THE

NEW GOSPEL OF HEALTH:

AN EFFORT TO TEACH PEOPLE

THE PRINCIPLES OF VITAL MAGNETISM:

OR,

HOW TO REPLENISH THE SPRINGS OF LIFE WITHOUT DRUGS OR STIMULANTS.

BY

ANDREW STONE, M.D.,

PHYSICIAN TO THE TROY LUNG AND HYGIENIC INSTITUTE; INVENTOR OF THE "PULMOMETER, OR LUNG TESTER;" AUTHOR OF A "TREATISE ON THE CURABILITY OF PULMONARY CONSUMPTION BY INHALATION OF COLD MEDICATED VAPORS, NATURAL HYGIENE," ETC.; "A TREATISE ON THE NEWLY-DISCOVERED SYSTEM OF ELECTRO-VITAL AND MAGNETIC REMEDIES;" "THE EARLY PHYSICAL DEGENERACY OF AMERICAN PEOPLE," AND SEVERAL OTHER WORKS.

Illustrated with One Hundred and Twenty Fine Engravings and Plates.

THIRD EDITION.

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DEDICATION.



HYGEIA! They who will not strive for THEE, magnificent GODDESS! have no spark of the divine electric fire in their craven souls! They who will not fight valiantly to overcome *their* enemies deserve their vassalage, however galled, heart-sore, abject, thou leavest them to be! They who will deprive thy kingdom of the pride and glory of lordly subjects, at the bidding of sensuous appetite, deserve the traitor's gyves and fetters with which they soon are bound.

Thou sittest in dazzling beauty, enthroned upon the saintly heights of wisdom, and the sceptre that thou swayest glitters with this magic word, that unlocketh all thy treasures, "SELF-GOVERNMENT."

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PREFACE.

We desire to be brief and explicit in narrating in what way and manner we are connected with this book. Some five years since, we received, through a medium of known integrity and ability, a communication, purporting to come from Sir Astley Cooper and Sir Benjamin Brodie, informing me that they, in connection with my Spirit-Band, numbering some eighteen or more of physicians, who had stood at the head of their profession when in earth-life, desired to communicate some twenty short sections upon different medical subjects, for me to publish; at the same time expressing much solicitude to present subject-matter that promised a more consistent and constructive mode of treatment than had hitherto characterized their practice in earth-life. Being now disembodied, and viewing the results of past experience with a far more progressive spiritual vision, they could see many errors which they now desired to correct, by substituting more rational and vital principles, having a direct tendency to construct or build up in harmony with the organic laws of life and health.

This communication was entirely unexpected, unthought of, or unsought for on my part; and still it was not surprising; for, for many months prior to this, we had had, in sleep, tangible visions of printed matter, plainly spread before us, which we had read with all distinctness and facility, and many times whole paragraphs would be recollected after awaking.

Hence, to us, the proposition seemed a perfectly natural one, and as a matter of consequence; and we replied, Go on; give the lectures,

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and, if considered worthy of publishing, they should be given to the public.

We arranged with the medium for compensation, and then, in the spring of '70, they were promised in five months. Some five lectures soon followed, by Rush, Bell, Mott, and others, when the medium's health failed, and a delay or suspense occurred, one coming occasionally in a year or two.

Being quite worn out with this unexpected tardiness and non-realization of promises, I sought to converse with the band through other reliable mediums, some four or more in number, when I discovered to my complete satisfaction the whole matter was familiar, and definite reasons would be given, and assurances again renewed that the work should be completed ; only command patience for conditions to be obtained or found in the medium of communication. Other media were sought by them, a few lectures ably given, when pecuniary or other considerations would again cause interruption and delay.

The contingencies attending the condition and control of mediums on the other side are best expressed by Sir Astley Cooper himself, whose communication I will copy :

"My Friend : I thank you heartily for your long-suffering patience and persistence in helping us try this experiment of contributing, bit by bit, the opinions of different individual spirits, bearing upon the same or kindred subjects. I was very anxious that this work should be commenced, though I had then no adequate idea of the trouble it would be to carry it on. I thought we could easily find and influence a score of mediums to contribute our thoughts and opinions through.

"But I find that mental work demands a certain amount of mental adaptation ; and as, after five or six years' trial and experiment, I have found no medium so well adapted to our work as the one I first influenced in this country and now influence, I am at present at work endeavoring to secure her time and services for the use of our band.

"She does not do her work willingly or gracefully, I admit ; but she does it, and that is the chief point. I think, as your book has

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already grown beyond its originally intended size, and new influences are constantly begging permission to speak through its pages, that you had better not wait for a specific section from me, but merely state that I have an interest in the work, and will soon make my own statement. I want to treat the subject of hernia so thoroughly and exhaustively that no one coming after me need ever have a hernia to treat.

"With you in spirit I remain connected with the working band in all they do, and hold myself, at all times, yours to command,

"ASTLEY PASTON COOPER.

"SPIRIT-SPHERE, January 14, 1875."

It will be noticed in the Physiological Proem, that Dr. James Johnson alludes to the same obstacles and contingencies in the way of communication and mediumship. And the difficulty encountered in this way has caused a departure in subject-matter transmitted quite different from the original programme proposed for the book.

The law seems to be this: Although all the original sections were prepared, yet the respective contributor necessitating the transmission personally, if he finds the conditions inharmonious for control, the work is at once paralyzed. Hence the change somewhat from the plan first given by Sir Astley Cooper. Each section has the contributor's name attached.

As the literature of the new school of medicine is yet to be written, it is to be earnestly hoped that mediums, properly organized, will be found efficient to the needs of the great undertaking.

The principal part of the work has been given through the mediumship of N. S. Emerson, formerly Mrs. French, of New-York.

We are under obligations to Dr. E. B. Foote, for favors in the way of cuts, and also to Vassar College, an institution worthy of all confidence and patronage.

ANDREW STONE, M.D.,
LUNG AND HYGIENIC INSTITUTE.

TROY, N. Y., April, 1875.

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HISTORICAL AND PHYSIOLOGICAL PROEM.

OUR book is somewhat unique, but it is *us*. We have no other apology to offer for it. It is not the consecutive action of a single brain, but rather the successive fragments of inspiration or influence that have come, under widely differing circumstances, and with almost every kind of surrounding disadvantage.

We give it to the world, as the best we could do at the time, and under the conditions that were afforded us; but we feel no hesitancy in affirming that this is but a faint and imperfect outline of work *yet to be wrought*.

Spiritualism, in its present form and phases, has been known to the dwellers upon the earth-planet not yet thirty years, and yet it has found its way into every department of life, has won attention from leading minds in all classes of society, and in all civilized nations. And this, not so much that it is new and strange, but that it fills a felt need in the heart and life of man.

Spiritualism came upon earth, not as an abnormal growth, a mere curiosity to be examined and laid aside, not even as a miracle outwrought from the hidden and occult laws of science, but it was evolved from the earth's own necessities.

It came, like the Christ-spirit long ago, "Not to destroy but to fulfill."

Old religion made war upon it, as the old is ever prone to do with the new; but it need not.

Spiritualism is not a destroyer of religions. Looked at in its best and truest aspect, it gives life and vitality to what was before mere husks and forms. And what is true of religion, the medicine and

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nutriment of the soul, is true also of the body, and its nutriments and medicaments. The one attribute that separates man from the brute creation, that makes him altogether different from and higher than the other animals, is the fact that he is, or may be, dominated by the spirit, rather than by the mere physical needs that belong to the body.

And it is this domination of the spirit that the true and divinely appointed healer appeals to, when he finds sickness and disease in the body that must needs be cast out, to make room for health and strength.

In ancient times, kings were supposed to be divinely appointed, and to have the power of healing diseases, and casting out devils or impure or troublesome spirits.

The latest tangible effort in this direction was when Prince Charles Edward was at Holyrood House, in October, 1745. He touched a young girl who had been grievously afflicted since her birth with scrofula, and she was perfectly cured in twenty-one days. Before this, up to the year 1719, there was a provision for this office made mention of in the Liturgy ; but it is said upon good authority that the old Jacobites believed that this power did not descend to Mary, William, or Anne, as they did not possess a full hereditary title, or in other words, did not reign by divine right.

So gradually, as the spirit failed and faded from the confidence of the people, the power followed it, and the power of the king to cure disease is now counted as among the baseless and foolish superstitions of the past.

It is true that the imagination has a powerful influence over the physical condition. But the imagination is one of the attributes of the spirit, and should in no way be despised.

If, then, a person can be relieved of suffering by any appeal to the imagination, let it be done faithfully, even reverently ; for the spirit may not be trifled with in any way with impunity.

Kings, presidents, ministers, priests, teachers, and leaders of all kinds *should be* healers. They should have enough true magnetic strength within themselves to attract the kindly and beneficent spirits about them, who have power to bring blessing and health in lieu of weakness and despair.

Thus only can they be fitted to act as rulers and guides for the people.

Thus only can they be saved from the bitterness of feeling that their position is a mockery, and the outward show of respect paid to them, but grudgingly at best, is husks without heart.

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We do not expect our book to make a revolution either in medicine or in government. But we wish to leave in the mind of the reader the general impression that we have endeavored to take a step in the right direction.

That whatever we have said has been not to further any selfish purpose, not to advertise a method at the expense of truth and justice, not to find fault with regular medical systems or schools; but to suggest that, as it is already known that a subtle current of magnetism or electricity is forever ebbing and flowing about the earth, this current be made available for its best and highest possibilities of use.

This is our theory: that the more subtle and intangible the elements are, the more essential they are to human life.

Thus it has been demonstrated by science, that certain mineral, animal, and vegetable substances go to make up the food consumed by man, and that these three constituents are all essential to the continued possession of life and health.

But if all mineral substances be removed from the daily food, life and apparent health will continue for a long time. If all animal substance be taken away, life still continues, though probably for a shorter time, and with less reliable strength.

The loss of all vegetable material would tend still further to shorten life; but even if all food be denied to a person, life would go on for a few days, until the accumulated tissue be used up, and exhaustion ensue.

If all liquids are abstained from, death comes quicker, and with greater suffering; if the air be excluded, the period of life is narrowed down to a few minutes.

If the supply of electricity be stopped, only a few seconds of life remain; and if the impalpable cords of magnetism be severed, the person is dead at once.

The reason why a human being can live for a long time in a trance, when all the functions of life and health are apparently suspended, when there is not sufficient nutriment taken either as food or drink to support life, when the lungs are not filled with air, when the heart does not beat, is because the magnetic current is unbroken.

That alone keeps the mystic bond unsevered that unites the spirit to its material tenement.

Magnetism is only another name for vitality itself. It is the principle of life animating all matter, permeating all space. And it is to this principle that we appeal when we heal without drugs. Every person has had more or less individual experience in this

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power, which we call magnetism, which other writers call by other names.

You sit quiet and low-spirited in your room; some person comes in whom you do not wish to see. In five minutes, your hands and feet have grown sensibly colder, or insensibly benumbed; a dull, slight headache seems stretching every nerve out of its proper place; you try to listen and reply properly, and succeed only in feeling very miserable, and in making your visitor, if in any way sensitive, decidedly uncomfortable and unhappy without knowing why.

Another person enters, whom you thoroughly like, and rejoice to see. There is a warm clasp of the hands, the blood is called to the surface and the extremities, the head is no longer overcharged, the brain makes no further exertion to comprehend and reply, conversation becomes natural and interesting; and if you were sick, you feel better than you have for a long time. This is the true mission of the physician. To carry life and health to his patients because they like him, and believe in him or her, as the case may be. For the female physician has her place in the world too, and her work should never be ignored.

The truest friend, the fondest lover, the most sympathizing spirit, the warmest heart, these make the best physician.

And these spiritual characteristics will almost invariably clothe themselves in the fine physique, strong frame, firm muscle, plentiful tissue, warm hands, light springy step, genial smile, and quick, loving eye, as sure to detect any change in the magnetic condition as the patient is to feel and realize it.

These physicians may be found in every household. They need not the drill of the college, the superabundant culture of books, the opinions of the past, or the theories based upon other people's experience.

They are at once a law unto themselves and to their patients, and by this law the work of health-giving is wrought.

These are the men and women about whom gentle and beneficent spirits, from whatever sphere, love to linger, with whom they are glad to work.

Then study to be good and true, if you would call to your aid the true power of the spirit that moves the world.

Ralph Waldo Emerson says that ideas and inventions are in the air. "We" (meaning the general race of men) "are all impressionable, for we are made up of these ideas. All are impressionable, but some more so than others; and those who are most sensitive first express the ideas."

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This explains the curious contemporaneousness of inventions and discoveries.

They came not alone to one person, but to several persons, who were equally impressible.

The truth is in the air, and the most impressionable brain will announce it first, but all will announce it a few minutes later. "So women, as most susceptible, are the best index of the coming hour."

But, while agreeing with Mr. Emerson in the statement of the fact, in regard to the coming upon earth of inventions, discoveries, and ideas, *we claim that they come from the spirit-life that surrounds and gives life to the earth.*

We who have passed away from the material existence which is confined solely to one planet, still feel a general interest in that planet, and a special interest in those individuals with whom we were closely associated as relatives or friends.

And we bring the forward-reaching ideas from the great fount of wisdom and knowledge, to bless and comfort our friends, or with a trifle less individual selfishness we pass them along because they were given to us, and are useless if we keep them.

Let us, then, teach you, O beautiful world of relations and effects! to look up, just one step, if no more. To remember that the air about and above you, permeated with ideas and discoveries and inventions, is permeated also with individualities and lives.

With spirits who love you, who would bless you if they could, who will bless you if you will let them. We can see farther than you can, and though we are not infinite in power or knowledge, yet such as we have we would gladly give to you.

We call out earnestly to you from every direction, "Give us time and opportunity; be patient with us; let us explain ourselves, and we will show you that we mean only the kindest and most beneficent deeds toward you all."

We try curious experiments with the laws of gravitation, of formation, of optics and audits, only to call attention to our real selves. To let you know that we *are*, and are waiting to express ourselves plainly to you.

The idlest and most foolish physical manifestation is significant if it awakens thought or inquiry; and that is all we ask for it. We know that no person can receive another's experience, and make it serve as his own.

Each must have his individuality appealed to; his wants, tastes, or inclinations consulted.

We know that spiritualism comes to each individual through a

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different channel, in a different way. It has a myriad voices, and they cause a myriad different chords in the human heart to vibrate with greater or less intensity.

To some it appeals to the affections, bringing an echo of a love that cheered and brightened the earth-life for a little time, then suddenly vanished at the portals of the grave. To many it speaks with the voice of reason.

Was so much of culture and intellect and education given to man for the brief life of three or four score years; and then, when he is just beginning to see and understand and reason for himself, behold is he naught? Shall he have no enjoyment of the knowledge he has acquired? And the answer comes back from the sage in the spirit-spheres, "*All that we have gained of knowledge or wisdom is ours forever, and the blessing of teaching is also ours.* For that we speak to you." The voice of religion is perhaps strongest of all.

The human mind is so constituted that in its normal condition it needs something to look up to, to rely upon.

It feels that it was not self-created, self-evolved from the great mass of matter about it, and it asks perpetually, "Whence came I? Why am I here? Who will take care of me? guide, protect, and direct me? *I walk but blindly through a maze of time; I follow no visible guide; I make for myself a new track in the pathless space before me. How shall I know if I walk to destruction or salvation?*"

To such as these, the waiting angels answer, "We are the agents of the great Will, the guiding Mind, the all-pervading Presence that is higher and wiser than your comprehension can reach. We will teach you of the beneficent father-power and mother-love, which is God. This power it is which cares for and protects you; this love which surrounds you like a great net, through whose meshes you can never fall." To the stricken mother come the words of her child, "Mamma, I love you; talk to my dear papa about me; tell him I have such a pretty home; a garden, a lake, and a boat, and I want him to teach me how to row." The mother is bewildered and delighted. She remembers how her little Theodore was charmed with the lake and the boat one day. Can it be—is it possible that God is so good as to let her darling speak to her again?

The mourning husband receives some fragmentary message from his lost wife, some pet name by which she used to call him, some reference to a past incident that made trouble between them once.

To the general world these are generalities, but to the *heart that is hungry for the bread of life*, shocked by the horror and mystery of death, these atoms are the manna that feeds the soul.

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We, the disembodied spirits, feel this craving, and reaching out, and asking for, of the human heart, acting as magnets to draw us back to earth.

And it is in partial answer to these cravings that we endeavor to interest the minds of our readers in the phenomena of spirit-manifestations, knowing that if once an interest is awakened, investigation and, in a large proportion of cases, conviction is sure to follow.

To be able to make use of and in some degree to control the elements about us; to use the magnetic and electric currents for healing and strengthening the sick and weary frame; to make faith take the place of mineral and love of vegetable poisons; to teach humanity; to breathe charity in lieu of miasms; this is the work we have undertaken, and which we ask you, kind reader, to help us in carrying on.

We have not written wonderfully, not even well perhaps; but we offer as an excuse for this, that we are like mechanics working with a class of tools with which we are not well acquainted and perfectly familiar.

Our book is in itself but an experiment, which we have been enabled to try, through the faith and liberality of our friend and co-worker, Dr. Andrew Stone.

We give him such thanks as our limited command of words enables us to express; but he knows by a sort of spiritual consciousness that is not dependent upon the outer senses, that we are with him.

That we share every good impulse, and lend what aid and strength we can to help along every good work of his; and he does the same for us.

This sort of brotherhood, of general faith and acceptance, is what we want in the world; is what we need to carry on our work; and what we have faith to believe as well as the prevision to see every year is bringing us more and more of. Instead of a single supernaturally-gifted man, working for us alone, surrounded with doubt, skepticism, and ridicule, as Swedenborg wrought, we have an army of men and women sustaining and strengthening each other, with brave hearts, clear intellects, and undaunted earnestness of purpose.

True, there are many frauds and deceptions clinging to our skirts, many unreliable phases yet to be done away with; but we are constantly striving to supply the highest needs and most earnest cravings of all hearts as well as to relieve all suffering, and make the human body a strong, pure temple, in which the spirit may dwell in peace and glory. Though we work in doubt and comparative dark-

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ness, yet we never stop working. We tell you the same thing a hundred times if you do not understand it by ninety-nine times' telling; we give varied expression to the same idea, in order to interest different minds and keep them thinking.

We haunt you with the possibilities of an invention or a discovery until it seems to follow you night and day, and will not let you rest. But be patient with us and our many failures; do what you can to help us on with our work, and rest assured you will thereby receive assistance in your own way at last.

Do not compel us to do what we wish rather in spite of your will than by aid of it. Do not resist us when we try to influence or assist you, but keep one frank generous thought in mind, that you will work for the highest purpose and the most universal good, whatever the means may be that you are allowed to work with. Then can we join our efforts to yours and work and think with you. The result may not be startling or wonderful, but it will be beneficent, and at last satisfactory.



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INTRODUCTORY.

BY GALEN.

TIMES have been, when to promulgate a new discovery was to invite persecution, and to be the open advocate of a new truth, frequently led to the prison or the stake. History, both sacred and profane, is replete with its heart-rending stories of the martyrdom of the noble heroes who lived in advance of their times, and who, for the sake of what appeared to them to be truth, were willing to suffer and to die. Truth has always had her martyrs, else Socrates, my contemporary, would not have been compelled to receive, although with smiles, the hemlock, the then popular reward of those who dared to freely express opinions in advance of the preconceived notions of his age, no matter how devoted to the highest welfare of his countrymen.

No matter how beneficial to the human family, no matter how calculated to relieve suffering, let a mode of cure, for instance, be new, it is met with sweeping denunciations of humbug and quackery. And when a truth is for the first time ascertained and promulgated, many persons, too ignorant to investigate, too stupid to comprehend, or too bigoted to admit, stir up the prejudices of the unlettered multitude, and after having cried on the pack, are reckless for their part if the truth itself, were it possible, should perish with its advocates. He who has the manliness to lift up his voice in defense of newly-discovered truth against old theory, though acting in behalf of the best interests of the human family, is too often doomed to penury and persecution. Such has been the case in the ages gone by, when error was rampant over the earth, and alas! such has been the case in this enlightened age and generation. But the Spirit of Progress is abroad in the land, and you may confidently hope to realize a better state of things. Unfortunately, there has been too great a tendency in the human family to adhere with dogmatical tenacity to old errors, rather than search after truth; and even truth, when ascer-

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tained, is often rejected, or with too much reluctance adopted. When Harvey demonstrated the circulation of the blood, there was not a single physician in England over forty years of age, who appreciated or acquiesced in the discovery. This may be said to be the scientific age, and he who henceforth would sway or control public opinion in regard to the science and philosophy of a new truth must himself be scientific. Thus, in introducing to suffering humanity our new system of vital magnetic treatment, we shall endeavor to make it comport with science, drawing largely from the experience of the past, and giving the highest standard of knowledge that we possess in spirit-life. We propose to elucidate the causes which disturb the grand equilibrium and physical harmony of the various functions of the human body, and state the best remedies and means of cure, touching upon diet, hygiene of dress, atmospheric influences, electricity, magnetism, and whatever, in our opinion and experience, may tend to relieve a suffering world. In this, we shall encourage no rash experiment. We shall not bow down at the shrine of tradition. We shall not attribute all disease to one common cause; we shall not galvanize into existence exploded theories; we shall not strain the intellect, or pervert facts, to find reasons for a new theory; but in our efforts to show the cause of disease, we shall not hesitate to appreciate any phenomena, however humble, to illustrate our meaning, or advance any idea which sound philosophy may indicate, however radical as compared with the pernicious teachings of an old-school system of therapeutics, however popular. For this purpose we have labored long, and to this end we devote our energies, and for the advancement of a higher standard of knowledge we consecrate our time and talents.



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FIRST SECTION.

GENERAL REMARKS.

The crude system of medicine to give place to finer and more spiritual treatment—Mankind approaching nearer to God—Brain texture improving—Deadly effects of mercurial practice—All the essential elements of vegetables possessed in a more refined form than mineral—Properties of, too much neglected—Erroneous system of medical education—A decided approach to magnetism—Homeopathic physicians progressive—Hydropathy an improvement, but much abused—Drenching an advantage over drugging—Cautions—The lifting-cure a sham—Movement-cure rational—Lomi-Lomi—Its ancient *prestige*—Its wonderful rejuvenating effects—The sun-bath—Its wonderful curative agency—Electricity—The mind the real healing power—Its effects upon digestion—Alexis St. Martin—Poisonous effects of anger upon digestion—The movement of the diaphragm and lungs electric—Dr. Golding Bird—The difference between electricity and magnetism—Curing by laying on of hands—Contingencies of operating—How to gather magnetic strength—Physiology and hygiene should be studied—The gift of healing a sacred boon—Individuality should be maintained—How to regard impressions.



N offering these remarks upon an unpopular subject to the world at large, and especially to sick and suffering humanity, we offer, along with them, an apology for the very imperfect manner in which the different diseases have been described or diagnosed, and for the little that has been said of the human system in general, and each organ in particular.

We wish this little work to travel fast and far, as it is in itself but the alphabet, the mere initial page, of what is to follow, upon the way to prevent and cure disease.

It is well known by the medical faculty that the crude and powerful medicines which have been in use for the last century, are gradually being superseded by lighter and finer remedies.

The reason for this is evident to the thinking mind.

Mankind are progressing physically, spiritually, and mentally.

The every day thoughts and words of hundreds of thousands of

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the cultured and educated men of to-day are better, purer, and nearer to God and the absolute truth than were the highest flight of eloquence, the loftiest imagery or the mental efforts of a life-time, a thousand years ago.

And it is safe to conclude that the texture of the brain improves, as its work grows finer and fairer.

The *Journal of Medical Reform* said, long ago, in a dissertation on the value of mercury as a remedial agent,

"The strongest evidence to prove the injurious effects of the various preparations of mercury on the organism of man is to be found in the admissions of those physicians who have most extensively employed them in their own practice.



FIG. 1.—A SALIVATED PATIENT, THE EFFECTS OF CALOMEL.

"That mercury has destroyed more lives than it has saved, and entailed upon the human family a train of disorders and an amount of suffering past all computation or description, no physician will deny, unless he be wholly wedded to the errors of early education or a slave to the authority of musty books."

Without wholly agreeing with this wholesale denunciation, we can declare, both from experience and observation, that if the time ever was in the history of man's development, when he needed crude minerals to be thrust into the stomach for the purification of the blood, *that time has now passed away*, and other remedies must be found and used.

Next to the mineral comes the vegetable kingdom, possessing in a more refined form all the essential elements both of medication and nutrition found in the former.

Many valuable remedial agents grow unnoticed in field and forest, and the idea almost involuntarily suggests itself that the medical students who go through with the routine of books, and graduate at the universities and colleges in such large numbers year after year, are either too indolent or too timid to think for them-

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selves, and so they accept the stated dogmas as containing all of wisdom and science it is necessary for them to know.

Their usual mode of proceeding is to inquire of the patient what are his symptoms, then by consulting the books, find out what disease is indicated, and by further consultation learn what drugs are to be applied as remedies or curatives.

Then if the patient recovers, it is a triumph of medical skill; and if not, he has the privilege of dying according to established rule and precedent, *secundum artem.*

Some allopathic physicians are truly magnetic and intuitional.

Holding their work to be a sacred office, and human life always worth saving.

These are the kind of whom it is said that their medicines are more efficacious if they mix and administer them themselves, and often that the doctor's visit does more good than his drugs.

Homeopathic treatment is to medicine what the Universalist's creed and faith is to religion.

A reaction so sudden, so powerful, and so determined, that reason is lost sight of, and the mind seems so glad to escape from crudities that it wanders to *infinitesimalities*, which are certainly very *mythical*, and the possibility of their benefit very hard to understand.

Still they give nature an opportunity to do her work unmolested, which, in nine cases out of ten, is all that is needed, especially if the mind is satisfied and at rest.

Homeopathic physicians are nearly all progressive and intuitional.

Many of them struggle slowly back to sensible doses, which are a great improvement on allopathic medication, and perhaps only less beneficial than botanic medicines.

But our space here is too limited to discuss the merits of botanic treatment, and we can only refer the general reader to books which have been already prepared upon this subject, and which are really very useful in helping men and women to understand their own constitutions, and how to preserve health or cure disease.

Next to the botanic comes the hydropathic treatment.

Much abused and little understood, it still has many advantages over the old way of filling the blood with unwholesome ingredients; and if the necessity should come for choice between drenching and drugging, let it be drenching, by all means.

There is magnetism in water, though it needs careful application.

The constitution of man is so adaptable that, by practice, a healthy person could so accustom himself to moist atmosphere, vapor, steam, or even water itself, that he could stay in it for hours with-

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out apparent injury. In fact, there are men and women connected with public bathing-houses, who are often saturated with moisture for ten or twelve hours every day, for weeks and months in succession; but an ordinary person who is obliged to go daily from place to place, in doors and out of doors, with change of temperature, perhaps change of clothing, should never take a cold or slightly warm bath more than once each day, and never a hot bath oftener than once in nine or ten days.

Sick people should be very *cautious* about using *hydropathic* treatment, and never meddle with it at all unless quite sure that it is accompanied with good *magnetism* and favorable conditions.

There is a new method of cure growing in popular favor now, called the movement-cure. It depends for its success far more upon the magnetic power of the operator than upon the mechanical manipulation.

It is beneficial in many cases of chronic disease, rheumatic and neuralgic, as well as in disordered digestion, dyspepsia, and constipation, and in imperfect or very irregular circulation, which implies disease of the heart and other organs.

But in every case, we do not hesitate to say that the movement-cure would be much more beneficial if used with a good knowledge of magnetism and electricity, and a strong *will* to apply these principles.



FIG. 2.—JAPANESE MANIPULATORS.

Similar to the movement-cure, and like it deriving its principal power and use from the magnetic currents it reaches, is the Lomi-Lomi of the Sandwich Islanders and other dwellers in the Pacific Islands, even as far as Australia.

It is the usual custom there, when hunters come in wearied from the chase, or fishers from their toil, for two stout young wo-

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men to take them first into a tank of water that has been thoroughly sunned; and after washing with sponges, they then to lay them on a pile of matting, and manipulate gently until the swarthy fellows fall asleep under their hands.

A traveler, I think his name is Emerson, tells of experiencing the most beneficial and healthful possible results, from a trial of Lomi-Lomi, when he was sick and exhausted from exposure and fatigue.

If any woman of rank is ill, her medical attendant gives her a course of bathing, sun-bathing, and rubbing that speedily changes the magnetic conditions about her, and makes her well in nine cases out of ten, without any medicine internally administered.

In China, magnetic treatment has been employed for hundreds of years, and in San Francisco some of the most successful medical practitioners are Chinese manipulators.



FIG. 3.—JAPANESE MANIPULATORS.

In Japan, the same treatment is used with the most wonderful results, a striking peculiarity noticed throughout the kingdom being, that all Japanese manipulators are blind, and almost without exception their gift is hereditary.

What connection the blindness can have with the magnetic power it is hard to understand, unless, indeed, the want of sight is hereditary, and so shuts them out from other vocations, and gives them opportunity to develop their gift of healing.

These Japanese physicians go about the streets, feeling their way with long staffs, and blowing shrill reed-whistles to attract attention.

If any one is sick or weary, or threatened with any disorder, the public physician is called in, the patient is disrobed, covered with some light drapery, and the manipulator commences by rubbing the head thoroughly, and proceeds thence to neck, chest, trunk, and limbs, gently pinching and kneading the whole body.

The lifting-cure scarcely deserves the name of medical treatment, being merely a mechanical form of exercising the muscles, and almost any man could find quite as much benefit, and make himself

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far more useful, by lifting a heavy and troublesome baby from the arms of a weary mother, and taking care of it for a while, or performing any other manual labor that would call into action more muscles than his ordinary vocations are in the habit of doing.

Dio Lewis, himself a model specimen of muscle, and the development thereof, suggests, teaches, and practices various unique methods of healing the sick, among them one known as the sun-bath.

This ought to be better understood and more universally used

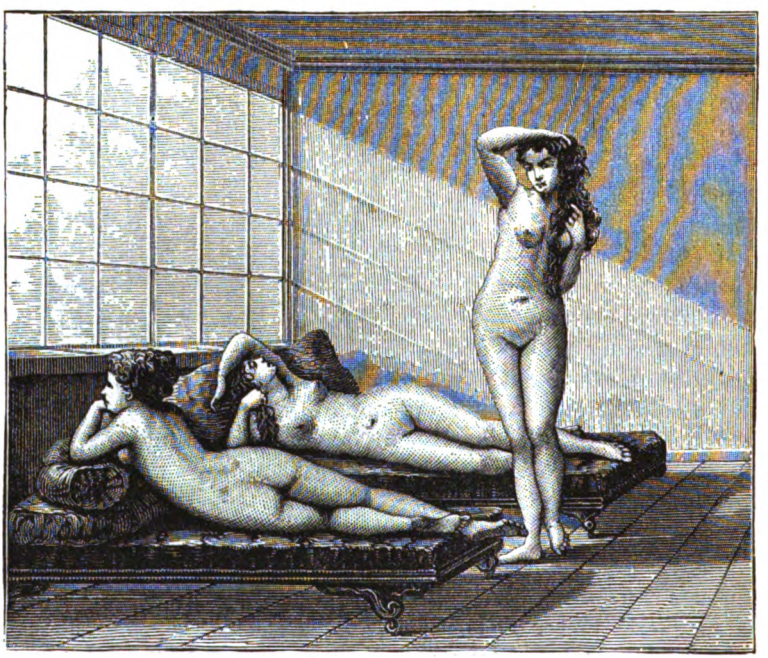


FIG. 4.—THE SUN-BATH.

than it is, as being simple, comparatively harmless, and within the reach of all.

The sun is the great central fountain of magnetic existence and power, and those who have not friendly human magnetism at hand, may derive great benefit from such contact with the emanations of the sun as would excite perspiration, quicken the flow of the blood, and assist the whole system in throwing off its accumulated impurities.

Without referring particularly to various other methods of curing disease or relieving pain, which man's restlessness has invented or his necessities evoked, many of which are very good, and all without ex-

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ception improvements upon the old way of universal drugging, we will proceed at once to the use of electricity and the galvanic battery.

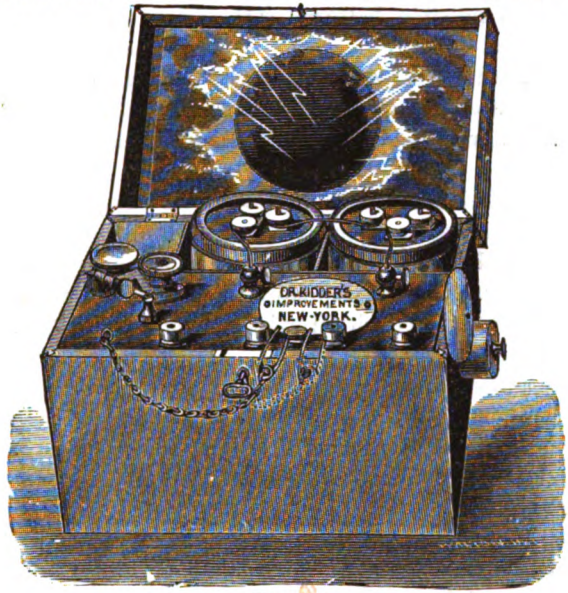


FIG. 5.

This is employed far more extensively in the hospitals of England, France, and Germany than in America.

Electricity is to the air what metals and minerals are to the earth. At once the wealth and the waste of the whole laboratory of nature.

And through every inch of soil, through every strata of stone, and every grain of sand, through every sea and river, and every drop of rain or dew, as well as through the fifty miles of atmosphere that surround the planet earth, *two* currents, *one electrical*, the *other magnetic*, are constantly flowing.

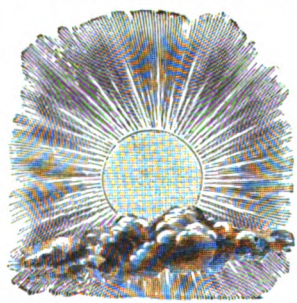


FIG. 6.—Illustrating the two currents in the atmosphere, one electrical, the other magnetic.

These are not easy to describe, as being too intangible for ordinary measurement, and men are prone to doubt what they can not measure with their outward senses.

But as the steam needs the powerful engine, strongly fashioned and constantly watched, to control its otherwise erratic and useless power, so the electrical current needs the battery to condense it and make it useful.

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But the highest natural production of the earth, the connecting link between the material and spiritual spheres, is so constructed as to be the best possible battery for the action of the electrical and magnetic currents.

The mind is the real healing power in any animate body, and by its action electricity is gathered and distributed, strengthening the action of the nerves and tending to equalize the circulation of the blood.

That the mind controls to a great extent the electrical forces of the whole physical economy, may be noticed in the fact that in cases of severe mental action the brain becomes stimulated to unusual activity and *consumes* or uses up more than its *due proportion* of the *nervo-electric fluid*, thus withdrawing enough from the stomach to supply the extra demand.

But the action of the stomach is stopped thereby in consequence.

One of the most interesting cases of experiment ever known or recorded was the case of Alexis St. Martin, whose side was so injured by a wound from a musket-ball that the action of his stomach could be plainly seen.

If he ate an ordinary dinner, and talked or walked or rested or even worked moderately after it, the process of digestion would go regularly on, and in two hours the food would be converted into chyme, and thus disposed of.

The chyme conveyed through the pyloric orifice of the stomach into the duodenum, and the stomach left comparatively empty.

But if the man became angry or excited immediately after eating, the process of digestion would be arrested until he became calm again, even if the excitement lasted for five or six hours.

We claim that this was an electrical disturbance more than any trouble of solids or fluids.

Dr. Foote says, in his *Plain Home Talk*,

"It is the interruption or partial withdrawal of the nervo-electrical circulation which causes what we term nervous disease.

"And there are more affections of this kind than were ever dreamed of in the allopathic philosophy.

"There is often an inharmonious action of the nervous forces in lung, liver, heart, and kidney diseases.

"All these organs perform their appropriate functions and offices under the stimulus of electricity.

"For instance, the lungs are not expanded and contracted by the inhalation and exhalation of air; but the diaphragm is thrown downward and the air-vesicles opened by the nervo-electric forces acting on the muscles.

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"By this electric movement, air of necessity rushes in, to fill the vacuum.

"When the same forces contract them, exhalation naturally follows.

"In diseased lungs and shortness of breath, there is frequently an interruption of the nervo-electric circulation, and hence the necessity of electrical remedies of some sort in the cure of many cases of *pulmonary* disease."

Dr. Golding Bird, a physician who is quoted as authority and whose opinion is respected throughout the medical world, says of electricity,

"Being conscientiously convinced that the agent in question is a no less energetic than valuable remedy in the treatment of disease, I feel most anxious to encourage its employment by the practical physician, and to urge him to have recourse to it as a rational but not infallible remedy, and not to regard it as either expected to or capable of effecting impossibilities."

The same writer adds that "electricity has been by no means fairly treated as a therapeutic agent; for it has either been exclusively referred to when all other remedies have failed, or its administration has been carelessly directed without reference to its manner or efficiency."

All this has reference to what we call mechanical electricity, or that gathered and distributed by metallic agency.

But far beyond this, in curative power, is the electricity generated by the human will, gathered in nerve and muscle, and given out by kindly faith through ready and gentle hands to the sick and suffering ones of earth who are ready to receive such ministrations.

By some authorities, magnetism is said to be electricity which has passed through the human frame, but this is not so.

There is as much difference between electricity and magnetism as between air and water.

It is not easy to give general directions for the application of electrical currents or magnetic power.

But it would be well for any one who desires to practice or experiment with either electricity or magnetism, to procure a good galvanic battery first, and study well the principle upon which it acts.

In applying it to cases of severe sickness or low prostration, it is best always to let it pass through the hands of the operator before it reaches the patient.

But the most essential points and elements in a good magnetic physician are a well-developed brain with the moral nature predominating.

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A strong will, and yet a gentle and kindly deference for all, a thorough self-respect, and a never-failing consideration for the rights of others.

A spirit of self-sacrifice, an earnest wish to benefit others, to do good—not merely to help individuals, but to make the world better and wiser, happier, and more healthy.

The next requisites are good health, a cheerful and equable temper, and warm, firm hands if magnetic influence predominate, or moist, cool hands if the electrical currents be strongest.

We believe that all acute diseases and a very large proportion of chronic diseases can be permanently cured by the laying on of hands, if a grain of common sense be added to the treatment in each case.

We do not utterly abjure all other methods of treatment; but in order to keep the van of all curative agencies, to act as pioneers or advance-guards and keep the way open, that the timid may follow at a safe distance, we like to advocate the best, the most radical, and the most progressive views, both in theory and practice.

Magnetism permeates every human frame; *but to comparatively few is given the power to concentrate it and use it for the benefit of others.*

Practice and harmonious conditions tend to develop this power, and it never does any harm, never interferes with any other method of treatment, though other methods interfere with it sometimes; but if a magnetic physician has the true good of the patient at heart, he or she will never insist that the regular physician be given up, *until the patient feels that more good can be done without the medicine than with it.*

Any reasonable person, after a fair trial with magnetism, will become convinced of this fact; and it is next to useless to magnetize a person who is determined that the treatment shall do them no good.

It is not actually essential that the patient have abundant faith or implicit confidence in magnetism, if they have but liberal reasoning faculties and a willingness to be convinced of any truth.

But in any case, it is very much better for patient and physician to agree in opinion and to believe in each other.

Sometimes, owing to strong sympathetic action, the magnetizer takes on all the symptoms of the disease which the patient manifests.

This is often unpleasant, but may be readily thrown off by exercise in the open air and quick manipulations.

Sometimes the magnetizer feels very weary and exhausted after treating several cases, especially of chronic disease.

To enable the system to gather magnetic strength from the atmo-

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sphere or the sunshine, perfect rest should be indulged in for several hours, and every thing done to keep up the healthy and natural tone of the system.

Physiological works should be carefully studied, and anatomy and hygiene thoroughly learned by experiment and observation; but a man or a woman with good health and a kind heart can be a successful magnetic physician without any knowledge at all of the human frame.

While a person may be ever so well educated and have a scientific knowledge of all the minutiæ connected with life, and if they have not charity, if they have a selfish or a sordid nature uncultured to kindness and love, they can never be permanently successful with magnetism.

For the strength of magnetism is in giving. In *gathering from the mysterious fountains of Nature's great heart and imparting to those who need.*

Faith to the despairing, strength to the weak, rest to the weary, and hope to all.

Any one blessed with the gift of healing should *use it as a sacred boon*, for the benefit of others.

And if they are honest and conscientious in the discharge of their duty as it comes to them, they can depend upon the justice and generosity of the world to pay them for their labors.

And justice and generosity seldom fail to be sufficiently remunerative.

It may be as well to remark in this connection that it is right for every person to retain their own *individuality* in whatever they may do or say.

Never do any thing merely because you are told to do it, if it does not correspond with your own judgment and reason.

Some people say they can not follow their impressions because they are not plain, but a *real* impression *is* plain.

Sometimes, of course, a person may attract two or more different influences, and each influence is liable to give a different impression. Sometimes, too, an impression may be received which is entirely contrary to what you consider the right way or the best way.

In both these cases, *individuality is to be respected.*

Consider the different impressions, and choose between them with all due deference for the reason and judgment which are given to each individual.

And if every one would act from *principle*, with a well-defined idea of right and wrong, seeking the right and shunning the wrong, surely, in the words of a popular poet, "The world would be the better for it."

BENJAMIN RUSH.

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SECOND SECTION.

MAGNETISM.

Origin of the term—Magnets are of two kinds—Have two poles or centres, north and south—The Earth a huge magnet—Diamagnetism—Dr. Faraday on magnetism of blood—Mode of gathering and using magnetism—An essential element of life—The more ethereal a substance, the more essential to life—Frederick Anton Mesmer—Declined a large offer from the French government—The art a part of one's self—One of reciprocal sympathy—The mind the seat of disease—Homeopathy the basest fraud—The life of a healer should be pure—Meat as well as vegetable diet necessary—Magnetic vampires—Non-magnetic incapable of strong love—Perfect health, perfect love—Reckless haste of American people all wrong—Diseased magnetism—Process of operating—Mode of diffusing virus into the blood, its subtlety—What to avoid.

THIS word is said to be originally derived from the word Magnesia, the name of the city where the loadstone was first discovered, and magnetism is properly used to signify the power which the magnet has to attract iron. In the science called Diamagnetism, it is said that every substance is more or less affected by the magnet; but as iron is more especially magnetic, the term is chiefly used with reference to it.

Magnets are of two kinds, natural and artificial. Natural magnetism consists of the iron ore that is usually called magnetic iron, and is familiarly known as the loadstone. Artificial magnets are usually bars of tempered steel which have been magnetized by the action of the galvanic current, to which they have been in some way exposed.

The power of the magnet to attract iron is by no means equal throughout its whole length, the magnetic force being the strongest at the ends, and not appreciable at all in the middle of the bar. The force even increases with the distance from the centre of magnets; and the ends, where the attractive power is greatest, are called its poles.

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The magnet has then two poles or centres of magnetic force, each having an equal power of attracting iron. This is the only property, however, which they possess in common; for whenever the poles of one magnet are made to act on those of another, a great dissimilarity is brought to light.

If a magnet be suspended so that it has free action, when left to itself it takes up a fixed position, one end keeping north and the other south; and when the magnet is disturbed or swung around, no matter how swiftly, both poles will return to their original positions and there stay. Thus we are enabled to distinguish them as north pole and south pole. When thus suspended, if we try the effect of another magnet upon it, we see that the pole of the suspended magnet that is attracted by one of the poles of the second magnet is repelled by the other, and *vice versa;* and where one pole attracts, the other repels. If now the second magnet be suspended like the first, and left free to act, it will be found that the pole which attracted the north pole of the first magnet is a south pole, and that the pole which repelled it is a north pole. We thus learn that each magnet has two poles, north and south, alike in their power of attracting soft iron, but differing in their action on the poles of another magnet, like poles repelling, and unlike poles attracting each other.

It might be thought that by dividing a magnet at its centre the two poles could be insulated, the one half containing all the north polar magnetism and the other the south. When this is done, however, both halves become separate magnets with two poles in each, the original north and south poles standing in the same relation to the other two poles called into existence by the separation.

This, then, is a known rule. We can never have one kind of magnetism without having it associated in some magnet with an equal kind of opposite magnetism. It is this double manifestation of force which constitutes the polarity of the magnet.

The fact of the freely-suspended magnet taking up a fixed position has led to the theory that the earth itself is a huge magnet, having its north and south magnetic poles in the neighborhood of the poles of the axis of rotation, and that the magnetic needle or suspended magnet turns to them as it does to those of another magnet. All the manifestations of terrestrial magnetism give decided confirmation of this theory.

We now come to the science or theory of Diamagnetism, a term applied to a class of substances which, under the influence of magnetism, take a position when freely suspended at right angles to the magnetic meridian, that is, they point east and west.

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The fact that iron is attracted by the magnet has been known from very remote times, and that bismuth expedites a repulsive action toward the magnetic needle has been now known for nearly one hundred years. But Dr. Faraday was the first, about the year 1840, to show that all bodies are more or less affected by magnetic influence, and his thoughtful and interesting researches on this subject have opened up a new field in the domain of science. But as the world itself is shown to be a huge magnet, and every dweller on its surface is likewise magnetic, every drop of blood that courses through the veins of an animal as well as the stream of life-giving sap that permeates the veins of every plant and tree, has its magnetic qualities without which neither life nor motion could be maintained. The magnetic nature of flames and gases has been also stated. When a flame of a candle is brought between the poles of a magnet, it is repelled by them and thrown out horizontally into an equatorial position. To ascertain the magnetism of gases, Faraday inflated soap-bubbles with them, and their magnetic power was exhibited by their being attracted or repelled by the poles. It was also ascertained by causing the gases to flow out from glass tubes in the presence of magnetic poles, when the peculiar magnetism of the gas was shown by its choosing an axial or equatorial means of egress.

There is another theory, that there is no such thing as magnetism *per se;* that it is only a state or condition of matter. But we are not discussing science here; we merely propose to direct the sick and suffering how to take advantage of the principles of magnetism by which they may find relief and gain strength; for as one magnet acts upon another in attracting or repelling it, and as one magnetic iron will act upon its hardened neighbor, steel, and impart to it so much of its own magnetic currents that the two become equalized by coming in contact with each other, so the healthy human being whose blood is full of vitality and whose whole frame is instinct with life and vigor, can impart to his weaker friend the magnetic strength which by his strong will and active brain he can gather from the atmosphere about him, from the food he eats, from the very earth over which he moves with his strong, elastic tread.

This is the one underlying principle of magnetic healing; and if people would but bear in mind that magnetism is a part of life and one of its most essential elements, they would find the subject worth studying and the principles worth applying. It is well known that if a person is left entirely without food, he will soon starve to death; but if left entirely without water or any liquid, he will die still sooner and in far greater agony. If left without air, death still more quickly en-

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sues, thus proving that the more ethereal a substance is, the more essential it is to life; and the mysterious magnetic currents that flow about the earth are life itself. This then is the only philosophical reason that we can offer for urging upon human kind the great importance of magnetism as a healing agent.

And this leads us to a phase of magnetism sometimes called Mesmerism, so-called from the name of the person, Frederick Anton Mesmer, who first introduced it as a separate science. Having made various experiments with the mineral magnet, he was led to the discovery of a power of magnetism in animals and in human life. This he made public a hundred years ago, in his treatise on magnetism. He soon after established a hospital at Vienna, for the perfection and promulgation of his discovery, and soon went to Paris, where he devoted himself to the cure of diseases, and had crowds of followers.

The French government offered him a large sum of money for his secret, and it was thought very strange that he refused it. He died in Germany, in the year 1815.

In an autobiographical journal which he was in the habit of keeping, he says, "My friends blame me much for not accepting the generous offer of the French government, and imparting my secret of healing in the university to which they would send me. Every day I receive scores of applications from people who wish to learn my art; but it is as much impossible for me to teach them how I heal, as it would be to explain the expression of my eyes or the tone of my voice. My art, if art it may be called, is essentially a part of myself; it was born with me, has grown and developed with me, and, so far as I know, will die with me, for I surely can not impart it to others. The most that I can do in that direction is to encourage people to live pure, healthy lives, to use their will-power always as beneficently, as uniformly as possible; never to waste their vitality, or abuse any power or gift, and to be ready at all times to bear one another's burdens in the way of pain and suffering and disease. If my life has not taught this, how vain would be the poor words I could now speak! And yet I foresee for the vital principle whose uses I have discovered, a brilliant and useful future. It will give life to the great, ponderable facts of medication; and where it does not wholly take the place of drugs and herbs, it will vitalize and spiritualize them, thus adding to their effectiveness, while diminishing the quantity employed."

And the words of Mesmer have proved true in more senses than one. The only underlying principle of truth in homeopathy is this idea that the mind is the seat of disease, and that the spirit or life of the

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drug can be employed, which in minute quantities will produce exactly the opposite from the poisonous effects which the drug itself produces in a healthy organism. Homeopathy, *per se*, as it is at present practiced, is the basest fraud that has ever been foisted upon an intelligent people; and when a cure is performed ostensibly by its treatment, it is, in at least six cases out of ten, owing to the curative principle in nature, which only needs to be let alone in order to manifest itself; and in three of their four cases, it is the magnetism of the physician that works a cure.

No man or woman can attain to eminence in the medical profession without having something of the spirit of healing indwelling in the soul, and manifesting itself in the life. The life of a healer should be pure, strong, gentle, sympathetic, self-sacrificing, asking little and willing to give much.

There is no use in trying to give stated directions in the way of diet, exercise, or the mode of life that shall be alike useful to all physicians who wish to heal by magnetic power. Each one should use his own judgment in determining what food best assimilates to his peculiar needs, what exercise is most beneficial. It is not in any way essential that a vegetable diet should be insisted upon; for we have been a meat-eating race for so long a time that the habit of centuries can scarcely be overcome in a single individual. Therefore, using due reason and discretion, let all choose their own food, making it always as simple, healthful, and nutritious as possible. Let the human frame be kept at its highest stage of health, that there may be always something of vitality and magnetic life to impart to the weak and suffering. And let no one forget that one of the most powerful healing agents ever yet discovered is a kindly sympathy for those in distress, and an earnest wish to relieve the suffering.

MAGNETISM has been called the first step out of the indifference of matter. To be magnetic, therefore, one must be well, full to the brim of royal health. We eat and drink by the action of certain minute ganglia. There is secreted from the arterial blood an impalpable, ethereal, magnetic aura which enters into and invigorates the nerves and brain, giving us physical and mental power. If this magnetism especially permeates the brain, then we are in high spirits; if it rushes to the digestive organs, we delight in the table, in beef and wine and strong, rich food. It may centre in the delicate tissues just over the eyes; then we are clairvoyant; or it pauses near the internal ear, and we become clair audient. We may have the power to send it streaming from our finger-ends; then we can fascinate others and put them in magnetic sleep, or we can relieve pain by laying on of hands,

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which is no longer, as it once was, an inscrutable miracle. Sometimes we have this magnetic power in such abundance that it floats around us, forming an atmosphere which is *palpable* and *real* to *sensitive* people. Some people seem to be entirely without this ethereal power, and they are magnetic vampires, feeding on others. They absorb much and give little.

The non-magnetic person is incapable of strong love, yet may not therefore be utterly selfish or entirely bad.

No medicine on earth can minister to a mind diseased save where that disease originates in violated magnetic law ; then it can and does. Remember, therefore, you who would make magnetism a remedial agent that a contracted heart and collapsed lungs mean illness and vice ; that the breath should be drawn strong and full, the lungs expanded, the shoulders set well back, the head poised gracefully and firmly, if one would have magnetism sufficient for the daily uses of life, and enough to spare for the sick and suffering about them.

Magnetic vampires, of whom we have spoken, the people who take much and give little or nothing magnetically, are generally such as were born of women who yearned for love from the father of the child they were carrying, but yearned and longed in vain. Hence the new soul came into the world ahungered and athirst for that food and sustenance whereon souls grow and are nourished.

Perfect health is perfect love. A well man ought to be a good man, and so of a woman. The great tendency of the Americans is to wear themselves out too rapidly. They exhaust their magnetic strength, and do not wait for it to recuperate itself either from the air they breathe, the food they eat, or the harmonizing influences about them, but go heedlessly on in a sort of mental gymnastics that comes very soon to mental debauch. All this is wrong.

People should learn to hoard more carefully their magnetic than their physical strength. They should give it as they would give of abundant wealth, never more than they can afford, for exhausted capital leaves crippled powers.

We have given minute directions in another chapter for the mechanical methods of imparting magnetism and using it as a remedial agent. But there is one truth that will bear repeating as often as a blessed thought will bear thinking. It is this: that the true magnetizer must have the good of his patient at heart, must work with an earnest and loving will, ready to take upon himself the pain and suffering, if in that way he can relieve suffering and benefit the patient.

The physician must learn to use his hands and his will simultaneously.

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The motion of the hands being a visible expression of the will, and he must beware of merely local treatment, which often throws a too powerful current of magnetism on a portion of the body already overcharged with diseased magnetism.

For instance, in a case of headache, it is always best to *rub the spinal column*, if possible, and to chafe the hands and feet thoroughly, in order to excite the circulation and *equalize the magnetic currents.*

In cases of neuralgia, the whole body should be rubbed and perspiration excited ; hot baths and fomentations being used on the parts most affected. So in the case of any other specific disease.

Restore and strengthen the general vitality of the system, and thus enable it to conquer the weaknesses that beset and the troubles that befall it.

It is well known that, when a person is bitten by a poisonous reptile, molecules of living germinal matter are forced into the blood, where they rapidly multiply. Millions upon millions being produced in an almost incredibly short space of time.

The natural action of the blood is interfered with ; combustion is, so to speak, extinguished by these foreign agents ; the lungs no longer vitalize ; the skin ceases to throw off its accumulated secretions ; the breath comes slowly and with difficulty ; coldness, drowsiness, insensibility creep along, and death is the result. This is poison that can be detected by the senses.

But a subtle form of poison lurks in the magnetic influence that is pernicious and unpleasant. For body and soul act and react upon each other, and mental and physical powers droop and fail simultaneously when the supply of pure and healthy magnetism fails, from any cause whatever. Then look to it, ye who would have strong, active brains, quick perceptions, sensitive nerves, red, healthy blood, and regular heart-throbs, carrying the vital fluid to and from the lungs.

Remember that true and pure love is the great remedial agent, and magnetism is to love what electricity is to the message that goes flitting over the telegraphic wires.

That as two magnets are drawn or repelled by the quality of the element that permeates them, so human beings are attracted or repulsed by the innate magnetic life within them.

Keep away from the people who cause an involuntary shudder to creep through your frame when you come near them. Keep away from the person who does not give your hand a good firm grip of welcome, whose presence brings with it a chill of disappointment or indifference.

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Give that man or woman plenty of space, and do not seek their society, if they make you feel weary and low-spirited with no visible cause.

In short, shun all disagreeable people; for it is a sure sign if a person is disagreeable to you that the magnetic conditions are inharmonious, unhealthy, and injurious between you.

There are probably people enough in the world whom you like. Seek these, and when found, learn to appreciate them truly.

SIR ARTHUR CLARKE.



CURING CONSUMPTION.

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THIRD SECTION.

VITAL MAGNETISM.

Lay hold of the principles of life—Two different objects can powerfully affect each other—The great secret—True and false magnetisms—Good homes and good houses essential—Divine laws not to be interfered with—The power that made the world can attend to it—Chronic inharmony from false desires—Proper education of girls—The true mission of woman, motherhood—Man's yearning after his true magnetic mate—Woman's condition far different from man's vitality, physiologically and magnetically—Harmony essential to the happiness of the future being—Infanticide terrible—Three fifths of the controlling influence of the world delegated to mothers—The relative difference between the secretion of the male and female—The imperative demand of the male—Causes for so much disappointment in married life—The days of courtship should never end—The food one is forced to eat neither satisfies nor nourishes—An appetite may be created for love—The dress of woman—Competing fashions—Corsets are unhealthy; cause falling of the bowels—Nature has no need of abdominal supporters—An outrageous style of dress—A rational style of dressing for eliminating magnetism.



E WISH to show to all reasonable and thinking minds that the way to abolish disease is to lay hold of the very principles of life and strengthen and encourage their action.

In contradistinction to the magnetic influence which has been found to exist in all metals, in fact, in all physical matter, there is the spiritual or vital magnetism, which, imperceptible to all outer senses, exists, as life itself exists, in a way that can not be explained or understood thoroughly, and yet is appreciated in a greater or less degree by all. As Dr. Foote pertinently says, "A man will tell you that he does not believe in magnetism or magnetic treatment; and yet if he bumps his head, he instinctively rubs it briskly with his hand. That is magnetism; the unconscious effort to equalize the disturbed currents and make them flow on evenly again."

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If a person strikes his elbow suddenly and with some force, his pulse is thereby accelerated. A brisk rubbing of the injured member therefore equalizes as well the circulation of the blood as of the more impalpable but not less real magnetic current.

In the same manner that two objects of the same organism act and react upon each other, two different and distinct organisms can far more powerfully affect each other. This is the one great secret that underlies magnetic medication. Every person is born with a certain amount of magnetic capital, to be used or abused as the will and circumstances surrounding may direct. One thing is very certain, that no person can have within him a strong, pure, and earnest love without healthy magnetic development. Especially is this true among women. Naturally more sensitive than men, they need associations about them from which they can at all times draw strength and pure and loving sustenance.

Many persons think themselves in love when they are only magnetically fascinated.

This magnetic fascination may become a pure and hallowed support, or it may degenerate into a selfish excuse for cruelty and unkindness.

Every person who truly loves is as willing to give as to take; more so, in fact, for love is essentially self-sacrificing.

Woman's strength consists in using her own legitimate powers, and never trenching upon man's domain unless she wishes to be looked upon as a man. Woman should draw man loveward through gentleness and unselfish affection, on her part, which will naturally correspond to the attributes of strength, guidance, and protection, which belong to man. Peace will reign at least nine tenths of the time in a healthy family, where discord and inharmony will be constantly at work among disease and suffering.

Magnetic health brings rest and quiet, through which the physical system can gather strength.

In order that the magnetic conditions of both man and woman be pure, strong, and healthy, it is necessary that they should have good homes; homes that will not impose upon every woman a burden of care which she is no wise fitted to bear; homes which will not demand that every woman shall be a housekeeper, a looker-after material things, a slave to the dominion of king dust, whose sceptre is a ragged bunch of feathers that must wave too often like a bird of ill omen before the distracted eyes of his victims.

It is not necessary that a woman be trained like a man in order that she may be independent and earn her own living; for there are

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plenty of pleasant and graceful ways in which woman's life may be made both attractive and profitable, if she so wills it. It is true every girl should be trained to be self-supporting; not defiantly and aggressively so, but with her own strongest impulses and best powers so developed that their own tastes may be gratified without doing any violence to their finer instincts. Women can be artists, and yet be kind and affectionate daughters. They can be sculptors, and wise and gentle sisters; architects, and good mothers; teachers, and fond and loving wives.

Whatever a girl wants to do, that she should be encouraged in doing, and almost every girl wants to do something to make herself useful and independent. There is no need for a woman to be classed or to class herself offensively as a reformer, in order that she may do good work in the world.

It was said by Mrs. Mary Livermore, the well-known lecturer, a few days since, speaking to one of her own ilk, "O you little witch! you want to reform the whole world;" and the witch addressed was a pale, sharp-visaged, sickly, irritable woman of something more than forty years, who, though ostensibly married, is of the class to which Dr. Clarke refers, when he says, "There is a class of hermaphroditical persons who are not truly wives, and never can be wives—not mothers, and never can be mothers." This witch smiled, and evidently took the lady's words as a compliment. But she made a great mistake.

It is no compliment to a human being that they wish to interfere with the divine laws by which we all are governed.

The power that made the world can attend to its progression and reformation in a way which we finite beings know not.

It is more a diseased vanity, an abnormal desire for distinction and notoriety, that make these women ramp and race and struggle to place themselves in positions which they have not strength to fill. It is because they need pleasant, sunshiny homes, places of rest and freedom from care, because they need the strength within themselves to inspire earnest and honest love; and, lacking this, they are discontented, restless, and unhappy; which unhappiness reacts upon all who come within their sphere, and chronic inharmony is the result.

It is true that girls need only so much education as will make them good mothers; because the true mission of woman is motherhood, and the great care of her life should be to rear brave sons and strong and gentle daughters.

The magnetic influence that comes from parentage is one of the most intricate and mysterious studies that the human mind has yet

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FIG. 7.

attempted. It may be said, as an appendage to the theory we have just advanced, that the true mission of woman is motherhood, that the true mission of man is fatherhood, and that he should devote his life just as conscientiously to the child-life that is to come after him. It is true that every man, for the sake of his children as well as for his own sake, should make his life pure and natural, his physical, moral, and mental natures well balanced, well educated, and well cared for. But nature makes a wide distinction between the immediate cares of father and mother for the young life they have evoked. A man may spend a single hour, or even less time, in the society of a woman whom he loves. (Let us, for the honor of man and for the best good of future generations, understand distinctly that no man spends even a single hour in the intimate relations that lead to parentage unless with a woman whom he devotedly and truly loves.) He is called away by business or some other motive. He remembers the woman as a gentle and holy influence that fell upon his life. He thinks of her pleasantly and kindly, and that is all. Sometimes, perhaps, he wishes that the days of his wanderings were over, and that he could go back to the woman he loved, to the wife, it may be, and be happy with her.

How is it with the woman? Her lover has gone from her sight. She knows she will not see him again for a long time. Perhaps, owing to the uncertainties of his journeying, they can not even hear from each other. Days grow to weeks; a little wonder, a trembling uncertainty creeps into her mind. Months pass; the uncertainty

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becomes a certainty. There is a new life throbbing within her own. The woman is not necessarily unhappy, though, sad to relate, she is too often so. But allowing that she is happy, that every legal form has been complied with, that society gives her permission to bear her babe in peace, that she is not called upon to disguise its presence with unnecessary torture, or hide its birth by the crime of infanticide; still there can be no hour, no single minute for the long year that follows the departure of her lover, in which she does not think of him, constantly reminded by the child-life which demands her care.

How important is it, then, that the mother, whose very life and thought must be given to her child, should have every thing harmonious and elevating that could in any way tend to the future life and happiness of that little epitome of herself and another, while waiting to have its *individuality* confirmed.

Every life is worth saving, and the crimes of abortion and infanticide are scarcely more terrible than the atmosphere of chill repugnance, the constant wail of the mother-heart over her unwelcome offspring, that fills so many homes.

Unconscious as the father may be of the very existence of his child, the mother's every pulse throbs for it and with it, and it is no wonder that our wisest physicians and philosophers have delegated to woman at least three fifths of the controlling influence in the world. Women have more power than that even, if they but knew how to use it rightly.

Pardon us for coming very near to a subject usually tabooed alike in polite literature and medical nomenclature. But it is true that a physical necessity exists in the very nature and constitution of man which the normal and healthy woman can not, from her own experience, appreciate. Men do not know this, many of them; even wise and sensible men would not believe it if they were told; but it is nevertheless true that the fluid that is secreted by the generative organs of man is nature's wise provision for the propagation of the race, and it demands a natural and healthy excretion. It is the life of the future generations, and should be so considered. With woman the whole matter is different. A single, *tiny ovum* passing without pain or effort once every month from the ovaries to the womb, and thence as a natural excretion carried out of the system, is the *only atom* of *life* that she is called upon to furnish.

Our stupid reformers tell us that women have as much right to ask for love and its passional expression from men as men have from women. So they have, as far as abstract right and privilege are concerned. But a person seldom asks for that which they neither want

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nor feel need for, and unless excited by personal contact with some one magnetically adapted to her own life and organism, the natural and healthy woman feels no stirring of sexual instinct within her. There are unnatural, unhealthy, and abnormal conditions under which the sexual instinct is falsely and ruinously excited, but of that we will deal in another chapter. Our present purpose only is to explain, if possible, to ignorant and puzzled manhood, the reason why they are so frequently disappointed in the married life to which they had looked forward with so much hope and pleasure.

The days of courtship should never end, and each fresh experience in the annals of love should be a new seduction on his part—a new giving of herself, life, and heart, on hers.

The food which a person is forced to eat neither satisfies nor nourishes them, especially if they have no appetite for it. But suppose you entice them to a game of romps, some healthy and pleasant exercise that makes the blood circulate faster, the pulse beat quicker, that exhausts the accumulated nervous force, and leaves the muscles weary and the brain temporarily depleted, then you have manufactured an appetite, and the food that was almost loathsome before grows tempting and desirable.

Is the lesson then so difficult to learn, that just as easily an appetite can be created for love and its passional expression? Ah well! we leave you to make your own applications of the mystic subject.

There is one more point that materially affects the magnetic life of woman, and therefore the magnetic welfare of the human race; it is the *dress of woman.*

The feminine nature, turning instinctively toward all that is graceful and beautiful, has a natural fondness for drapery. This is one great reason why dress reforms are so unpopular with women of taste and refinement, because the reform dress is usually an *outré* and ungraceful combination of all that is most objectionable in the ordinary man and woman costumes of the present day, without the redeeming features of either. Still there are adaptations of dress that are graceful, comfortable, and healthy. And we know scores of women who dress simply, and even elegantly, without any pretensions to reform, and yet never wear an injurious or unhealthy article of dress.

CORSETS ARE UNHEALTHY, not merely because they are usually tight about the waist, but also because, by a *pressure* upon the *diaphragm*, they are the cause of a tendency to *falling of the bowels.* And the so-called abdominal corset supplies a want that never should be felt.

Nature has provided abundant support for the abdomen; won-

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drously strong and supple are the ligatures that cross and recross each other to hold the bowels in their proper place, to support the womb and bladder, to make the loins strong and light and supple. If these muscles be properly cared for, if proper food be eaten, and proper exercise taken, there would be no need for abdominal supporters of any kind.

A tendency to falling of the bowels, if early discovered, can be easily cured by proper magnetic applications. A strong and healthy current of magnetism directly applied to the weakest locality, and followed by a general treatment to equalize the magnetic circulation, will give a tenseness and vigor to the diseased or weakened organs that nothing else can impart.

That the clothing should be light, comfortable, and, to please the eye and the taste, graceful, we will not deny ; but there are absurdities in the latest edition of the reform dress that will certainly be apparent to any observer. For instance, read the description which a woman herself gives of her own dress ; and she, be it understood, a reformer of the fiercest and most rabid kind. She says, "In the winter I wear next my skin an entire suit of flannel, waist and drawers combined, the sleeves reaching to my wrists, and the waist coming up well about the neck, the drawers-legs fastened about the ankles. Over these, I wear a canton flannel suit made in the same way. And last winter, I wore, in addition to these, a similarly made suit of heavy twilled blue flannel : my woolen stockings are held up by elastic straps that fasten at the waist. I wear leather boots, buttoned high, and over these, when I go out, I wear blue cloth leggings lined with heavy linen, and buttoning from the ankle to the knee. I wear but one skirt or petticoat of woolen, and a cloth dress cut with a plain loose waist, and a sack of the same over all."

This is her own description ; and a more thoroughly unhealthy, unnatural, ungraceful, and in every way undesirable dress could scarcely be invented or devised. There are eight thicknesses about the ankles, where no extraneous warmth is needed ; there is the irritation of flannel over the whole skin, which is bad and unhealthy; there are six to eleven thicknesses about the waist, which are unnecessary and burdensome; and there is an utter lack of gracefulness and elegance in the whole appearance which would make the whole thing objectionable, even if no other objection were offered. The clumsy boots, buttoning high about the leg, are bad, and the leggings over them simply outrageous.

You may think it time that we, having complained of the fashionable dress, and criticised the reformer, make some suggestion of im-

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provement. Wise, thoughtful little women all over the land, we call upon you each and all to assert your individuality; to choose each the dress best suited to her own means, taste, figure, and convenience, and to wear it, never forgetting to make yourselves as pretty and as comfortable as possible. I do assert it as my honest opinion, after years of careful thought and inquiry, that flannel should not be worn next the skin; that nothing should be worn which clings closely or acts in any way as an irritant.*

Our suggestion for a dress would be slippers or low shoes, that could be taken off and put on easily; soft, thick stockings, preferably of cotton; a cotton chemise, made long enough to come below the knees; a loose cotton or stout linen waist, to which, by means of clasp-pins, all skirts can be easily and securely fastened without the trouble of buttons and button-holes.

If a woman has a good figure, she, of course, needs no padding or building up; but so many of them have, either from an unhealthy and unnatural mode of life, or from hereditary weakness and disease, thin, angular figures, that they are quite excusable for adopting the little devices of padding that go to make them look trim and attractive.

Long, soft wrappers that can not be easily tumbled or torn, loosely belted about the waist, and neatly collared and cuffed with the same material, or with soft, dark lace, are the most attractive and serviceable house dresses.

For the street, there is the simple walking-dress, plain skirt, swinging a couple of inches from the ground, and any kind of sack or over-dress that may suit at once the taste and comfort of the wearer. *Thick cotton drawers should be put on when going out in the cold* or wet, exactly as the cloak or other garment is put on for warmth and protection from the weather. These should come just below the knee, where they may be met by long, soft, knitted leggings.

You may think this dress would be a very insufficient protection in the variable climate that prevails in the United States; but, ladies, remember the lighter the burden of clothing that you are compelled to carry, the more strength you will have for other purposes; and the free circulation of air next the skin, carrying off the insensible perspiration, and not compelling it to struggle through various thick-

* Our contributor, in making these very exclusive remarks about the use of flannel, means them to apply to the healthy, the strong, the robust; therefore the invalid, the consumptive, the very negative lymphatic, will not be deluded thereby, but in all cases be governed by their needs, or consult a physician of large common-sense and practical experience.—ED.

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nesses of flannel or other cloth, is one of the best *tonics* that can possibly be used. You will find that you will seldom, almost never, have colds, coughs, and other irritating diseases if the skin is kept cool and comparatively dry. Then, of course, you are to take what exercise your health demands or your circumstances permit. You are to *bathe* for the sake of *cleanliness*, and not as a mere matter of form. In short, ladies, you are to use your common sense in all things.

Thus only can you win the strong currents of vital magnetism to flow through your systems, making you at once healthy and happy, giving you time and strength to develop every best instinct, every purest hope and aspiration.

The warmth of the dress is largely a matter of habit, and one *needs* what they are accustomed to. Accustom yourselves, therefore, to as little clothing as possible, that you may have healthy, vigorous cuticles, ready to absorb the *ever-present wealth of magnetism in the air*, and adapt it to your nourishment and support.

I did not intend this as a special exhortation to woman: but as man governs the world, and woman governs man, I am content to address myself to her.

SIR ARTHUR CLARKE.



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FOURTH SECTION.

VITAL MAGNETISM—*CONTINUED.*

Its origin—The brain a magnetic reservoir—The digestive functions set free electricity—The vitalizing properties of air—The great necessity of sunlight, and sunshine never should be excluded from rooms—Artificial heat may restore much magnetism—Danger of living in shady rooms or houses—Philosophy of sun-stroke—Proper diet—Cheerful, healthful society—The babe receives magnetism from the mother—Human magnetism the highest attribute of earth-life—Magnetism stirs the blood and contracts the muscles—Individual spirit organized electricity—The passions belong to the body—The body the home of the spirit—Evidences of spirit communication always known—Swedenborg—Magnetism and electricity the agents of spirit communication—The laws of spirit-control but little understood—Every form of clairvoyance, mesmerism, magnetism, and mediumship embraced in spirit-power—Home influences should be pleasant—Avoid unpleasant magnetisms.



HE subject of vital magnetism is demanding, more than ever, a place in the medical world to-day.

It is an agent more valuable than any combination of barks, and gums, and roots, more potent than any chemical drug, perfectly harmless if used with reason and in a spirit of kindness, and within the reach of all, however poor, or ignorant, or feeble.

Every brain is in itself a magnetic reservoir, receiving magnetism and distributing it according to the condition and needs of the system.

Every motion evolves electrical and magnetic force. The digestion of the food, the circulation of the blood, the action of the respiratory organs, all set free a certain amount of electricity, which the brain garners for future use.

The brain is composed mostly of two substances. A pale gray tissue which collects and holds the vital magnetic or nerve-making substance, and a white fibrous matter, firm in texture, and consisting

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of fine tubes, which act as distributing agents to carry the vital fluid to the nerves.

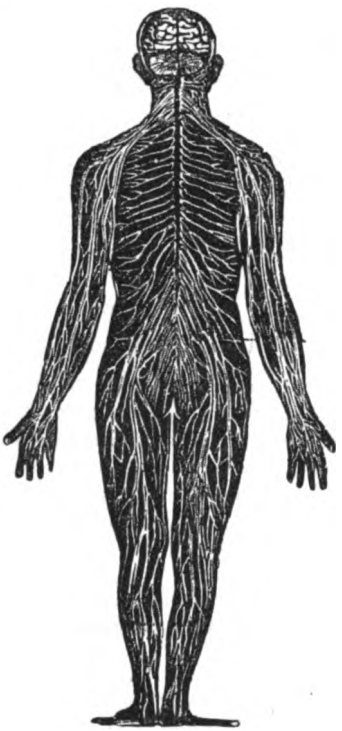


FIG. 8.—NERVE-TELEGRAPHS.

There are in other parts of the system smaller magnetic reservoirs, sometimes called a ganglion of nerves ; but all these are under the control of, and receive supplies from, the brain itself.

And to keep the brain well supplied with nerve-power, with magnetic vigor, with vital electricity, is the great object and desideratum of life and health.

Through the nerves of special sense the brain is constantly being communicated with in regard to the physical condition and surroundings of the body. The brain is instantly informed when light comes to the eyes, when pleasant or unpleasant odors reach the nostrils, when waves of sound are borne to the ears ; and it is the indwelling spirit which governs brain and nerves, which carries all knowledge through the medium of physical powers, which supplies the motor nerves with motion, and the sensitive nerves with sensation.

This power of the spirit can not be fully comprehended by mortal mind acting through matter.

But when the grosser material of bone and muscle and tissue is laid aside, then the spirit is free to inhabit its spiritual dwelling-place.

It is useless to try to provide a healthy body for a diseased spirit.

And it is best always to protect the spirit, to provide for its welfare and happiness. Then the body suffers less, the brain is more active, the nerves are stronger, and the whole machinery more easily acted upon.

The vitalizing property of air is mainly electricity, which is taken up by the lungs and pores, and carried to the brain for use. But once gathered there, it takes on some portion of the spiritual influence and life-power of man, and becomes human magnetism.

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This can be imparted by laying on of hands, and sometimes by the force of will without actual contact, so that the recipient may receive a strengthening and beneficial influence.

A gentleman in New-York State, Mr. Vincent Kenyon, could, at one time, enter a room where any person was lying dangerously ill with either chronic or acute disease, and, by merely sitting down quietly and looking at the patient, there would soon appear symptoms of improvement in the physical condition of the sufferer.

Strength would return to the weakened frame, light to the eye, and courage to the mind.

The exercise of his will, on the part of Mr. K., had doubtless much to do in producing these wonderful results; but the co-operation of the patient was not essential to its action, as many were healed in this way who had no faith whatever in the possibility of such a result, and many others who were entirely ignorant of any such effort being made, and yet felt themselves growing stronger, pain and inflammation fleeing away as by magic, and health and vigor returning.

But owing to his ignorance of magnetic laws, Mr. K. was not able to gather vital magnetism enough to recuperate his wasted powers.

The nerve-centres became weakened, and he has ever since been affected with a species of spasm, usually coming on in the night, and having the appearance of cramp in the stomach.

Nor is Mr. K.'s an isolated case in regard to the healing gift.

Many people have had it; some have grown famous from its exercise.

A Frenchman, known as Zouave Jacob, has cured hundreds, and Dr. J. R. Newton has healed thousands merely by the laying on of hands, by the simplest form of manipulation, by the imparting of vitality.

This should be more fully understood, and more generally practiced.

We want institutions that shall be consecrated to the divine law of health. Homes where the sick in body and mind can go and find rest.

Where the weak *will* can be strengthened, the hungry nerves fed, and harmony restored to the worn and weary mortal.

We want large, cheerful rooms, clean and fresh, no matter how simple, where patients can be treated.

Galvanic batteries that will cause the blood to flow more readily and its vitality to be more equally distributed. Animal magnetism

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that shall be derived from the horses, cows, goats, and dogs about the place.

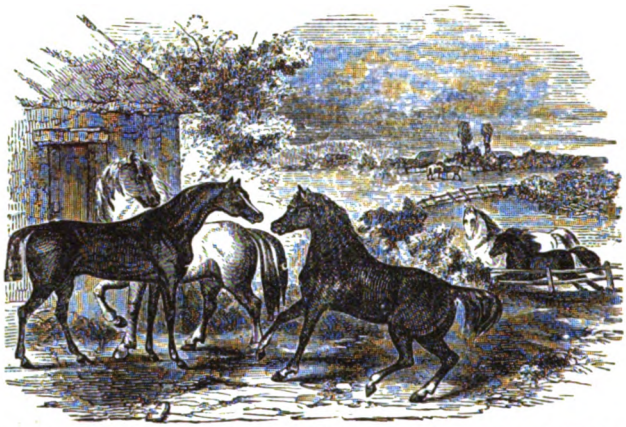


FIG. 9.—THE MAGNETISM DERIVED FROM HORSES AND ANIMALS.

Human magnetism too, emanating from strong healthy magnetizers, both male and female, who will work with earnest purpose and generous hearts, to give what they have so freely received from nature's fountain, life and health.

We are glad to find an interest in these subjects becoming more universal, and we take pleasure in recommending the few institutions of the kind to the careful consideration of all thinking people.

In all that may hereafter be done toward assisting nature in throwing off disease, people will look back to the pioneers of all reform in this direction, and it is well that every step taken now should be in the right direction.

Good and thorough ventilation is one essential requisite in an institute devoted to the improvement of health. And the day is not far distant, when the engine that forces hot air through the house in winter, making it of an equable and pleasant temperature, will force cool air through the same or corresponding pipes in summer, thus keeping the rooms at all times comfortable, well ventilated, and healthy. There is much magnetic power in the atmosphere, and so subtle and intangible are its currents that they are first absorbed by the sensitive organism, so that the air is robbed of its vital principle, more valuable than oxygen, even before the oxygen deserts it.

This is one most powerful argument in favor of pure air, if the vital magnetism be weakened. *Artificial heat is magnetic in strengthening properties for some constitutions, and a room or suit of rooms so arranged that a uniformly warm temperature can be*

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kept up through the changeful months of autumn, winter, and spring, would save more patients from consumption than any amount of journeying to warmer climates can ever do.

The room thus prepared should be gradually made colder as the cold outside increases in intensity, sinking from seventy to sixty degrees perhaps, but never greater variation should be allowed, if it be possible to avoid it.

See Dr. Stone's treatise on Consumption and its treatment, etc.

But it should be constantly borne in mind that the sunshine is never to be excluded from rooms devoted to the acquiring or maintaining of health.

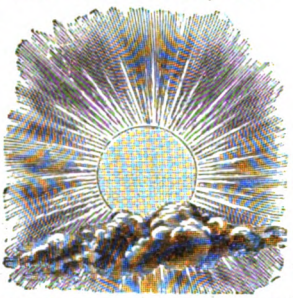


FIG. 10.—The sunshine essentially necessary to health.

Artificial heat may and often does prove beneficial, but no form or kind of artificial heat or light yet invented or discovered can begin to compare with natural sunlight for the purpose of stimulating and assisting either animal or vegetable life. Besides the action of sunlight upon all the mere animal tissues of the human body, it has a very decided effect upon the mental organization. A person leaving a room habitually sunny, and going to live in one where the sunlight seldom or never enters, will grow low-spirited, peevish, irritable, or gloomy, hopeless, and nervous, as the natural temperament may be.

The danger of sun-stroke is largely increased by the wearing of dark or black coverings on the head, and I believe there is no authentic record of any person having suffered from sun-stroke while wearing a white or light-colored hat. But the condition of the blood and nerves is also to be considered in this connection.

Any stimulant that heats the blood or weakens the reactionary power of the nerves, renders a person more liable to prostration from sun-stroke.

And the best preventive of any such casualty is to eat light, nutritious food, drink cooling drinks, slightly acidulated if possible, and wear something light both in color and texture to protect the head; then any reasonable exposure or exertion will not be attended with injurious results.

But when the brain has been affected by heat, the vital magnetism will be much reduced, and there must follow long quiet seasons for rest, and a gathering again of the magnetic forces. At such times, pleasant and healthful society is of the utmost importance, and can scarcely be over-estimated.

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It is an old and trite saying, that a babe takes more from its mother than the milk from her breast, and every nurse or physician knows that even if the mother can not nurse her child, the little one grows stronger from being placed near her in the same bed, and in her arms if possible.



Fig. 11.—Showing the magnetism imparted to the babe by the mother.

It is not merely the warmth and the physical life; for any artificial heat, however skillfully applied, will not produce the same result. It is the magnetism that belongs only to mother and child, that can not be otherwise supplied. This human magnetism is the highest known attribute of earth-life. It is that quality which allies man to the angels, and makes him sure of another life, a future existence, where all that is incomplete and unsatisfactory may be made complete and perfect. Men may not realize this intellectually; but the ignorant or the most learned, the most simple or the most profound, has felt the strange, yearning desire, that without reason or argument seems to demand of the future some recompense for the unrequited toils and troubles that make up so large a portion of every human life.

Though it might not be possible for the large majority of intelligent men and women to tell *why* they desire or have any faith that they shall yet enjoy a future state of existence, yet there are few who do not anticipate a life of which they have no knowledge.

It is the incomprehensible magnetic power that stirs the blood, contracts the muscle, and thrills the nerve, that asserts itself and claims continued existence as its true prerogative. Individuality is a manifestation of the magnetic life.

It is not merely a manifestation of the great principle of life that pervades the universe, but it is a voice from that especial divine spark which has become a power unto itself; which has taken on so much of earthy material, accumulated so many gross particles, that it can go its separate way, recognized as an *entity* even among material particles and grossness. And this magnetic life, this individuality, is what makes every person different from every other person, and is the principle which continues to exist as an individual, when the earthy material has fallen away, dissolved and lost by some law affecting only the union of animate and inanimate existence. The

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best idea of a spirit as a separate and distinct being, that can be given to those who are accustomed to judge and measure every thing by the material senses, is, that it is organized electricity.

That, when the grosser frame is laid aside, the spirit, escaping, attracts to itself finer particles and a more ethereal form.

With the earthly frame go the appetites which ministered unto it, the passions which glorified or debased it, the weakness which marred it, the strength which distinguished it. While to the spirit remain the motives which actuated, the hopes which encouraged, and



FIG. 12.—FAITH.

the faith which cheered it. And spirit in a spiritual sense, as matter in a material sense, always seeks its own level. The human being approximates to a certain extent to this same principle.

Seeks the society it is best fitted for or would like to be fitted for.

But surrounding influences of wealth, or family, or social position sometimes elevate a person higher than their natural tendencies, and sometimes drag them lower.

In the world of spirit all this is changed. There is no power or influence, or factitious circumstance whatever, that can in any way affect the life or position of the spirit.

The power that dwells within the soul has more and more opportunity for free expression and action, as the spirit progresses, throws

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off the habits and imperfections which it gathered in earth-life, and grows higher, purer, and more nearly allied to the Highest.

As babyhood is but a prelude to youth, and youth especially designed as a stage of preparation for mature life, so the longest human life is but a brief and imperfect season of preparation for the measureless life of the spirit that reaches out beyond time and space into infinitude.

How important it is, therefore, that the spirit should be well treated and considered.

That every possible advantage be given it for growth and development. That the body, which is the home of the spirit, be kept pure, and strong, and healthy.

Even though it be but for a comparatively short time that the spirit dwells in its earthy tenement, it is due to the better and higher life it is destined to lead in the future, that that *tenement* be properly and consistently cared for.

For many thousand years, as far back as can be traced any authentic record of human life, there are evidences of efforts made by spirits who have passed on from the earth to other stages of existence, to manifest themselves to and communicate with their friends left in the material world. Some of these evidences are vague and indistinct, and they vary in style, from tragic and frightful, to comic and ludicrous. Any one who will carefully read the accumulated ghost-stories of the last two hundred years, will find that, however slight their foundation may seem to be, they have gained credence so widely that it seems impertinent to say they are mere fabrications. Even the ancient witchcraft, with its uncertain vagaries and sometimes fatal results, seems to have been beneficent in its original purposes, namely, to heal the sick, to ameliorate suffering, especially to cure nervous diseases and troubled minds. But, from being misunderstood and unappreciated, the power soon came to be wrongly applied.

There is no doubt, in my mind, that the original design of that peculiar phase of life and history known as witchcraft was an effort, on the part of disembodied spirits, to establish some tangible method of communication with the material world they had left. But finding that the minds of the people were not ready to receive such demonstrations, or that they themselves were not sufficiently well acquainted with the laws of magnetic control to make it safe and pleasant for them to proceed, they withdrew the undeveloped power and influence, and bided their time.

Many years ago, when the quaint but faithful Swedenborg wrote the strange spiritual teachings that were given to him, he recorded

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that he had received one day a visit from a spirit whose material existence had been passed on the planet Jupiter.

He (the spirit) reported that it was no unusual thing for spirits who had passed on from that planet to a less material life to return and communicate with their friends, or to teach them concerning the higher spheres. And, he continued, in coming years, when your people have progressed in reason and spirituality, it will be no unusual thing for spirits who have laid aside their mortal forms and escaped from the thralldom of earth to return and communicate in some tangible manner with the friends who mourned for or needed them. It is not recorded that the spirit gave any inkling as to the way in which these communications were to come, or the material to be used in transmitting them. But magnetism and electricity were unknown forces then, and though the strange visitant was probably using one or both of these, to control the brain of his subject, yet he evidently did not try to explain his power to his subject.

And this brings us directly to the question, Has the prophecy made at that time been fulfilled, or is it being fulfilled?

There are millions of people, in the United States alone, probably millions more in other parts of the world, and these embrace many active brains, strong minds, and cautious judgments, who are ready to declare to-day that spirits do communicate with mortals.

And they declare this, not as a mere creed or belief, but as a matter of conviction based on evidence they have received.

This can not be all superstition on the part of those who receive this evidence, or fraud on the part of those who give it.

A large number of people are now known as "mediums" or media. They profess, or some power professes through them, to give communications from the unseen world, the world of spirits.

Many of these are men and women of known honesty, integrity, and reliability.

A large proportion take more pains to hide than to exhibit their weird gifts, and so very little is known of them, beyond their immediate and often small circle of acquaintance.

Some of those who have adopted public mediumship as a business, a means of support, are mere *charlatans*, *tricksters*, and *amateur jugglers*. But there are others who truly and honestly believe that the abnormal phenomena are produced by disembodied spirits. Now, as I said before, a belief which has obtained such universal credence ought not to be repudiated as a myth or a delusion.

The spirits are communicating. The age and time of spiritual progression has truly come. And here let me say that the best work

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of the spiritual awaking, so far, has not been done through its media.

At least, not through its professional media. It has been in a general spiritual growth, a liberal and kindly feeling for each other and for humanity in general. The spirits, finding they could make a recognizable impression on the minds of their mortal friends, fell diligently at work wherever they could find people ready to receive them.

In different ways, they found they could approach people of different temperaments. Some through their affections, some through their interest in science, many through their religious hopes and aspirations, and nearly all through that powerful element in human nature known as curiosity.

Hundreds and thousands who took their religion for granted, in a weekly dose, who never paused to think or inquire if the soul had a separate existence, that continued after the body had been laid aside, would stop to wonder what made a table move without sufficient force being visibly applied.

And when the cry came that it was all done by electricity, people who had at all begun to think upon the subject said with hesitating acquiescence, "Yes; but has electricity intelligence?"

Can it answer questions?

And when the next argument was put forward, "It is the action of mind over mind," the investigator could not help asking, "What mind?"

A truthful and reliable medium once said, "I do not like to have people ask questions about business. I do not feel that the information they receive can be relied upon, or that it is right for any person to give themselves up to any guidance that interferes with the exercise of their own will and judgment."

More than this, I know that the person who asks the question often answers it just as much as though he held the pencil and wrote the words.

I can not help this, nor is the questioner aware of it. It is the influence of mind over mind. But what is mind? Is it not spirit? And if the spirit confined in its fleshly tabernacle has so much power, will it not, when free, have vastly more?

It is a problem very difficult to solve. But the question that next arises is, if the communications are from spirits, why should they be so vague and unsatisfactory, even contradictory sometimes?

It is because the means by which the work is done are so imperfect and the laws of control so little understood.

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Because conditions are so unfavorable, and harmony is not observed.

But we can not here explain the strange phenomena of spirit intercourse.

We do but hint at it, and leave each one to pursue their own investigations.

The subject is worth careful study and much serious thought.

It is intimately connected with vital magnetism.

It is the turning-point of many social and scientific questions.

It is working a complete revolution in the manner of treating diseases.

Spirit-power and control embraces every form of clairvoyance, mesmerism, magnetism, and mediumship.

It is the power that lives, that manifests itself through every material form, from the inanimate mass of granite that makes the largest mountain to the faintest zephyr that plays about its base.

Magnetism and electricity are to the spirit what air and light are to more material life. And if the magnetism be impure or the electrical currents in any way disturbed, the spirit is unpleasantly affected, and the body soon suffers.

Then keep the home influences pleasant, to attract a loving and harmonious circle of spirits. Let no harsh words or unkind thoughts break the tranquil magnetic tide that ebbs and flows about each individual.

Avoid coming in contact with people whose magnetic influence is unpleasant or questionable.

And if obliged to meet such persons, do not quarrel or argue with them.

It gives them an advantage they could not otherwise obtain; lets them come within the sphere of your individual life, where you can not repel them so easily as you could at a distance.

Guard well the spirit, which is the real and true life. And care for the body only as it is the shrine and temple of the living spirit.

FRANÇOIS DOMINIQUE ARAGO.

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FIFTH SECTION.

MESMERISM.

CONTRIBUTED BY FRIEDRICH ANTON MESMER.

I MUST be the hero of my own story perforce, to clear, if possible, from my name the stain of fraud and deception that has for so long rested upon it.

I was born in Germany when the great "Peasants' War" and the cruel "Thirty Years' War," had wasted the energies and eaten up the wealth of the land, and peace and the empire were dying. My mother was a Suabian peasant woman, and the love of freedom burned brightly in her heart.

I know her soul was strong and pure; for while she lived, it spoke in brave words of courage and loving deeds of kindness; and after she laid aside the burden of mortal life, I felt it thrilling in every bright hope of mine, leading me on and on to better work for the world.

My beautiful mother! From her I inherited the strange gift of magic, and though some of her family, it is said, had practiced "black magic" that carried a curse with it, her own power was all in the region of "white magic," and fraught with blessing.

Fortunately, the gift of my inheritance was of the whitest and most beneficent order, and even when I was a babe, my mother discovered the germs of that wonderful power in me, and dedicated me at once to the god of healing.

The power of the mineral or metallic magnet to attract metals was even then well known, and not being understood, was at once attributed to magic. It was believed that these magnets, when properly manipulated, had power to cure disease.

But there was the mystery.

They must be properly manipulated, and by the proper persons, or no beneficial result would follow.

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This early led me to inquire, "Was it the magnet or the hand that wrought the cure?"

My mother had a magnet, the fame of whose magical virtues was known far and wide.

Often have I seen her take that bit of iron in her hand with a gentle, caressing motion, speak to it some low, inarticulate word, then pass it lightly over an aching brow, or a swollen and inflamed joint, or an ugly, suppurating sore.

Strangely, and by almost imperceptible degrees, the pain would depart, the swelling would disappear, the inflammation subside, and the suppuration cease.

I had great faith in my mother, but very little faith in that bit of black iron. Yet when she saw in my eyes the doubt and questioning, she would put the magnet in my hand, and bid me rub some waiting sufferer, while she stood with her hand on my head; or, perhaps, only touching my shoulder, and I could feel the strange, strong thrill creeping and quivering through me as the pain and disease fled away.

Still, this did not have the effect that she intended; for when I crept alone into her room and took the sacred magnet in my small hands, and held it tight, and whispered to it, no thrill swept through my nerves at its cold touch. *So all the more I believed in my mother, and less in the iron charm.*

With almost incredible care and patience, I fashioned a bit of slate to the exact size and shape of the magnet, and with fear and trembling I exchanged the one for the other, carrying the magnet about in my pocket day after day, and leaving the slate in its place, determined to wait until a patient came, and see if the healing did not go on as usual.

It was a bad case of inflammatory rheumatism that came; a strong man, who had been working day after day upon the dikes, standing or walking with his feet in the heavy mud and the water nearly up to his waist. For a time, the intense excitement of saving lives and homes, where the river had burst through its banks, kept his blood circulating with such extra force that he could not take cold; but as he grew weary, he had less power to resist the abnormal influences about him; the continued wet and chill caused the blood-vessels to contract where they were least protected by muscle or adipose tissue —this, of course, was about the joints—and pain and swelling was the result. It was terrible to see a strong man suffer so, and I remember how my mother hurried, as soon as they had laid him on the bed, to bring her magnet and rub him. She took the bit of

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slate in her hands without even looking at it, and proceeded to her task.

She closed her eyes as usual; but, instead of the peaceful and quiet look that usually rested on her face, she grew pale and wan, the lines about her mouth were tense, and almost painful to see, *her breathing was long, labored respirations, and it was plain to see that she worked with the greatest difficulty.*

Slowly, very slowly, the pain which the sick man suffered was relieved; *but it left my mother utterly prostrated, and it was several days before she quite recovered her strength.*

Grieved and conscience-stricken, I put the magnet back in its place, but still I was not satisfied.

It was by such experiments as these that I discovered the principle of animal magnetism, as I called it, to distinguish it from the curious metallic magnetism which puzzled me so greatly.

I believed that there was a latent, inherent power in all organisms to control others, and to heal them.

I called it brain-power and will-power, the action of mind over mind; and since then it has been termed od-force, the odylic influence, electricity, and a hundred other names besides Mesmerism.

It is *not a matter of temperament*, as far as temperament is manifested in color of eyes, hair, and complexion; for the mystic power is known to exist in the fiercest sanguine and the coolest lymphatic, in the darkest brunette and the fairest blonde.

It is not a matter of climate; for from the equator to the poles it is found, and manifests itself in one form or another.

All nations of which we have any record, all times to which history extends, bear witness to this curious power, varied alike in its purposes and its results, but springing from one great universal source.

I say, I believed that all human beings possessed this power, and that, under favorable circumstances, it might be developed and increased to a wonderful extent. I knew I possessed it.

I had demonstrated the fact in a hundred different ways; and knowing that I had been through with no especial course of training to learn or acquire it, I could but think it was a natural power, and, like breathing or any of the physical senses, shared by all.,

This was not in itself a very great mistake; *but when I tried to reduce the mystic power to a science, and teach it by fixed laws and rules, there I failed.*

And yet, so wonderful and apparent was my own power, that people *would not believe me when I told them I had nothing to teach.*

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The magnet of iron, which I sometimes rubbed upon an aching brow, and the pain would flee away at its touch, lay utterly powerless in the hands of him who would fain be my student and disciple, and then I was blamed in bitter terms because they said I would not impart the secret of my success; that I took their money, and taught them nothing.

Then I said, "I will take no more money for myself; if the people will give, they shall give to the poor and sick;" and so, when I was forty years old or thereabouts, I established a hospital in Vienna, where I cured many patients; and those in whom I had discovered the same power that I possessed cured many also.

Soon after this, I went to Paris, and there I was quite as successful as in my own home. So much so, in fact, that the government of France offered me many thousand livres, many thousand dollars, if I would betray to them my secret.

I told them I had no secret, but they would not believe me, and when I refused the money, they called me odd, eccentric, and even insane.

Yet I converted many skeptics to a faith in the power of magnetism, and established a sort of half-school, half-hospital there, leaving it in charge of some of my most faithful students and followers when I returned to Vienna.

It was after this that I was offered an independent fortune, more wealth than I had ever dreamed of possessing, and this, too, by my own friends and adherents, if I would betray to them the secret of my power.

I wanted the money to devote to my work, to enlarge my hospital, already overfull, and to bring health and comfort to many for whom I had now no place.

I hesitated, but they urged me to accept it as a gift if I would not take it as tuition-fee in the regular line of business; they knew if I once accepted the money, that I would hold myself in honor bound to give them true and just equivalent for it, so far as lay in my power, and they thought in that way they could wrest from me a carefully-guarded secret which I was keeping for some purpose of my own.

Urged by my needs and their flattering importunities, I took the money, and I said,

"Gentlemen and friends, I will lay bare to you my heart; I will give my very soul to your keeping, in return for this munificent gift, donated by your kindness through my poor and unworthy ministrations, to the sick and suffering."

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This only meant that I would tell them all I knew, which I at once proceeded to do, and behold, they are no wiser than before.

There *was a secret;* I knew it, felt it, but I dared not utter it; for I knew they would call me insane, and deprive me of my liberty and my work if I did.

I knew, when my gentle, truthful mother closed her beautiful eyes in a semi-trance and laid her hands upon the aching brow or distorted limb of some poor sufferer, that she called upon some spirit to aid her, and *I fully and firmly believed that the spirit came.*

The power that guided my hand, that thrilled my nerve, that healed the sick, opened the eyes of the blind, made the deaf to hear, the mute to speak, the lame and maimed to walk upright and strong again, *was the power of the disembodied spirit acting through me.*

When I pressed the balls of my two thumbs lightly upon the temples of my patient, in order to throw him into a magnetic sleep, or as people soon learned to call it, to mesmerize him, I felt the pressure upon my own brow of two similar points of contact, like the poles of a battery when fully charged. And by this pressure and the effect it produced upon me, I could at once determine what effect I, or rather the power acting through me, could produce upon the patient or subject.

I looked upon this mystic power of mine as a precious and sacred gift.

I shivered when people tried to analyze it with their hard book-learning, to submit it to severe scientific tests. I shrank as if in pain from all experiments tried merely for curiosity, and I would not give my magnetic subjects up, even for an hour, to the mental control of a person whom I considered impure or unworthy in heart or life.

One idea seemed curiously to possess me. It was, that when my mother passed away from earth the mantle of her spiritual gifts would fall upon me, and my power be increased tenfold. And so it was.

I knew when she came to me, and more plainly than ever before did I hear her dear voice urging me on in the path of duty, telling me never to sacrifice the highest to any lower impulse, but to remember that my life was consecrated to a power not my own, to a work which owned a higher master mind than any earthly authority. It was then that I reached the very zenith of my fame and usefulness, and then, *had I but possessed the moral courage to speak the truth as I believed and received it, I might at once have established the fact of the power of the disembodied spirit.*

But as Galileo feared physical pain or perhaps death, so I feared to take another step in the way of reform, of social query, and cavil

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and criticism, of ridicule and ostracism at last. I had my little share of personal pride. I had established a hospital, I had done some good in the world. I would take this money so freely offered, and for the future I would rest.

But instinctively my friends and pupils, even my most devoted followers, felt that I had not told them the whole truth, even as I believed it.

And so, little by little, I lost my power. I felt it slipping away from me, and I struggled bravely and determinedly to keep it. I talked with an earnestness that was positive fervor, with an eloquence that was all but inspiration; I wrote with tireless patience all the minutiæ of treatment for different cases, all the theories and experiments of which I had any knowledge; and yet I did not say, "This is the power of the disembodied spirits who visit me. This is the work of the physician who toiled and groped his blind, experimental way through a half-century of earth-life, and has now added a whole century of clearer knowledge and better light in the spheres beyond, which he returns to bless the waiting world with."

And because I did not say this, I did not tell the whole truth.

For a person to say that they believe in mesmerism and do not believe in spiritualism is an *absurdity;* for mesmerism is but one manifestation of spiritualism, and a very weak and imperfect manifestation at the best.

I do not deny that some minds or spirits while yet in the body do have a certain control over other minds; for I have known a sensitive subject when so magnetized or mesmerized as to be unconscious of surroundings, to be so under the control of the operator as to answer questions in a way quite foreign to the truth, and that because the one in control *believed* as the answers indicated.

I knew then that the person who asked the questions answered them too, and just as personally, distinctly, and individually as though he had spoken the answers with his own voice.

But this does not go to prove that there is no such thing as spirit-control.

In fact, it goes far to prove that there is such a reality, and this is one manifestation of it. For if the spirit still in the form, and compelled to express itself through the physical senses, has so much power, surely the disembodied spirit has far more power to act independently and freely.

I often hear the question discussed, "Has a man a spirit, a spiritual existence?" And the query sounds very strange, for man *is* a spirit.

When men learn to reason from this stand-point, to take as a fun-

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damental principle that man *is* a spirit in whatever sphere he exists, and of whatever material his visible form may be composed, then can they begin to approximate the power of the *spirit* itself, whether clothed in the ponderable and changeful material of the earth-life, or the more subtle and ethereal chemical elements that make up the habitation of the spirit upon some of the other planets, or farther on yet in these realms of spiritual existence, that are freed from most of the laws that govern the physical universe, and yet are just as amenable to their own adaptation of laws as the most sterile and barren mass of organic substance.

I was not a cheat and a deceiver, I did not feign any power that I had not full faith in; *but I did not tell the whole truth.* Therefore I failed to reach the highest possibilities of my own work, and passed away from earth unsatisfied.

I believe the reason that Swedenborg's words, unreasonable and imperfect as they are, yet carry so much faith and conviction with them, is because he told his whole belief and faith, heedless of the world and its taunts, regardless of society and its sneers. And the most skeptical critic who finds fault with the philosophy of Emanuel Swedenborg still feels that his heart was in his words, and that it is there yet. That he gave his time, his life, his own best self to his work, and then gave that work to the world freely and frankly, without hope of fee or reward.

I remember a brief, quaint interview with him while I was yet a boy, in which he said,

"A spirit visited me from the planet Jupiter. I asked him, 'Is death the same terrible mystery on your planet that it is here upon the earth?' and he answered me, 'Nay! Death is neither terrible nor a mystery; for we keep up a pleasant and frequent intercommunion across the boundary, that takes away all dread.'

"'But why can not such communion be generally established on this planet?' I asked wistfully, and the spirit made answer, 'The child plays idly and harmlessly with his toys; if he had the keen blade of the surgeon's knife or the intricate apparatus of the scientist, he would only make toys of them and demand that they should please him.'

"The earth is young yet. If the angels and archangels and the spirit of the Most High were to visit its people, its people would ask of them, 'How can we acquire wealth? How can we win gold? How can I stretch out the boundaries of my possession and encircle all that surrounds me and make it mine?'

"The day comes when the people of earth will see that gold and

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wide possessions are not the best gifts. Then the freed spirits will return and talk with them. Many weak and frivolous things must be said perforce, but the truth will be revealed at last.

"*Bide ye in patience.*"

And Emanuel Swedenborg was not a man who would be easily led astray by a whim, or deceived by an illusion or a phantom.

One of the keenest and clearest mathematicians that ever demonstrated a problem, and the best anatomist that ever studied the human frame, for he studied not merely to learn how the joints were hung, but what was the mainspring that moved them. He studied the body to find the soul, and through all research God came very close beside him, and sent his angels and messengers to minister unto the searcher after truth.

The student found that the soul, though for a little time *in* the body, was never *of* the body. That the body was but a garment worn for a few brief years, for the sake of an experience that could be gained in no other way, then laid aside for a better-fitting attire. And whatever wonders he wrought in word or deed, he said constantly, "The Lord himself, when I was in great doubt, allowed me the privilege of conversing with spirits and angels, which I have ever since enjoyed."

To Hahnemann came also the divine gift of magnetic control and healing, and he hid it under a yet weaker pretense than I had ever employed.

He found that he could work greater and more rapid cures without medicine than with it; and yet he argued to himself, "If I give no medicine, people will not employ me, the regular faculty will not consult with me; I shall lose caste and be called a charlatan;" so he struggled along, evading his drugs by one trick or another, until the idea came to him to *pretend* to give medicines, and yet employ them in quantities so small that they would have no sensible effect.

I think his theory of giving a medicine that would produce upon a person in health the symptoms of the disease he intended to cure was at first a mere pretense; but he worked it up into a sort of philosophy to satisfy credulous inquirers, and it was really accepted as a new school of medicine.

Hahnemann knew that the power transmitted through his agency came from a higher source than any chemical preparation, any mineral or vegetable drug, but he would not own it. He was mediumistic, but weak. Of his followers, the most of them at the present day give modified allopathic medicines in somewhat smaller doses than the regular practitioners; some use the eclectic or botanic rem-

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edies; and a few, a very few, trust to the spirit to assert its dominion over the human organism.

But a young physician not long since had a patient, a babe sick with some slight weakness of the bowels and persistent diarrhea.

After exhausting his skill and patience with other remedies that had no effect, he gave it (he said so himself) "a very minute dose of morphia, about a sixth of a grain."

That man, physician as he calls himself (?), did not know enough about allopathic remedies to know that a sixth of a grain of morphine, though a minute *quantity*, is *not* a minute *dose*. The child died from stoppage in the bowels.

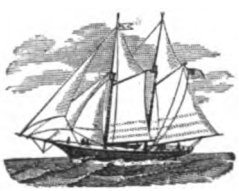
A lady boasting a few days ago of how sick she had been, and what great skill it required on the part of her physician to cure her, said that he assured her he had been through the whole cornucopia before he could find a medicine that suited her case.

The fact that the lady meant pharmacopœia, and merely mispronounced a word, is not half so ridiculous as the statement itself, which shows how exact a science homeopathy is.

Nay, it is not a science. It is a maudlin pretense, an insult to ordinary intelligence, and a weak and cowardly fraud. If a person *believes in the spirit*, and in the control which the spirit can exercise over the physical frame, then by the power of the spirit they can heal without drugs or the semblance of drugs.

I would have all magnetizers and mesmerizers, all clairvoyants and psychometrists remember that if they hope to work with any success they must have faith in the spirit-power that guides them, and they *must not evade a confession of that faith by any weak subterfuge, for their power will fail them if they do.*

Be honest and truthful, seek ever for the light, and the light shall be given you; and freely as you have received so freely give, by the power of the spirit.



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SIXTH SECTION.

CONSUMPTION.

BY JAMES RUSH.



ULMONARY Consumption is a disease of great frequency, and it is said, upon good authority, that in all civilized nations it produces from one sixth to one tenth of the total mortality in ordinary times. It is uncertain whether there is any part of the world or any race of men exempt from consumption, it having been found in the extremes of both hot and cold climates, in India, Australia, Iceland, Van Diemen's Land, and Patagonia. It is a disease that has a tendency to increase with the increased aggregation of the human family. Hence it is most frequent and most fatal in thickly-settled towns. It is sometimes found in children, often in old people; but peculiarly affects those just stepping to manhood or womanhood. It is often hereditary, being, it is said, most frequently inherited from the mother.

Many medical statisticians insist, and bring a long array of facts to prove their position, that the intermarriage of cousins is one prolific cause of tuberculous or pulmonary consumption. This is a subject of which we do not care to treat in this place. There *may* be no physiological reasons why cousins should not marry; there are powerful *magnetic* reasons, and these we will explain in another section.

But there are certain aggravating causes which superinduce consumption. Among these, habitually working or *living in close, ill-ventilated* places, especially when there is much *dust* or much *dampness. Pure air* and *sunshine* are the great magnetic agents to *prevent consumption.* But, when once the insidious destroyer has gained a hold upon the human system, it is one of the most difficult to battle with.

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The general symptoms of consumption are too well known to need any accurate description here. These, in their very earliest stages, often escape attention from their obscurity, and the slow, insidious way in which they attack the sufferer. In almost every case, it appears first like a *slight cold* or an attack of *catarrh*. This, passing without notice, grows worse, and the symptoms more decided. Shiverings occur, a sense of general chilliness followed by oppressive warmth, and, especially in the night, copious perspiration. A quick, hacking cough, pains between the shoulders and about the shoulder-

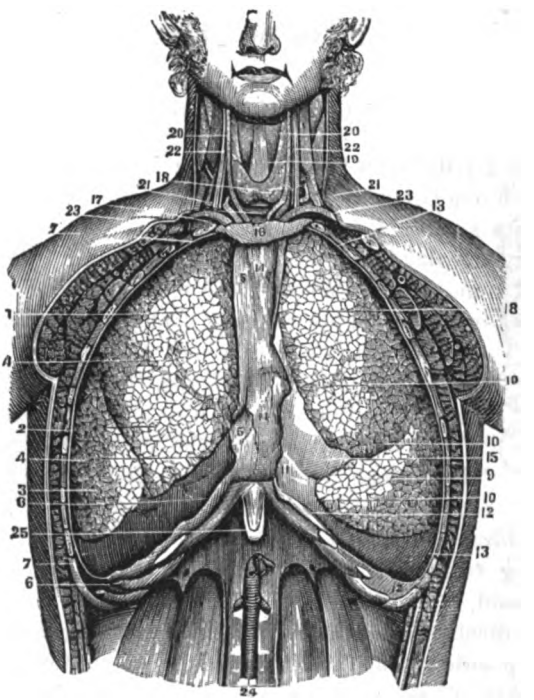


FIG. 13.—This cut illustrates the front view of the Lungs, the three lobes of the right, the two lobes of the left; the diaphragm below, the Pleura Pulmonalis, Pleura Costalis, the Larynx and Trachea above.

blades or below the collar-bones. These indicate a pressure upon the lungs, that the air-cells are not properly filled with air, that the blood is not properly purified, and that the heart can not do its legitimate work. The absorption of fine dust in stone-cutting, the inhalation of minute particles of steel in cutlery, or other metals in other smith-work, will cause this stoppage in the lungs, and produce consumption. But, in order to cure it when once it has asserted itself, no power yet discovered can act with any degree of certainty as a

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remedial agent, excepting inhalations which go directly to the lungs, and assist those delicate organs in throwing off their accumulated weight of extraneous substance.

Medicines taken into the stomach can only be useful in regulating the action of the secretive organs, and assisting the digestive organs to do their work.

A varied and wholesome but light and unstimulating diet; much exercise in the open air, especially in the sunshine, and cool, well-ventilated sleeping apartments, are the best adjuncts and assistants to the treatment by inhalation.

There is also a way in which an atmosphere may be created about a person similar in all beneficial results to residence in a warm climate; but it necessitates confinement to a single room, or suit of rooms, in cold weather, and for this reason is better adapted to the INSTITUTE, or medical conservatory, than to the private house. (See how to prepare a medicated air-chamber for domestic use, at the end of the section.)

In a large Medical Institute, it would be easy to have a number of pleasant adjoining apartments kept at an equable temperature, and always at summer warmth. These should be cheerfully but simply furnished, with more or less *moisture* in the air, enough to keep plants growing and in a healthy state; for there is no better barometer than the condition of a plant to tell if the air in a room is sufficiently vitalized with oxygen and magnetized with sunlight.

Steam-baths or vapor-baths, graduated to meet the wants of each individual, are powerful adjuncts in the case of consumption; but if not used with proper judgment and discretion, will tend to hasten decay and death.

Experience alone can safely determine in what way these baths should be used. They may be used with decided benefit by the patient alone; but in many cases, that benefit will be largely augmented by the attendance of a healthy and vigorous person, who should rub the patient thoroughly, gently at first, until it is known what degree of friction can be safely and beneficially borne. If the bather or attendant has, in addition to good health, a kindly sympathy with the patient, so much the better and more beneficial will be the result.

It is, alas! too true that many patients are sent to foreign lands to *die*, ostensibly for a change of air and climate, but *really* because the *physician is satisfied that they can never recover, and wishes to save himself from the stigma of having them die upon his hands.*

It is a curious fact that hysteria often arrests and even cures con-

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sumption. In many cases, the spasms of hysteric fits stop the breathing for a short time, and prevent the air leaving the lungs. In this way it is forced down into the lower air-cells, which become expanded and throw off their accumulated load of mucus. The lungs are thus expanded and made more active. Heart-disease, asthma, and swelling of the tonsils have sometimes the same or similar effect, by retarding the breathing, filling the lungs over-full, enlarging the chest, and thus causing a reaction that arrests the process of disease.

Children born of consumptive parents should be brought up in the plainest possible manner, having plenty of light, nutritious food, little meat, no coffee, no stimulants save fresh air and exercise ; an abundance of fresh milk, pudding and milk, mush, rice, green corn, all sorts of grains and fruits ; plenty of out-door exercise, which tends to give full chests, large lungs, and vigorous constitutions.

Children under seven years of age should never be kept more than one hour in the same position without a chance to run about, stretch their limbs, use their joints, and fill their lungs with fresh air. The chairs or benches upon which they sit should always be low, and provided with backs. The desks before them should be high in comparison, rising even to the armpits of the child, so that they need not sit stooping, in order to read, or write, or study.

They will, of course, soon be fatigued by this position before they are accustomed to it ; but if they are allowed to stand, walk, or run about frequently, this fatigue and weariness can be easily overcome.

It is well for grown people also to accustom themselves to sitting at a high desk or table, thus bringing the work up, to keep the form in a perfectly erect position. After a little practice, this will be found a more comfortable position, as it is far more healthy than stooping.



Fig. 14.—The advantage of carrying burdens on the head to prevent Consumption.

In the city of Edinburgh, Scotland, where consumption is almost an epidemic, the one class of persons said to be entirely exempt from the disease is the fish-women who carry fish in the streets for sale. They go a distance of more than two miles down to Leith Harbor early in the morning, fill their baskets with fish, and then hurry all the way to Edinburgh, where they sell the fish in the streets, often walking for six or eight hours with the baskets on their heads. This practice makes them straight, with full chests.

One of the best exercises for delicate per-

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sons, and especially for those in any way predisposed to consumption, is dancing.

No exercise should be carried to the point of *exhaustion*, or allowed to produce *debility*. But, for young and old people to meet together in pleasant, social intercourse, and then to dance; the exhilaration of the moment, the sound of the music, the steps that must be taken, even the light touching of hands, the *magnetic contact*, the smile and pleasant word passing from one to another ; all these tend to make the *blood flow faster*, and to bring the whole system into a more healthy state.

Consumption, in its first stages, can even be cured by dancing, commencing with a few minutes at a time, and continuing and increasing it for longer periods, as the strength will allow.

Pleasant company is one important requisite ; but the very motion itself is healthy and invigorating.

One of the best preventives of consumption is a cool, dry skin, bathing in cold or slightly warm water, rubbing the skin thoroughly with a dry towel, and then wearing loose clothing, with cotton next the skin, and a free circulation of air allowed,

Many people wear shoulder-braces to support the chest ; but we have always found that an *earnest will* and good common sense is the best shoulder-brace.

A person should be careful never to contract the habit of stooping, either from debility, or from standing or sitting in bad positions.

Round and stooping shoulders were formerly, and perhaps they are at the present day, in England, considered decidedly vulgar, marking ignoble descent, and denoting weakness and want of individuality.

There are boarding-schools where, if children have high or stooping shoulders, strong shoulder-braces are put on them, and passed down the back outside the dress, where a weight is attached, and the child is placed in a standing position for a period varying from fifteen minutes to an hour, two or three times daily, until its shoulders are brought into the required symmetry. They may be worn until the disposition to stoop is entirely overcome, and a fine figure and graceful carriage are fully established.

Remember, ladies, that we use health and beauty as synonymous terms. Every lady is beautiful, every woman is womanly, who has a good circulation of warm, red blood, strong lungs, flat back, good digestive powers, strong secretive organs and an active brain. All these for beauty, though we remember a sailor's description of a beautiful woman, bent on some errand of mercy, when he said, "Her

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foot is as light as the wave-lifted ship ; for it swings from the heart, and not from the hip."

Ladies, if every motion of your lives could be so described, if the hands reached out from the heart to do good and the thoughts sprang forth from the heart to help others, one fountain of beauty would be kept alive forever.

For the motive is the mainspring of life.

Strange to say, there is a fashion in medicine as there is in dress and other adjuncts of human life. There was a time, even within the last threescore years, when it was the fashion to bleed people for incipient consumption ; and I knew a young physician who, realizing that consumption was hereditary in his family, looked for it anxiously in his own case, resolved to cure it if possible.

It was when blood-letting was a popular remedial agent used, and I have known that poor fellow to be bled twenty times within a month. It was such a relief, he said ; it made him breathe more easily, cooled the fever that seemed burning him up, and relieved the pain in his chest and back. But when the fever was quite cooled, and the pain entirely relieved, nature had no strength left to restore the wasted vitality ; and the victim of that experiment passed on to another sphere where he could afford to smile at his well-meaning ignorance, as men smile at the enthusiastic mistakes of boyhood when they have reached mature life.

A process of treatment for consumption, some time fashionable, has been counter-irritation. This is produced by the use of blisters, croton-oil, and tartar-emetic. These sores and blisters, besides being excessively painful and causing great suffering, tend greatly to reduce the strength of the patient at a time when *no strength should be spared.*

An ordinary soft, coarse towel, folded four thicknesses, *wrung out of hot water*, will, when applied to the chest or below the shoulder-blades, or to any place where pain is located, relieve it as soon as a blister, without producing any injurious consequences whatever.

The cloth may be renewed and worn all the time, or only at night ; but the habitual pain will soon cease.

Better than water treatment, immeasurably better than blisters, plasters, or irritants of any kind, is the *warm, gentle, magnetic hand*, hovering over the painful or diseased organs, and relieving all suffering as if by magic. Even the warm, quiet room, the equable temperature and confinement, should never be resorted to when the patient is able to go out of doors and exercise in the fresh air with any visible benefit; for there is a *magnetism in the fresh air*, and

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especially in the unobstructed *sunlight*, that no artificial means can supply.

Sometimes a case of chills and fever will break up all consumptive habit and actually cure consumption. Still, it would not be a safe or reliable method of treatment to contract any one disease for the sake of curing another.

There is also one possible cure for consumption, which we would suggest to every one for at least a thorough trial. It is the cultivation of the voice, either in singing or *declaiming*. *Singing* is *best*, as song is produced by the glottis, and speech by the mouth ; or perhaps a more correct statement would be that the larynx is the organ of song, and the mouth, tongue, and other organs merely giving audible articulation.

The narrower the glottis is made, and the more tightly the muscles are strained about it, the more rapidly they will vibrate and the higher will be the musical note emitted. While, therefore, song is laryngeal, speech, which is a modification thereof, is oral, or produced by the mouth. Both speech and song use the lungs to their utmost capacity, if properly trained and directed. Every tiniest air-cell is filled and emptied with regular and decided force ; and when we make the consumptive patient sing and dance, we offer at once pleasantest amusement and most powerful remedial agency.

Among the gymnastic exercises that we would recommend for weak lungs and consumptive patients generally, is a raising of the arms as high as possible above the head repeatedly, especially after eating. (See diagram of chest-expander at the end of section.)

Another good exercise is to throw a blanket upon the floor, lie flat down at full length upon it, and roll over and over. This brings every muscle into action, causes the blood to circulate better, accelerates the breathing, and strengthens the lungs.

If the *skin* is *cold* and *unexcitable*, *flannel may be worn with safety* and perhaps with benefit ; but in nine cases out of ten, warm, soft, cotton clothing, especially next the skin, is far more desirable.

Says that quaint philosopher, P. B. Randolph, "The proper study of mankind is woman ; and precious few are they who really know any thing about her ; though millions of our whiskered brothers imagine that of all studies in this mundane life of ours they have most perfectly mastered her. But a greater mistake was never made since creation began and the morning stars sang together for joy. Among other errors concerning her now prevalent is the absurd idea that, sex excepted, she is precisely what man is in all respects ; while the truth of the case is, that she is naturally his oppo-

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site and counterpart, mentally, socially, physically, æsthetically, physiologically, anatomically, magnetically, electrically, psychologically, chemically, and mechanically.

"Mentally she knows by one brief, quick thrill of inspiration or intuition what man learns by a long process of reasoning.

"Socially, she is like sunshine, brightening and beautifying all within her influence; while man is like a sponge, absorbing every thing that he can reach.

"Physically, she is inferior in strength; but in endurance, fortitude, courage to undergo and victoriously to bear pain, she rises far above him.

"Æsthetically, she is generous where he is selfish.

"Physiologically, the difference in texture and quality is too apparent to need explanation.

"Anatomically, she is wide in the pelvis, where man is narrow; and narrow in the shoulders, where man is wide.

"Magnetically, she is a natural nurse, caring for all helpless and tender things; while man prefers rather to get out of their way and give them space.

"Electrically, she is receptive or negative, while man is forceful and positive.

"Chemically, she eats the same food that man does, and drinks the same general fluids in different quantities and proportions; but she makes a far different use of them; for while *man converts them into muscular force, woman changes them into nervous power and love.*

"Mechanically, woman is all ovals, while man is all circles.

"And when it is said that man is the creative element, that he does the inventing, makes all the improvements, builds cities, forms states, and governs empires, woman is busy nurturing and feeding, inventing and building up and governing the men who make these things.

"*Be careful then of women; give them good homes and pleasant surroundings, fresh air and love, that the children may be born strong, pure-hearted, affectionate, tenacious of life, and without hereditary predisposition to consumption.*"

It will take several generations yet to root out unhealthy practices, and overcome general tendencies to evil; for all weakness and disease is in itself evil. The establishing of good homes for consumptive patients, and a general course of diet and treatment insisted upon and continued, will break up consumptive tendencies and stop their transmission from one generation to another.

It should be a matter of *principle* with people who know that

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they inherit, or are strongly predisposed to, consumption, that they *transmit* the disease *no* farther.

The natural instinct of parentage, the desire for propagation, should be subordinated to the best good of the human family.

And this brings us to a question more fully discussed in another section, and upon which we have already expressed the opinion that the bearing of children should always *be within the control and subject to the discretion and judgment of the mother.*

But if any person of known consumptive tendency or predisposition does, through any mistaken view, accept the responsibility of *parentage, let the fact be constantly borne in mind that such child is born with a constitution weakened in every way, and thus more liable to attacks of disease of every kind.*

The abnormally delicate mucous membrane will easily become inflamed, and, with less power to throw off all unhealthy secretions, will thicken as the inflammation increases and cause croup. Attacks of lung-fever will become frequent, and each congestion will be liable to fill the inflamed air-cells for the last time.

All cutaneous diseases, such as measles, chicken-pox, and rash, will be intensified and made more dangerous to the consumptive child, because the lungs, being weak, will delegate to the skin a large portion of their work in carrying waste matter out of the system, and any feverish condition closes the pores and thus stops the action of the skin.

Be careful then that the child who inherits consumption have every possible advantage that artificial means can give to counteract the natural tendencies of the disease.

See that the sleeping-room be high up from the ground, light, dry, and airy. That the bed be *hard* and *clean*, and of vegetable rather than animal structure; husks, straw, or moss being better than either feathers or hair.

A springy bed is not objectionable, and if the skin be chilly and inactive, a brisk rubbing before going to bed should be habitually resorted to.

A night-gown of thick, soft canton-flannel, or other cotton material, is better than woolen, and so is cotton under-clothing, unless a very *cold* and *inactive* condition of the skin prevails, when soft red flannel may be worn and changed frequently.

The reason why *red* flannel is preferable to white is that in dyeing the material is thoroughly boiled, which gives the threads of wool a chance to shrink and contract to their fullest extent. Of course, allowance is made for this in weaving the cloth, and therefore

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whatever openings or interstices there may be between the threads remain there, and the flannel wears thinner and thinner.

But white flannel is manufactured with a view to special bleaching and stretching, and so every time it is washed or even dampened with perspiration, it shrinks more and more, until it becomes close and firm, retaining the insensible perspiration and constantly weakening the skin. Cotton is generally much better to wear next the skin, as it is less irritating, does not cling so closely, and thus allows a free circulation of air, which to a child is a most important consideration, as the skin is thus made firm and healthy for the whole future life.

And really the skin needs air almost as much as the lungs do.

Exercise is another important means of strengthening a naturally consumptive child, especially exercise in the open air and in the sunshine. The *magnetism* of these two curative agents, *fresh air* and *sunlight*, is nature's purest wealth.

These should be indulged in all the year, no matter how cold or how hot it may be. All invalids of a consumptive tendency should not only *live*, as it were, in the open air as much as the weather and season will allow, but they should mingle much with or work with animals; hence milking of cows conduces greatly to health—to arrest the progress of the disease by the magnetism imbibed: this is particularly imparted by young animals having a superabundance of life.



Fig. 15.

Drinking or rather sipping the milk, while fresh and warm from the cow, should habitually be practiced in all cases where the use of milk as an article of diet seems to agree well with the stomach; this may be sipped when no *oppression* or *headache* follows. Should such symptoms be manifested, try it with *a* spoonful or *two* of lime-water to one tumbler of milk.

As milk possesses *all* the material elements requisite to build up the body, it will prove exceedingly nutritive in most cases finding an inability to bear much solid food.

But the value of air and exercise can be greatly enhanced by *proper position* and filling the lungs to the best advantage. These special directions about children should be remembered also in every

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adult case, and in the management of the disease after it has become plainly developed and even far advanced.

The only difference to be observed between treating an apparently well person to prevent consumption, and a suffering patient to cure it, is in the *artificial atmosphere* and the *process* of *inhalation*.

COLD INHALATIONS are usually best, and it is rarely, very rarely, that warm ones need be used. *Steam of all kinds should be carefully avoided*, not only by consumptive patients, but by all people in any way subject to weakness of the lungs. All directions for creating and maintaining an artificial atmosphere that will be at once healthful, invigorating, and comparatively inexpensive, may be obtained



FIG. 16.

by applying by letter to the author of this work, answering the questions he will send, and stating as plainly as possible the symptoms most prominent in the individual case to be treated. The preparation of a room or suit of rooms, if convenient, in which a warm and equable temperature may be maintained for weeks or months together, is a far more simple process than is usually supposed, and infinitely better for the health and comfort of a patient than *journeying* to a warmer climate, *enduring the fatigues and inconveniences of travel* and the contact with unsympathetic strangers, which, to a magnetically sensitive person, is in itself a poison.

This cut illustrates the medicated air-chamber of the Institution,

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but can as easily be furnished in the home of every consumptive, from *special* directions. The atmosphere is blended with medicated vapors of gums and balsams and healing medicaments, evaporated from a stove; hence the patient has a balmy air in which he can sit or stay, read and enjoy himself with his friends and family, without the awful sacrifice and suffering encountered on being sent away, too often to die abroad.

There is a false and thoughtless idea that air, to be pure, must be cold, especially in winter. A moment's consideration will show how stupid this is.

A room may be thoroughly ventilated every four hours, if necessary, and yet have no draught created and no cold or damp air admitted to any part of it.

Simply by using an adjoining room as a heater and regulator.

Close the doors between the two rooms, *then open the windows of the vacant room until the air is thoroughly changed and freshened.* Close the windows, brighten the fire, and wait until the temperature in the vacant room is exactly like, or a trifle higher than, that which the patient occupies. Then open the door, and slowly but not less surely the *warmed* and dried *air* will creep in, *taking the place* of the *weakened* and *vitiated* atmosphere of which the patient has become so weary, having *exhausted* all the healthy *magnetism* long before the entire quantity of oxygen is used up.

The cold, medicated inhalations we will not attempt to describe here, as they are varied to meet each individual case, and written directions will be promptly forwarded to any address, accompanied by the ingredients to be used, or the preparation in fluid or solid form, as the symptoms may demand.

Dr. Stone's triumphant announcement that "*Consumption is curable,*" is no idle boast.

Himself his own first patient, he tried experiments that had never been tried before, until he became fully convinced that he held in his own hands the key which should yet unlock the *cruel fetters* by which this most insidious and relentless foe has for so long a time bound his helpless victims.

Time and experience have richly and abundantly proved that the Doctor was not mistaken in his calculations.

Thousands of letters, filled with the warmest thanks and heartiest prayers for his welfare, crowd his desk, dictated by those whom he has saved from that most dreadful death, lingering consumption; other thousands are every year destroyed to make room for later tributes, and the cry is, "Still they come."

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He has wrought a good work. The beautiful ideal home he has established is but a nucleus, a yet imperfect model of other homes yet to spring up all over the world, where the best and truest laws of magnetic health and power may be studied and practiced.

There was a theory, that was scarcely more than a superstition, among the red men of the forest, that in the immediate vicinity of every baleful or poisonous plant grew its antidote, and that wherever nature had produced aught that could injure man, side by side with it she had set some blessing or benefit to counteract the evil effect.

Thus the stinging nettle grows beside the dock, and the active irritation of the one is quickly allayed by the soothing juice of the



FIG. 17.—THE IDEAL HOME FOR THE CONSUMPTIVE.

other. On the great arid plains, where every spring of water is strongly impregnated with alkali, the sage lifts its dusty, blue-green leaves, and offers health and strength anew to disordered digestion and weakened liver. It may be but a whim and not a manifestation of the great law of correspondences; but it suggests that, as the American climate is especially productive of lung diseases, special protection against and cure for them should also be provided. And in America should we find the true HYGIENIC HOME.

It is not as a mere matter of advertisement that we would call attention to the great improvements that have been made in the treatment of consumption within the last twenty years.

Some physicians use tar as a principal ingredient for healing the mucous membranes by inhalation.

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But there is an ingredient far more subtle and powerful, that lurks in the very heart of the *petrified light* hidden below the surface of the earth, and only made useful and available by the labor and skill of the chemist. This subtle agent we have employed for the relief of suffering and the cure of consumption.

Any person can learn how we apply it in the most effectual manner by sending age and symptoms and receiving full diagnosis of disease, with directions for treatment at home, without, in any way, interfering with whatever work or business the patient may be able to attend to.

Scrofula is often associated with *consumption*, probably on account of its tendency to form tubercles, and the same treatment will often cure both diseases.



Fig. 13.—The inhaling-tube and apparatus for inhaling or breathing the cold medicated vapors, as practiced and used by Dr. Stone, and furnished to *all* patients under treatment at their homes.

But we will give a separate section to scrofula, and describe its nature, its general symptoms, and the means to be used for its cure.

The consumptive patient need not despair of regaining health merely because symptoms of scrofula appear inseparably connected with the progress of his disease.

Thirty years ago, a certain Dr. Fitch acquired a reputation for successfully curing consumption, and one of his principal remedial agents was a simple inhaling-tube, so arranged that it introduced more air into the lungs than could readily pass out, and, thus expanded, the diseased portions created new activity there, and actually assisted the process of healing the suppurated surfaces.

We, too, offer the inhaling-tube to our patients, but with it we give a powerful *vaporous anti-septic*, which *arrests* the process of *sup-*

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puration, and the best known *healing* agent, which, finding its way to the minute tubercles with which the lining of the bronchial tubes is covered, sets up an immediate process of healing, and forms a delicate film over the abraded surfaces beneath which the recuperative organs can do their work.

True, the lung once destroyed, will not grow again, like the mutilated claws of a lobster; but if one lobe be left intact, the progress of the disease may be stopped, the ulcerated surfaces healed, all effete or poisonous matter rendered harmless and discharged, and the breath made sweet and pure again, so that life may be prolonged until some other cause intervenes to stop the action of the heart.



FIG. 19.—TUBERCULAR CAVITY IN THE ACT OF HEALING.

We have written thus at length about the *cause* and *cure* of consumption, not only because it is the most prevalent disease in America, and one of the most universal throughout the civilized world, but also because we have given it *special study*, and intend, at some not distant day, *to cure it without any medicine* save the establishing of healthy magnetic conditions, by which every diseased or weakened organ may *claim from healthy food, fresh air, sunshine, and harmony, the sustenance needed to re-establish vigorous action and continued strength and power.*

Diseased lungs have various forms of manifestations, one of the most universal being the cough; a spasmodic effort to expel some foreign or irritating matter.

But the cough is not always an indication of disease in the lungs. It may be caused by *irritation* or *inflammation* of the throat, or by a simple *weakness* of the *air-cells*, so that they do not properly expel the vitiated air.

LARYNGEAL AND BRONCHIAL CONSUMPTION.

The majority of the *laity*, or people unread in anatomy and physiology, are prone to great errors respecting what is really consump-

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tion, supposing that it means literally *consumption* of or ulceration of the air-cells, in *all cases.* There is no idea more incorrect, none fraught with more *direful* results; for by far the larger number of cases afflicting the respiratory organs, the air-passages, and at length *terminate fatally, do not* involve in ulceration or consumption the lungs proper, the air-cells, and yet convey the idea that thay are all one, belonging to the same category. (See plate of respiratory organs.)

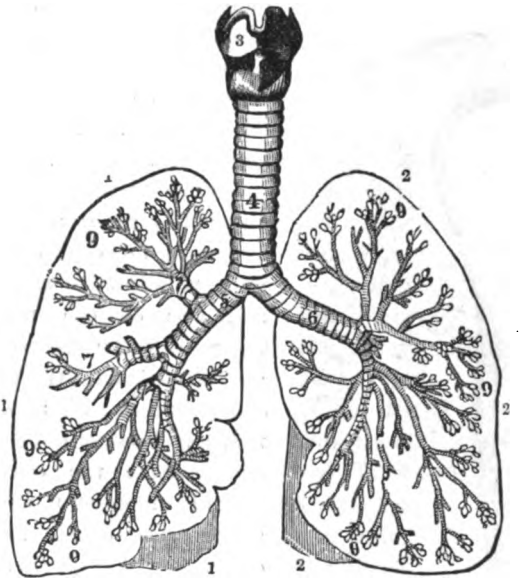


FIG. 20.—The Larynx, Trachea, branches of the trachea called Bronchia, and minute bronchial tubes, the seat of bronchial catarrh or bronchial consumption.

Excepting to a physician of great practical experience, the symptoms are constantly being confounded; cough or shortness of breath attends both bronchial and tubercular consumption. There may be great *dryness* or *tightness* of the air-passages, or extreme expectoration, and expectoration of mucous, resembling to all intents and purposes pus itself, and yet not be pus or denote ulceration in the least, but to the skilled physician denoting an extremely *abnormal* condition of the *glands* of the surfaces only, of the tubes or membranes of the entire respiratory apparatus.

Catarrh, in almost every case, has been the precursor of or premonition to this alarming condition; that is, the disease commenced with a cold in the head, and this primarily caused by specific virus back in the blood or fountain of physical life itself; it was looked upon

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as harmless and self-curative, while, in nine cases out of ten, it is but the egg of the viper, not being crushed when it could easily have been, and allowed to develop, while insidiously coiling itself about the victim, who, when aroused to reflections, finds himself powerless to extricate himself.

This then, is the fatal form of pulmonary affection in America, so erroneously associated with tubercular ulceration—when there is no ulceration, rightly known as bronchitis—and it is more especially where treatment by inhaling the improved system of cold medicated vapors of Dr. Stone has been so *remarkably curative.*

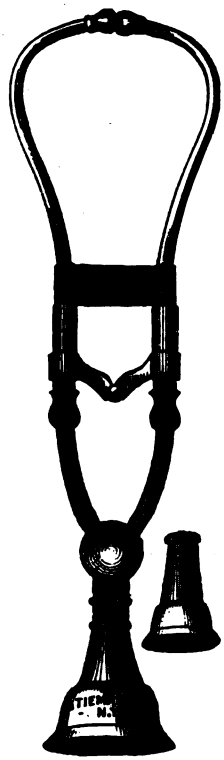


FIG. 21.—THE DOUBLE STETHOSCOPE.

Where patients are situated to conveniently visit the Institution for a personal investigation of their case, the different characteristic features are easily made known by the aid of modern instrumental facilities; the double stethoscope, the laryngoscope, and pulmometer.

Sometimes very slight peculiarities will show that the lungs are abnormally weak. We once knew an artist, a lady, fair and rather delicate, yet apparently healthy. If she held her palette as is the usual custom, upon the thumb of her left hand, keeping the left arm in a raised and constrained position, a slight hacking cough would soon occur, and if, thus warned, she did not soon let her arm drop, she would even go so far as to raise blood, owing to the exertion of the cough, which would rupture some slight blood-vessel.

Immediately upon diagnosing her case, she was found to have inherited consumption, and its symptoms were already developing. She had habitual costiveness, an almost universal trouble with consumptives, and slight falling of the bowels, with other plain indications of coming disease.

Taken so early, the progress of the disorder was at once arrested, and the lady lived to be old, but was never able to hold her left hand up in the constrained position described.

We know another lady, now living, an active, ambitious writer, who can not hold her arm upon a table to write for ten consecutive minutes without producing a hacking cough.

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She has tried every possible means for controlling this, but is at last obliged to take her work in her lap, sit in a low chair, and write with a pencil. She inherits weak lungs and a consumptive tendency, but understanding these facts so soon and so well, will probably by care be enabled to escape pulmonary disease and early death thereby.

When warned by irritation of the throat or slight cough that she has taken cold, she inhales the medicated vapors, takes a bath and a thorough rubbing, drinks from a pint to a quart of cold water, and goes to bed; wakes in the night to find herself in a gentle perspiration, takes another rub in the morning, inhales, and finds her head clear, her skin active, and a general feeling of all right prevailing through her whole system.

This treatment may not do for every one; but the exercise of a little care and discretion, and some judgment, will soon decide for each one what their individual needs are, and what suits them best as simple relief or curative.

Consumptive patients should try to cultivate a feeling of *hopefulness*, as that tends largely to assist the physical functions, especially in very sensitive persons. Remember that symptoms are not dangerous, merely because they are plainly indicated, nor are they alarming because they are dangerous.

"While there is life, there is hope," is not so true of any other disease in the whole catalogue that human flesh is heir to, as it is of consumption, because at a later hour than has hitherto been deemed possible, a truce may be held, a suspension of hostilities insisted upon, and peace restored.

Then let no one despair.

Modern science has done much and *spiritual intuition far more* toward subduing the treacherous enemy which has been so long the fear and dread of physician and patient alike.

And learning to think, to reason upon, and understand one's own case and constitutional tendencies, is far better than any amount of medicine, either palliative or stimulating.

All persons, but especially those with any known tendency to weak lungs, should make an *especial study and practice of standing, sitting, and walking erect.*

You know that a post or pillar in a perfectly upright position will sustain an immense weight without injury; but let it be thrown ever so little out of the perpendicular, and half the weight it has been accustomed to support will crush it *instanter.*

Remember that the lower limbs or legs are two strong jointed

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pillars, upholding the trunk or body. Through this runs the spinal column, rising firm, flexible, and wonderfully delicate to the neck, where it is met by the head.

How much the human head weighs may not be exactly known; but it is easy to see that it is a heavy weight to be supported by so slight a structure as the throat. See to it, then, that the spinal column be kept in an erect position, to avoid all unnecessary strain it may have in up-bearing the head. Hold the throat as nearly straight as possible too, that the air may pass with the utmost freedom to and from the lungs, and that the lungs themselves may have full play and not be crowded upon by the shoulder-blades, or forced down against the heart and stomach.

Practice any simple gymnastic or calisthenic exercises, and make the lungs do their part.

Let every person make it their invariable habit to breathe through the nostrils and not through the open mouth, as many are in the habit of doing, especially at night when asleep; also, to avoid sleeping with the arms raised over the head—a practice very productive of heart diseases; both of which can not be too severely condemned.

One of the simplest apparatuses for expanding the chest and giving mobility and strength to the lungs, the air-cells, is that devised by Dupuytren, as here illustrated. (See plate, page 82.)

The cost is so slight, the construction so simple, it *can* and *should be* found in the chamber of every consumptive, every invalid, and every one following an in-door or sedentary employment. In stormy or unpleasant weather, and during the winter months when the needed exercise and recreation can not be obtained out, here, with this apparatus many hours of the day should be occupied; especially just before retiring, should a half-hour or an hour be so spent, sufficient to produce gentle fatigue, which will conduce to tranquil and refreshing sleep, beyond any opiate or chloral hydrate to give.

We have known several of our patients to increase their vital capacity 100 cubic inches in four months' time, as demonstrated by the pulmometer.

This philosophical and ingeniously contrived instrument is constructed on correct scientific principles. It consists of a glass reservoir for containing air, graduated into cubic inches, standing in a bowl of water, with a valve and stop-cock. The person testing his capacity instantly exhausts his breath at the time of putting the tube or mouth-piece into his lips; the valve is at once opened, and the lungs are filled exclusively from the air contained in the jar; water takes the place of the vacuum formed by the air passing out

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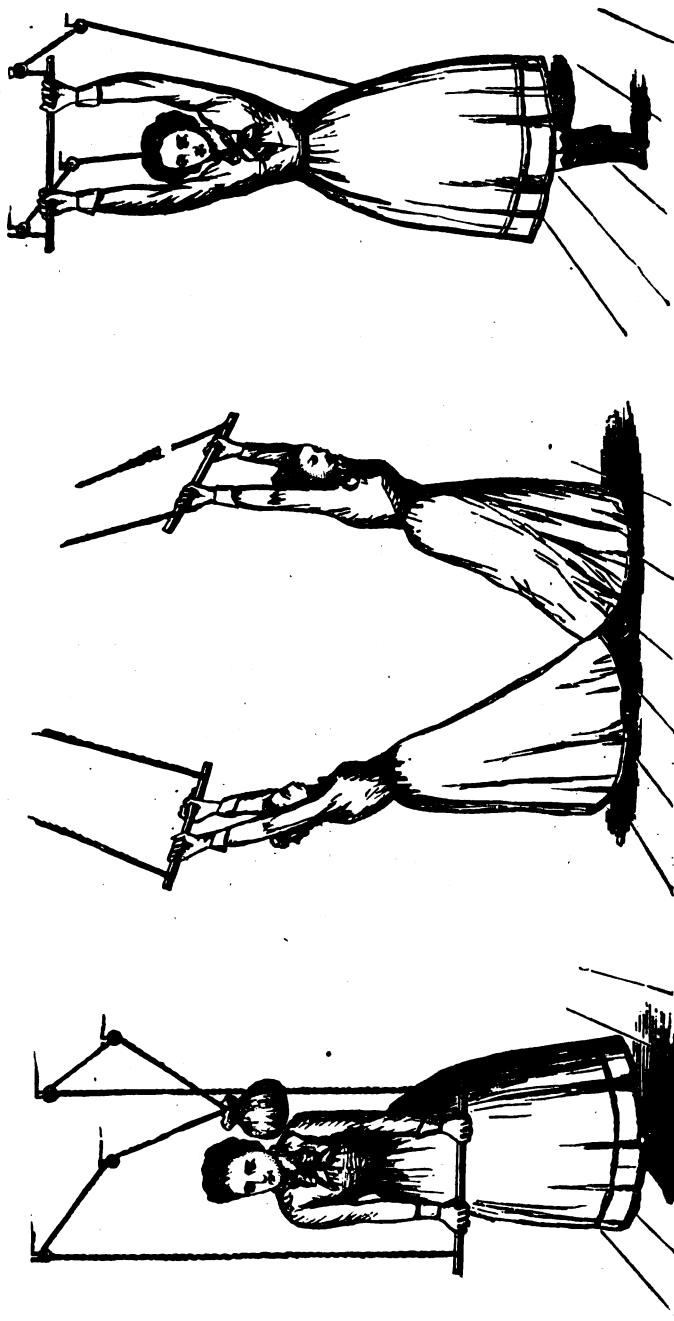


FIG. 22.—THE CHEST-EXPANDER.

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into the person's lungs. From experiment on many thousands, it has been demonstrated that the average capacity of males, in health, is 224 cubic inches, and of females, about 175 or 180 cubic inches; accordingly it will be readily seen that the lessening or falling off in the vital capacity will demonstrate to a moral certainty either structural or functional disease. The incipient process of tubercle or scrofulous deposit in the minute air-cells of the lungs can be



FIG. 23.—THE PULMOMETER, OR LUNG-TESTER.

detected by this scientific method earlier than by any other; hence its wonderful importance in discriminating the true condition of each case, and in pointing out a timely aid to arrest its further progress, for the want of which vast many cases would be allowed to run to a melancholy fatality. Truly medicine is a noble art when it enlists the hand of genius, who by device and invention causes it to become

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a healing art indeed, by staying the march of such a fated and dread malady. She will now take her place among her sister sciences in onward progress to new developments that will ameliorate the condition of suffering humanity, and cause joy and happiness to take the place of misery and woe.



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SEVENTH SECTION.

SCROFULA.

Meaning of the word—Manifested in indolent glandular tumors—Usually a disease of childhood—Wickedly hereditary—its tendency to hydrocephalus or dropsy of the brain—Barbarous remedies of the old-school physicians—Only proper cure, out-door life and magnetism; a plain, nutritious diet—Judgment in frequency of food—Starvation diet of hydropathists will not do—Mesenteric consumption a form of scrofula—Treatment for—Rickets, another form—Indications and cure—Too little lime in bones—Medicated bathing for—The duty of every man and woman respecting propagation.

THIS word is derived from the Latin *Scrofa*, which originally signified a raiser or breeder of swine; but afterward came to be used to signify a female swine, or breeding-sow. It is supposed to have some loathsome reference to pork, or swine's flesh, but it does not.

True, the tuberculous deposits that usually indicate a scrofulous condition of the system are often found in swine, more particularly, perhaps, in the female when breeding; but the reason is a perfectly natural one.

The pig is an animal that, from its very nature and habits, needs plenty of exercise, and, especially, contact with the fresh earth, which it turns up with its snout in search of roots, its normal food. But the domesticated swine, closely penned in a small, damp, perhaps poorly ventilated place, adopts, from necessity, a sluggish, unnatural mode of life; its lungs are not properly exercised, the blood becomes impure, and tuberculous deposits are the inevitable result. This is not the fault of the animal, but of its surroundings.

Scrofula usually manifests itself in indolent glandular tumors, which occur more frequently in the neck than elsewhere, but are often found about the joints and tendons.

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These tumors suppurate slowly, and are with the greatest difficulty scattered or healed.

Scrofula is usually a disease of childhood or early life, and if it does not manifest itself before the age of maturity, a person may feel a tolerable degree of assurance that he will never be troubled by it. Still it often becomes worse as age advances, and develops more troublesome and distressing forms of disease.

The general method of treating scrofulous swellings is, if they are hard and painless, to rub them with liniment that contains much iodine, or to paint them with tincture of iodine, thus trying to make them disperse and scatter their diseased substance, to be carried along by the blood.

If the swellings are soft, and seem likely to suppurate, that process is usually hastened by hot poultices and fomentations. These tumors are sometimes opened, and the unhealthy secretions allowed to escape.

The treatment that SHOULD BE adopted is that which will give most magnetic strength and vitality. The obvious demand of the system is for fresh air, earth, and water, the primal physical elements.

A big pine-tree, whose balsam-freighted leaves or needles and cones have fallen in the same place for twenty years, is a better physician than all the drugs the apothecary can offer.



FIG. 24.—WORK OUT-DOORS.

Pull off the little one's shoes and stockings, give him a spade or a hoe, and set him at work in the warm sunshine, with his bare feet in contact with the medicated earth.

If he lies down to rest there when weary, so much the better; only, if he fall asleep, be careful that he is covered a trifle more warmly, and does not take cold. Encourage exercise and exertion; it will make the blood flow faster, keep the lungs at work, and carry away all unhealthy and abnormal deposits from the system.

Scrofula, in every form, is wickedly hereditary, and should be guarded against in every way.

It is in itself a sign of weakness, and of course weakness can not breed strength. Any thing that strengthens or tones up the system tends to eradicate scrofula. One well-known and quite successful agent in the treatment of scrofula is cod-liver oil, or the purest and most translucent quality of sweet-oil, or olive-oil; but the

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reason for this is, that the oils are very nutritious, supply little waste, and do not, like most forms of excessively nutritious food, clog the system, and stop the action of the secretive organs; but rather, by keeping the bowels open, tend to the more rapid use of all the natural and healthy secretions.

Oil and eggs, says a well-known French physician, should be used in scrofula as a regular article of diet, as well as a medicine.

Eggs should be boiled for two or three minutes only, when they are soft and easily digested.

They should then be salted slightly, and eaten with bread and butter, boiled rice, or other light, palatable food.

The oil should be given gradually, commencing with one half teaspoonful every third night, taken with a little lemonade, or wine and water.

If it persistently produces absolute nausea, as it does in some stomachs, there is no use in looking for beneficial results from it; but if it can be taken and retained in the stomach, the dose may be repeated more frequently, and in larger quantities, until a tablespoonful may be taken every day, not only without injury, but with positively good results.

Among other distressing and fatal disorders that scrofula seems to be the parent of, is hydrocephalus, or "water on the brain."

This, too, associated as it is with scrofula, is merely an indication of weakness, a positive assertion that the secretive and excretive organs are not doing their work properly. The water that should be separated from the blood, and carried away by the kidneys, bladder, lungs, and skin, is allowed to accumulate, and naturally seeks the head as farthest from any disturbance by the action of other organs. It is a disease of childhood, usually occurring at less than six years, and rarely after twelve; sometimes commencing before birth even, thus rendering the confinement dangerous and difficult. It has been known to take place late in life, when the parting of the bones of the skull, and consequent swelling of the head by the inside pressure of the water, had become impossible. But paralysis or idiocy is sure to result from this.

It is reported that Dean Swift died from hydrocephalus, and that for three years before his death he did not speak at all.

The premonitory symptoms in this disease are, unnatural drowsiness, a rolling of the head from side to side, quickened pulse, feverishness, capricious appetite, and a morbid state of all the nutritive functions; following these symptoms come pains in the head, gene-

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rally sharp and darting, causing the child to cry out suddenly when apparently fast asleep.

The head usually begins to swell soon after these pains occur, and then the physician really gives up all hope of saving the life of the little sufferer, though he seldom says so.

If the parents are wealthy, and ready or even urgent to have hope kept alive until the latest moment, some most barbarous surgical operations, or rather experiments, are often tried, such as blistering the back, opening the head by cutting through the scalp, to allow the accumulated fluid to pass off, or cupping and blistering behind the ears, or on the soles of the feet.

Fortunately for the little one, the stage of sensitive agony is soon passed, and often these operations are performed on a body already senseless by paralysis or stupor, so that the sympathetic relatives and attendants are really the worst sufferers. Even spasmodic twitchings and convulsions are not always indications of suffering, as they often occur when the brain has become so nearly paralyzed that none of the senses have their normal action.

But the proper treatment for hydrocephalus is the magnetic treatment.

Keep the hands and feet warm, rub the back downward until a thorough glow is visible, then put the patient in bed, with a hot brick wrapped in flannel or some equivalent for this at his feet, and enough warm coverings over him to excite copious perspiration. Keep him there for an hour, and upon taking him out, rub again briskly but gently. Be careful that the bowels and kidneys act freely, and encourage them to do so by any simple medicine.

Hydrocephalus is one of the troubles that yields to a careful treatment by *hydropathy.*

Packing in a wet-sheet for an hour and washing off with cold water, the sitz-bath and the shower-bath are all beneficial, if cautiously and judiciously managed.

Any thing that will help the kidneys, lungs, and skin to separate the serous or aqueous matter from the blood, and carry it out of the system.

Any treatment that succeeds well with consumption may also be used to advantage with scrofula.

For that reason, *cold inhalations* should be used to strengthen the lungs, quicken the circulation, and assist the action of the liver and other organs, as consumption itself is a manifestation of scrofulous disease in the formation of tubercles.

The scrofulous patient needs light, rich food, in moderate quanti-

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ties at a time, but partaken of frequently, to prevent the diseased humor from exhausting the blood or feeding on the gastric and other juices that promote digestion.

In this respect, the ordinary starvation diet of the hydropathic or Grahamite or vegetarian schools, is the worst possible treatment for scrofulous patients, as it keeps them in a constant state of torture and misery, suffering that worst of all horrors, the pangs of actual hunger. Gradually the use of meat as an article of diet will die out and be superseded by fruits and grains; but there is no need of sacrificing valuable lives and precious health to that or any other merely fanatical idea. Nor is it an end so very greatly to be desired, when we look at ultimate results.

The Chinese, for instance, live almost entirely upon a vegetable diet, and though they are quiet and inoffensive, though their tempers are not fierce, nor their passions ungovernable, yet, to use an expressive phrase, they do not amount to much. They are not great thinkers, true philosophers, or quick, intuitive inventors.

Let us wait patiently then for nature to do her own work, while we each act conscientiously toward ourselves and each other.

There are two distinct temperaments in which scrofulous diseases are equally liable to manifest themselves.

These are the sanguine or serous, and the phlegmatic or melancholic.

In the sanguine temperament, we find the fair delicate complexion, bright rosy cheeks, blue or soft gray eyes, hair fine, usually long, and of a light blonde or reddish color. The intellect is often precocious when the child is young, and the brain seems to develop rapidly.

In the phlegmatic temperament, the skin is usually dark and coarse, either flushing easily or wearing habitually a dark, ruddy hue.

In cases of this kind, the mind is usually dull and torpid, acting slowly, and with a conscious hesitancy or uncertainty. *Children of known or even suspected scrofulous tendency should never be encouraged to study or make any continued mental exertion.*

If naturally forward and quick to learn, they should be restrained as much as possible; if dull and averse to study, they should be given plenty of out-door exercise, pleasant, interesting sports, and every thing should be done to keep the mind pleasantly and happily employed.

Scrofulous constitutions often produce in children the narrow, projecting chest, which is called pigeon-breasted or sometimes chicken-breasted.

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The only remedy for this is to take unusual care in expanding the chest, fully inflating the lungs, and throwing the arms back, to bring the ribs and sternum into a proper and healthy position, by daily use of the chest-expander and gymnasium, as figured in the cut.

The abdomen is often abnormally enlarged, the limbs wasted, the circulation sluggish or languid, the breath hot, fetid, and unpleasant.

The bowels are irregular in their action, with a constant tendency toward costiveness, alternating with severe and sometimes long-continued attacks of diarrhea.

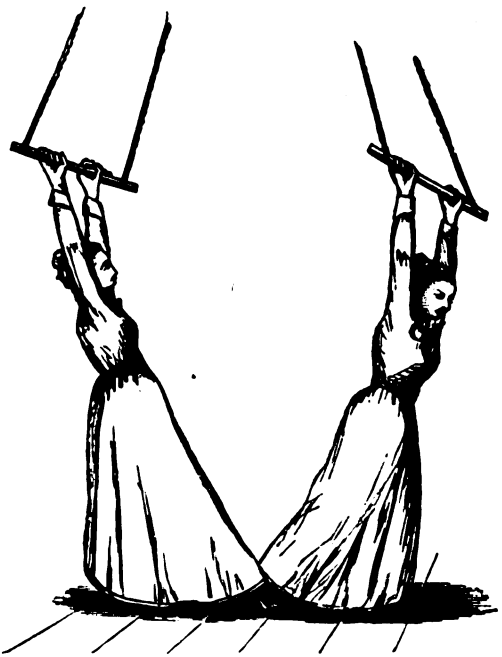


FIG. 24.—FORM OF CHEST-EXPANDER.

For this, give warm drinks, and plenty of fruit with the diet; cover the whole person, *especially the back and abdomen, with flannel*, keep the extremities warm, and insist upon regular exercise until the whole body feels the glow of quickened perspiration. Rubbing with a soft flesh-brush or towel is good, and with a *warm healthy hand is best of all.*

In all cases of scrofula, the epidermis is very liable to irritation and eruption. This more commonly occurs behind the ears, under the knees, in the bend of the elbows; in fact, wherever any extra warmth or chafing is liable to take place, and the best local relief and cure for it now known is a plentiful use of a diluted solution of carbolic

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acid, or, better yet, a free use of *carbolic soap*, which is cleansing, healing, and purifying.

The skin of the face too, being constantly exposed to the atmosphere, alternately heated and chilled, the pores become closed, and the waste matter that should pass off remains to cause small pustules and general roughness or harshness of the skin.

A good local treatment for this very annoying form of irritation is, after washing the face with carbolic or other healing soap, to make a thin paste of common starch, apply it to the face wet, let it remain until dry, then rub off lightly with a soft towel. This application of starch may be used with benefit even when the face is not washed, as the gentle rubbing tends to make the skin firm and smooth, thus improving both its texture and appearance.

The starch too fills the pores with a healthy vegetable substance which absorbs the insensible perspiration and can be readily removed.

There are various other forms of scrofulous diagnosis, too numerous to be mentioned here; but in whatever form they appear, they demand the same general treatment, varied to suit individual cases.

It is best to watch children who seem in any way delicate, for indications of scrofula, and at once commence treatment of a hygienic and strengthening nature for it. Iodide of iron and similar drugs are usually used to strengthen the blood, but we do not approve of them.

Sarsaparilla, dock-root, Peruvian bark, and other vegetable preparations are far more healthy and less injurious.

When scrofula takes the form of mesenteric disease, or *mesenteric consumption*, the mesenteric glands are the seat of the disease.

There are more than a hundred of these glands situated upon the mesentery, which is a broad fold of peritoneum, the great serous membrane of the abdomen.

The mesentery serves to hold the small intestines in their place, and the glands aid the process of digestion. When these are diseased, the food passes through the stomach and intestines without being digested, the body is not nourished, the patient grows feverish and emaciated in spite of a ravenous appetite.

The abdomen is hard and swollen, and sometimes dropsical symptoms appear.

Nothing will so quickly arrest the progress of mesenteric consumption as good brisk magnetic treatment patiently followed.

The rubbing of the abdomen with stimulating liniments or iodine

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ointment, is known to have a beneficial effect; but the persistent rubbing is more than half the cure.

Fine sweet-oil or cod-liver-oil should be given if the patient can bear it, especial care should be taken of the bowels and kidneys, and the same general rules adhered to, that are given in other cases of scrofula.

One more special manifestation of this terrible disease we will refer to here, and that is rickets; more properly termed rachitis, from the Greek word rhachis, the spine. So called because a peculiar form of spinal curvature often results from this form of disease.



Fig. 25.—Rachitis or Rickets.

The bones are all liable to imperfect formation and abnormal softening, caused by lack of lime or earthy salts in the structure of the bones. The weight of the body often causes the bones of the legs to bend, and the bones of the pelvis become so distorted even in very young girls, before the age of six years, that future child-bearing would be distressingly painful and even perilous to the life of both mother and child. With rickets often appears some form of hydrocephalus, so that the two diseases are often confounded; and as they spring from one common mother, scrofula, the treatment for both should be the same, excepting that in case of rickets the child should be guarded against walking or running about much.

The weight of the body should be kept off the limbs as much as possible, and even sitting for a long time in one position should be avoided.

Lying down or reclining is the best position, and pillows of husks or grass are better than feathers, unless there is decided tenderness of the flesh or soreness of the joints.

If the patient can bear sea-bathing during the summer and early autumn, it will prove very beneficial; but if it produces a continued

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feeling of chilliness, and there is no supervening warmth or glow, it must be discontinued at once.

Bathing in salt-water or in water impregnated with alkali, as soda or ammonia, will prove an advantage in cases of feverishness and marked debility.

For methods of treatment suited to each individual case, send description of leading symptoms, with age, temperament, sex, etc., of the patient to Dr. Stone, and receive medicines all prepared, with directions for using; also directions for magnetic treatment at home if desired, and surgical apparatus for supporting the spine, straightening and strengthening the limbs, guarding the ankles, which are especially liable to local inflammation and displacement of the joints, and all other needful assistance.



FIG. 26.—Illustrating instrument to support the spine or weakened limb.

It is always well to state if the disease be hereditary, if it proceeds from the father or mother, and what form of scrofula either or both parents have manifested.

It is sometimes better to give the child a magnetic change by taking it quite away from home, giving it change of air and scene, and *filling the mind with new thoughts.*

Stimulants should be avoided.

Some physicians recommend a little beer, taken regularly every day; but it is liable to act too much upon the liver, produce biliousness, and cause a heavy, sleepy feeling, an almost painful flushing of the face, and constant pain in the head. This should be considered conclusive evidence that the system is not in a condition to assimilate a beverage so powerful either as a tonic or excitant. Some physicians strongly recommend the use of oysters as an article of diet, claiming that they contain lime enough to affect the blood. But this would depend much upon the physical condition and age of the patient.

Eggs, oil, fat beef and mutton, corn, rice, and wheat, I know to be good.

If soups or broth be eaten, they should be made rich with the meat-bone and marrow, but seasoned slightly.

Heating spices and condiments are bad for scrofula. Fish is good. The phosphorus that forms so important an element in fish

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is also a principal ingredient in bones, and feeds the blood with bone-making substance.

Scrofulous patients should live out of doors as much as possible. *Sunshine and contact with the fresh earth being among the very best magnetic medicines* to strengthen the blood, promote digestion, assist the action of the heart, lungs, and brain, as well as to give fresh vigor and strength to the secretive and excretive organs.

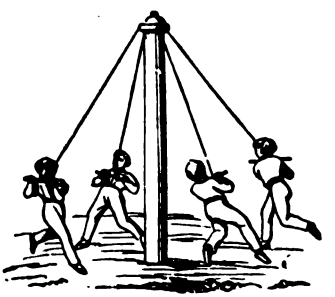
But it is always best to consult some physician of known skill and experience when the symptoms first appear, as a few months of proper and judicious treatment and training may save a lifetime of misery.

If death were the worst result to be feared, we would not attach so much importance to medical treatment; *but years of deformity and torture are far worse than death;* and it is to relieve the human family from such suffering, that we insist upon these two rules:

First. It is the duty of every man and woman to see that they do not perpetuate hereditary scrofula.

Secondly. They should look for the first symptoms of scrofulous tendency, and spare no time or trouble to eradicate every germ of the disease.

WILLIAM HEWSON.



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EIGHTH SECTION.

ODYLIC FORCE—ONLY ANOTHER NAME FOR MAGNETISM, THE FORCE OF THE SPIRIT.

BY CARL REICHENBACH.

ODD! YES. That was what I called it. I might have improved its orthography by adding another *d;* for it was, of all things in the universe, the most decidedly Odd!

And such a chase as it led me; a perfect will-o'-the-wisp, flying in the face of every known, well-established, and firmly-believed-in rule, and yet constantly and persistently asserting itself; peeping out at every angle and turn and corner in the strange superstructure of life, taunting but still evading me.

I called it an imponderable agent, and wondered why scientific men did not take more notice of it when it explained so many hitherto mysterious and puzzling phenomena.

I was, myself, sensitive to this peculiar influence, though my experiments were made with others.

I think nothing but the most positive personal realization of the mysterious power would have made me continue my experiments and investigations so long. But I felt the magnetic influence of different metals and of mineral-springs, when none of the outward senses gave any indication of their proximity. I was deeply interested in geology, and seemed to feel the spirit of the rocks striving to express itself to the human understanding.

Once, when I was with a dear friend who died, I saw a faint, luminous substance rise and gather above the lifeless form; but I did not see it take human shape. It seemed to pass off like a cloud, growing brighter and fainter by turns, as it rose and floated in the air.

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I could see it pass through the wall of the room, still retaining its faint diaphanous lustre.

It puzzled me very much and set me to experimenting with and writing about the new principle which I had discovered, and which I called Od, or Odic force.

If I had, at that time, understood or believed in the existence of the individual spirit as separate from the body, it would have saved me much time and thought and trouble, much useless experiment, and many false deductions from wrong premises.

I know now that the spirit is a separate entity, a real and perfect individualism, with a mission reaching far beyond its brief life on earth.

I know, too (and that is why I try to express my thoughts in this way), that the spirit is the dominating power over all material things.

I believed in a system of healing by "Odic force;" and if I had remained long enough on earth, I should have endeavored to demonstrate that system and reduce it to a science. I am glad now that I did not do this. It would have been but another half-step, taken while groping blindly in the dark.

I was an earnest student in Animal Magnetism; but I knew nothing of Spiritual Magnetism.

Whatever work I do now in the way of healing shall be to make the "Odic force," or animal magnetism (for they are really but two terms for one and the same principle), not the culminating essence of success, but merely the ground-work on which a brighter and better work shall be wrought.

When people learn the true power of the spirit, the desire for sin and wrong-doing will be taken away from them, and every tendency of the heart will be toward progression and wisdom.

Atheism is not worse in its way than the blind infatuation of religious prejudice, which sets up a narrow boundary for the soul, and says, "Thus far and no farther shalt thou travel toward the light."

And neither of these are so bad or prove such stubborn barriers toward human progress as the custom which endeavors to reduce to a scientific exactness the delicate and varied disorganizations of that intricate mechanism, the human frame.

In my various experiments with a certain sensitive subject, a woman who would now be considered only a very ordinary "medium," but whose power seemed quite supernatural to me then, when I held up a bit of magnetized iron, she could see arising from it a faint, white flame; but when I held an exactly similar bit that was not

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magnetized, she would shudder slightly as if suddenly chilled, and would see nothing. I have changed these so rapidly that I could not tell which was the magnet myself, and yet her keen power never failed to indicate instantly which one I was holding, often before it had been held up to view.

I did not then know how simple and reasonable a solution might be given of the whole mystery.

I did not know that the principle which I called "Odic force" was merely one manifestation of the spirit, while the whole material constitution of man is but another evidence of the same force or power.

I studied geology and chemistry with more earnest zeal, and perhaps to better purpose, than physiology; but some of the most important facts in physiological science had not been discovered at the time when I inhabited a mortal form; and though I was somewhat intuitive, I did not perceive the coming light in that direction.

For instance, it has long been known that man, merely considered as a so far perfected animal, requires means for the perception of time, space, force, and quality.

This is accomplished by the organs and nerves of sense, and they are usually ranged in the following order:

The ear is the organ of hearing, by which time in sound is measured; the eye is the organ of seeing, which measures or perceives space; the nerves of sensation, which constitute the tactile apparatus, are distributed over the whole surface of the body, but concentrate most powerfully in some sensitive region, as the ends of the fingers. These are used for the perception of force; and the mouth and nose, forming conjointly the organs of tasting and smelling, are used for determining the chemical qualities of bodies; that of smelling addressing itself to substances in the vaporous and gaseous states; and that of tasting to such as are liquid, or may be acted upon and dissolved by the saliva.

But apart from all these mere outward senses is the great *sympathetic* nerve, of which I knew nothing.

Strange as it may seem, this nerve or ganglion (for it is in reality a whole system by itself) has the power of regulating, equalizing, and balancing the nervous force; even storing up, as it were, all transient and temporary excesses of nervous power, and thus being ready to supply all transient deficiencies.

It would be interesting to the student, the anatomist, and physiologist, if I could give here my own detailed experiments and observations since reaching the higher life, in regard to this strange store-

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house of brain-material; but I have no space here for scientific detail.

Suffice it to say, therefore, that this mystic gray ganglion of nerves, slow to awaken to irritation, or to convey sensation to the brain, is to my "*Odic force*" exactly what the bit of iron is to the magnetism that dwells within it—the body to the soul. All that was tangible or demonstrable or measurable about Od, *per se*, lay in that intricate and yet simple *plexus* called the *sympathetic* nerve. The rest flitted away with the spirit, and no human perception can follow it.

Physiologists tell in how few seconds the cerebro-spinal fluid can be absorbed and reproduced in the brain in times of great nervous excitement or excessive mental exertion, or even of physical labor, when so performed that it acts with depleting influence upon the brain. And it is quite a stride toward the uniting of physical phenomena with spiritual effort, when they even try to give to brain-action a character not wholly muscular and nervous.

Some writer says, "The cerebro-spinal fluid, the quantity of which has been estimated at two ounces, is very readily absorbed or exhausted, and as rapidly re-secreted. But the functional activity of the brain depends on its copious supply of arterial blood; it being computed that one fifth of all the arterial blood in circulation is sent to this organ.

The act of adjustment, therefore, between the blood and the cerebro-spinal fluid requires a certain period of time for its completion, and this affords an explanation of the fact that the brain can not be brought at once or instantaneously to its maximum action.

Thus, as all persons observe, when we undertake any unusual mental or intellectual task, there is a certain preparatory period to be passed through with, which is usually termed "collecting or composing the thoughts."

"Few topics," says the same writer, "are more worthy of the attention of the physiologist than that of the variable psychical powers of man; and *yet few have been more carelessly overlooked.*"

THE PSYCHICAL POWERS OF MAN: this is only another word for the spiritual power. It is only dodging the form of expression, and not changing the idea.

The life that hides in the flint is brought out when it is sharply struck with a bit of steel, though steel and flint are both but cold and apparently lifeless masses.

Two vines grow fruitless and barren on the two sides of a high wall, year after year; but when they reach the top of the wall, and

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their tendrils intertwine, and the breath of their blooming mingles the one with the other, then the sterile flowers grow fruitful, and strange to tell, the autumn finds grapes purpling on both vines.

This is the Odic force that puzzled me so, manifesting itself in mineral and vegetable life.

In man we find yet higher possibilities; and if to-day I felt assured that one wish, and only one, could be granted me, how earnestly would I pray *that man and woman might mutually learn to respect their own highest impulses, and never to fall below them.* The odylic force gives life to every red *corpuscle* afloat in human veins; that throbs in the heart, revivifies in the lungs, and thinks in the brain; that, seeking further expression, reaches out through the dim spaces of material life for its other self, the duality which shall make complete the unity of its imperfect existence, and then behold another life is evoked, another atom individualized. As the true aim of life is to be happy, to enjoy existence, so its ultimate perfection in result is to reproduce itself, to authorize the existence of other lives that may in their turn be happy and useful. Strange widening spiralty of time and progress, toward the infinite perfection!

But when men learn that the *times* to which they attach such vague importance are merely the manifestation of a few strong minds grasping at and apparently controlling many weak ones; when they remember that they may each leave print or picture on the *plastic mould* of to-day, to be hardened into imperishable adamant or wiped out forever as time breathes upon it, then will they learn that the *present* hour is the *only* hour worth cherishing, the indwelling active power and force the only force that can be counted on for sequences and results.

No mortal, living in the material sphere, can comprehend the effort, the continued exertion, the long and patient progress, by which the disembodied spirits have learned to control the material forces which they have become separated from by that change called death.

And one of the triumphs they have achieved is the power over disease.

Faintly foreshadowed a hundred years ago, when the mysterious magnet was discovered; frankly asserted by Swedenborg, when he talked far beyond himself; dimly hinted at by medical writers, only to be denounced as a delusion or ridiculed as a phantasm of disordered imaginations; grasped at by science, but constantly evading that grasp; appealing to the reason, yet refusing to be reasoned out

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of sight; the spirit struggled on, content to know that the great problem of progress was being solved by their aid, either with or without their individual volition.

Thus are we working still, and every passing year bears away its quota of superstition and prejudice to the realm of oblivion, leaving us more freedom, and consequently more power to act. The ideas that so vaguely teased and tormented us when we were in the elementary condition of physical life are all as plain as printed words now.

Who has not wondered when a child, what made the moon climb up from the sea, round and bright, or the sun slip down the western sky and hide away? And who, grown to mature life, has not ceased to wonder at these things?

It is so with us. All through the earth-life, we wonder what is the relation of spirit and matter, and how we live, and why we die, and what next. *But having reached the "next," all is plain and clear to us.*

Having lived our allotted three or four score years of tuition and experience on earth, we pass on to a higher class, and many of the puzzling and seemingly inexplainable problems that perplexed and exasperated us become self-evident facts, demonstrated by the simple realization of our new existence.

Ach weil! I can not explain this to you now. I can only ask the poor, groping scientists of the day to give over searching for new words and terms, in which to hide their mystified ignorance, to talk *no more* of odylic force and psychical effects or conditions; but to *accept* the phenomena of life in all its subtle simplicity; *to study the manifestations of the spirit*, both embodied and disembodied; and to allow us to communicate with them, not in spite of every obstacle they can place in our way, but rather by aid of every advantage and assistance *that they can reasonably render* us.

I did not intend, when I commenced this article, to write an essay on spiritualism; but spiritualism is attracting so large a portion of attention from the public at the present time, that I let that be my excuse for drifting with the tide; and I hereby assure all casual readers that a thorough and candid study of spirit manifestations, even as imperfect and doubtful of accuracy as they are now, will result in convincing any reasonable investigator that the embodied spirit has a power to act, without the use of its physical habiliments; and the disembodied spirit commands a realm of thought and life as yet unreached and unexplored, but waiting with a wealth more precious and a power more potent than any hidden mine ever

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held. This is the true "fountain of perpetual youth," for which Ponce de Leon sought in vain; this the true philosopher's stone, that transmutes all the baser aims and purposes of life to the pure gold of spiritual truth and reason.

All that I knew of magnetism when I lived on earth, and all I have learned since I came here, sinks into comparative insignificance beside that great fundamental fact, which, once established in the mind, changes past and future, makes life a blessing, and eternity a vantage-ground of usefulness. This fact is the existence of the spirit of man after the body is laid aside, and its perfect individuality and identity. Through the recognition of this power, comes the thorough control of all physical inharmonies that cause disease, as well as all mental idiosyncrasies that are in themselves manifestations of a diseased condition.

A good magnetic physician should have a realizing sense of the fact that he draws his supply of healing power from a higher source of intelligence than his own brain and will. Otherwise, he will soon become weak and exhausted, and fail to recuperate rapidly.

The air *is* magnetic; so *is* the earth; and the sunshine, which is the emanations from the sun uniting with the emanations from the earth to produce light and heat, is permeated through and through with magnetic power; but it needs a wise and kind intelligence to apply that power properly to human wants and needs.

This intelligence is possessed by the disembodied spirits overlooking the many blunders and mistakes they made in earth-life, clinging only to the few forward steps they took, and the many they tried to take, reaching onward forever toward a higher and better state.

We have not infinite power or infallible wisdom; but we have the experience of earth-life and an extended field of observation here, by which we may go on studying and experimenting.

Magnetology, psychology, and biology puzzled me much, *because I tried to consider them all as mere manifestations of physical force.* I did not recognize any distinct and separate spiritual force. *If I had allowed that strange, prescient voice in my soul to speak, I should have been saved years of useless speculation and experiment, years of hopeless trouble in the way of terms and meaningless distinctions, of words and significations.*

I claimed that the odylic force was a new discovery. *It was as old as the primeval voice that said, "Let there be light," and there was light.*

So the voice of the spirit *speaks to-day* in the form of *magnetism*, and says to the sick and suffering, "Behold the light." "Be-

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hold your way made plain through the wilderness, from pain and weakness to health and strength. Behold the vigor of youth given back to the wasted springs of manhood; behold the charm of girlhood's freshness looking out from the weary eyes of the matron."

"I am the way and the life," said the magnetic Healer long ago, who made the lame to walk, the blind to see, and even the apparently dead to rise again with a renewed lease of life. He spoke by the power of the spirit, and that power *lives* not for any special age or people, *dies not at any stated time.* It is!

It speaks to-day, it will speak forever, and "He that hath ears let him ear."



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NINTH SECTION.

SOME ASTOUNDING REMARKS BY LAENNEC ON THE CAUSES FOR AND THE CURABILITY OF PULMONARY CONSUMPTION.



COME, dear friend and brother, to add to such testimony as you have already received the little I have to say upon this momentous subject. Consumption is curable, as you have decided. But it is also preventible.

O my brother! my heart aches, and it is enough to make many a harder heart than mine ache to look abroad over this beautiful world and see the unnecessary suffering and sorrow in it, the shame and disgrace that comes of false lives falsely lived; and to the women, to the mothers, must our appeal be made.

It is true that medical statistics show that as many men (or nearly as many) die every year with consumption as women. But *all* those men were born of women, were dragged about in process of formation, nine tenths of them crowded down below a tight-fitting corset, and heated and smothered under superabundant clothing about the mother's hips, while chilled and shriveled perhaps by lack of proper warmth about the throat and chest.

I have the truth in my heart, *mon frère*, when I tell you the dress of our women to-day is an abomination to the eye and a disgrace to the pure thought. In a time when (we hope for the honor of manhood) men were more sensual than they are to-day, it was decided that women with full, wide hips were more inclined to sexual pleasures and excesses than those who were thin and narrow. As woman was then (and in a certain sense now is) the property of man, and dependent upon him, she learned that if she could be kept for the pleasures of the couch, she would not be expected to work so hard and long in the fields or at the fireside. So the rude blanket was

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draped in heavier folds about the hips, and cushions were slyly hidden there; and when they learned that lessening the size of the waist made the hips appear larger by contrast, tightly-fitting garments were first introduced. So the idea has gained ground, until small waists have become a *mania* among women, and disgusting to the sight of every sensible man. And the evil reacted upon the authors of it; for men found that the women who languished in their arms with slender waists and apparently wide hips, bore them weak, effeminate sons, with lungs undeveloped, and hearts of unsteady action.

But still the error is not rooted out as it should be, as we hope it soon will be, and *modest demoiselle* and prudish *madame*, who would not for the world be thought to be making an effort to attract the attention of men, stilt themselves on high-heeled boots, and walk with a Grecian bend, in order to make prominent the lower portion of the body, as do the poor, misguided prostitutes who for the bitter bread they eat pander with unholy zeal to unholy passions.

Mind, I do not say sexual intercourse is itself unholy; when prompted by right motives, it is the connecting link between spiritual and physical life, the language of love and of passional attraction, and should only be spoken by those who love each other.

Perhaps you think I have wandered far from my subject; I only meant to say that consumption can be cured by using proper means, and can be prevented from being the hereditary cause it now is. I have looked far back for hidden causes, but I find them plain and true.

So while you treat the *effect*, which is pulmonary consumption, try also to reach the *cause*, and give us good and pure and healthful motherhood.

I believe the inhalation of vapors is the only true way to medicate the lungs, and the Indian magnetic treatment the only way to equalize the life-forces in the human frame.

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TENTH SECTION.

VITAL AND ANIMAL MAGNETISM A SUBSTITUTE FOR ANÆSTHESIA.

"I AM sure that, by careful study and reasonable practice, magnetism can be made to take the place of all other anæsthetics."

JAMES YOUNG SIMPSON, M.D.

The discovery of the use of ether, nitrous-oxide, chloroform, and other anæsthetics—Their relative merits compared with vital magnetism—Remarkable instance of magnetism in child-birth—The galvanic battery to prevent injury from anæsthesia—Principal elements necessary for a magnetic physician—Principles laid down by Jesus of Nazareth—The first and highest record of magnetic treatment—Reasons why the same striking results are not obtained now—Mental anæsthetics—Sympathy the strongest, excepting love—Love latent in every being, waiting to be awakened—Ill adaptation of certain temperaments—The highest aim of human life found in making others happy—The first step for a perfect ideal home is good health—Avoid vesication and application of morphia to denuded surfaces—Substitute the magnetic hand—Virtues of homeopathy only in faith—The brain not to be trifled with—Directions for choice of magnetic physician—An eloquent plea to substitute magnetism and electricity.



WAS not so old a man when I passed away from the earth-sphere as most people supposed me to be—not quite three-score; but I had lived a busy, active life, and had been quite successful in a way; always trying experiments, many of them vague and unsatisfactory, but urged on by an unexplainable power and impulse that would not let me rest. After I had discovered the anæsthetic power of chloroform, and had seen it supersede, to a very decided extent, the use of sulphuric ether, I was still unsatisfied.

I had used ether for a year, in all protracted or dangerous cases of midwifery; also using chloroform, which I manufactured myself, as an outward application for cuts, bruises, and some kinds of inflammation.

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The use of ether to render a patient insensible to pain was in no way my discovery, nor was I first to use it.

One Dr. Jackson, a chemist in Boston, published a letter early in 1847, in which he says, "Being impressed with the remarks of Sir Humphry Davy concerning the remedial agency of gaseous matters," he tried the effect of the vapor of ether upon himself, with some satisfactory results.

In addition to the claim of Dr. Jackson, came, almost simultaneously, a statement from Dr. Wells, a dentist at Hartford, Connecticut. He stated that he was led to believe that surgical operations could be performed without causing pain to the patient, from the fact that, under any intense excitement, physical injuries, even of a very serious kind, seemed to attract no attention whatever; as in the case of a man being wounded in battle without knowing it, or severely injured when deeply intoxicated without any sensibility of suffering. From these considerations, he was led to inquire whether the same or similar results would not follow the inhalation of some exhilarating gas, the effect of which would rapidly pass away without leaving any bad consequences upon the system.

He therefore procured some nitrous-oxide gas, and inhaled it himself; having a tooth extracted while under its influence, he felt no pain, and this he claims as a discovery. But during the same year, Dr. Morton, a dentist in Boston, gave an account of an experiment, or rather an experience, of his own, which involved the same theory.

He said that a patient came to him, nearly frantic with pain from an ulcerated tooth; that he had not slept for several nights; his nerves were weakened, his gums and lips swollen and inflamed.

Knowing that the rapid evaporation of ether produced a sensation of coldness, and his only desire being to reduce the inflammation and relieve the pain so as to be able to make an examination of the teeth, he commenced bathing the face with ether, at the same time giving his patient a napkin saturated with ether, to hold to his lips, which were also swollen and inflamed.

Soon the head fell back to an easy position in the chair, the eyes closed, the breathing grew light and regular, and the pain seemed to have subsided.

Thinking for the moment that these symptoms were caused by the nervous reaction that sometimes takes the form of utter prostration, upon the sudden cessation of pain, and intent only upon finding what was to be done to the teeth, the dentist dropped his towel, parted the jaws whose muscles were relaxed, made the examination, used a

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probe on one side of the mouth, drew out a huge decayed molar from the other, and then *paused to gaze in astonishment* upon his patient.

The eyes were still closed, the hands drooping, the face wearing a look of repose not like sleep even. "It is a trance," said the bewildered dentist, "and how will it end?"

But even as he puzzled over the question, a nervous thrill and shudder crept through his patient's frame, the mysterious appearance passed off, and consciousness returned.

In reply to the doctor's questions, the patient steadily averred that it was breathing the liniment that had made him fall asleep; he had felt his consciousness slipping from him, and thought he was dying.

He refused all further experiment, walked unsteadily out to the fresh air, and, though he trembled with nervous weakness for several hours, no further ill results were felt from this first wonderful accidental experiment in anæsthesia.

Dr. Morton experimented some with cats and dogs, and in a few days found a patient who submitted, not without much fear and faltering, to a regular trial of inhalation of ether, and the effort proved a complete success. This trial and its result were recorded in the medical history of the world in uneffaceable characters.

In two or three weeks, the news was being discussed in England; and a few days later, I tried the same agent in a case of midwifery.

After the first experiment, I found what a dangerous weapon we were using.

Ether was crude in composition, uncertain in action, and variable in result. No one knows, no one ever will know, how many lives were lost, how many patients fell victims to syncope, how many brains were affected more or less permanently, and how many lungs injured by those first experiments with sulphuric ether. But every experience was a stepping-stone to knowledge and wisdom, and so we wrought on.

For nearly a year, I made constant, careful use of this mysterious agent, and then discovered the superior advantages of chloroform, to be used in the same way as an anæsthetical agent.

The advantages are, that chloroform is more powerful, more manageable, and less exciting than ether, giving the physician much better control over the patient, and over the administering of the drug.

It is also safer, when properly and carefully used, especially when used to relieve rather than to prevent pain. It can be administered in very small doses, merely quieting the patient for a few moments,

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or the doses can be repeated at such brief intervals as to continually allay nervous irritation without producing actual unconsciousness.

I have often used it in this way for neuralgia, when hot baths could not be easily procured. Especially in cases of spasmodic neuralgia, where the pains are recurring at intervals, it is well to give slight whiffs of chloroform, and when the pain passes, apply *hot compresses* or bandages to excite the most healthy circulation, and rub the parts most affected lightly over the bandages and toward the heart. But in using chloroform in cases of midwifery, I learned how important it was to have the mind and will act in correspondence with the effect I wished to produce. Sometimes, before the pains grew regular, I would give a slight dose of chloroform, and allow its effects to pass away, noted at every stage, not merely as an experiment (though it was often useful in determining the sensibility of the subject, and the amount that could be safely given), but principally to assert myself, and show my perfect control over the drug and its entire harmlessness when properly treated, and administered so as to establish the full confidence of the patient. I could then, when the pains were coming on, pour a little alcohol on a sponge, add a little chloride of lime, place it near the patient's face, put my hand on the back of the neck or low down the spine; the pain would come on and pass off, and the patient apparently no more conscious of it than if a full dose of chloroform had been administered.

This I have done hundreds of times, but each time it seemed merely like a new accident.

I could discover no law by which such peculiarity was produced, neither any condition which would satisfactorily explain it.

I think I can understand it better now, though I do not feel quite sure that I can explain it satisfactorily.

I remember one case of a child-bearing woman, who had been for three consecutive hours suffering the most intense agony. The child was living and apparently vigorous, but the woman herself was young, small, and weak.

We feared to use chloroform, knowing that her lungs were diseased, and fearing asphyxia.

We had already held a consultation, and decided that nothing could be done except to remove the child by instrumentation.

This idea nearly threw the young woman into convulsions, and we were obliged to pacify her as best we could, without in any way relieving the incessant pains that were racking her, when suddenly her husband, who had been away and just returned, entered the room where she lay.

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He went directly to the bed, took her two cold hands in his own strong, warm clasp, brushed her hair back from her temples, where the blue veins lay like cords, rubbed her back, and placed one hand low on the right side of the abdomen.

In ten seconds the child was born alive and well, in ten minutes the little mother lay quiet and restful on her pillow, and the result which medical science had failed to produce in hours of questioning experiment, was wrought instantly by some strange sympathy which has as yet found no place in *materia medica*.

The mechanical action and visible expression of this *sympathetic current* we call *magnetism*. It was this I was looking for, and striving to understand.

I think the good work which magnetism is yet to do is in part to take the place of anæsthetics.

Already the most powerful agent to arrest syncope and prevent injury from anæsthesia is the galvanic battery, and many physicians never administer chloroform without a fully-charged battery near at hand.

The principal elements necessary for a magnetic physician are a strong will, perfect self-control, and an earnest desire to do good and help every one.

We read that in the olden time Jesus of Nazareth healed by laying on of hands, and chose his disciples for the same power and purpose of healing; and the lesson he constantly taught was, "Love one another;" "Bear ye one another's burdens;" "Judge not," etc.

Always the spirit breathing through his words and pervading his acts was the same that heralded his birth and proclaimed the new dispensation he came to teach, "Peace on earth, good-will to all." This is the first record we have of magnetic treatment, and the highest form it has ever taken. Of course, it is entirely unreasonable for any person to undertake, in the present state of society, to do any such work as that recorded of the gentle Nazarene.

Individual interests are so strongly marked, so persistently pursued, that the person, man or woman, who consecrates himself or herself to work for humanity, turns that self into a perpetual martyr, and soon recognizes the fact that the kindest acts, devised by the purest motives, are most liable to be misunderstood, scoffed at by the ignorant, slighted by those who need them most, and often argued out of sight by the truly wise and kindly, who are so interested, each in his especial work, that they do not recognize the good in others.

But while we can not all become universal philanthropists, or devote our lives to healing the sick without hope of fee or reward, we may

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each do something toward understanding the wants and needs of human kind, and toward alleviating the sufferings that confront us at every turn in the path of life.



FIG. 27.—THE GOOD SAMARITAN POURING IN THE OIL AND WINE.

For this purpose, it is essential that every one should understand the best and simplest methods of alleviating pain and suffering, both mental and physical.

There are mental anæsthetics.

Sympathy is the strongest of these, excepting always love, which is stronger for every purpose than any other power known in nature or art.

There is an affection which is not passional, and a passion which is not truly affectional, and either of these forces may prove a very strong attraction to draw individuals toward each other. But the union of passion and affection, the exquisite blending of emotional sentiment with the strongest sensuous desire, the temperamental adaptation which gives to two people the desire at once to possess and be possessed, which floods the senses with delicious joy in each other's presence, and completely annihilates the outside world—this is love. And rarely as it may be found on earth, still it does exist, in all its wonderful and mysterious strength, in every human nature, waiting but the coming of the counterpart to waken it to life. And this is what raises man above the brutes, and makes him near akin to the angels—this spiritual adaptation and selection. I do not say, nor do I mean to be understood as believing, that some one man was made as an especial and foreordained mate for each one woman. But there are certain temperaments that can only be kept tranquil and happy by union with certain other temperaments; and there are natural antagonisms, existing often in the same family, that utterly defy all attempts at harmony, either in thought, word, or deed.

Some of these can be overcome, at least in their outward manifestation, but the inward principle remains the same; and after all, the question arises, if, in the short space of time allotted to any human life, it is worth while to take the time and trouble that might bring pleasanter results in other ways, by contributing something to

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the sum of human happiness, merely in the discipline of the mind to endure what it can never enjoy?

This brings forward the undeveloped idea of spiritual anæsthetics, the studying of spiritual needs, the faithful understanding of what causes spiritual suffering, and the best way to remove said causes.

If a knowledge of magnetism, its powers and uses, was more universal, the subject of mental and spiritual anæsthetics would not seem so ridiculous as it does now, and mental and spiritual diseases, even apart from the physical, would not be slighted and disregarded as they now appear to be.

It is the highest aim of human life to make at least one person happy; and if that one person is one's self, the aim is still worth working for. But usually the highest happiness can be found in making others happy, and this has not been kept a secret these last two thousand years.

Almost every body realizes this, and works for it too, in one form or another. Hundreds, perhaps thousands, of ideal homes, or schools, or institutes are planned in busy or ambitious brains, many of which could not be made practical or available under the most favorable circumstances.

But the very fact that they do exist as ideals proves that some of them may yet be wrought out in reality, and the first step to be taken for the formation of perfect homes is to do as much as possible for the establishment of good health. When people have learned how to live rightly, every school will be in itself a health-institute, where proper rules of hygiene, exercise, and food will be taught and enforced. But until then, we must have especial homes and institutes for the recovery and preservation of health.

And in these must be studied, taught, and practiced, along with all simple formulæ for medical and surgical treatment, the laws of magnetism and electricity. These should be taught theoretically and practically, with whatever improvements may have been made in batteries and other electrical-machines, and, by constant experiment in all harmless and useful forms of magnetic treatment, I am sure that, by careful study and reasonable practice, magnetism can be made to take the place of all other anæsthetics. I call upon physicians to use, as Dr. Warren says, their hands and their common-sense more, and their drugs and their instruments less.

Let every doctor *take an interest in his patient*, and consider that human health and happiness, as well as life and death, are at stake; and being anxious to keep a condition of mental harmony, the whole

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will and *mind* will be *intent upon soothing* and *assisting the sufferer*, and thus all natural means will be called into action for overpowering the disease, and all the benefits of anæsthesia are obtained, without any of its ill effects.

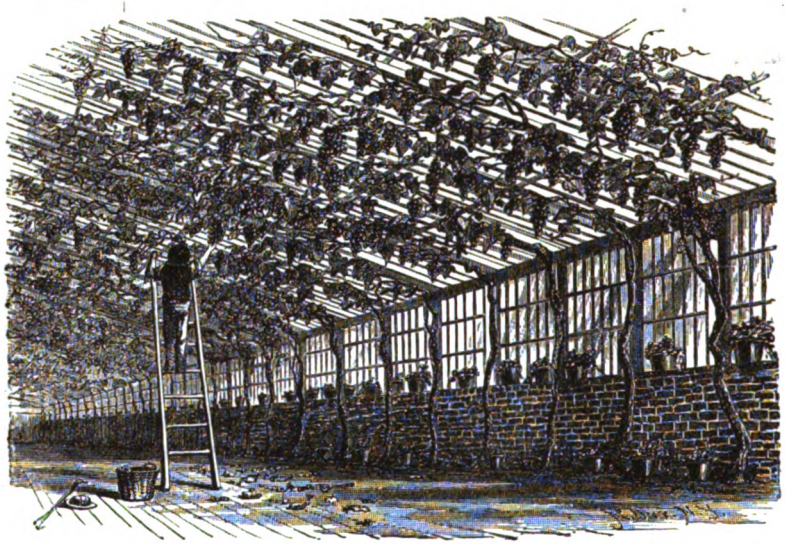


FIG. 28.—A GRAPERY AND GARDEN FOR THE INVALID.

And there is magnetism in the sunlight, in every breath of wind that blows across the fresh earth or in from the great salt sea. There is magnetic strength in the very grass that covers the prairies, and powerful healing properties in the pine woods.

Consumptive patients should have a bit of garden to work in, that the hidden currents of magnetism may find their way up from the mellow earth. And if a person is threatened with apoplexy, let him remember that the best cure for such trouble is the pine forest, the worst possible aggravation of it being the hot-house life and excitement usually attendant upon the business cares and late hours of city life.

Let every one remember that there is a strong curative principle in nature, which needs first to be allowed to work, and then to be encouraged and strengthened. One of the latest monstrosities in the way of medical treatment is thus described in a modern journal as a cure for neuralgia, "Raise a blister on the part most affected, then rub the skin off and apply morphine," etc. etc. Of course, the sensitive *cutis vera* thus exposed, with its multitude of delicate absorbents, takes up the poisonous drug, and filters it into the blood. Tem-

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porary relief is obtained by this process, but permanent injury is wrought to the whole system. How much better would it be to apply the warm hands of a good magnetic physician to the part most affected, and start anew the retarded blood-currents that are causing all the pain! Then, when the local trouble is removed, a quick, brisk rubbing of the whole person will go far toward *preventing* another attack. And it is always well to prevent trouble of all kinds when possible.



FIG. 29.—THE MAGNETIC HAND.

It will be a grand achievement of mind over matter, when all physical anæsthetics give place to magnetic power, and health can be gathered from the *primal elements*, without the intervention of drugs. I have no faith in homeopathy, with its infinitesimal doses and high potencies, save that the tiny pellets and weak dilutions may carry with them some element of *faith* to the mind of the patient.

I have before spoken of the curative principle in nature. When homeopathy gives virtually no medicine, and yet keeps the mind of the patient in a quiescent state by pretending or appearing to administer potent agents, then nature has the best and most favorable opportunity possible for establishing her own harmonial relations, and thus building up and strengthening the diseased and weakened organism. In this way, homeopathy does its own beneficent work, being humanity's earnest protest against the system of universal drugging, which had become more destructive to human life than the diseases the drugs were intended to cure.

Protests are seldom reasonable; and as, if one wishes to straighten a stick that has been long bent, he bends it the other way; so society, wishing to remedy an evil, rushes to the opposite extreme. But the golden mean of reason will be reached at last, and the world will acknowledge the step that homeopathy has helped it to take in advancement.

The constant experiments being made with anæsthetical agents tend more and more to the ethereal and intangible forms, by which the same or even better results may be obtained than by the older and cruder materials. One can not help foreseeing that the ultimate

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of this will be a *reliance upon the mental power*, without the intervention of any mechanical agent. Until then, let anæsthetics *be used with the utmost caution* and care. *Remember* that they directly *affect the brain*, the very stronghold of consciousness and reason. And the brain is, of all organs in the human body, the one that must not be trifled with. If the action of the heart is stopped for any length of time, if air is denied to the lungs or food to the stomach, in a way to stop their action—that is the end. Death comes, a merciful angel, to terminate all physical suffering, and allow the soul to change spheres, and go on untrammeled in its strife for light and search for wisdom.

But the normal action of the brain may be destroyed, all capacity for conscious enjoyment of life may be annihilated, all acquired knowledge swept away, all natural talent obliterated, and yet the machinery of mere material life run on smoothly and perfectly for years, in a way that is worse than death.

I do not intend to say that permanent insanity is often caused by anæsthetics; but I have known cases of *softening* of the *brain* that I had good reason to think were superinduced by a careless or improper use of anæsthetical agents.

And magnetism has always this advantage, that it can do no harm, and the instincts of the patient may always be trusted in regard to its beneficial effect. Any magnetic treatment that is decidedly unpleasant may not be beneficial; still, it will not be injurious, unless the patient is very nervous, and has most unreasonable prejudices. In that case, it is best to allow even whims that border on absurdity to have some weight in deciding the treatment to be pursued.

If it is possible to have a choice in physicians, and if one is more agreeable to the patient than another, the most harmonious one should always be selected, as there may be some temperamental adaptation, which, without obtaining recognition by any of the outward senses, has nevertheless an influence upon the springs of vital life and health that ought not to be disregarded. Kindness and yet unvarying firmness are especially desirable in a magnetic physician, when anæsthetical results are desired; and patience and equanimity of temper should always be maintained.

In conclusion, I have only this to say, that, in view of all experience and observation that has so far been mine, I warn every one that too much care can not possibly be taken in the use of anæsthetics, and it is better to substitute magnetic or even electrical treatment at all times.

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If the patient have any tendency to weak lungs, especial caution should be used; but this branch of anæsthesia will have a separate chapter devoted to it. (See Section on Consumption and Cure by Cold Medicated Inhaling Vapors, by James Rush.)

JAMES YOUNG SIMPSON.



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ELEVENTH SECTION.

ON DRINKS AND THEIR EFFECTS, OR DRUNKENNESS AS A DISEASE.

American people very immoderate in both eating and drinking—Want of individuality of character for self-government—The great object of life is to use brain-power to the best advantage—Three forms of appetite—Appetite for strong drink hereditary often—A thorough knowledge of its effects—No man would treat a dog as he treats himself—Effects of alcohol upon the kidneys in deposit of calculus—Abnormal action—Nephritis or inflammation of kidneys—Coma follows the retention of urea—Inflammation of neck of the bladder exceedingly painful—Dropsy—Bright's disease—Albumen in urine—Secretory functions obscure—Hydrocele—Children should be kept from stimulating drinks—Importance of chemical analysis of urine—Softening of the brain result of spirit-drinking—Magnetic treatment very important.

IT IS well known, and almost universally acknowledged by writers and thinkers, that the American people eat and drink too much as a very general rule. Food is indulged in for the taste in the mouth, and drink is taken into the stomach for reasons even less tangible and real.

A frank and fearless woman, talking one day to a man whose habit of drinking was fast ruining his powers of body and mind, said, "It is too bad that you like whisky so well."

To which the man replied, "But I do not *like* whisky. I never drank a glass of whisky or any other liquor in my life because I liked it."

"Then what in the name of reason do you drink it for?" asked the woman. "I supposed you liked it as I like chocolate, and that it was only your misfortune that whisky was more injurious than chocolate. Do you drink it only for the effect it produces? for the way it makes you feel?"

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"Oh! not for that even," was the reply. "I do not crave the stimulus of ardent spirit, nor do I feel either the need of or a desire for the excitement it produces."

"Then tell me why you drink, knowing as you must know, as every sensible man does know, that it injures you."

The man sighed deeply and said, "Oh! it is part and parcel of social life. Others drink, and I join them. One must do something to make the time pass lightly."

The woman looked astonished; but there are too many men in this country, and in fact, in all other civilized countries, drinking because it is part and parcel of social life; because they are expected to help along the evening's entertainment, and the chosen beverage is poisonous and stultifying.



FIG. 30.—TEA-PLANT OF CHINA.

If Young America would be content with beer, as Young Germany is, and accustom itself to it as gradually and constantly, it might be as little injurious to the one as to the other. But the only true way to overcome the evil of drunkenness in the future is by education in the present.

All children should be taught that the great object of life is to use their brain-power to the best advantage, and that the brain, when

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unduly stimulated, loses its power of acquiring knowledge, of thinking good thoughts, of experiencing real happiness. Says Dr. Foote,

"A correct understanding of the effects of various liquids commonly used as beverages will enable thinking people to understand how much they have to do in the production of nervous derangements and blood impurities."

It is estimated that every person drinks about fifteen hundred



FIG. 31.—COFFEE-PLANT.

pounds of liquid per annum. Of course, many largely exceed this. But it becomes important that the habitual beverage should contain as little poisonous matter as possible, as all poisons are liable to be deposited in the process of filtration, which goes on in the stomach, the secretive organs, and blood, as fluids are being passed through the system.

The ordinary Chinese tea, which is universally used as a beverage,

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contains gum, sugar, tannin, and theine. It is slightly nutritious and exhilarating, having a direct effect upon the nerves.

A Chinese writer who lived, studied, drank tea, and died, long before the year one of our usual computation, thus wrote in regard to the tea of his day, which is supposed to have differed no whit from that drank so liberally at present:

"It tempers the spirits and harmonizes the mind, dispels lassitude and relieves fatigue, awakens thought and prevents drowsiness, lightens or refreshes the body, and clears the perceptive faculties."

Some people are so constituted that tea, even weak tea, and much more when taken strong, will render them nervous, wakeful, irritable, and uncomfortable. But these are the exceptions; for tea generally acts as a mild and gentle stimulant, aiding digestion, and assisting the circulation of the blood.

Next to tea, coffee is the most universal beverage used, and, being slightly more stimulating and narcotic than tea, it is slightly more



FIG. 83.—THEOBROMA, COCOA.

injurious. Still it has more nutritive qualities, and it is a well-established fact that people who drink coffee can not eat so much food as those who do not, other things being equal.

Chocolate is often classed in the same category with tea and coffee, being, as usually prepared, still more nutritious than either of the others. It is especially good for people who have weak nerves, or are liable to suffer from indigestion, being light and soothing in its effects, passing readily into the stomach, and assimilating easily with the gastric juices.

The only trouble about its more general use with invalids is, that a large proportion of milk is used in preparing it, and weak or delicate stomachs can not adapt themselves to rich animal secretions, like milk and eggs.

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Chocolate itself is a manufactured article, being the product of the seeds of trees of the genus Theobroma (this is a Greek word, signifying food of the gods).

The fruit of these trees is somewhat like a cucumber in shape, six or eight inches long, yellow, turning to red on the side next the sun. The rind is thick and somewhat rough, the pulp sweetish and not unpleasant; the seeds numerous, resembling a small almond or large bean in shape, with a thin, pale-brownish skin or shell, covering a dark-brown, oily, aromatic, bitter kernel.

This kernel is very nutritious, its principal constituents being the soft, solid oil called cocoa-butter, which forms more than fifty per cent of the whole shelled bean; about twenty-two per cent being starch, gum, mucilage, etc., and seventeen per cent being gluten and albumen.

They contain also a crystallizable principle called theobromine, somewhat analogous to caffeine, but more nitrogenous. If cocoa be used regularly as a beverage, it will soon be found to supply the need of both food and drink, to a great extent.

Following tea and coffee in general use comes lager-beer and the lighter kinds of ale. These, when not used to excess, are healthful, invigorating, and strengthening. Alas! that they too often are used in excess, and prove a curse rather than a blessing. Whisky and the long train of alcoholic drinks follow the fermented liquors, and the tide of folly and ruin flows fast and wide from the distillery to death, or to that destruction of the mental, moral, and physical natures which is so much worse than death—drunkenness. Truly if any phase of human weakness and imperfection may be called a disease, the curse of the inebriate deserves what small excuse that name can bring to soften, though it may not pardon, his imbecility and his crime.

There are three forms of appetite which lead to the passion of intoxication.

The first, the most difficult to deal with, the hardest to control, is hereditary predisposition. This may be manifested early in life, or only later years and temptations may develop it. But once it has gained an ascendency, and what power can stay its course? Only the strongest *will*, the severest *self-control*, and the most steadfast patience.

The second phase that inebriation takes is where the appetite has been indulged or even forced and coaxed until it has acquired a need, a craving for stimulants that nothing else can satisfy.

A total putting aside of all spirituous drinks, a brief, fierce

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struggle, some true and faithful friend to lean upon, if possible, and a victory is won that brings back the freshness and vigor of early youth, and gives a man the privilege of being proud of himself.

The third form of drunkenness is that brought on by excitement; only occasionally the flood rises high enough to overwhelm reason and drown consciousness; only at long intervals, perhaps, when merry friends are about, and the wine-cup circles freely. But whenever and wherever a man loses command of himself, he loses some portion of his own self-respect, and he can never again so bravely and determinedly challenge and demand the respect of others. The treatment for occasional drunkenness, as a disease, should be a thorough knowledge of its evil effects on brain and nerve and bone and muscle, and then a calm and deliberate conviction that excess of any kind does not pay. Following this, it seems as though any man might have strength of will and common-sense enough to keep from committing an act that can have very little charm in itself, and tends to such disastrous and ruinous results.

No man would treat a dog with such persistent cruelty as he treats himself when he drinks to intoxication.

If he was going to poison a dog, he would at least *try* to administer enough of the drug to terminate fatally and at once, or as soon as possible. But a man who should give a dog sufficient poison to nauseate and stultify him, and then when he had partially or apparently wholly recovered from its injurious effects, repeat the process again and yet again, until the poor brute might be said never to have the use of his normal faculties, would be considered only one step removed from a fiend, and would be actually liable to arrest and prosecution by law, for cruelty to animals.

But the one animal who can never in any way, or at any time, escape from the cruel dominion of man, is himself; and he seems never to consider how great is the responsibility that rests upon him in caring for himself, or how severe and certain is the penalty for self-abuse or self-neglect in any form.

In addition to the direct influence which alcoholic drinks have upon the brain, depleting, irritating, and exhausting it, there follows the indirect but no less certain action upon the *kidneys*, causing inflammation, inaction, frequent deposit of *calculus*, and other distressing troubles.

It is not denied by any person who has given thought and attention to the subject that alcohol is really the most vital and life-sustaining principle in all grains, fruits, and vegetable productions generally. And a small quantity of alcohol, taken in the form of

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beer, ale, diluted wine, or even rum or whisky, drank slowly with the food and allowed to pass gradually into the stomach, will stimulate digestion, warm the blood, and assist the secretive organs.

But the *excessive use* of alcoholic drinks causes an abnormal action of all these organs, and it is this which all persons should especially guard against.

The symptoms which attend inflammation of the kidneys, or *nephritis*, are a deep-seated pain in the small of the back, on one or both sides of the spine, often extending downward toward the inside of the thigh.

This pain is increased by pressure, by coughing, by sitting down suddenly, or by falling, as well as in various other ways.



FIG. 33.—Morbid deposits as seen in the urine under the microscope, indicating triple phosphates, lithic acid, and amorphous matter.

The urine is high-colored, secreted in small quantities, sometimes attended by severer pain, and deposits a sediment varying in color from a whitish albuminous secretion to a pink, red, or brownish deposit.

There is fever and occasional nausea, with this form of disease; the retarded secretions cause distention of the glands, the kidneys refuse to go on with their work of separating the waste and unvitalized particles from the healthful fluids, the blood becomes vitiated, and other diseases follow.

The treatment should be a wet bandage applied around the body, thickened at the back where the pain is most apparent, drinking plentifully of cold spring-water, and perspiration excited over the whole surface of the body; a brisk rubbing, both local and general, should be administered, twice each day during acute attacks, and two or three times per week, if the disease has become chronic and less painful.

Every thing should be done to promote the secretions; the diet should be light and nourishing, and no stimulants of any kind should be used.

The patient should have free access to the sunlight, take both sun and Turkish or hot-air baths; should exercise as much as possible, and, if the urine is passed with difficulty or pain, a weak decoction

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of *buchu* or *uva ursi* leaves, should be taken in doses of about one wine-glassful every two hours, until a change takes place, and relief is gained.

If no urine is separated from the blood, *coma* or a death-like stupefaction is the result, and death itself soon follows, caused by a retention of urea or carbonate of ammonia in the blood, which thus becomes impure, and acts as a poison to the brain. But very frequently the kidneys go on with their work of secretion, and the urine is passed to the bladder, and there retained, sometimes for several days, failing to pass off on account of inflammation or ulceration of the neck of the bladder.

This is an exceedingly painful but usually not a dangerous disease.

(Read the very interesting case of Mrs. Haine, reported in the Twenty-second Section—Cases of Cures.)



FIG. 34.—MANNER OF TAKING THE BATH.

Sometimes the use of the catheter is desirable. This is a tube made of hard rubber or silver, varying in length from four to six inches for a female, while the male catheter should be from ten to twelve inches in length, small, perfectly smooth, and slightly curved.

When, by the careful use of the catheter, the bladder has been emptied of its contents, the bowels should be evacuated by some mild but persistent laxative, and cooling and healing drinks used in connection with warm *sitz-baths*, and rubbing of the back and loins.

Both of these occasion the severest and most excruciating pains, but in themselves have very rarely proved fatal.

One distressing trouble often occurring to people who live sedentary lives, and especially who partake of stimulants to excess, is the formation of calculus, or stony substance, either in the kidneys or bladder, which are known as *Urinary Calculi*, or in the bile-ducts or gall-bladder, called *Biliary Calculi*.

The surgical operations by which these concretions are removed, often proved fatal in former times, when instruments were of a more primitive and imperfect manufacture, and even now these operations are attended with more or less danger.

Prevention is better than cure for these troubles, and as no sailor

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or miner, rarely a farmer, and never a gymnast, was known to suffer from calculi, it is but reasonable to conclude that active exercise, plain food, plenty of bathing, and copious draughts of cold, soft water, are the best means for keeping the kidneys busily at work and the bladder well rinsed and cleansed.

But if the urinary discharge shows a tendency to deposit a fine gritty substance that feels like sand and looks like grains of Cayenne pepper, there is reason to apprehend the formation of calculus, though these symptoms are generally known as gravel.

And if a person, having been for any previous time affected with gravel, should feel a very severe, even if transitory, pain, or if the urine is bloody or thick, or if it passes with difficulty, or if agonizing twinges, commencing in the loins, sting downward into the thigh or groin, it is probable that a stone is already forming in the kidneys, and preparing to make its way to the bladder.



Fig. 35.—The ax for health and exercise.

I know of no better remedy at this stage of the disease than that which Dr. Warren suggests in case of any predisposition to apoplexy or paralysis, "An ax and a pine forest, or, where this is not practicable, a pick and a shovel, a bank of gravel, and a road to build."

This at least should be remembered, that violent exercise is the surest prevention and sometimes the best cure for any collection or concretion of foreign substance in any of the secretive organs.

The allopathic faculty prescribe opiates only, and these deaden the pain but act viciously upon the brain, and most disastrously upon the secretive organs.

But it is best to learn as soon as possible what is the nature of the concretions forming or gathering in the kidneys.

[We have been purposely clear and as specific as practicable, in our prescriptions for the many painful affections of the kidneys and urinary organs, with the hope of successfully reaching many sufferers distant from *immediate* professional aid. But we must conscientiously advise all such sufferers to heed the timely indications, and have their case scientifically investigated and certainly diagnosed, by forwarding a specimen of the morning's urine for chemical analysis. For it will be particularly observed that the sediments or morbid deposits in the urine may be and often are perfectly opposite in their

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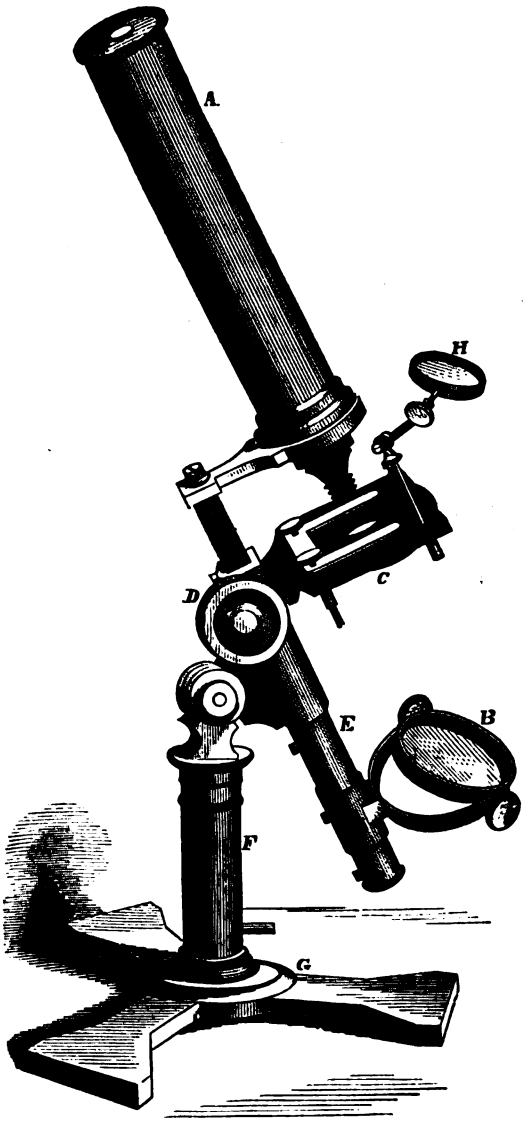


FIG. 36.—MICROSCOPE.

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nature, and therefore requiring opposite modes of treatment; the white sand indicating an *undue* waste of phosphoric acid; the phosphates, or elements that largely compose the brain and nervous system, proving an over-taxation or an alarming conflict of the very citadel of life; while the pink or red sand denotes disorder of the stomach and function of assimilation, a rapid waste or disintegration of muscle, the fibrinous structure of the body; while again, the dark or mixed muddy sediments most certainly indicate a defective function of that *large* gland, the liver, liver complaint, biliary calculi, which often terminates in the most excruciating agony, and even death itself, by blocking up and entirely obstructing the ducts; while again oxalic acid and lime are surely indicated by the dark and amorphous accumulations.

Now, it will be readily seen that in all such cases the *complications* are too intricate for one unskilled and unversed in animal chemistry to think for one moment of treating himself with any degree of certainty or success. To do so must be a blind shooting in the dark, a groping after an object that can not be seen. No course of treatment for these affections can be prescribed, with the certainty of removing the cause in the *blood*, or in the nutritive functions, without a chemical analysis being made.

Says Dr. Bird, the distinguished author of *Urinary Pathology*, "The examination of the urine, in disease, is now regarded as one of the most important aids in diagnosis, and which it would be alike injurious to the welfare of the patient and the credit and reputation of the practitioner to avoid."

The Institution possesses a microscope of wonderful power, by the aid of which the most minute *atom* can be detected; and as each chemical agent or elementary principle crystallizes in accordance with a *law of organic* chemistry, the nature and condition of each case is diagnosed to a certainty; the treatment at once based upon calculations of ultimate success and restoration.

Those hitherto intractable and incurable diseases (so considered), diabetes and Bright's disease, become known in their incipiency, and yield kindly to our administration. One of the most aggravated cases of Bright's kidney, that of Mr. Burgess, of Marathon, N. Y., was cured in ten weeks under the prescription of this Institution at his own home, after having been a long time unsuccessfully treated by three physicians of his neighborhood, who at length hopelessly abandoned and consigned him to an early grave.

Patients, therefore, in the most distant parts of the country can be as *readily* and successfully treated at their own homes, without

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being seen even, as though they were at the Institution. Let one ounce of the urine *first* passed in the morning after the digestion of the preceding day, the blood-urine—*urina sanguinis*—be put into a strong vial, well sealed, and then securely packed in a *tin* box, accompanied with the fee of three dollars ($3), and forwarded REGISTERED per mail, or by express, with all transportation fees *pre-paid;* stating age, sex, name, and post-office address, county and State. In due time, full report will be made and returned, giving the result of the analysis with full particulars as to the nature of disorder, the treatment required, or the causes to be avoided.

Let the victim of such maladies look calmly and philosophically at the subject. He should consider this, namely, that there are some five or six great functions necessarily maintained in the animal economy, all tending to counterbalance each other in sustaining the system in health, in harmony—the lungs, the skin, the liver, the kidneys, and the bowels, to say nothing of the spleen and pancreas.

Bear in mind that, when any one of these is suppressed, some *one* or all of the others are compelled to an increased or an unnatural duty, to make up for the deficiency of the *failing* function. When the pores are closed by sudden cold, how soon the secretion of the kidneys is disturbed! The same when disintegration is going on in the lungs, the urine is then loaded with *urates* or triple phosphates.

The lover of good eating, of choice, high-seasoned dishes, who simply eats because it is delectable, to please the palate, little considers that he is imposing an unmerciful task upon the kidneys to free the blood of a load of effete matter which he is wickedly throwing in, simply to gratify the pleasures of sense, and *not* because it is needed to repair or sustain the temple which belongs *not* to himself, but which he has only in trust for a more lofty development and discipline of the immortal spirit. To him, *even*, we come, at his own door, and endeavor, in the spirit of humility, to impart a knowledge of hygiene to govern his future career, that he shall be no longer "slave to his appetites," and deserve the traitor's gyves, but become a fit temple for a sound mind.

We insert here a cut of the various apparatus and case of reagents made use of by the Institution in prosecuting the examinations by chemical analysis and otherwise.

[Physicians situated in distant parts of the country in want of such, can be furnished at reasonable charges, and the same forwarded per express.]

If red sand is deposited in the urine, it indicates an excess of uric

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acid. But if the phosphates of ammonia or magnesia are in excess, limy or alkaline deposits will be the result.

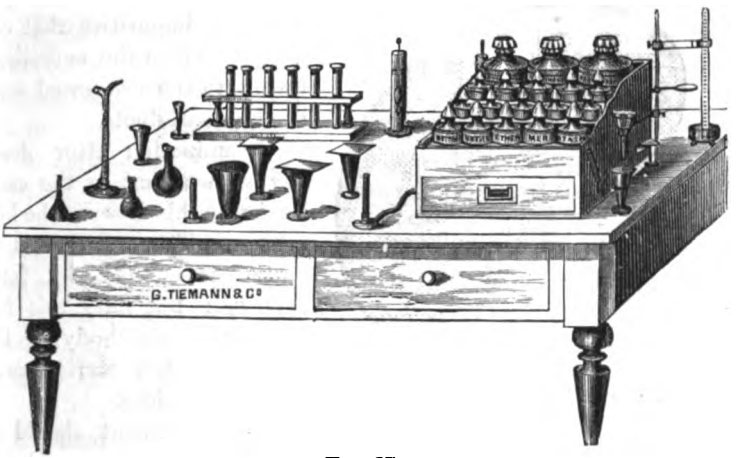


FIG. 37.

The treatment for these two sedimentary deposits is exactly opposed, the one to the other.

If *uric acid* be found, the patient should take weak alkalies, as soda-water, bicarbonate of soda in small doses, diluted lime-water, or small quantities of magnesia.

If, on the contrary, alkaline deposits be discovered, the patient should take fruits and vegetable acids freely; acetic acid having been found especially adapted to act upon the secretive organs.

A pleasant and at the same time efficacious remedy for alkaline excess in the blood is a half-pint of lemonade, with from three to ten drops of *spirits of turpentine*, alternating with from six to twenty drops of *sweet spirits of nitre*, taken every night and morning. But when a calculus of large size is really formed, there is probably no cure for it excepting its removal by lithotomy, which is a process too entirely surgical and scientific to be described here.

The disease usually known as Bright's disease of the kidneys is only an aggravated form of a much older trouble, treated before the days of Dr. Bright (an English physician, who made diseases of the kidneys, and particularly this disease, a specialty), and then called consumption of the kidneys.

It is caused by a weak and feverish condition of the body, more frequently by strong drinks than any other one trouble, and is frequently associated with enlargement of the heart.

The symptoms are a dry, feverish skin, white, furred tongue,

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pallor and languor on the part of the patient, drowsiness, and loss of memory. The urinary discharge becomes thick, turbid, and albuminous, and the blood is poisoned by impurities that can not pass off in the excretions, owing to the congested state of the small ducts.



FIG. 38.—Section of a Kidney in a state of disease, representing a condition very often found after death, called Bright's Disease, or Consumption of the Kidneys.

Examination after death has shown that in the early stages of this disease the kidneys are surrounded, and in some cases filled, by fatty deposits; but later this fat, as well as the body of the kidney itself, is carried away in the excretions.

The treatment should be of the most vigorous kind—sitz-bathing, rubbing, abundant exercise in the fresh air, drinking plentifully of cold, soft water, or hot cocoa or chocolate—any thing that will bring the blood to the surface and cause it to circulate more freely, or excite perspiration, and thus carry off some of the gathered impurities by way of the skin. The food should be plain and abundant, the bowels kept open, acid fruits should be used freely, and it is sometimes beneficial to bathe the back with hot vinegar, following this by profuse sweating and a water or Turkish bath.

[See Twenty-second Section for a most *interesting case* of *cure* of Bright's disease of the kidneys, in the person of A. L. Burgess, in which the hot-air or Turkish bath was made use of conjointly with other treatment, with the most astonishing results.]

Dropsy is a disease that results from inaction of the secretive organs, and causes the effusion of a watery fluid from the blood, which is deposited in the cavities of the body. This watery fluid should be eliminated from the system by means of the kidneys, the pores of the skin, and the lungs. In order to effect this result, magnetic treatment should be resorted to immediately, and it will frequently occur that a dropsical patient being rubbed thoroughly by magnetic hands will discharge two or three pounds of water through the skin alone. The kidneys should be stimulated by a decoction or tea made from one ounce of dried bean-pods steeped in a quart of

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soft water. A few drops of lemon-juice added to a wine-glassful of the tea should be taken every six or eight hours, and then alternated with a tea made from *buchu* leaves.

The bowels should be kept open, and two movements daily insisted on.

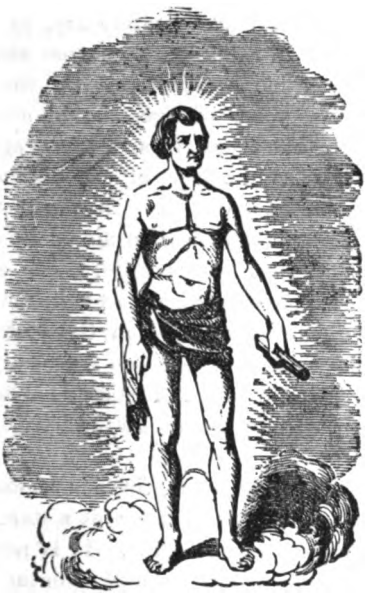


Fig. 89.—Cut inserted to show the very important function of the skin.

Hydrocephalus signifies dropsy of the head, and is a disease incident to childhood.

It is an effusion of water on the brain, occurring before the sutures of the skull have united, and thus allowing the head to swell. It is usually fatal. The only hope of recovery lies in change of air, increased activity of the secretive organs, and good magnetic treatment.

If dropsy in the head occurs later in life, at a time when the skull will not expand, the pressure of water on the brain causes death very soon, sometimes preceded by apoplexy and occasionally by *coma*.

Hydrocele is a form of dropsy that manifests itself by a swelling of the testicles, or rather by an effusion of water inside the membrane or sac that covers the testicles; for the testes themselves are often quite healthy, even through an aggravated attack of hydrocele. The swelling is usually soft and not painful, sometimes causing a feeling of weight and slight uneasiness, which should be relieved by *wearing a suspensory bandage*.

The treatment is the same as that recommended for general dropsy, and care must be taken to keep the strength up and give as much tone and vigor to the blood as possible.

The secretive organs are all obscure in construction, and their action is intimately dependent, each one upon all the others. The brain especially needs that all the secretions be healthy and active, that the blood may be pure and highly vitalized for the manufacture of nerve-fluid. And it is better not to overload the blood with impurities which must first pass through the secretive organs and then be excreted from the system.

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There are direct diseases of the brain brought on by drinking spirituous liquors, of which softening of the brain is one of the most frequent in occurrence, as well as one of the most difficult to treat. This, with its kindred maladies of apoplexy, epilepsy, and several others, is spoken of in a chapter devoted to the brain and its functions.



FIG. 40.—This cut illustrates the benefit of magnetic treatment, and being rubbed by magnetic hands.

But we can safely say, as a general rule, that no person with tolerable health, and less than fifty years of age, should ever partake themselves, or encourage the use in others, of any kind of alcoholic drinks. Never any thing stronger than ale or beer, and that but sparingly, one or two glasses per day, to promote digestion and aid in the secretions that are but too frequently retarded by sedentary habits, breathing impure air, and living fast.

After a person has reached the age of fifty years, there is seldom any increase of strength or vigor. The faculties seem at a standstill for perhaps ten years, before they begin to decline. It is now that a person, having lived temperately and plainly for half a century, can feel the invigorating effect of a glass of wine, or is ready to receive the assistance to brain and nerve which some such slight stimulant gives.

From this time onward there is no danger of injurious habits being acquired; the appetite is well under the control of reason, and the addition of a small quantity of alcohol to the daily food will be a benefit and not an injury.

Children especially should be kept on a non-exciting and non-stimulating diet. No meat should be given before the age of three to four years, and it would be much better if none were used before seven; even then only plain, boiled meats with bread, ripe fruit, and plenty of milk and water, should be allowed.

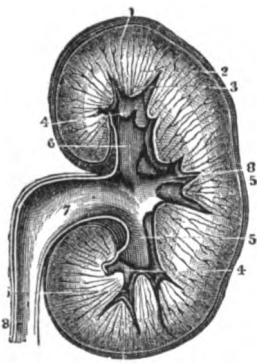
It is of the utmost importance that all secretions and excretions be carried on regularly and thoroughly. Any thing which tends to promote this result is to be used with care and judgment, never to excess; for excessive secretions are as bad for the health as when re-

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tarded, or nearly so, being weakening, depleting, and difficult to control when once established.

But every person, by devoting a reasonable amount of time and thought to the study of their own constitution, can learn what best assists them to health and comfort. This course of conduct should be pursued by all, and thus one of the learned professions would be cheated of nine tenths of its victims.

ELIPHALET NOTT.



SECTION OF A KIDNEY IN A STATE OF HEALTH

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TWELFTH SECTION.

THE BLOOD AND ITS DISEASES.

The heart the most important organ—The arteries carry the blood from the heart—The capillaries—The veins—Arterial blood more highly charged with magnetism—Diseases of the blood—Cold hands and feet—Rheumatism—Globules—Neuralgia—The best remedy—Tobacco cause of rheumatism and nerve-ache—Syphilitic horrors—Cancer—Canker—Turkish baths the remedy—Analysis should obtain to determine the nature of the blood—Piles or hemorrhoids—Apoplexy—Paralysis—Electricity—Palsy—The lymphatic glands—Carbolic soap—Magnetism better than the knife—Mothers should anticipate and remedy in conception.

THE circulatory organs are the heart, arteries, veins, and capillaries.

The brain and nerves have also a system of circulation, but these have been treated in another place.

I have chosen to speak upon the subject of the blood and its circulation, because during earth-life I was especially interested in surgery, and I can not help seeing now that many a dangerous and fatal operation might have been avoided, and the patient restored whole to health and vigor, if I had used my education and instruments *less*, and my common-sense and intuitions *more*.

However, I did what I could for science and humanity, and am glad to own myself still a student in the school of nature and revelation.

As I have stated, the heart is the first and most important organ in the circulatory system.

The arteries carry the blood from the heart and distribute it to all parts of the system, however minute or remote; and the fine, infinitesimal capillaries gather the exhausted blood in its impure state,

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and feed it in some miraculous way into the veins, which carry it back to the heart, whence it is forced into the lungs, purified there, returned to the heart, and again sent forth on its mission of promoting the growth and repairing the waste of the human frame.

The arteries are smaller than the veins; but the blood moves more rapidly in them, and is more highly charged with magnetism, so that any loss of arterial blood *depletes* the system more, and is

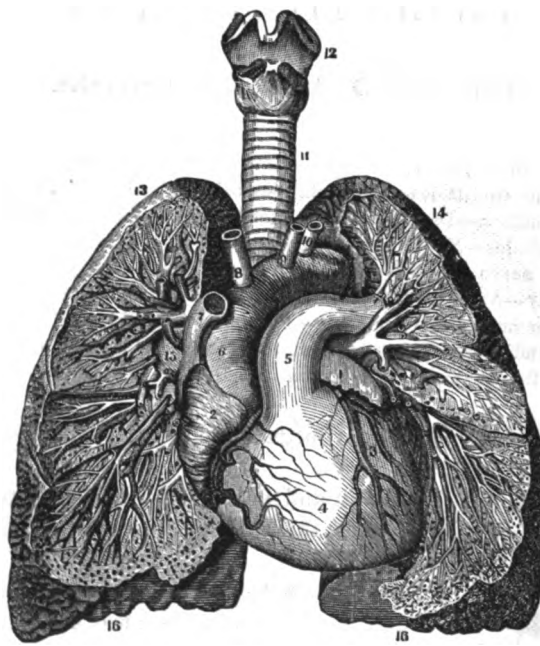


FIG. 41.—DIAGRAM OF THE HEART AND LUNGS.

more difficult to recover from than a loss of the same amount of venous blood.

There are many diseases of the blood brought on by improper living, that might be remedied by strictly following a few *simple* rules of diet and breathing.

The clothing should be loosely worn, and the extremities kept warm by active exercise or extra coverings, but circulation should never be impeded by tight boots or gloves. Cold hands and feet indicate an unequal circulation, which means rush of blood to the head, nervous disorders, eruptions of the skin, etc.

[I can see now the circulation of the blood, which once puzzled and interested me so much, can see the tiny red globules forced out from

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the heart, with vitalized living centres, and each globule inclosed in a fine thin sac ; as they enter the large arteries, each globule pressing against its neighbor, forces them into a flattened or disk-like form ; and where the arteries divide and become smaller, the disks burst, separate into finer globules, each with its thinner sac ; and the old sac is deposited as effete matter, to be carried off as an excretion by the natural secretions, either through the kidneys, the pores of the skin, or in a still finer state by the breath.

Sluggish circulatory and secretory action allows these effete particles to remain in the kidneys, where, by the chemical action of the fluids, they take the form of calculi ; or in the lungs, where they are deposited in the tiny tubercles, causing irritation, inflammation, and subsequent ulceration, until the soft tissue of the lung is torn in shreds by the violent and spasmodic effort of expectoration, the finer blood-vessels are ruptured, and no healing or hardening principle being applied, of course decay and death are inevitable.

I must tell you, in a future paper, my ideas of the magnetic influence of the sun upon the circulation of the fluids in the human body. To a person who writes a great deal, who is in the habit of exhausting the brain, and drawing heavily upon the vital forces, the presence of sunlight in the room is actually cash consideration, and one worthy of attention.

It is action—action—action that humanity needs. We talk about the blood being weak, when in reality the heart and lungs are only inactive, and the circulation goes on sluggishly, and the blood-disks are too lazy to change their coats often enough to keep in a healthy state, and, instead of casting them off at the proper time and place, they wear them out and leave them in minute shreds, and they clog the flattened arteries that pass near the bones, and cause *neuralgia*—nerve-ache indeed ; if the blood were all right, no danger of the nerves making the disturbance they do in this world.

I assure you, my friend, that any thing that tends to keep up a healthy action of the heart and lungs is the great remedial agent against pulmonary disease of any kind. J. Hughes Bennett.]

One of the worst diseases connected with the circulatory organs is *rheumatism.*

This is sometimes attributed to the nerves, and sometimes considered as a disease of the bones ; but in reality it is occasioned by weakened blood and imperfect circulation.

The blood forms in globules, each globule inclosed in a frail, delicate sheath or covering ; but as the globules enter the arteries, they are forced against each other, and become flattened or disk-shaped.

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In case of sudden or repeated chills, the arteries passing over or near the joints become contracted, the blood-disks accumulate for a time, causing inflammation and swelling, severe pain, and sometimes ulceration.

When the blood commences to gather in this way in the arteries or veins, it stops for a while, and then forces its way through the congested tubes, causing a terribly acute pain, which is often known as *neuralgia*. This frequently attacks the head.

But instead of being a disease of the brain or nerves, as is often supposed, and in fact, as the name indicates, being, literally translated, *nerve-ache*, the trouble can usually be traced to the net-work of veins and arteries found over and near the temples, or other and less sensitive parts of the head.

The first, best, and in fact only, proper remedy for rheumatic or neuralgic affections is *magnetic treatment*—steady, soft, persistent manipulations, merely touching the inflamed portions with the tips of the fingers at first, but gradually, as the inflammation subsides, *following along the muscles, pinching and rubbing them firmly*, and at last *brisk, sharp slapping* that will *bring* the *blood* to the *surface* and make it circulate freely in every tiny vein and artery, washing away all impurities, and thus leaving the blood-vessels clear and clean, and far less liable to again become clogged or stopped by imperfect circulation.

Various other causes than sudden cold will produce rheumatism.

If the blood is depleted by continued or repeated attacks of *venereal* disease, severe inflammatory rheumatism is quite sure to appear, and leucorrhœa in the female will sometimes produce the same result.

Fever or *dyspepsia*, or the excessive use of *tobacco*, or any over-exertion, either mental or physical, is liable at any time to result in rheumatism.

Dr. Foote, a comparatively young physician, living in New-York City, who often calls upon himself the gathered anathemas of the "Faculty," by his irregular practice, relates an incident that happened several years ago in Troy, N. Y., which illustrates our idea of magnetic treatment, as it should be applied to cases of inflammatory rheumatism.

He says, "A gentleman hobbled up-stairs to my rooms to consult me regarding rheumatism in one of his knee-joints, which had been very painful, and which had made his limb stiff for more than a year.

"The knee was red and swollen, and excessively sensitive to the touch.

"I examined it a long time, and very carefully, following the

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muscles for several inches with my fingers, where I could reach them, to discover, if possible, any contraction or rigidity.

"I then gave him my opinion, and he left, promising to call again soon for medicine, and seeming pleased with my diagnosis.

"He had scarcely been gone ten minutes when he returned, and with a look of indescribable relief and surprise, he asked,

"'What have you done to my knee, doctor?'

"Of course I did not know what I had done to it, and his remarks astonished me, as he declared he had both descended and ascended the stairs without pain or inconvenience, and at the same time gesticulated with the limb, moving it backward and forward to show its mobility and strength."

This was a case of unintentional magnetic treatment, and speaks well for the doctor's interest in his patient, and kind good-will toward a suffering stranger.



FIG. 43.—THIS CUT ILLUSTRATES HOW THE LEG WAS CURED BY MAGNETISM.

It also points most distinctly to the course of treatment that should be pursued in all cases of rheumatism and neuralgia.

There are other diseases of the blood, not so easy to reach by magnetic treatment; all the enormous catalogue of woes known by the universal name of *humors*, and among these the most pitiable, as well as the most blamable, is *venerea*, with its attendant *syphilitic* horrors.

For all the lighter forms of this disease, where it has been contracted by want of cleanliness, or by contact with inflammation and irritation, we recommend local treatment.

Injections every thirty or forty minutes, made with *carbolic* soap and warm, soft water, and frequent washing with the same, is the best local application, and next to this a weak solution of sulphate of zinc.

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It will be many years before the use of cubebs and copaiba is abolished, as a specific for venerea; but sandal-wood, oil of turpentine, or some of the balsams, which operate readily upon the kidneys and induce more rapid secretion, and so cause as it were a washing process from the inside, are now quite extensively used, as is also *buchu*, a medicinal plant somewhat resembling in fragrance and flavor the little herb called pennyroyal, which finds constant favor with New-England nurses; and *uva ursi*, or *bear-berry*, sometimes called *mountain cranberry*, is used by the *Indians* for this strange visitant which civilization has brought among them. It is also used for dropsy and all diseases of the urinary organs; but good *magnetic* treatment will cure twice as many cases of dropsy as all other forms of treatment combined, besides relieving all it can not cure permanently.



FIG. 43.—BUCHU.

For *cancer*, before it has suppurated or commenced discharging, a magnetizer can place one hand on the hard lump that always precedes the breaking out of the sore, and by holding the hand perfectly still and allowing the perspiration to gather under it for twenty or thirty minutes each day, the lump will gradually disappear, taken up by the absorbents and discharged partly by the *secretory* organs, and partly by the lungs.

Of course, much effete, waste matter must be left in the blood after such a gathering has been dispersed; but by proper care and diet this can be disposed of, and the whole system restored to purity and health.

There is a troublesome form of humor in the blood, more annoying than dangerous, sometimes called *canker*, and sometimes by other names, which appears on the mucous membrane usually, but sometimes on the cuticle, in small irregular pustules, red at first, but gathering watery fluid from the blood; a small white centre forms, and unless opened by artificial means, never discharges any matter, but gradually dies away, leaving a crimson scar.

Within the mouth, nose, and throat these pustules are so softened by constant moisture that they spread over a larger surface, and often present dead white surfaces an inch or more in length, from which much inflammation often proceeds.

This trouble should be treated first with a course of *Turkish* baths, steam-baths, or abundant hot-water bathing, alternating with a dip in the sea occasionally.

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It is next to useless to take any form of drugs, internally, for this trouble, and a great deal worse than useless to apply poisons to the surface, as is often done.

Botanically, a yellow root called *gold-thread* is used in decoction as a drink for canker; and alum, being a powerful astringent, is often used to harden the mucous membrane and heal the abrasions already made. Sometimes canker reaches to the stomach, and causes a burning sensation, that can be allayed by drinking mucilages, of which the best is a tea made of slippery-*elm* bark, with a little gum-arabic added.

Sometimes canker eruptions indicate that the blood needs *acidulating*, and can be corrected by a fruit diet; sometimes that *lime* is needed, which can be supplied by eating eggs, oysters, and similar articles of food.

But abundant *bathing* and *magnetic* treatment are best.

For aggravated cases of venereal and syphilitic affections, the patient must commence a thorough course of dieting, bathing, and exercising, for the purpose of purifying the blood.

We shall be glad to see medication used much less, and common-sense much more, for this as well as other diseases.



FIG. 44.—THE ASCENDING DOUCHE AND SPRAY.

Gout is much like rheumatism in its manifestations, excepting that it is more severe and concentrated.

The same general directions will apply for it, excepting that the food should be much simpler, and contain a larger supply of waste material.

Hemorrhoids or piles are often said to be a disorder of the blood, but any thing which induces extra heat in the lower part of the body will cause these.

Sitting for a long time, especially on softly-cushioned chairs or sofas, walking too much, or excessive sexual intercourse, are the ordinary ways in which this disease is superinduced; but eating improper

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food at improper hours, and allowing *costiveness* to become *habitual*, is a great aggravation of the same.

To cure this distressing malady, commence with the food.

Eat beef or mutton only once a day, no pork, and as little seasoning as possible.

Drink water, cold or hot, weak black tea, without sugar, no coffee, alcohol, wine, or other stimulant.

Eat coarse, light food, mush, grains, corn-bread, and vegetables.

Bathe freely—sitz-baths being a specific for this trouble.

What is still better than the SITZ-BATH is the ascending douche (see cut); for it affords the *ready* means of applying *cool* or tepid lavements directly to the piles, the inflamed membrane of the rectum, abating the heat, the soreness, the swelling, by causing the blood in the capillaries to be carried along or absorbed, and at the same time producing a daily healthy movement of the bowels, and obviating costiveness, which has been the great cause. The douche is a self-injecting apparatus, operated with one hand with the utmost facility, and so small and convenient that it can be taken on a journey, in a carpet-bag, and used in the bed-room or private apartment at leisure, thereby obviating necessities the traveler is so liable to, that produce general illness, headache, and the painful affection in question.



FIG. 45.—CHOPPING IN THE FOREST.

Have the back rubbed and the bowels thoroughly kneaded by a good magnetizer every night, and apply a wet bandage to the spine. This will reduce the inflammation, and allow the healing process to go on regularly and steadily.

Exercise every day in the open air, and, if it be a possibility to do so, walk on the grass, *sit down where the sun shines or has been shining warmly*, and take every pains to induce healthy and natural circulation.

Apoplexy is a very decided indication of trouble in the circulation.

Its symptoms are, increased fullness of the blood-vessels about the

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head and neck, a tendency to obesity, disinclination for active exercise, occasional feelings of dizziness, and sometimes loss of memory and temporary failure of the mental faculties.

The best remedy for this disease is an ax and a pine forest, with the privilege of camping out until the last tree is felled. (See Fig. 45.)

Next to this is a shovel and a bank of fresh earth, or a good strong horse and a journey across the continent of twenty miles a day, with a not very easy saddle. There is probably no exercise so beneficial as horseback-riding ; for much walking exhausts the mag-



FIG. 46.—MAGNETIC EXERCISE.

netic forces of the system, if they are deficient; but in riding a horse, the animal does the work, and the rider takes the exercise, and not only do the stomach, liver, and other internal organs get wholesomely jostled, but every muscle of the arms and limbs partakes of the invigorating shaking.

Then, too, the horse is a regular battery for the generation of animal electricity. The vapors from his nostrils and the steam from his body are loaded with magnetic life. The busy brain-worker, seated upon the saddle, is enveloped in an atmosphere of vital mag-

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netism, which his attenuated body drinks in as the parched earth takes in the evening shower.

If neither of these plans are feasible, good faithful magnetic treatment every day for three months will correct the abnormal tendency, and restore an equable circulation.

Careful attention to diet, light, plain food, and plenty of exercise will then make the cure permanent, and relieve the mind from all uneasiness on that point.

Paralysis is a different form of disease altogether. It can not really be said to be caused by the blood or the circulation, and yet it is so little understood that it is hard to classify it.

Heart-disease is of course intimately connected with the circulation, but is mostly dependent upon the nervo-electrical forces, and has been treated under the head of nerves and their offices.

Paralysis can only be arrested by magnetic treatment, aided by electro-galvanism. It can usually be prevented by careful attention to the laws of health: plenty of exercise in the open air, good food in moderation, careful avoidance of stimulants, strictest abstinence from all unnatural sexual excitement, frequent bathing in cold water, brisk rubbing of the whole surface of the skin by the bare hand. *A hard bed is essential;* and next to a good magnetic physician the best remedial agent for coming paralysis is a good horse. Even horseback exercise may be carried to excess, but is not very likely to be.

Any one who dreads paralysis *should wear the hair long enough to shield the base of the brain*, and always light, well-ventilated hats. Use the *will*-power with a steady and *strong determination to overcome physical weakness by spiritual strength.*

Palsy is a species of paralysis; one way in which the brain grows weak and weary, and protests against over-work. For this the patient should put the feet in hot water, put cold water on the head, rub the back of the neck, and exercise the will-power as much as possible.

The one great bugbear of the blood in old and young, to which we have not alluded, is *Scrofula.*

We shall be glad when some other name is substituted for this, to represent the general troubles that refuse to be classed under any other head.

The word is unpleasantly suggestive, and yet means nothing. It is usually applied first to an enlargement of the lymphatic glands, especially those situated about the throat, arm-pits, and groins.

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The first appearance of papular scrofula indicates a weakened condition of the lacteal and lymphatic vessels.

Swelling or enlargement of the glands shows that the carriers are not doing their work properly, that they are sluggish and indolent, and quantities of waste matter are accumulating that should be carried off more rapidly.

To aid in this carrying-off process, magnetic treatment should be resorted to as soon as the swelling appears. Local and general manipulations should be commenced immediately, and continued until rapid and regular circulation has carried off the accumulated impurities.

Some author says that "Wherever there is a minute artery to deposit a living particle of matter, there is also a lymphatic vessel or venous radical to remove it as soon as it shall have finished its especial office."

This only shows, to all who give the subject any thought, that the action of the lymphatic vessels counterbalances that of the nutritive system, and thus the form and size of the body can be harmoniously preserved only by all these different forces acting in concert.

When the lymphatics exceed the nutrients in power, the body emaciates. When the nutrients are strongest, plethora is the result; and yet the general health may be prolonged apparently for years under some irregular action, by which either class of these vessels may be nearly paralyzed. But discomfort and constant uneasiness are usually the result of any such partial or one-sided action; and the true way to keep the balance of power even is to assist nature by the simplest possible means, either to keep in the right path or to readily return to it when any accident or untoward circumstance has turned her aside for a time.

If a person manifests predisposition to scrofula, he must eat light, rich food, to supply the nutriment which the system needs, and then *stimulate the absorbents* and secretory organs to carry off the waste.

But if there be already sores discharging their acrid, watery, and sometimes offensive secretions, the treatment must be cautious; and the patient must exercise the most careful supervision over his or her general health and condition.

Magnetic treatment should be continued, in order to strengthen the system, the whole person should be bathed frequently in warm water, and, if possible, *electro-chemical baths* taken at least once every week.

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All sores should be washed with carbolic soap-suds two or three times every day, and covered with finely-pulverized dry earth, or a fine muslin bag should be made large enough to cover the surface of the sore, and filled with equal quantities of dry earth and finely-pulverized charcoal.

Wash the sore thoroughly, dry it with a soft linen cloth, and cover it with the bag of earth, allowing it to remain on for twenty-four hours if no inflammation or irritation ensues.

Carbolic acid is the best disinfectant that has yet been discovered, and one of the best healing agents that can be used for outward application. It has the cleansing properties of tar, and is more soothing than the finest oil.

But, whatever may be the state of a scrofulous sore or swelling, never have a knife or scalpel near it. And never have a limb amputated for white-swelling or fever-sore, or any other cause than absolute necessity of crushed bone and severed arteries.

I say never. I mean if you have a good magnetizer at hand, or can by any means procure the services of one. For magnetism is better than the knife in ninety-nine out of every hundred cases.

To eradicate scrofula from the system, live properly. To prevent its appearance in your children, take good care of them, both before and after their physical birth.

Do not wait until unmistakable symptoms have manifested themselves, but commence as soon as *conception* has taken place, to *live for the little one;* to feed it properly, avoiding stimulants, eating light food, rice, and grains and mucilages, and for meat good sweet beef and mutton and poultry; to breathe fresh air, that its blood may be pure; to wear suitable clothing, that it may not be kept too cold or too warm; to keep the nerves steady and the temper equable; to seek pleasant society; to think pleasant thoughts; for all these things have their effect in forming the new life and making it worth living.

Nursing mothers can not be too considerate of the *awful responsibility* that rests upon them; and but few people are aware how easily the blood is vitiated—ah! completely poisoned—from an unhappy, perturbed state of the mind.

Thousands of innocents are annually *immolated* on that fountain, designed by Omnipotent Wisdom to be the spring and font of life. The milk of the nursing mother instantly partakes, by a vital and chemical law, of every *condition* of *her mind;* for her blood is instantly affected. Hence the nervous, feverish excitements, the

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spasmodic pains, convulsions, cramps, and even the mental anguish of the nursing babe.

To show the fact, it is only necessary to repeat the incident related by Carpenter, in his Physiology, of the woman whose husband was attacked by some maddened soldier, flourishing a sword, which she sprang forward, seized, and wrested from him at the most imminent danger of her own life. At the time her babe was sleeping sweetly in the cradle, to which she in a little time after thoughtlessly gave nurse, when in twenty minutes it was dead, her milk proving as poisonous and deadly as prussic acid.

This instance should afford a most appalling lesson to all women, and especially to mothers, namely, to keep a quiet, harmonious state of mind under all circumstances—TO LEARN SELF-GOVERNMENT.

CANCER, too, a blood disease, coming from blood-poison, than which no sound in the English language next to pulmonary consumption becomes more melancholy and heart-sickening to the human ear, proceeds primarily, in the very large majority of cases, from a disturbed, inharmonious, fretful, passionate condition of the mind.

In others, where through misfortune or through grief, the spirits, once so buoyant, are utterly dejected and depressed, the canker-worm of care, with slow and insidious progress, eats into some less vital organ, and altering its structure and vitiating its faculties, gradually undermines the fabric of the constitution, and establishes a painful, an incurable, and ultimately a fatal disease.

Some years since, a preceptor of ours being in London, whilst engaged one morning in conversation with the late Sir Astley Cooper in his study, a subject was announced who had come from Norfolk for that justly eminent surgeon's opinion and advice. His keen and practiced eye at once discerned the malady; and before he put a question to the elderly and melancholy object that had entered the room, Sir Astley asked me if I could name his disease? I admitted my inability beyond that of a constitution thoroughly impaired; on which Sir Astley said he was much mistaken if the poor man was not laboring from carcinoma of the rectum, and that probably his mind was ill at ease. On examining the patient, the accuracy of his diagnosis was most fully confirmed. He then observed how frequently that disease ensued on mental distress.

The disease is, however, by no means confined to the rectum. The female breast and uterus are particularly subject to scirrhus from the same cause.

"I should have observed," says Sir Astley Cooper in his lectures,

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when speaking of the causes of this disease, "that one of the most frequent is grief or anxiety of mind. It arrests the progress of secretion, produces irritative fever, and becomes the forerunner of scirrhous tubercle. How often have I found," he continues, "when a mother has been watching, night after night, with anxious solicitude, the pangs and sufferings of her child, and has had the comfort and gratification of seeing its recovery, that in a short time after this, she has come to me with an uneasiness of the breast, which on examination I have discovered to be scirrhous tubercle. Full three fourths of these cases arise from grief and anxiety of mind. It is the state of mind and body which predisposes to this disease. The mind acts on the body, the secretions are arrested, and the result is the formation of scirrhus. Look, then, in this complaint, not only at altering the state of the constitution, but *relieve the mind*, and remove, if possible, the anxiety under which the patient labors."

Remember that pure blood is to the human frame what pure water is to the earth and its inhabitants; not the source of life, but so intimately connected with it that no life can go on without its agency; and the nearer it is to absolute purity, the stronger and more perfect is the life it helps to sustain.

Then try to avoid every thing that vitiates the blood, and to appropriate every thing that vitalizes and strengthens it.

Learn to gather magnetism from the atmosphere that surrounds you, from the strong, healthy, generous people you come in contact with, and be always ready to impart it to those who need—to the weak and weary, the exhausted and discouraged.

So shall you supply spirit as well as material substance to your heart and daily life. VALENTINE MOTT.

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THIRTEENTH SECTION.

THE STOMACH AND DIGESTIVE ORGANS—DYSPEPSIA AND ITS HORRORS.

Care of the teeth—Use of carbolic soap—Importance of lime in food—Hot drinks and confectionery bad—Toothache a divine monition—The salivary glands—Gastric fluid, its importance—Food, and time of eating regulated by discretion—Vegetable and animal foods, both may be necessary—Pork unhealthy—Generates scrofula, trichinæ, and tape-worm—People do partake of the nature of the food they eat—Grains of all kinds the most natural food—Neglect of the secretive functions the prolific cause of disease—Costiveness, its cause and remedy—Vital magnetism the best remedy—The function of the skin, its great importance—The alkaline bath, its use—The pack—Dyspepsia, its horrors—How cured—Importance of sunshine—Exercise, its importance—Anger and fear to be avoided—Bilious persons should avoid milk—Buttermilk healthy—Animal fats to be avoided—Fruits should form a good share of the breakfast—The food should be most nutritious, and of the best quality—A magnetic ride after dinner to be taken—Sleep before twelve, its importance—The Turkish bath, its effects—To be used discriminately—The medicinal vapor-bath.

THE digestive organs, or those which convert the food into blood and tissue for the support, growth, and nourishment of the body, are the mouth, teeth, salivary glands, pharynx, œsophagus, stomach, intestines, lacteals, thoracic duct, and liver. (See cut.)

The mouth is an irregular cavity, containing the instruments of mastication and the organs of taste. It is continuous with the pharynx, but separated from it by the palate, which can be elevated or depressed so as to close the passage or leave it free.

The teeth are composed of bony matter, but in composition, nutrition, and growth are unlike the other bones of the body, as they are exposed to the immediate action of atmospheric air and foreign substances, in the way of food and drink.

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The bones of the system generally, when fractured, unite; but there is never a permanent union of a tooth when broken.

The teeth require a great deal of care and attention. They should be brushed cleanly with a soft brush and a little nice soap every night, and rinsed cleanly afterward. Tar-soap or carbolic soap is very good for this purpose, being hardening for the gums, healing for any slight abrasion or irritation, cleansing for canker or other sores, and effectually destroying and removing all tartar, thus purifying the breath and strengthening the lungs.

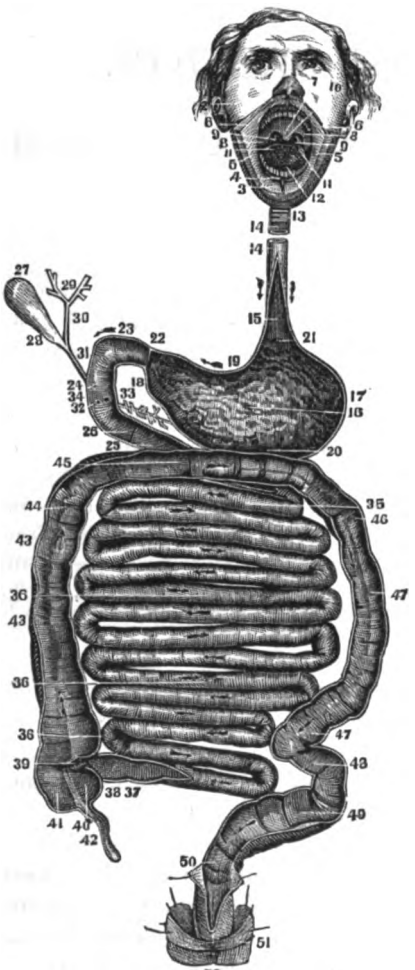


FIG. 47.

The food should be chosen with reference to supplying plenty of lime, to keep the teeth as well as the other bones of a firm consistency, and plenty of silicate for supplying enamel with which the teeth are covered.

Toothache, though a distressing trouble, has its own mission of usefulness in the protection of health and life.

A minute vein and artery and a tiny nerve are found in the centre of each tooth.

Boys and girls drink hot and unwholesome drinks, and eat candy and other improper food, which cracks the enamel on the teeth, and exposes the nerve, thus increasing its sensitiveness.

They go out insufficiently clad, allow their feet to become cold or wet, stop the invisible perspiration that is constantly passing off through the pores of the skin, the blood rushes to the head, every artery and vein is congested and presses against the nerve, and the imperfect tooth throbs and aches to give warning

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that some law has been violated, and that care must be taken in the future of the teeth if not of the lungs.

And decaying teeth have saved more young people from consumption than all the medicines ever made for that purpose.

When toothache is fairly inaugurated, nothing is better than magnetism to draw the blood from the head, warm the extremities, and restore the nervous equilibrium.

The salivary glands are six in number, three on each side of the face.

It is not necessary to tell the Latin names here, as we are only trying to deal with plain English.

The pharynx is a membranous sac, extending from the base of the skull to the top of the trachea, and is continuous with the œsophagus.

From the pharynx are four passages.

One opens upward and forward to the nose; the second, directly forward, to the mouth; the third, downward to the trachea and lungs; the fourth, downward and backward to the stomach.

The membranous linings of all these passages are affected in the disease called catarrh, which we have treated in another place.

The œsophagus is a large membranous tube that extends behind the trachea, the heart and lungs, pierces the diaphragm, and terminates in the stomach.

The stomach is situated in the left side of the abdomen, immediately below the diaphragm, and is provided with a multitude of small glands, in which is secreted the gastric fluid, one of the most important elements in the whole digestive economy.

The intestines or alimentary canal receive the food from the stomach, and convey the waste matter out of the system by excretion.

It is very evident that one important consideration toward preserving health is to eat proper food, in proper quantities, and at proper times.

Most writers upon these subjects insist that food should be taken at regular intervals by all; but feeling the highest respect for personal individuality, we think that by the exercise of reason and prudent judgment, every person of mature age can choose his own food and his own time for eating.

Sufficient food can be eaten once in every twenty-four hours to support life, and keep the health good; still we do not say that no person should ever eat more frequently than once in twenty-four hours.

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Many people contend that only a vegetable diet should be used, and illustrate their opinion by stating that in tropical climates the natives live exclusively on a vegetable diet, and are healthy and happy. The only reply we can offer to this argument is, that in tropical climates there is generally very little call for brain-work, and the nervo-electric currents can attend upon the stomach undisturbed by other demands.

But in colder climates, where life requires more thinking and planning, more exertion of brain and muscle, it is well for the ox and sheep to do their part and convert some of the juicy grasses and odorous blossoms into a more condensed and nutritious form. For all flesh is grass in a certain sense, though we may have some choice in the way in which it is prepared.

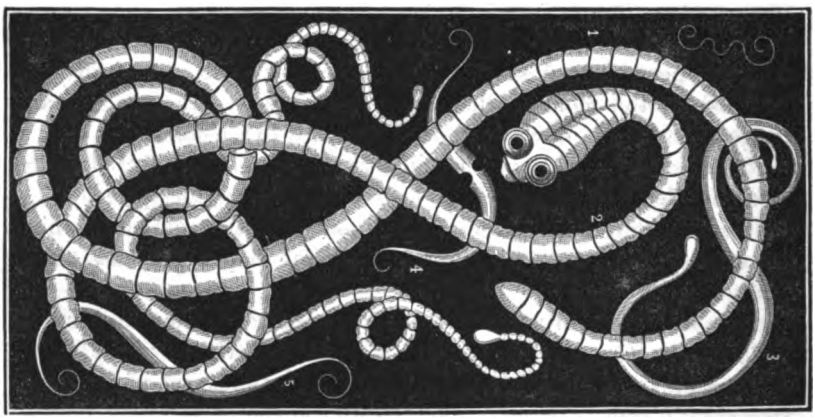


FIG. 48.—This cut represents the *Tænia Solium*, or Tape-worm, which was dislodged from a patient after being its subject for nine years, and having been reduced to the brink of the grave by its pernicious effects.

Pork has fallen into disfavor, principally from the unwholesome way in which it is raised and fed.

In the West, the great corn-raising and pork-raising district of the United States, there are immense distilleries, where the heart and life of the countless tons of grain are stolen out, for the manufacture of ardent spirits. And upon the heated and unhealthy refuse, hundreds and thousands of hogs are yearly fattened.

Sometimes the hogs are kept in a half-wild state, and fed on nuts, until every particle of their unfattened, flabby flesh is filled with a vegetable oil, rancid and not fairly digested.

Always these creatures are poisonous, unhealthy, and the worst forms of scrofula are developed by eating of their flesh, which, in

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its very best condition, will be filled with minute larvæ and rapidly-growing worms almost as soon as the life-blood leaves it.

No person should eat pork, in any form ; for the risk of being poisoned by it is incalculable.

The tape-worm has *ever* been the bane of feeders on swine's flesh; but, as seemingly to indicate a providential displeasure or rebuke against eating meat fed upon such vile trash, hogs have become, within a few years, exceedingly infested with another parasite, rendering the danger of eating such meat of extreme peril, not only to health but to life itself, so much so, that thousands of people have been its victims, dying, in many instances, in the most horrid agony.

Well-authenticated cases of deaths have been published all over the country ; but to give a practical evidence of the danger, we will reproduce the following as a *warning* to all feeders on swine's flesh :

"A dreadful case of *trichinisis* has just occurred in Utica. George Mechlin, a young German, died of it last Sunday, and Charles Pomerina and wife, and William Deisenholt, are suffering from its effects. About a week before being attacked, they had feasted on raw sausages and imperfectly cooked pork-chops. Portions of the muscles taken from Mechlin's shoulders and thighs after his death, were examined under the microscope, and immense numbers of minute living worms, known as *trichina spiralis*, were found wriggling about in the flesh. In a piece of the muscle not larger than a pin's-head, three or four of these deathly living atoms could be plainly seen with a glass of four hundred magnifying power. In appearance they resemble the smallest kind of a tape-worm, and the majority of them were coiled up in the form of the letter S and the figure 8. The movements of the living creatures were like those of half-torpid angle-worms."

Another powerful argument against the use of pork as an article of diet is, that people do partake of the nature of the food they habitually eat.

And as the hog is the type of filth and selfishness, probably no person is ambitious to emulate it or share its fame.

Grains of all kinds are the most natural food for man, supplying every essential element for muscle, bone, and tissue, with sufficient stimulating power to feed the brain and nerves.

But from successive generations of meat-eating parents, we can not expect to see the habit suddenly abolished by the children. Therefore all we can do is to raise our voice against it, and to endeavor to point out what is better, more rational, and more healthful.

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But one very prolific cause of disease in the human family is the neglect of the *secretive* and *excretive* organs, by which all waste matter is carried from the system.



FIG. 49.

The principal organs of excretion seem to be the intestines or bowels and the bladder. And upon their healthy action depends the comfort of the whole system.

Young people should especially insist upon an evacuation of the bowels as often as once in twenty-four hours, and of the bladder much more frequently.

The improper food that interferes with digestion is one prolific cause of that most frequent and distressing trouble known as *costiveness.*

It can always be remedied by proper care in the selection of food; avoiding all stimulants, eating good ripe fruits, grain, rice, etc.

If medical treatment becomes absolutely necessary, try *magnetism first of all;* a vigorous and thorough rubbing of the back and chest, kneading of the bowels, and rubbing and bathing the feet.

Sometimes a shock of the battery will bring life and action again to the torpid muscles that are fast verging toward paralysis; for paralysis is often preceded by costiveness, and great care should be taken on this account.

Excessive use of laxative medicines will, by reaction, produce excessive costiveness or constipation; and undue excitement of the sexual organs is also a prolific source of trouble in this direction.

Diseases of the kidneys and bladder often result from trouble with the digestive organs. These, if assuming a chronic form, should be treated with vital magnetism and hydropathic accompaniments.

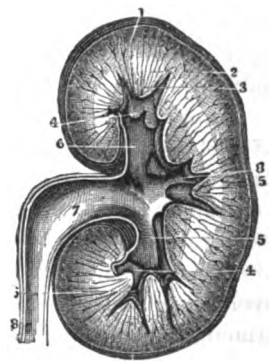


FIG. 50.—VERTICAL SECTION OF THE KIDNEY.

If they are acute attacks, it is well to take a few drops of turpentine (spirits) with lemon-juice, in the morning, repeating the dose of three or four drops and a tea-spoonful of juice every two hours until relief is obtained.

Magnetism will relieve the pain and distress caused by inflammation of the urinary organs; but when nature has been abused, and her laws violated for years, she often demands some assistance in keeping up the healthy action of the digestive and secretive organs after it has been re-established.

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It is such cases as these that require a long course of magnetic treatment, in order to change the entire electrical currents of the whole system, and give new vitality and strength to the blood, thus carrying off or driving out impurities.

The third and altogether most important process of excretion, or carrying off the waste matter from the system, is by means of the skin. (See cut illustrating the silent radiations.)

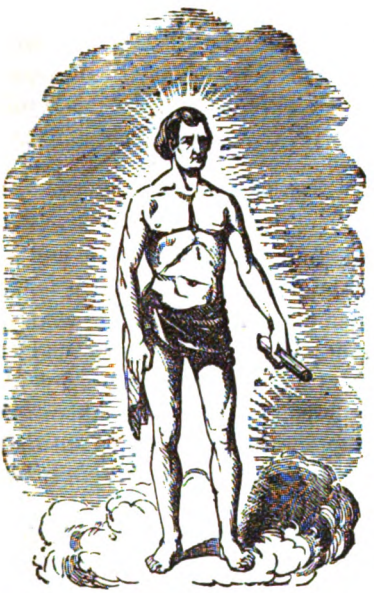


Fig. 51.—Electrical exhalations of the skin.—The importance of its healthy function.

Millions of tiny pores cover every inch of surface, and demand breathing space. These pores carry off more effete or waste matter from the blood than all the other forms of excretion; and to keep them in active operation, bathing should be frequently resorted to.

The warm alkaline bath is most cleansing when the pores are stopped. This can be used by adding a table-spoonful of ordinary soda, or a tea-spoonful of ammonia, to every gallon of warm water, and stirring until they are thoroughly dissolved. Then bathe slowly, wetting every part of the surface of the whole body thoroughly, and using at least a sitz-bath if a plunge-bath is not available. It is best, after taking an alkaline bath, to wring a towel in clear cold water, and rub the surface briskly for a few minutes; then rub dry, and keep quiet until the pores have had time to resume their action.

It is well to take an alkaline bath upon retiring at night, and a slight bath of cold or tepid water upon rising in the morning. The pack is really one of the most simple and useful forms of medicament, being simply to lay three or four blankets on a straw mattress, wring out very dry a coarse sheet from clear cold or slightly warm water, wrap it about the patient, let him lie down upon the blankets, and fold these closely over the sheet, wrapping them from side to side, to exclude the air and excite perspiration as soon as possible. The

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length of time which a person should remain in a pack varies with different constitutions and different diseases.



FIG. 52.—WET-PACK.



FIG. 53.—GOING FROM THE PACK TO THE DOUCHE.

After becoming accustomed to this form of treatment, it will not be injurious to remain packed for an hour every day. But it is best to be very careful at first about sudden exposure and taking cold.

The digestive organs can often be relieved, the blood made to circulate more freely, and the horrors of dyspepsia cured by free applications of water and the magnetism to be derived therefrom. But the same result can be reached more readily and more naturally by animal magnetism; *by rubbing the whole surface of the skin briskly with warm healthy hands.*

No person, however magnetic, can receive so much benefit from rubbing themselves as from *being rubbed by another person.*

The sun-bath is also useful in aiding digestion; and a quiet walk in the sunshine after dinner, is better than bitters or any stimulant.

People generally are too much afraid of the sunlight. They darken their windows with curtains and blinds, and shield their bodies with too abundant clothing, their faces with vails and shades, their hands with tight-fitting gloves.

All these things tend to weakness rather than strength. The very air is purer and more healthful when the sun is shining, and sun-stroke is extremely rare unless the blood has been already overheated by exciting drink or undue exercise.

But any exercise is better taken in the day than the night-time.

Even in a stormy or wildly windy day, the latent magnetic powers of the whole system are brought into action to resist the force of the elements, and with proper protection and sufficient will-power, there is very little danger of taking cold. And walking or running is

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strongly conducive to good and rapid digestion, while any mental excitement, as anger, grief, or fear, will act as a sudden and effectual check upon the digestive process.



Fig. 54.—Walking or running for health.

If the stomach feels oppressed with a sensation of over-fullness, raise the arms above the head as high as you can reach, five or six times in rapid succession, then close the hands lightly and strike the chest several times.

In short, every one, especially every child, should learn some simple gymnastic routine, and practice it every day. If it is possible to have music to accompany the motions, it will lend interest and add precision to the exercise. If every girl should vary this amusement by practicing for a few hours every day with the *broom*, the *duster*, or the *garden-spade*, and every boy with the hoe, the hammer, or the plane, it would be still better for them.

The horrors of indigestion need scarcely be enumerated here.

They can readily be detected by the sallow, unhealthy complexion, the nervous, irritable manner, loss of appetite and of memory, and other attendant evils.

To remedy these the patient should rise early, exercise for an hour out of doors or in a well-ventilated room before breakfast, then eat plentifully of some light, nutritious food, made up chiefly of grain in some form, and ripe fruit.

A person who is inclined to biliousness should not use milk as a beverage or even an article of diet habitually, as it tends to make a torpid liver still more torpid, and causes drowsiness and a feeling of fullness and sometimes of dizziness in the head. *But buttermilk is especially good for inactive liver and kidneys, and should be freely drank by all who can obtain it fresh and pure;* most of its oily substance having been removed in the butter, and a large proportion of acid developed, which aids in digestion and assists in the healthy action of all the secretive and excretive organs. It may be useless to refer again to different articles of food and their action upon the system;



Fig. 55.—Spading and Working in Garden for Health.

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but as healthy magnetism is the one object to be most heartily desired, one can not be too careful about what they eat.

All animal fats are non-conductors of electricity, and they are not in the true sense of the word digested, but rather melted in the stomach and absorbed by the blood, making it thick and apparently rich. But the richness often becomes over-abundant and is deposited on the surface of the body immediately under the skin, where, the pores not being able to discharge it rapidly enough, it collects, forming—every body knows what—pimples, boils, abcesses, ulcers, tumors, cancers, and the rest of the list.

Some people will aver that they have always eaten large quantities of fat, and yet suffer from none of these evils.

This indicates that they have very active digestive and secretive organs, and usually very porous and coarse-grained cuticle that allows impurities to escape readily and rapidly. Very active work, either of brain or muscle, acts as a sort of combustion, using up or consuming the purest part of all fatty or oily substances, and still leaving the impurities to be disposed of in other ways.



FIG. 56.—FRUITS FOR THE BREAKFAST-TABLE.

If a person will eat vegetable fats and oils, the best antidote for them is the acid contained in ripe fruits; lemons, tomatoes, apples, grapes, oranges, peaches, the very luxuries of life.

No table should be considered as furnishing a complete breakfast without abundant supply of fruit. There is a magnetism in their abundant juices that nothing else can furnish. And when a person considers how rapidly the food of to-day becomes the blood, muscle, and bone of to-morrow, it is certainly worth while to see to it that the food is of the *best* and *most nutritious* quality.

But after breakfast, when the daily work and cares of life demand attention, the patient should still bear in mind the trouble he is striving to cure; should not exercise to exhaustion, or remain quiet either sitting or standing more than two hours at a time. Let your occupation be *varied* as much as possible, and always alternate rapid and vigorous exercise with quiet rest.

Be sure to eat dinner or the heartiest meal in the middle of the day, some time between twelve and three o'clock. Let it consist of

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fish, well cooked, of beef not under-done; always substitute mutton for pork, and poultry for sausage; eschew pies and rich pastry, and eat rice, wheat, hominy, or fruits for dessert. The latter part of the day should be spent more quietly than the earlier portion; that is, for invalids or sick people. A walk, ride, or drive after dinner may be beneficial, and pleasant, cheerful society will bring new magnetic life and vigor to the weary or dyspeptic brain.

The supper should be light, and tea, if it must be drank, taken very weak and in small quantities.

The evening should be passed quietly and the patient retire early, as it is well known that sleep obtained early in the night is much more strengthening and refreshing than that of later hours.



FIG. 57.—This cut is designed to show the magnetism that exhales from horses, and the invigorating effects of riding after or mingling with horses, or other young animals as well.

It is an old axiom that one hour of sleep before midnight is worth two after it. But probably this proportion is somewhat exaggerated.

We have given the dyspeptic no stated rules about bathing, but we want it borne in mind that water is full of *latent magnetic and electrical currents;* that besides its mechanical action in opening the pores of the skin and allowing the *impurities* and *exhalations to escape*, it also has healing and strengthening powers in itself which are not to be slighted. Solitary bathing is beneficial, but not to be compared with the bath accompanied by good magnetic treatment, a vigorous rubbing from head to foot.

They who have invented and perfected the now popular Turkish bath have this idea, though vaguely hidden and unexpressed to the popular mind.

They know that in the rubbing, more than in any combinations of water, steam, and vapor, lies the great curative principle; and

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they are careful to select strong, healthy attendants, who will not suffer from the great loss of magnetism which must take place by coming in contact with so many different people.

But the Turkish bath, though already so popular and growing in favor, should be used with great care and discretion.

The sudden, powerful, and continued action of the secretory glands in such profuse perspiration is very weakening.

The repeated opening and closing of the pores of the skin by alternate applications of heat and cold, relaxes the fibres of the cuticle

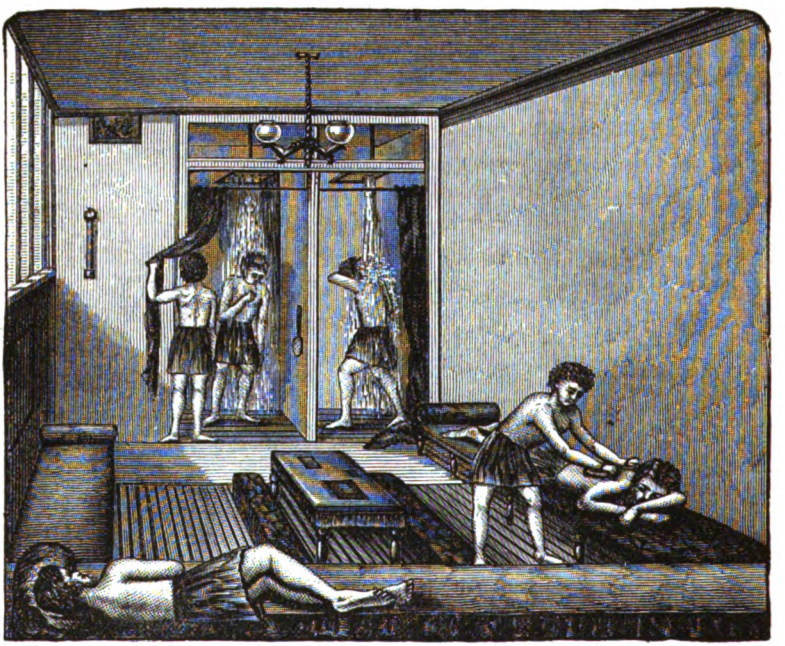


FIG. 58.—THE TURKISH BATH.

and exhausts the oil-follicles, thus rendering the system more sensitive to after-changes of temperature.

But all this is but an *abuse*, and should not result from the *use* of the Turkish or any bath, only as it may be given under the direct control of an experienced medical man for the accomplishment of some urgent result in equally urgent conditions—to overcome sudden congestion, throw off an acute attack of cold, or relieve *intense* pain, as in neuralgia, rheumatism, gout, etc.

The Turkish or hot-air bath, given at rather a moderate, graduated temperature, certainly affords one of the most convenient and ready means of removing chronic diseases affecting the blood or local parts,

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as in chronic rheumatism, calculary affections of the kidneys, known to modern medical science, and Dr. Stone has performed some of the greatest cures in Bright's disease known on record by its aid; and under his *specific*, plain directions, can be adopted with facility at the home of the patient at a very moderate expense.

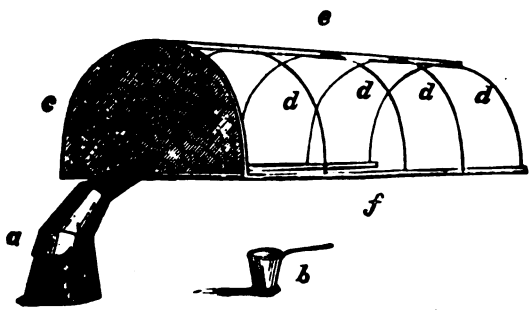
It is well, in order to prevent taking cold, to rub the chest with a few drops of oil after the severity of the bath.

But the plain VAPOR-bath can be used at any time with impunity, and the MEDICATED vapor-bath, combined with magnetic treatment, is one of the *best* remedies for impure blood, imperfect digestion, and all diseases of the secretive organs.

We can not better close this chapter upon one of the most prevalent and annoying of all physical troubles, than by advising every person to use their own judgment and intelligence, to study the causes which lead to the distressing disarrangement, and see if it is not possible to remove or modify these.

Avoid drugs and stimulants, use only natural remedies to assist nature, and you will be rewarded by increased vitality, and greater power to resist as well as to overcome disease.

ROBERT JAMES, M.D.



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FOURTEENTH SECTION.

WOMANHOOD AND MATERNITY.

Undesired maternity a curse—Women to be fit for mothers should be healthy—Must reform themselves—Proper dress, food, pure air, exercise, and employment—A divine impulse to be heeded—Abortionism horrid—The darkest blot on modern civilization—Man and wife both cheat each other—How? why?—The heart always capable of love—Marriage a most solemn obligation too little considered—How can most happiness be gained?—Wrong impressions of life—Should be well versed in the anatomy and physiology of her system—Maternity should not be crowded—Too little time to think—Magnetic nurse.



FIG. 59.—MOTHERHOOD.

WOMANHOOD and maternity is the subject I have chosen upon which to give a few of my thoughts, because I consider it of the utmost importance to the whole human family, and especially to woman.

Undesired maternity is truly a curse in itself, and most disastrous in its results.

But woman can not desire maternity, or any thing else pure and healthy and natural, while she is weak and diseased in mind and body, wearing improper clothing, eating improper food, and breathing impure air.

In order that women should be fit for mothers, they should first become strong, healthy, happy women; with hearts full of love for their kind, full of hope for the future, full of confidence in themselves.

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There are mistaken notions of duty in regard to these matters, which I do not propose to discuss now and here; but I believe the truth should be plainly spoken at all times. We can not expect to make any very radical change in the general life of womanhood, with its present artificialities and weaknesses; but to the few whose eyes our words may reach, whose hearts they may appeal to, we would say, First, reform yourselves!

Wear loose, soft dresses, that do not impede your movements, that can not be easily tumbled or torn; eat light, nutritious food in abundance; exercise freely every day in the open air; see to it you divide the day as nature evidently intended it should be divided, using "one third for labor, one third for recreation, and one third for rest."

Then, when you have grown strong and happy, the natural desire for maternity will assert itself.

Then there will be a diviner impulse for life and love; and you will plan and think, not how the little life may be destroyed and you made free, but how you can best serve and love and cherish it, that *it* may be made free.

That horrible and unnatural practice, called Abortionism, is one of the darkest blots on our modern system of civilization. It is trifling with human life in a double sense.

One of our grandest human poets says,

> "They enslave their children's children
> Who make compromise with sin;"

and every one does that who directly interferes with any natural law to the direct detriment of humanity.

Men and women have equal share of blame in the perpetration of this monstrous crime; but it seems sometimes as though it was woman's dumb appeal against being made a slave of; being forced, either by direct mental or physical power, or by a wrong sense of duty, to do that against which her nature rebels and her soul cries out with loathing.

It is a sad subject.

Two young people, with innocent hearts, pure motives, and good intentions, meet, become interested in each other, are mutually attracted to each other, feel a desire to unite their interests, to spend their time in each other's society, to benefit and bless each other, and so, according to the modern usages of society, the two stand before witnesses, and before God, who is the highest witness, and promise to love each other until death shall sever the bond.

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Time passes. In ninety-five cases out of every hundred, they drift apart, and the bond becomes irksome to one or both. Yet they wear it on, for custom, form, or actual law, and supposed necessity.

And they *each cheat themselves* and the other of much that is bright and beautiful in life, much that they might enjoy if they understood their own needs and nature's better.

But how to remedy all this is the subject now most engrossing to the thought of every true philanthropist.

In a work of this character, I can not treat the subject of marriage except from a merely physiological and material stand-point. And that does not half express the true significance and importance of the whole principle which underlies society.

All I can do here is to advise people to have patience; to grant such freedom as they desire to enjoy; to do nothing secretly with an idea of deceiving, but to be *true to themselves*, and then they will be *true to all.*

The days of loving are not ended merely because youth has departed. The heart that is ever capable of a true, earnest, honest affection never outgrows the power of loving and appreciating love.

The object of this affection may change; one may love several different people in different ways, and for different qualities, without interfering with each other, or there may be one love, *par excellence*, which absorbs the whole life and soul for the time being. It is this last that usually forms the basis of marriage in its present form.

We say usually. We know there are hundreds and thousands of marriages contracted every year with as little affection involved or even pretended, as in an ordinary business transaction.

And if they were but considered as business transactions, to be quietly and honorably annulled when they have served the purpose for which they were entered into, or when the parties most interested learn how utterly impossible it is for them to serve such purpose, then the soul-sickening cry of "unhappily married!" would in many instances be hushed.

No man would enter into a business copartnership with either a man or woman, and bind himself by solemn pledge and promise that such partnership should continue through life. How then can man and woman dare assume that holy relation, which not only affects themselves and their own happiness, but is at any time liable to create new life, for joy or sorrow, and promise that such relationship shall exist unchanged while they live?

They promise, the one to love, cherish, and protect; the other, to love, honor, and obey, until death.

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They do not know whether they will keep this promise or not. They do not know whether they *can* keep it or *not*. Their hearts may be honest, their motives pure; but ah! how little they know of one another—how little of themselves! How the wearing-out process of time may change them, one or both!

And now they pretend to quarrel with the word "obey," and stipulate that it shall be left out from the marriage ceremony.

Do they ever consider how much easier it is to obey than to love?

Obedience is possible by a mere effort of the will; but it is very doubtful if love can at any time be compelled into service.

But in the face of all trouble and difficulty, people will marry. And once married, the natural sequence presents itself, and the question arises, "*How can most happiness and harmony be gained within the marriage relation?*"

Women are naturally more faithful and trustful than men. They have less desire as well as less opportunity for variety; but they grow weary sooner—physically weary.

Men go out into the world, meet their fellows, and gather magnetic strength and vigor, while women stay more at home, live within themselves or the little circle gathered about them; and often this life reacts upon their physical constitutions and brings an unexplainable lassitude and languor. From the present condition of woman's health and surroundings, child-bearing is attended with unnecessary pain and suffering; from a wrong and unnatural state of society, false ideas of beauty and propriety, and a desire to make themselves attractive, women acquire wrong impressions of life and what is required of them. Often they dread the pain and danger of childbirth so much that they come to dread the very thought of sexual intercourse.

Many a husband not conscious of any change in his feelings toward his wife sees her shrinking from him, hears with wonder the few pitiful appealing words in which she begs him not to disturb her, or worse, the constant fretting and scolding that tell too plainly of weakness and disturbance in the nervous system, but suggest no remedy therefor.

He does not realize how incompetent she is to supply the mental and affectional stimulus, the elixir of life, which he demands and really needs.

Perhaps neither of them know how truly the spiritual may dominate over the physical; how, putting selfishness aside, the wife may grow stronger, the husband more refined, by being patient with each other's faults and peculiarities—how love may become the true

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harmonizer, and faith in each other the true bond of union between them.

The husband is usually first to go astray. He throws off the restraints of business when the day is ended, and drinks or smokes, or both, knowing that every glass of intoxicating liquor, every whiff of smoke, tends to make him more repulsive to the wife at home. "But she does not care for his society," he says, "why should he trouble himself about her?"

The wife stays at home and frets and pines. Sometimes (it is the exception and not the rule) she too finds pleasure in other society, and a sort of armed neutrality is established between them; but all concert of action and harmony of life is thus destroyed.

Many women bear children who are utterly unfitted as well as unwilling to do so. Many more resort to that horrible, health-destroying, life-endangering process of abortionism.

Unwilling maternity is a fearful curse, and maternity being, next to true womanhood, the highest and holiest mission of woman, the object of making it a blessing in every sense should be carefully studied.

Maternity should be entirely under the control of the mother; subject only to her wishes and her judgment. But it is not right for her to fill her system with poisonous drugs for the sake of regulating the monthly periods, *nor are cold vaginal injections safe, especially when the flow of blood is quickened by excitement or the whole system overheated, as is often the case.*

There is a solution, simple, cleanly, safe, and sure, which can be used by any one without material inconvenience, and which will effectually prevent conception.

[Although Dr. Warren has given the *formula* from the most philanthropic and humane motives, we prefer to omit printing it *here* from prudential considerations, arising from an unenlightened and ungenerous *special* enactment, interfering with the natural, inborn, organic rights which sacredly belong to every individual. For, as Sir Benjamin Brodie very cogently remarks in a still later communication, "But there are sickly and groaning thousands who are not fit to become mothers, and yet, having accepted the marriage relation, know not how to escape maternity; for these there should be some preventive agency, simple, cleanly, safe, and sure, which they could use at their own option. Any person who brings to meet this proposition the charge of immorality will be met on their own grounds promptly."

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We will hold the formula in print, with clear and explicit directions for those who need.—Ed.]

When the solution is ready for use, take a soft, fine sponge, about as large as an ordinary walnut. Draw a fine strong cord through it, and fasten firmly. Wet this sponge thoroughly in the solution, and place it in the vagina.

It will do no harm to wear it for ten or twelve hours without removal; but it is well to withdraw it after the act of coition, and be sure to wash it thoroughly before inserting it again.

If the sponge seems to be an irritant, or if the vagina is inflamed or the womb ulcerated to painfulness, it is well to use a bit of linen instead of the sponge. Old, soft linen is best. Take a piece two inches square or even longer, gather it loosely, and fasten with a strong thread or fine cord as you would the sponge. Wear it in the same manner, take it out and throw it in cold water, that it may be thoroughly cleansed.

This solution acts as an astringent, is very healing and cleansing, will cure inflammation or ulceration wherever it may be applied, strengthens the ligaments that hold the womb, thus curing or preventing prolapsus, and so invigorates the mucous membrane as to render the secretions healthy and natural, thus remedying all tendency to leucorrhœa.

A free use of this solution will cure the lighter forms of venerea, and prevent contagion in that way.

I am sorry to say that many women have suffered innocently from contagious diseases of which they little knew the origin. And the *considerate* physician seldom enlightens them.

While we would not create suspicion or dissension between husband and wife, we would have every woman sufficiently educated in regard to the anatomy of the human system, to know where and how the different organs are situated, what their peculiar functions are, and what diseases are most liable to affect them.

They should learn the wonderful mechanism of the human eye, and the no less wonderful mechanism of the kidney. They should learn that the healthy action of the mucous membrane about the nose and throat will prevent catarrh, and that similar action of similar membrane in the vagina and womb is necessary to prevent leucorrhœa.

They should know how to regulate their drink and diet to cause a healthy action of the bowels as well as of the secretive organs.

And they should each and all know how to care for and assist a woman in childbirth, and how to wash and dress a baby, at any age.

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They should always bear in mind that motherhood is at once the most noble, the most useful, and the most natural mission for woman to fulfill; that, upon the rising generation and their proper training and education, the strength of the nation and the welfare of the world depend.

Girls and boys should all be taught the rudiments of physiology and anatomy, by thorough study. They should also become familiarized with the first principles of phrenology and physiognomy, by general lectures and conversations on these subjects.

They should learn that no subject is impure or indelicate when properly considered. And the bearing and rearing of children should be always held in pure and sacred esteem.

In the present condition of health of the average American woman, no one ought to have more than four or five children, and the most of them not more than one or two.

And many a young mother looks with sad, despairing eyes upon her little flock, feeling too weak to care for them, wondering what will become of them in the future, when she is dead.

This is one fault of our present isolated households.

Their whole existence depends upon the will and the work of the one man and one woman who have founded it; often only upon the one man, the woman being considered as a mere attachment to his dignity.

There should be more harmony of feeling, more concert of action among people of similar tastes, that they may rely upon each other for sympathy and assistance, in times of trouble and need.

A woman should not be expected to do all kinds of work, but should be allowed, as men are, to choose an occupation that they are fitted for, and that they can enjoy, if they must go out into the world and earn their own sustenance.

There is a story told of a young woman in England, many years ago, who had a special and wonderful faculty for learning languages.

This talent was so remarkable that she was presented to the king as a person who, without any teacher, had learned to read in seven different languages.

The king listened quietly, looked at the girl with some interest, and remarked, "Yes, but can she spin?" As though the principal and most important consideration of a woman's life was, not learning, or perseverance, or remarkable gifts, but—spinning!

If a young man of similar attainments had been presented to the same king, we wonder if he would have asked, "Can he

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plow?" or "Can he make shoes?" And yet, why should not every man be expected to cut and stitch his own coat, as well as every woman to fashion with her own busy fingers, or personally superintend the making of her own and her children's garments!

Women have, as a general thing, too little time to think.

The day is divided by many cares, trifling perhaps and insignificant, but each one demanding its quota of minutes until the hours have slipped away; and no time is allotted to self-improvement, none to earnest thought and culture, none to the jotting down of useful facts or newly-acquired information for future use. Even the children, dearly as they are always loved at heart, seem to be looked upon as necessary evils rather than the real blessings they are.

And the mother forgets the divine plan of which her sorrows and sufferings form a part.

Nature always does her best with the materials at her command; and every new baby is a new possibility of wonderful and beautiful development in the future. Therefore it should be the mother's constant aim and effort, when she finds the strange process of forming a new being is going on, to make her own life as *pure*, as *happy*, and as *harmonious* as it can be made.

She should seek pleasant society, read pleasant books, exercise much in the open air, avoid all morbid and melancholy subjects, eat light, nutritious food, take plenty of rest and sleep, avoid stimulants, use no wine or ale, porter, beer, or coffee, and try in all things to prove herself a rational being, striving to do the work of her life as well as possible.

We do not try to tell her what part the husband and father should take in this work of perpetuating and improving humanity.

We leave it to his conscience to suggest the kindness, the sympathy, the affection now needed; and to his judgment to carry out such suggestions in a manner that will reflect credit alike on his head and heart.

For the various derangements and diseases incident to child-bearing (most of which are caused by improper food and clothing), there is nothing better than *magnetic* treatment. And to insure an easy and safe delivery, *magnetism* should be freely applied. Treatment with both cold and warm water is beneficial, if properly applied; but an injudicious use of water may do much injury, and it is better to have some practical instruction in the course to be pursued.

We will give, in another chapter, directions as simple and explicit as we can for the use of water as a medicament, that its *magnetic*

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properties may be taken advantage of, when other magnetism can not be reached.

And when the mysterious process of gestation is ended, and the little child is palpitating with its new and separate existence, then let the mother remember that nothing is so strengthening and soothing to the baby as *careful and gentle rubbing.*



Fig. 60.—Soothing the Baby by magnetic passes and rubbing.

Be sure to find a good-natured, kind-hearted nurse for the little stranger, as, even before he is a year old, he will be influenced by the *magnetism* about him.

Have you not noticed that with some people the baby is always fretful, uneasy, and restless, while with others he is either quiet and sleepy, or merry and frolicsome, and all without apparent cause?

It is the magnetic atmosphere surrounding every person that really makes them individual, distinct, and separate from all the rest of their species. And this *individuality* is capable of being cultivated and improved.

Young people should learn this, and act accordingly.

It is not regularity of features or beauty of coloring, not manifold gifts or graces that make them attractive; *but pleasant and harmonious magnetism,* which always tends to tranquillize people, and give them rest.

I once knew a lady who, without wealth or beauty, or varied accomplishments, had always troops of friends about her. Men of talent and culture, women of fashion and social position seemed alike to enjoy the society of this plain little person; and one day I heard a lady say to her,

"Why is it that you who care so little for dress, who take so little pains to make yourself attractive, have always such pleasant company in your rooms?"

I fancied there was a dash of bitterness or sarcasm in the merry voice as she replied, "My recipe is very simple: Do every thing you can for your friends, and never ask favors, and you will always have plenty of them."

She laughed lightly, but added soon in a more serious and enthusiastic tone,

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"But I like my friends so much, I believe in them so truly, I am *so* proud of them, that they are worth more than they cost me."

This was indeed the secret of her popularity. She liked her friends so much that she naturally inspired liking in them, and made them feel satisfied with themselves and with her.

You may think this has very little to do with womanhood and maternity; but if every husband and wife could be good friends, at once trustful and proud of each other, how much misery, how much heart-ache, how much dissension might be saved; how much jealousy and suspicion avoided; how much true happiness enjoyed! It is better to have a friend than a lover if one can not have the two combined. For love in its general acceptance is selfish, asking for much, while friendship is generous, giving much. Love demands sacrifices, friendship shares every thing, and is content. Love makes sacrifices; friendship is never weary, never selfish, and nothing that can be done for a friend is ever considered as a sacrifice.

Let the utmost friendliness be cultivated, therefore, and all selfishness eschewed; that men and women may become wiser, consulting each other's interests and wishes, and always working together for the ultimate good.

Children can early be taught to respect the rights of others; and it is needless to say here that no child should ever be whipped for doing wrong, nor should whipping ever be threatened.

There are ways enough for punishing without inflicting bodily injuries, and the careful and judicious rewards for doing right are far more efficacious in keeping up harmonious family relations and making children good as well as happy, than any system of punishment could be.

Children are often managed too much. They should be let alone as much as possible. Left to their own simple devices for amusement, they will find more comfort in making sand-pies and sawdust cakes, or in harnessing two chairs, or sailing paper-boats in a basin, than in the most costly toys that can be purchased.

As they grow older, let the girls learn to drive nails as well as the boys to sew on buttons, and later in life let every boy and every girl learn to be self-supporting. Let them have education enough to teach, or let some mechanical occupation be learned, by which they may feel themselves independent. And then, when they marry, let it not be merely for a home or for support, but for *companionship.*

Then we shall have *fewer* inharmonious marriages and *fewer unwelcome* children born.

We do not expect to bring about the millennium in a single year

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nor in a single generation; but if men and women will give these subjects some careful and impartial thought and consideration, more especially, if they will talk of all these things together, they will be far more likely to find the way out of many of their troubles without legal intervention than ever they can with it. But if people have made a mistake and married unhappily, it should be considered no disgrace for them to separate. But this is a subject for another chapter, and scarcely to be considered from a medical point of view.

IRA WARREN.

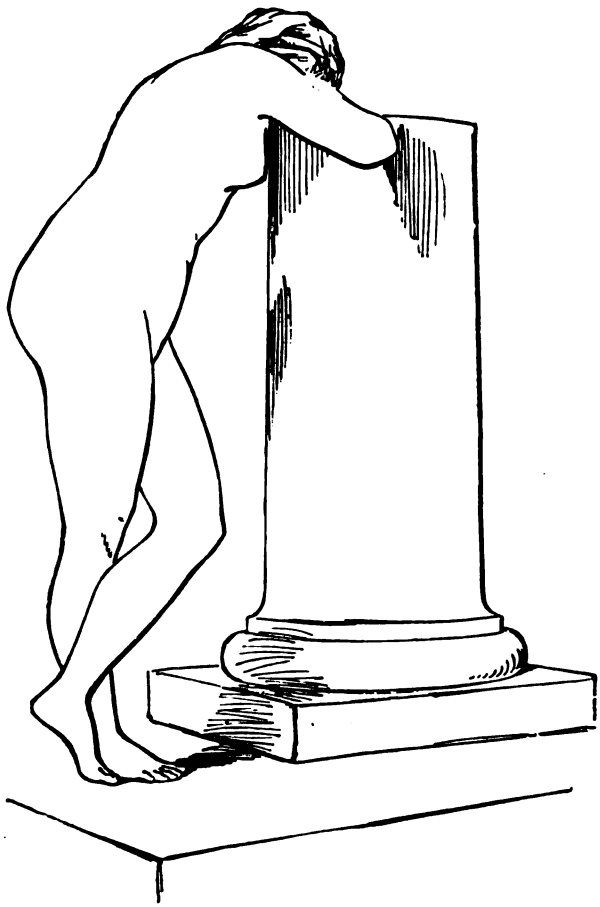


FIG. 61.—THE VITAL TEMPERAMENT.

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FIFTEENTH SECTION.

FEMALE WEAKNESSES THE GREAT CAUSE OF CONSUMPTION.

[DR. WARREN makes special request that I shall reproduce *this* section from my large pamphlet on vital treatment, to accompany his foregoing section.—ED.]

THAT complex and mysterious organism peculiar to the female sex, which this cut is intended to illustrate, necessarily entails upon them a thousand mysterious and untold sufferings of both a mental and physical nature, for which they receive too little sympathy from their husbands, if married, and often too little from their immediate friends—on the contrary, and not unfrequently, cold and inhuman treatment as a compensation for their generous endeavors and unrequited toil.

The reproductive organs are the masterpiece of God's human organism. An immortal being, with all his attributes, can not be developed with organic, individual life, embodying every atom possessed in the great cosmos of nature—the ultimatum of the

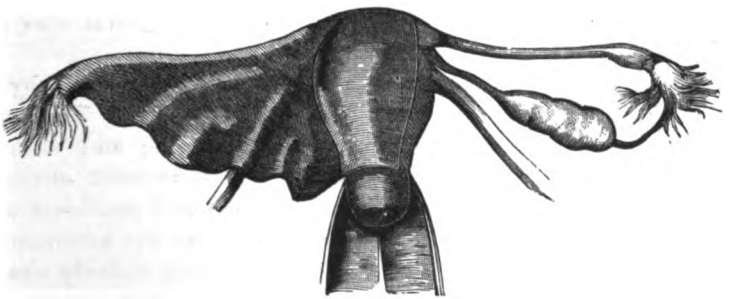


FIG. 62.

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skill of the Divine Architect—which is pre-eminently possessed by man over and above all other orders of organic life, without a structure so formed, so contrived, so complex in its nature, as to convey the mysterious principles of the soul, vitality, and the intellect, with all its numerous faculties, into a minute germ, and then clothe it with the physical body, to be built up, atom by atom, mysteriously and almost imperceptibly, from surrounding physical agents.

Such is the wonderful structure which you see in the female system, which is so small in normal virgin life, occupying such a small space in the lower part of the body, yet, when impregnated with this vital germ, capable of enlarging in a few short months and developing an offspring of ten or twelve pounds or more, with other appendages.

Will such of the opposite sex as are so callous and unsympathizing in their disposition, stop and reflect upon the mysterious process that has been carried on in the constitution of the mother; the sympathy of the *matrix* or womb with the great battery—the brain and nervous system—in the performance of its vital function of imparting the nerve-forces through the thousands of telegraphic wires embodied in the ganglionic and the organic and great sympathetic system of nerves?

When you take into consideration that the brain sends its innumerable wires to the lungs and to the heart, for the purpose of carrying on respiration and circulation; to the stomach and neighboring organs, for the purpose of digestion and assimilation to impart the vital current; and that, during this entire process of fetal development, an entirely new and independent system of circulation and nervous action is established and kept up, making its constant and yet mysterious demands upon the great battery of life, independent of supporting the daily needs of the body for nutrition: can you begin then to fathom, or have but a faint idea what must be the feelings of the mother in now being made the humble instrument in the hands of the great Creator of moulding, perhaps, some mighty genius who is to move the world!

The wonderful sympathy with the stomach, produced by the growing germ, demanding nutrition; with the heart, demanding blood; with the lungs, demanding its vitalization; and with the cerebrum, demanding vital force at the same time, must change all her feelings in proportion to the new and wonderful processes which are now going on in her organism; hence come the anomalies of nervous diseases on her part; an appetite, a longing entirely new and out of the natural course; a longing as uncontrollable as it would

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seem disgusting to him, yet all inexplicable to herself; without one act of volition or induction, but springing from the demand made by the new soul-life in the developing germ which he has imparted to her constitution.

Let him who has voluntarily been the coagent or instrument in bringing about this new, wonderful, and mysterious condition—I repeat, let him, before he makes her wretched by withdrawing his sympathies, or coolly and rashly repulsing her, take into momentous and awful consideration, that he alone is responsible for imparting the mysterious appetites now being developed in her from his long-continued indulgencies and dissipation—tobacco, or uncontrolled animalization—which for a long time he has indulged in his own system; and that he alone imparts the animal appetites—not the mother.

We have made this brief explanation of the great processes in the mysterious organism of the reproductive system, to show their direct sympathy with the lungs and respiratory organs; and how consumption is developed from diseases which, in innumerable instances, have their origin and seat in the womb, the ovaries—the sexual organs.

The disorders which modern females especially are given to, come on as silently, often as gradually, and lay their foundation as firmly in the constitution as the structure is complex and mysterious in its nature. A disease, inflammation, for instance, will exist for a long time in the neck of the womb, increase its size enormously, and frequently run into a low and obscure stage of ulceration, before any manifestation is made by pain or suffering locally.

This is another peculiar feature in the organization of the structure. The nerves distributed to the neck of the uterus have but little sensibility, compared with the different set of nerves which is distributed to the cavity and lining membranes of the body of the womb. So the same explanation obtains in those silent diseases manifested in the ovaries—those two round bodies which you see in the cut on each side of the body of the womb.

Though the periodical function of a female, in a state of perfect health, is one of a physiological or strictly natural character, and would, in a perfectly healthy organism, be unattended with pain, like other functions of the body, yet rarely is this the case with females of the present day; the function generally becomes one of an abnormal character, causing the general health to suffer more or less every month. Some females go through life suffering, during the period and a few days after, intense pain at the lower part of the abdomen, through the loins and back, completely prostrating them,

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with disturbance of every function, loss of appetite, inability to digest food, depression of spirits, headache, despondency, and general languor or lassitude, from which she will hardly recover after one period before the recurrence of another; hence, her whole life is one of suffering; and in a constitution inheriting any predisposition to tubercular disease, or other maladies, which are frequently entailed, they are sure to be called into action and prematurely developed in her constitution, which otherwise might have lain dormant.

Dysmenorrhea, or painful menstruation, commences with puberty, occasioned, in hundreds and thousands of cases, by repelling the blood from the extremities and the surface by *insufficient clothing* and *thin shoes*, and the lack of nutritious food to develop iron and fibrine, and the vital principles of the blood which go to establish and keep up this great function, and for the lack of which it is often suppressed.

Again: The continuation of this unhealthy exposure of the body produces a chronic thickening or congestion in the minute blood-vessels and membranes of the womb, which, with those already enumerated, are the causes of their painful menstruation and ill-health.

Again: Prolapsus, or falling down of the womb into the vagina, is now a very common and almost invariable attendant upon every female—as common in virgin as in married life. This will be surprising to many who think that none other than married females are liable to prolapsus. This erroneous idea has been the cause of immolating thousands of young and tender females, during the period of adolescence, upon the altar of that fell destroyer—*consumption*.

Why is this? If you take one glance at the cut, you can have at least some slight conception. The uterus, or womb, is an organ almost isolated from the other parts of the body, held suspended by two round ligaments, its neck poised on the top of the vagina, having no other material support. The invariable practice or custom of females, especially the young, is tight dressing, hanging a mass of skirts or under-clothing drawn tightly about their waists, compressing the lower part of the chest, the lower lobes of the lungs, the stomach and the liver with the diaphragm—the muscle above—all inward, and, at the same time, downward. It follows, of necessity, that the organs above, crowded out of their natural place, down upon the abdominal viscera—the bowels—will crowd this organ downward out of *its* place, from its slight attachment; hence, it follows to an absolute certainty that there is not one virgin female in ten who is not affected with misplacement or derangement of these organs, designed by Omnipotent Wisdom for the performance of such a wonderful function.

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Will you wonder longer, then, respecting the awful prevalence and fatality of that class of maladies known as *female weaknesses?*

The cuts which we introduce into this section are designed to illustrate the position and carriage of the body as it is developed by prolapsus, and the effect produced by the wicked habit of dress, to which we have referred, in deranging the whole internal structure. But before closing, we wish to illustrate more clearly than we have

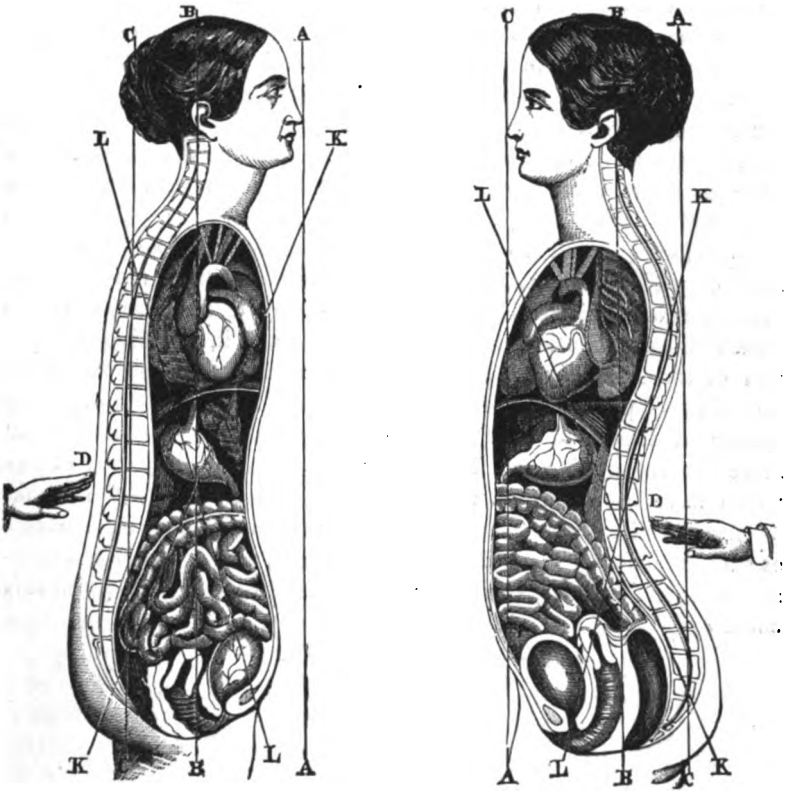


FIG. 63.—The left-hand figure shows the womb fallen down into the vagina. The right-hand figure represents a well-formed, healthy female figure, having all the organs in their natural condition. The reader will observe the striking difference in the position and appearance of the bladder and the uterus.

already done, the sympathetic powers of the uterus and its structure, with every other part of the body. We can not do this better than in the language of the learned Dr. Tyler Smith: "There is nothing in the whole range of physiology or pathology more extraordinary than the fact that the gravid (pregnant) uterus, without itself being the seat of special pain, irritation, or disease, shall excite fatal disease

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by reflex irritation in some distant organ. In this way, pregnant women may be destroyed by secondary disease of the brain, heart, lungs, kidneys, stomach, or intestines; in fact, there are, in particular cases, unlimited poisonous influences exerted on the rest of the economy by the gravid uterus."

This quotation conclusively proves what we have learned by our vast experience of pulmonary consumption. We rarely meet with a case of consumption in females who are not suffering more or less from some derangement or great disease of the sexual organs, and on minute investigation of the case, we have found that these constitutional or abnormal symptoms which we have mentioned, existed for some time before a cough, or shortness of breath, or other more prominent symptoms of disease in the lungs, began to be thought of. We have, therefore, investigated this class of maladies with an interest seldom felt or manifested by the general practitioner; and in studying diseases peculiar to the respiratory organs, we never have lost sight of predisposing causes; of tracing, as before observed, external symptoms or manifestations through the long chain of connections back in the constitution to their first causes; and in adopting our system of treatment, *by inhalation*, for the suffering of the lungs, we should never perfect a cure of consumption did we not adopt, also, a system of local and constitutional treatment, equally efficient, and more imperiously demanded to remove the great predisposing causes which have been going on in the reproductive system—the sexual organs. And we would say here, that our treatment is as efficient and as successful for their use at their own homes, as our medicated inhalation is for the lungs, as we have explained in the beginning of this book.*

* See Section Six—Consumption.

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SIXTEENTH SECTION.

MOTHER AND CHILD.

Nature always does her best—Love the most important pre-natal influence—A very relative thing—And yet love should be the basis of all life—Different relations between the wife and husband explained—Conception, the mother's care in—Progress—Confinement—Birth and care of the infant—Moral or mental condition—Diet and hygiene—Fœticide, its horrors—God the Supreme Ruler—The awful responsibility of both father and mother—Every new life is a classification of organic faculties evoked from the great unknown cause—The great duty of the mother to know how to care for and rear her offspring—A physiological manner of dressing for the infant insisted upon—Keep drugs and sweatmeats out of its stomach.



INDEED, children ought to be healthy.

Nature always does her best with each new possibility in the way of life, and pure and healthy conditions, physically, mentally, and spiritually given, will invariably produce healthy and happy results.

First, and most important of all pre-natal influences, is love; love that is strong enough to bear all things, and divine enough to forgive all; the strong, true, individual conjugal love, that gives to its mated life only kind words and loving thoughts.

Such love as this is possible, though it is not general; for men are unreasonable, and women fret.

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Perhaps only one woman in a thousand loves truly and unselfishly, and one man in ten thousand appreciates and returns such love. But love is the best of life, nevertheless, and should be the basis of all future lives.

The way to keep men from evil is to educate them into being good; to teach them that goodness is greatness, and honor, and worth.

The way to keep women from evil is to give them good to do.

Love admits of no suspicion, no jealousy, no deception.

A woman should love so well, and with such perfect trust and confidence, that when her mate is away from her, instead of feeling any desire to watch him, any suspicion of evil regarding him, she should be able to say, "He is doing what he thinks is right, and what he thinks is right I think is right, always."

Women are more monogamic in nature than men, and have therefore less excuse for promiscuity in love; but I am not quite certain how far this psychological difference extends, or how plainly it is marked.

Be that as it may, children are born and are to be born of mortal parents.

The first requisite for those parents to have, is a pure and natural affection for each other; the next is spontaneity.

I know there is much talk of deliberate and scientific breeding of children, as prize stock and fancy pigeons are bred. This can be done, and no doubt with good results physically, perhaps mentally.

I have no doubt that children could be advantageously raised to special sciences or departments in this way, too; but I believe it would all be at the expense of the natural affections, the heart and the soul's sole strength, which is love.

Give us, therefore, I say, spontaneity in the expression of the affections, with a full realization of what the result may be, and a holy and hearty approval of that result.

So much for conception; for the mystic, unexplained, uncomprehended instant when from two lives throbbing in unison another life is evolved.

From the time of conception the mother's mind should be kept as tranquil as possible, and the father's also, as they will constantly react upon each other.

Sometimes within twelve hours of conception, and from that to twelve days, slight symptoms of derangement of the whole system will occur.

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This is because nature demands a general rearrangement of forces for the new work to be done.

Slight but persistent nausea, especially in the morning, shows that the stomach objects decidedly to its ordinary food, and calls for something different.

Often, by a curious sympathetic action, the father as well as the mother will be affected with nausea.

To prevent this, eat only such food as is agreeable. Ripe fruits, boiled rice, and tomatoes, either raw or cooked, are best; and an entirely vegetable diet for a few weeks will usually be enough to make every thing go on regularly and pleasantly.

When the mother finds herself relieved from symptoms of nausea, she may then take more nourishing food, as lamb or chicken-broths, eggs, etc.

But she should be careful about eating food that produces adipose tissue, or fat, to any great extent, especially with her first child.

She should exercise freely every day, avoiding excitement or violent exertion. Live as much as possible in the open air, and with pleasant thoughts and harmonious influences for company.

The care of her home will be no disadvantage to her at this time, whether her child be a boy or girl, as all social and domestic feelings should be assiduously cultivated, and with a generous wish to make other people happy.

She should be careful about walking on ice, going up and down steps, or slipping or falling in any way, and especially careful about becoming angry or frightened, or immoderately glad or sorry, as any sudden shock is likely to affect the embryo life so near her heart.

For ten or twelve weeks, the mother will feel a constant enlargement in the region of the abdomen; the breasts grow round and plump, full and hard; the glands are slightly affected; the neck is enlarged as by swelling; sometimes the extremities swell as with dropsy; and palpitation of the heart is a not infrequent accompaniment to other disturbances.

All these symptoms are far more annoying than dangerous, and usually, during the third month of pregnancy, a change takes place in the development of the fœtus, the forces concentrating more and expanding less. At this time, if the mother is very anxious to have her child born alive and well, she may *fear* she is going to lose it; if, however, she would be glad to rid herself of this new burden, and has been making efforts to do so, she *may hope* that the hour of her deliverance is at hand. Hope and fear usually prove alike futile in

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these respects, and the process of nature goes on, in a large majority of cases, without any interruption.

And this brings us to the treatment of a subject alike startling and horrible to the unprejudiced mind.

This subject is Infanticide or fœticide. It seems strange that the highest object of life, the only way, in fact, in which life can be perpetuated, should, by abuse of nature's functions, and disregard of her laws and demands, become so much a matter of pain, and trouble, and annoyance, as to make them not only undesirable but apparently unendurable; so much so that the unhappy victim, finding herself impregnated without her own will or consent, dares danger and even death, rather than to let the unconscious embryo develop into a perfect human being, asking for admittance at the gate of life.

In sorrow and pity do we look upon this grave and dreadful error.

My friends and co-workers, Sir Astley Cooper and Sir Benjamin Brodie, have jointly considered this subject, and given their views upon it, to which I will add but few words, as it has never been a specialty of mine.

But this let me say to every woman on earth:

If God did not want another man or woman in the world, he would not give magnetic life and power to that tiny atom hidden in the inmost recesses of your wonderful mechanism.

Do not sneer at the idea of God. We are but weak and finite in all our knowledge and intelligence.

There is a power higher and wiser than we are, call it by what name you will, and that is God.

If to you is given the sacred trust of ushering into its new earth-life a future man or woman, accept that trust without murmuring at the divine decree. Be glad that you are strong and well enough in body and spirit to evoke that life, and give it the best you have to offer in the way of conditions and encouragement; take air and exercise, and sweet, abundant food in extra quantities for baby's sake; and when sad thoughts oppress you, or doubts about the future arise, remember it is God's own image to be reproduced again through you; and he will take care of you and bless you, if you do your work faithfully and well.

Study nature in her brightest moods while the wee bit life gathers strength and individuality from you.

Study the birds and blossoms, the brook and the billowy sea; live in the sunshine, and in hope; and make yourself in all reasonable ways worthy to be a mother.

Every new life brings conditions that never existed before, and

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almost every mother shrinks and falters from the trials in the path before her.

The pains incident to childbirth are greatly aggravated by the unnatural and unhealthy lives that women live both before and during pregnancy; the food they eat, the clothes they wear, and the amount of exercise they take, as well as the more hygienic matters of bathing, breathing, etc.

The dress should always be loose, soft, and artistic, conforming to the useful where strict utility is demanded, but appealing to the beautiful as soon and as much as possible. Do not let the unborn baby feel that you consider yourself a fright or badly dressed, for his sake.

Wear as much drapery as you like when at rest, or when receiving your friends; but make it a point to exercise for at least an hour every day with little or no clothing on.

If the fresh air and the warm, invigorating, magnetic sunshine could reach your whole person and penetrate every pore of your skin, you would feel all the better for it.

Throw a blanket or quilt upon the floor as near to a wide-open sunshiny window as you can place it, lie down and roll over, stretch your arms above your head, rub your back, chest, and limbs, and make the blood circulate freely in every vein.

Ten minutes of such exercise as this every day will do you more good than quarts of tonic medicines.

Bathe freely, and if it tires you excessively to rub yourself, have some one rub your back, limbs, and extremities briskly with a soft, coarse towel.

You can continue this treatment with advantage up to within a few hours of the birth of your child.

Working about the house, sweeping, dusting, cooking, and all light work is advantageous, inasmuch as it provides exercise and keeps the thoughts busy. Of course this should not be carried to excess or to produce exhaustion.

But put away all sad or depressing thoughts, as you would put poison out of reach of a child. Keep hope and faith by remembering that motherhood is not within the compass of your own powers to gain, and therefore should not be trifled with. Do not dwell upon any *possibility* of destroying that strange germ of life, *lest* you make your child an *idiot* or a *murderer*. Children are worth saving and caring for, because upon them depends the future welfare and progress of the world.

After the third month of pregnancy, the growth and development

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of the child goes on very rapidly; and soon after the fourth month, a spasmodic motion of the unconscious fœtus is felt.

This produces many unpleasant feelings, and a sort of sickness that is not nausea, but slightly akin to it, in the mother's system.

This can not be modified much by taking medicines, but may be by proper exercise, reaching the arms often above the head, taking hold of the top of a door and resting the whole weight upon the hands, or any other motion that gives the muscles full play and changes the weight and position of the internal viscera. Sitting is a bad and uncomfortable position from this time onward; and much of the time should be spent in standing, walking, or reclining. The last three months of pregnancy must always be a time of great nervous irritability; and if the mother is not very happy, she is almost sure to be very unhappy.

Let her comfort herself with one thought, that, much as she may suffer and uneasy as she may feel or be, her own peculiar sensations will not affect her child so much as they would at an earlier period of gestation.

Try to keep your hands and thoughts busily and pleasantly employed; make some simple, pretty garments for the coming baby; knit soft wool for its little socks or jackets, embroider some fanciful pattern, nothing intricate or puzzling; and if you have any talent at all for it, draw or paint, write whatever pleasant, quaint, or interesting thoughts come to you; or learn some simple art that will at once serve as rest and amusement.

Remember, if you have worn light, loose clothing, eaten simple, laxative food, and exercised properly, the pains of labor and of childbirth will be comparatively light. When you feel these approaching, have every thing prepared as simply and cleanly as possible; a mattress, or straw bed, with a rubber blanket or clean, coarse cloth that will not wet through easily, thrown over it, is the best bed; a long plain night-dress open all the way down, and well tucked away to keep it from being wetted or stained, so that after the child is born you can wrap it about you warm and dry, is the only suitable dress to wear.

It is needless to go into particulars here. A woman with good sense and plenty of courage will walk about between the coming of the pains, and converse freely even up to the last moment. Remember that child-bearing is a perfectly natural and healthy operation; that you have no occasion to be frightened, or to expect any thing but the most natural and healthy results.

There is nothing to be done except to let nature take its own

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course, and in ninety-nine cases out of a hundred any interference only makes matters worse. The pains will come regularly, and at shorter and shorter intervals, increasing in severity.

There is not much relief gained by screams and groans, and they usually make those about you feel worse than they otherwise would. The presence of a good magnetizer, either male or female, is of the utmost importance at this time; and if the father has any magnetic control whatever over the mother of his babe, he should lovingly and carefully exercise it, to relieve and soothe her as much as possible.

The one relief and consolation through all this unavoidable suffering is, that it will soon be over; that a few hours, or it may be only a few minutes, if all is well, and there will be a weary, happy woman lying at rest with one more life beside her, waiting to learn its mission on earth.

Dress the baby simply and loosely after severing the umbilical cord, and disposing of the placenta.

In a small work which we have prepared upon the "Treatment of Children in Health and Sickness," the reader can find full and explicit directions, which it would be out of place to give here, for caring for both mother and child through gestation, birth, and infancy.

We would only say here, that the best bandage to be applied around the child's body is a strip of soft white flannel from four to six inches wide, cut crosswise, or bias, and without hem or edging of any kind. The flannel skirt should have a moderately wide white cotton waist, and the dresses should be the simplest possible slips that can be easily put on and off.

Give the baby warm sugar and water as soon as it shows a disposition to swallow; or if some experienced nurse or physician is present who insists upon catnip or elderflower-tea, give them very weak, slightly sweetened, and in very small quantities.

They are simple, slightly warming, and stimulating, and not injurious.

Usually within twelve hours, the child will be ready to nurse, and the milk in the breasts will be ready for it.

Do not fill its stomach so full of foreign substances that there is no space or craving for its natural food.

Give the mother cooked fruit, broth, and jellies with Graham-bread, rye-bread, plain toast, etc.

Give her also plenty of milk and water to drink if she can bear it.

For a few days the mother had better keep quiet; and when she walks about her room, she should have a long firm bandage properly applied.

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If this bandage is wet in cold water, and then covered with a dry towel, it will act as a tonic and stimulant as well as support.

There is no need that the mother should lie in bed day after day when she feels perfectly strong and well.

She should learn from the first to use her own judgment and common-sense in regard to these matters. She should wash and dress her baby herself as soon as she is able, and learn, by careful observation and experience, what it needs and wants. She should regulate her own food with reference to the health and comfort of her little one, and never forget that, as long as the child draws its nourishment from her, it is physically and spiritually still a part of herself. It has, however, a life of its own, and as such it is a separate individual fighting its little battles, planning its little triumphs, suffering its little ills, and these, too, must be separately considered.

CHARLOTTE E. LOZIER.



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SEVENTEENTH SECTION.

DISEASES OF CHILDREN.

The importance of laying a firm foundation when very young—Preventive of contagious and other diseases—Magnetism before all other treatment—Pure-air exercise in the open air—Teething, how to manage—Convulsions, how to treat—The mother must regulate her diet and keep an equanimity of mind—Avoid soothing-syrups and opiates—Croup and diphtheria, how to treat—Warm bathing and magnetism—Cold medicated inhaling vapors highly important—How to cure scrofula, and what it is—Sunshine absolutely necessary—Scarlet-fever, how to treat—Putrid sore-throat—Disinfectants must be used—Caution against sudden changes—Water treatment beneficial, carefully used—Never use caustics to the throat—Function of the kidneys must be established—The Turkish bath a most efficient agent—Measles and other diseases of childhood—Children must be regarded as public property—Look for the book to be published.



E CAN treat but briefly here, of the diseases incident to infancy and childhood; but we intend to publish soon a small volume devoted entirely to the care and treatment of children, both in health and sickness, as it is only by laying a *firm foundation when very young that health and vigor can be retained until late in life.*

We have already given a few words upon pregnancy and childbirth. Allowing, then, that the little helpless baby be safely and healthily born; that its *bark* of life, so frail that a breath might destroy it, is launched on the *billows* of time, and ready to make its own way in the world, dress it softly and loosely with as few clothes as possible.

Tight or heavy clothing tends to obstruct the circulation, and make the child weak and nervous. Too warm dressing, even if ever so loose, makes a child abnormally *tender* and susceptible to changes

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in the atmosphere, thus superinducing colds and fevers, or making the little one unnaturally liable to take disease from others.

One of the best preventives for contagious diseases is to expose the child as much as possible to the *fresh, pure air*, and *rub* it with the *hand* (see page 46) thoroughly, thus making the skin firm and elastic, and the circulation vigorous and healthy.

The baby should nurse, if possible, as nature thus provides, or does her best to provide, suitable food for the new atom of life. Usually the milk will be ready in the mother's breasts in a few hours after the child is born; if it does not so appear, the breasts should be washed gently and rubbed persistently with a *magnetic hand* (see page 113); the mother should drink freely of cold milk and water or very weak warm tea; and the bowels of both mother and child should be kept open by the simplest possible means.

A little olive-oil may be given to the mother every day, either with her food or afloat on a glass of lemonade, where it can be easily swallowed; the slight acid of the drink removing all the unpleasant effects of the oil.

If the little one can not nurse, give it simple, light food, milk and water sweetened slightly, or very thin gruel; give it in small quantities and often, if you wish the child to thrive and grow fat; but if it is naturally very fat and its flesh soft and puffy, give the food in larger quantities and at longer and more regular intervals.

There should be a movement of the bowels every six hours, or as nearly that as nature demands, considering the amount of food, drink, and exercise taken.

Weak broth in which bread has been soaked may next be given; but no meat until after the teeth are well-cut and grown.

Teething is a process always accompanied by some fever, and disturbance of the digestive and secretive organs.

The face is usually flushed, the hands hot and dry, the pulse quick, very frequently slight red eruptions appear upon the skin, the breath is feverish, the gums swell, and sometimes a troublesome cough seems to indicate that the lungs are disordered in their action.

Since the days of Hippocrates, it has been well known that one essential method of treatment has been and must be, to keep the bowels free in their movements, thus carrying away the fever and other diseased conditions, preventing dropsical and hydrocephalic symptoms, and hastening the return of health; bathing every day in water so cool as to act as a tonic, but *not* so cold as to give the delicate system a *shock*, and then rubbing thoroughly until the magnetic conditions are equalized and the nerves calm.

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I do not have much faith in the lancet, as I think cutting the gums often makes an ugly flesh-wound that becomes more or less inflamed before it heals, and adds to baby's sufferings.

But sometimes, when the skin seems to be drawn hard and firm over the growing teeth, it may be well to separate it, and let the little tooth have its freedom. Some hard, smooth substance should be kept constantly within reach of the child, that he may bite or rub his gums with it, and thus facilitate the breaking of the membrane by the crown of the tooth.

Soft linen cloths should be kept about the neck, and removed as often as they become wet from the increased secretion of saliva.

If they are allowed to remain too long, the skin of the chin and throat becomes tender, irritated, and chafed.

It will not be necessary to give the child any laxative medicine if it is nursing, as children should do until their sixteen first teeth are all safely through the gums and in good working order.

The mother can regulate her own diet in such a way as to meet all the digestive needs of the babe; but she must be careful, and avoid all stimulants and irritants.

Teething usually commences at about the age of four months, and continues for a year; sometimes much longer.

But when the teeth are cut and the little one can walk firmly on his own feet, then he should be gradually accustomed to eating bread and milk, broth, and other light, nutritious food.

He will then soon give up the habit of nursing, when he no longer needs the food thus provided; and with proper care, and attention to diet, exercise, and bathing, the transition can be made without trouble or danger.

If the child has *convulsions*, is inclined to start and cry out in its sleep, or exhibits other signs of unusual nervousness, remember that these generally proceed from *indigestion*, and be careful to regulate the quality and quantity of food to prevent a recurrence of such troubles.

In convulsions, raise the head, loosen all the clothing, supply plenty of fresh air, dash the head and face with cold water, put a silver spoon in the mouth, to prevent the teeth from closing tightly; then gently rub the back, stomach, bowels, and limbs; prepare hot flannels as soon as possible, and wrap the feet in them; apply hot fomentations to the pit of the stomach; and, as soon as the patient can swallow, give four or five drops of ammonia in a table-spoonful of water, also apply ammonia to the nostrils repeatedly. Do not allow the head to fall backward, but support it in a natural position,

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and keep calm and patient, even if the fit continue for hours. Magnetism will do in ten seconds what it will take mere mechanical means hours to accomplish; therefore, apply magnetism if possible. But it is better, by proper care in food, bathing, and exercise, to prevent convulsions, than to depend upon any artificial means for curing them.

Avoid soothing-syrups and all medicines containing opiates.

A slightly warm bath and plenty of rubbing will cure the worst case of colic or cold or restlessness, easily and safely. If a child is subject to croup, or is threatened with it, let him drink copiously of cold water before going to bed; and then covered so warmly as to excite slight perspiration, merely enough to keep the whole skin active in throwing off all morbid secretions, thus preventing them from gathering where the mucous membrane is weakest.

But if the terrible whistling breath tells too plainly to the mother's ear that the little throat is filling up, and the child is gasping painfully, then no time is to be lost.

Put the feet in warm water, dip a long strip of flannel in cold water, wind it about the neck, and, pressing the mouth firmly but lightly against the windpipe, breathe out a long breath slowly but steadily, then *re-fill* the *lungs* as full as possible, and repeat the action. Any one who has not tried this experiment will scarcely believe how much local heat may be generated by this simple process. It may be done with a dry flannel if preferred, and applied also to the back of the neck, as well as to the windpipe. It will soon loosen the accumulated secretions, and a fit of coughing will often bring up a mucous cast as large as the annular opening of the throat, and nearly solid.

If this does not come up, and the child seems inclined to choke or strangle, give warm drinks, and even if the entire mass is carried down into the stomach, it will do no harm.

Very small doses of *ipecacuanha*-root may be given with good effect, if the necessity for medicine seems imminent; but if the cold inhalations used by Dr. Stone can be procured, *they will produce an immediate and salutary result not to be obtained in any other way.*

It would be well worth the trouble for any parent to keep these preparations at hand, if only for the relief they will afford in croups, colds, and all asthmatic or phthisical affections. (See page 76.)

The contagious and eruptive diseases usually incident to childhood, such as *chicken-pox*, *measles*, etc., can be easily treated by light, nourishing food, bathing, and magnetic rubbing.

Hooping-cough, if slight, should be cared for like a cold; if

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severe, the *cold inhalations* should be resorted to, with plenty of exercise and rubbing.

One of the most distressing and troublesome diseases usually incident to childhood and early life is scrofula, in its various forms.

This, if it does not prove fatal to the young patient, often continues to manifest its baneful symptoms until late in life; but it rarely attacks or shows its first indications upon a person later than the age of ten or twelve years.

Scrofula, bad as it is in every way, is yet especially amenable to the simplest and most natural forms of treatment.

Take the child to the country, where it can come in contact with the fresh earth; to the sea-shore, where it can play in the sand and dabble in the salt water; and always be careful that plenty of sunshine reaches it.

You know very well that the plants in the window will not grow and thrive and blossom unless the *sun shines on them;* and what is necessary for plants and flowers is far more *essential for baby.*

But scrofula only means weakness and debility, lack of vitality, and want of magnetic strength, not merely in the individual, but as an hereditary bequest and condition.

To supply the lack and the need, then, will be to rout the enemy from his stronghold, and save the victim from further torture.

We claim to be able to cure scrofula more effectually than any known regular school or practice can do, because we work with and by nature.

There is a form of disease usually incident to childhood, though sometimes it attacks adults. Its very name is enough to make the mother's heart stand still with horror, and her cheek blanch with fear.

This is scarlet-fever.

Every year this terrible scourge sweeps away from mortal sight thousands of helpless victims, who might, in almost every case where the disease is not of a malignant type, be saved by attention to a few simple hygienic rules.

Scarlet-fever is usually divided into three varieties. *Scarlatina*, called also simple scarlet-fever, because it is not complicated with any disease of the throat; scarlet-fever and throat-distemper, which is the most usual form of its appearance; and *malignant scarlet-fever*, which is very much like *putrid* sore-throat and the worst forms of *diphtheria*, in its symptoms, and requires very nearly the same treatment.

For scarlatina, the simplest possible treatment is safest and best.

A large, airy room, which can be freely ventilated without exposing the patient to a draught, should be used if possible.

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A mattress, covered with a rubber cloth or bit of canvas that can be easily removed twice a day, forms the best bed.

The patient should lie upon a soft cotton sheet, and another sheet should be used for a covering. That is all that will be needed until the little one complains of cold, which will be an indication that the fever is abating, and then more bed-clothes should be added.

Let the patient have cold water to drink as often as desired, and some pleasant acid drink, as lemonade or a little cream of tartar and water, sweetened with white sugar. Use ammonia freely, and all simple *disinfectants*, as *carbolic acid*, diluted *chloride of lime*, *soda*, etc.

When the breathing becomes difficult, use Dr. Stone's cold inhalations; or if these are not at hand, use camphor, ammonia, and carbolic acid, mixed with cologne spirit, to make the odor as pleasant as possible. Let these be inhaled, and immediate relief will follow.

Cold water is one of the oldest and most efficient curatives for scarlet-fever.

Many years ago, when I was a physician on earth, I wrote of this same disease,

"We are possessed of no physical agent, so far as my experience has taught me, by which the functions of the animal economy are controlled with so much safety, certainty, and rapidity as by the application of cold water to the skin, under the augmented heat of scarlatina and some other fevers. This expedient combines in itself all the medicinal properties which are indicated in this state of disease, and which we should scarcely *à priori* expect it to possess.

"For it is not only the most effectual *febrifuge*, but it is in fact the only *sudorific* or *anodyne* which will not disappoint the expectations of the practitioner under these circumstances.

"I have had the satisfaction, in numerous instances, of witnessing the immediate improvement of the symptoms and the rapid change in the countenance of the patient, produced by simply washing the whole surface of the body. In a few minutes, the pulse has been diminished in frequency, the thirst abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, the eyes have brightened; and these indications of relief have almost invariably been speedily followed by a calm and refreshing sleep."

Still, I will say this in regard to water treatment, that some of the worst and most fatal cases of scarlet-fever I have ever known have swept through whole families of children who have been reared in the Grahamite and hydropathic faith and practice. But I think one rea-

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son why the fever is prone to be especially fatal in those families is because children brought up on a purely vegetable diet, and often perhaps a short allowance even of that, have less power to withstand disease, less physical stamina, and therefore they yield all the more readily to contagion or gradual weakness.

It is well known, more especially among the homœopathic school of physicians, that Dr. Hahnemann, of Leipsic, has asserted that belladonna, or deadly night-shade, will, if taken in small doses, prevent attacks of scarlet and similar fevers; but whether this has been found to be scientifically possible or practically true I do not know. I am inclined to think, however, that it is a mere matter of faith and superstition, arising from the fact that belladonna will produce a slight eruption on the skin somewhat resembling that of scarlet-fever. Caustic should never be used for the throat, nor should sponges or other foreign substances be introduced unless suffocation seems imminent. A good magnetic physician will be a safe and speedy relief from all such troubles. When the fever has turned, and the cuticle begins to show symptoms of falling off, to give place to a new, soft, healthy skin, then the body should be carefully and gently rubbed; and if the skin seems very dry, a little sweet-oil or glycerine should be used, rubbing it in until it does not show or leave any unpleasant feeling on the surface.

Be very careful, when the patient begins to recover, about any exposure to *draughts or out-door air*, as the system is in a very *sensitive state*, and the secretive organs and absorbents are especially weakened.

The kidneys often refuse to do their work properly, and dropsy is the result.

Good magnetic treatment, rubbing, bathing, and proper exercise, are the only reliable means for toning and strengthening the whole system, and making all the organs perform their proper functions.

Plenty of light, nourishing food should be given; arrow-root, rice-water, fruits, gruels, boiled rice, jellies, broth, bread and milk, tomatoes, etc., increasing in richness and strength-giving qualities as the demand increases. Tomatoes, having a specific effect upon the kidneys, are particularly useful in all feverish diseases.

The general directions for treatment of scarlet-fever apply equally well to *measles*, *chicken-pox*, *rash*, and other eruptive diseases; plenty of fresh air and a judicious use of cold water being always needed, and good magnetic treatment the next desideratum. When the throat is affected, it requires local treatment.

If a good magnetizer can not be found, wrap the throat in cold

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wet cloths, renewing them every two or three hours; bathe the body frequently; keep the extremities warm; excite perspiration as soon as possible; and if the child can not be persuaded to use a simple healing gargle, be sure to try inhalations of carbolic acid and other healing vapors.

One of the best and most healing inhalations is made by pouring hot water upon *black cherries* that have been *soaked* in *alcohol* or rum, or black currants, and then inhaling the steam.

In scarlet-fever, the rash or eruption usually appears within the first forty-eight hours of the fever; but in measles, not until the third, fourth, or sometimes the fifth day.

In scarlet-fever, the eruption appears like a superficial flush, with innumerable fine points intermixed with minute pimples, dispersed all over the skin. In measles, the rash consists of small circular dots, like insect-bites, and of a deeper red in the centre than at the circumference.

The best preventive for these diseases is to keep the child strong and healthy, by abundant nutritive food, and free contact with fresh air, sunshine, cold water, and the ever-healing magnetic mother earth. The best cure is care and cleanliness without drugs.

Other diseases incident to childhood or infancy will be treated more fully in another work.

Also the care and teaching of children, children's schools, the Kinder-Garten or children's garden, the different methods of object-teaching at home and at school, the influence of children upon each other, and the kind of people best adapted for teachers and guardians of children. It is a well-known fact, both physiological and psychological, that there are many women capable of conceiving, bearing, and bringing to safe and healthy birth children whom they are not fitted to rear and educate, or even to care for during childhood.

Society should make some provision for this, and it is a subject worthy of careful consideration.

THOMAS BATEMAN, M.D.

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EIGHTEENTH SECTION.

HOMEOPATHY.

CONTRIBUTED BY SAMUEL HAHNEMANN.



ASK as a matter of literary courtesy,* what I can not demand as a right, that you grant me a little space to explain my own position in my own way.

That very enthusiastic and somewhat unreasonable experimenter— Nay! I will not be unjust. However I may differ from my contemporaries in opinion, I will still speak of them with the respect due from student to student, from friend to friend.

I believe, I have always believed, that Friedrich A. Mesmer was, through some peculiarity of nervous temperament, subject to a disease of the brain that made him visionary and imaginative. I thought his control over his patients was due only to the imagination or the will.

I had the more reason to think this as I knew, by actual experiment, often repeated and thoroughly tested, that I could produce the effect of certain medicines upon persons both in sickness and health, merely by intimating to them that they were taking or had taken certain drugs.

I did not do this with any idea of ridiculing the imagination or its power over the more physical faculties.

* This lecture should have followed the one by Friedrich Anton Mesmer; but feeling to conscientiously *coincide* with the views expressed by him and other contributors regarding the merits of homeopathy, we were opposed to publishing it; but in reply to a strong mental request, after the manuscripts had gone into the compositor's hands, Dr. James Johnson, the chairman of our BAND, says, "I want Hahnemann's words added to the book, because it will show that we are tolerant to all sides, and give every one a chance to speak for himself."—ED.

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I have tried the same experiment upon myself, and wondered much at the result. That is to say, I took what I thought was a certain drug, at one time in experimenting, and found it produced the symptoms of the disease I intended to cure by it.

These symptoms proceeded so far that I thought I would take their antidote, and thus control them. I did so, and they rapidly subsided.

I then learned, to my intense surprise and bewilderment, that I had taken blank medicine in both cases.

That is, I had prepared some tiny pellets of sugar of milk, intending to medicate them with certain drugs of the sixth potency or six hundredth dilution.

I had marked them with the names of the two drugs I was to use, putting a sign of minus, thus, —, before the name, to show that they were not yet medicated.

I selected these bottles from my case, and took the several doses without noticing the minus sign. When I did notice it, I was utterly confounded.

I did not know whether I had experienced any feverish symptoms or not.

Before that time, I had been in the habit of asserting very positively that certain minute doses of certain drugs, at certain dilutions, given to a person in health, *would produce* certain effects.

After that, I gave my drugs to the best of my knowledge and instinct, and said, "Behold the result," but I was a little shaken in regard to mathematical certainties. I now know that the disembodied spirits who were interested in my experiments and were trying experiments of their own at the same time, produced the effect upon me which I have described; but I did not know it then.

Mesmer says that he *knew* that the spirits influenced him, and wrought through his agency the marvels that startled the scientific world; but that, knowing how the idea would be ridiculed and scorned, he persistently denied the fact even to himself.

So prone is man to ridicule what he can not understand.

Perhaps Mesmer shrank the more from revealing what he believed to be the truth, from the feeling that it would be like casting pearls before swine, or exposing the holy and sacred secrets of the inner temple to the carping gaze of a curiosity-loving crowd.

But for me, I had no such idea. I did not even fully believe in conscious existence after death.

And strange as was my experience in mental power, it never, to my mind, had any *spiritual* significance.

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I recognized the power which the mind or imagination had over the individual's own faculties and functions, but did not even know the power possessed by one mind over another.

So that the charge of fraud in that direction is utterly groundless.

The theory of "Similia similibus curantur," or like counteracts or cures like, was not new, though I thought it was.

It had been known since the days of Æsculapius that a certain quantity of opium, given under certain conditions, would produce wakefulness, while another proportion of the same drug would cause sleep. It was known that large doses of any poison would pass harmlessly out of the system, while small doses would remain and cause derangement, distress, or death.

It was known that a large dose of mercury would pass through the stomach and intestines, and find its way out with no more perceptible effect upon the system than a ball of lead, swallowed in a metallic state.

But let the mercury or the lead be triturated by corrosion, and mixed finely with ever so harmless a preparation, conserve of roses, for instance, and what violent poisons do they both become, and how small a quantity of either will produce the most distressing symptoms upon the human frame?

When a certain honest and enthusiastic spiritualist, published, a few years ago, a little book entitled, *Whatever is is Right*, it called out an unprecedented amount of criticism from both the secular and the religious people.

And yet the idea was not a new one. It was as old as the Christian religion itself, and many centuries older. It is only another form of saying that if God does any thing He does it all; that "God's ways are not as our ways, but his ways are best for us, always, though sometimes we can not see that they are best."

But so resolutely and persistently do people slip into one channel and take up the tread-mill of habit, that they refuse to listen to a new thought, and even persecute and revile an old thought when offered to them clothed in a garb of new words. When I said as an axiom, "The smaller the dose, the more powerful the effect," I meant, primarily, that the same amount of medicine, given in many small doses, would produce a far greater effect upon the system, and would control a diseased condition far sooner than if given in one large dose.

But that simple statement, which every physician who had ever conscientiously watched the effect of a dose of herb-tea, knew to be

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perfectly true, wakened a howling whose echo has not died away yet, and caused a chatter of ignorant ridicule, which a century has not sufficed to silence.

The opposition that I encountered made me stubborn.

I firmly believed that I had received the first faint glimmer of a great truth, which was destined yet to make an entire revolution in the whole use of medicine. Where that glimmer came from, I did not think or inquire.

I believed that I held one end of a tangled thread, which, properly unraveled, would lead to all the beneficent effects which drugs had ever been able to produce upon the human system, without any of the reactionary or poisonous results.

I know what the abuses of homeopathy are; for I have watched the whole subject with the most intense interest, ever since I came here, and with a far wider scope for observation than I could possibly have while confined to the earth-planet.

But I believe that one of the principal and most glaring abuses has grown from the indiscriminate and careless use of homeopathic remedies by ignorant people, without the advice and supervision of some one who had made a study of both chemistry and physiology.

The common understanding is, that homeopathic remedies will do no harm, even if they do no good; but never was a greater mistake made.

As I have before remarked, large quantities even of the most poisonous drugs or chemicals may be thrown off from the stomach by vomiting, or may pass off in the natural way, while small doses will be retained in the system.

I watched a case not long ago, where a young man who wrote a great deal, and was closely confined to severe mental labor, found his eyes troubling him. He had a sort of double vision at times, and an apparent shortening of the sight, so that he would reach out his hand to take a book or a chair that was really twenty feet away from him.

He went to the family physician, of the homeopathic school, and soon obtained relief.

The physician gave him homeopathic arsenic. The young man discovered this fact, and when again the troublesome symptoms appeared (which were really only an indication of nervous weakness and weariness, nature's pleading voice saying, "Give me rest or I fail"), he took arsenicum, without consulting the physician. This course he continued for two years; took arsenic until it became a habit with him, until he could not live without it; took it until he

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died with every symptom of arsenical poisoning, and his eyes protruding like globes. Sad as this case was, and possible as it is that there are many others like it, I can scarcely hold homeopathy accountable for it. I never taught or practiced any such treatment of medicines as would allow an ignorant clerk to dispense the mother tincture of belladonna, nux vomica, or other poisons.

And yet a person can now go to a druggist's, virtually devoted to the sale of homeopathic remedies, and buy any of these dangerous articles, to be used at home for the ordinary ailments of childhood, without question or instruction.

This is all wrong, but it is not homeopathy. A well-known writer says, "I saw a young man yesterday, enter a homeopathic drug-store and call for 'Nux,' with a very important air, as though he wished it distinctly understood that he knew what he was talking about.

The clerk took down a bottle of blank sugar pills, and poured the mother tincture of nux vomica upon them.

The pills were discolored and partially dissolved. They emitted a powerful and characteristic odor, and were nauseatingly bitter to the taste. Three of the pills licked off the hand by a pet lap-dog caused spasms, followed by rigidity, and it was thought for a time that the dog was dead.

Now this was not a safe preparation to put into the hands of any person.

I gladly enter my protest against all such abuses. I call upon all reasonable and thinking persons to look well to the course they are pursuing, lest they unintentionally dally too long with poisonous preparations, and bring disease and death where health and strength should reign.

I know that homeopathy is a mere name, and as far as the practice of its pretended disciples is concerned, it means nothing.

I know that it would be difficult, perhaps impossible, for any one to find two so-called homeopathic physicians who now give medicines as they were taught, and according to the same rules or in the same proportions. Even this would not be objectionable if they were all equally careful and conscientious. But I am sorry to say they are not. They know that their profession is not an exact science, and they try one remedy after another, often giving doses that would make a regular old-school physician tremble for his reputation, perhaps for his life. Or if they give small doses, they mix two or three, sometimes a half-dozen, different drugs together, hoping that if one does not prove beneficial, another may.

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Now, any one who has studied my writings, unfinished and imperfect as they were left, will see at once that I did not countenance or teach any thing of that kind.

I believed in the very simplest forms of treatment, and if magnetism can still farther simplify the whole process, I gladly accept magnetism as a substitute for drugs, even in their infinitesimal forms.

I know now that it is in many cases the physician who heals, and not the medicines; but I did not know it when I was going through with the tedious process of "provings," that took up so large a portion of my time.

I know now that the same infinitesimal drug administered by two different people, will produce two different effects, and that destroys the certainty of action upon which alone a science can depend. But I certainly had faith in my little pellets, while I used them; and that faith, thus transmitted, did its work too in the way of healing.

The old, old saying, "Thy *faith* shall make thee whole," never had a truer significance than it has to-day; and that significance was never more plainly demonstrated than by the use of homeopathic remedies in the true insensible doses; that is, in doses in which the drug could not be detected by any of the senses.

Blank medicines will produce a specific effect, if the patient is led to believe that they contain a certain drug, or medical power or virtue. But if the physician also believes the same thing, the effect is still more marked.

I suppose this is one manifestation of "the power of the spirit," of which Mesmer speaks so enthusiastically.

But I must confess that my studies have been so closely confined to the realm of drugs and their effects, that I have not until very recently thought of taking the one step farther on, and studying the effect of faith, hope, and love without any drug at all.

Of late, I have been experimenting through some of those peculiarly organized persons now called "magnetic physicians," or "media."

They belong, I believe, to the same class or order of temperament with what was at one time known as mesmeric subjects, or, as Reichenbach calls them, "sensitives." My experiments in this line are as yet in their infancy.

As they progress, I may desire to find some patient hand and receptive brain to record them.

If so, my readers may feel assured that I tell them the whole truth as far as I know it, and give them every ray of transmittible light that I have received.

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If homeopathy is, to-day, as it is said to be, a mean and cowardly fraud, it certainly never was intended by me to hold any such position, and I can not help believing that its general tendency has been for good; that as spiritualism has had a general tendency toward liberalizing all religion and awaking thought, so homeopathy has tended to make physicians study more carefully the nature and possibilities of drugs and to give smaller doses. Nature and science, revelation and religion, still move onward very much as a man walks. One foot takes a step forward, and calls itself the progressive foot; the other is left far behind, and is called the conservative foot. Strife, and ridicule, and mutual "I-am-better-than-thou" bickerings ensue. Slowly and quite imperceptibly for a time, the conservative member pulls itself forward, presently it reaches out in turn far beyond its neighbor, and relative positions are reversed. There is the same strife, the same bitterness of spirit, and tendency toward persecution, but they do progress. Let us try, then, individually, to cultivate patience and charity, not only toward each other, but toward all movements and theories and ideas.

I know that one of the best remedies in almost any disease is that it be let severely alone. Another is, that the mind of the patient be kept in a quiet and composed state, and all responsibility and effort of the brain, in thinking and caring for itself, be removed.

This is best done by having a physician in whom the patient places implicit confidence and trust.

Good judgment, patience, faith in one's self, and determination to succeed are the best qualifications for a physician, and then if medicines must be given and drugs used, stick to the infinitesimal doses. Cure by the spirit.

I think there are not a dozen doctors in America to-day, who even *pretend* to practice homeopathy as I taught it.

Each one studies up a sort of eclecticism of his own, and practices in accordance with it; but for all his or her blunders and errors of judgment, homeopathy is held responsible. This is neither wise nor just. Therefore, I join the general plea used by the higher intelligences, and call upon all disciples of homeopathy to study well the principles of magnetism; and if they thereby become convinced that there is a way to heal without even the semblance and pretense of drugs, so much the better for their patients and the world.

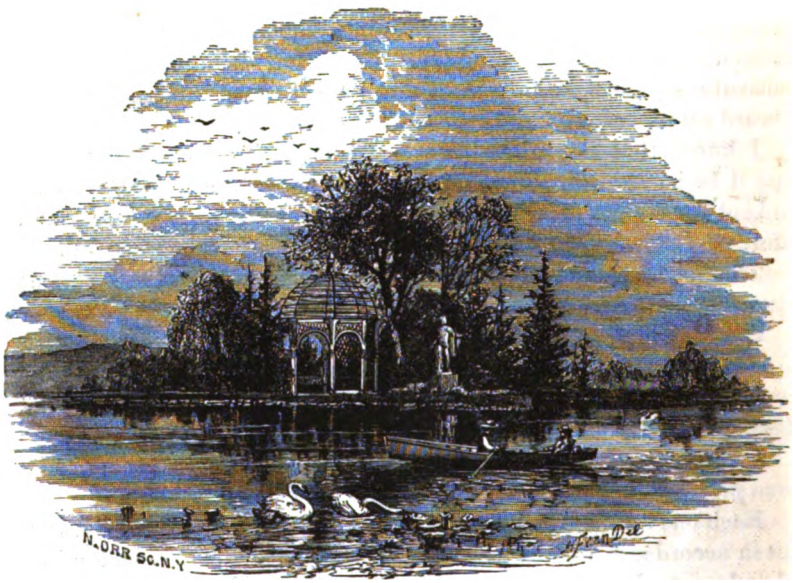
There is no doubt that the improper use of drugs has wrought great mischief to the human family, not alone in the deaths thereby caused, but in the poisoning of the blood and weakening the secre-

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tive and excretive organs, so that life has dragged on, a succession of miseries and suffering.

There is no doubt that homeopathy as practiced to-day, is doing its full share of depositing poisons and injurious substances in the systems of its victims, by which they suffer from morbid secretions, paralysis, chronic diseases, and general derangement.

Education and liberal, honest thought will show the way out from these abuses.



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NINETEENTH SECTION.

COSMETICS.

THE CARE FOR AND IMPORTANCE OF THE FUNCTION OF THE SKIN.

BY FRANCES ANNE KEMBLE.

Beauty simply the skin—Too much washing of the face—The skin composed of two layers—Seat of the coloring matter—The skin or complexion must be well cared for—Diana bathed every morning in rain-water, the secret of her beauty—Cold bathing injurious and bad for the skin—Rub with the soft magnetic hand—A soft dry powder beneficial—Bathe other parts of the body more—Baths of milk—The Turkish bath—A domestic steam-bath from a heated brick—Of soaps, castile and carbolic are preferable to all others—To secure a fine complexion, the excretions of the body must be daily carried away—A quiet and happy temper essential—The magnetism of beauty and love.



E shall treat in this section of the skin and the complexion, more from the anatomist's stand-point than from the physiological view, and more in regard to beauty in general appearance than in regard to health. There is a little book of Jacob le Bibliophile, *Confessions Archéologiques et Cosmetiques.* It is called both witty and learned, and certainly has many original and interesting views.

"Beauty," he tells us, "is simply the skin. Resolve me the problem of preserving the skin, and the preservation of beauty is no longer a problem." And now we wish to state, as a primal fact in regard to preserving the skin of the face, ninety-nine out of every one hundred people wash their faces too much. Instantly the query arises, What is the skin? Any medical student will glibly reply that it is the protecting cover

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to the exterior of the body; that it is composed of two layers—the epidermis, or scarf-skin on the outside, a structure usually thin and without sensation; and the derma, or true skin, a sensitive layer of fibres immediately beneath the epidermis. The epidermis is composed of numerous cells. These contain the coloring matter which gives the flush to the cheek, and the different hue to the different races of men. It is the epidermis which rises when a blister is drawn. Blister a negro, and when the epidermis comes away, you will find the spot is white. This color, which we make such an ado about, is not even skin-deep; for it does not reach through the true skin.

So it is with freckles, moles, moth, and most kinds of spots on the skin; they are very superficial, and do not affect the true skin at all. In point of looks, however, it is the scarf-skin, much more than the true skin, which concerns us; for it is this outer and ever visible layer which is most frequently to blame in unhandsome complexions.



FIG. 64.

Therefore, to retain the clear and brilliant complexion of youth, the skin must be well cared for. To do this, our instructions commence with a homely theme, but an orthodox one. It is that of *bathing*.

It is said of Diana of Poitiers, that every morning of her life she bathed in rain-water. Says Master Oudard, her apothecary-in-chief, surgeon-barber, and perfumer, as he delighted to call himself, "And this it was, I swear by the soul of my honored mistress, that was the only secret of that illustrious dame, employed to preserve her health, youth, and beauty to the age of three-score and twelve years."

We believe the honest apothecary; for rain-water is the finest and purest of distilled water, perfectly soft and neutral, fitted beyond any other to render the skin clean, odorless, white, smooth, and transparent.

Let it be preferred to all artificial preparations; for it is better than any of them. Hard water, which contains mineral salts, should be avoided in bathing, as it cracks and injures the epidermis.

Cold bathing is injurious to many constitutions, and is always bad for the skin. Very hot water is quite as bad. The water should be tepid, or slightly warm; and in using it, one should wet the person sufficiently to soften the skin thoroughly, and then rub the flesh, not violently, but gently and continuously, with a coarse towel, a soft flesh-brush, or a mitten not too rough.

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Best of all treatments for the skin, both for its health and beauty, is the warm, soft, *magnetic* hand, to rub it thoroughly and persistently. A few drops of clean sweet-oil, or a small quantity of glycerine, should be taken in the palm of the hand, and thoroughly rubbed over the whole surface of the skin until no greasy or sticky feeling remains.



FIG. 65.—THE MAGNETIZED HAND.

The face should be thoroughly rubbed with fine, soft powder, made from starch, rice, or other harmless preparation. It is well for the health and beauty of the skin of the face that it be washed as seldom as possible. A rubbing over with dry powder will cleanse it much better than an application of soap and water, and will not leave the pores open to fill with dust and form the unpleasant black specks, erroneously called worms.

A good powder to use is three parts of finely-pulverized starch to one of orris-root. One reason why the face is most subject to spots, pimples, and other eruptions is because the face is washed oftener, the pores are kept open, and the circulation stimulated by the rubbing, so that the effete humors in the blood find there the readiest exit, and consequently crowd thither from all parts of the body, giving the face too much to do. Wash and rub daily all parts of the surface, and the secretions will be equally distributed, and no one part overtasked.

Baths of milk may be beneficial in cases of sickness, where a patient is very weak; for the skin is an active absorbent. Milk is often used as a cosmetic, and is supposed to give a peculiar softness and freshness to the skin; but it needs great care to prevent it from leaving the epidermis in a sticky state that makes it more liable to catch the dust and grow gray in consequence.

THE TURKISH BATH is becoming so popular that it deserves special mention. It is a sort of hybrid reproduction or degenerate offspring of the old Roman bath. That luxuriant nation reduced bathing to a system. Establishments for the purpose were found in every city of the empire, and were of the most splendid and costly construction. Their plan was as follows: The first room the guest entered was filled with hot air. Here he remained long enough to break out into a profuse perspiration. Then he was ushered into a large apartment, in the centre of which was an elegant tank or basin of water

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heated to one hundred or one hundred and five degrees. Here men and women often sat together, reading, exercising, or gossiping for an hour or more; after which, they went to the next room, and plunged for a moment into cold, clear water. This sudden transition removed the languor left by the previous high temperature, and braced the system for exercise. The whole body was then anointed with perfumed olive-oil well rubbed in, to protect it from the action of the air. The clothing was then resumed in a moderately-warmed room; more chatting and lounging about on soft divans was indulged in, and the bath was finished.

The Turkish bath likewise has its hot-air chamber, its hot-water bath, its plunge or *douche*, or spray, its needle-bath; and it no doubt cures some cases of rheumatism and other chronic disorders; but a person needs a strong constitution to go successfully through with a course of Turkish baths. The value of this bath depends on the thorough cleaning it gives the system and on the perspiration it excites. Its peculiar feature is the *shampooing* process.

An expert attendant kneads, rubs, and manipulates every muscle and joint of the body, imparting a suppleness and elasticity which is often agreeable and beneficial; *but they must be taken cautiously*, lest the patient lose strength unawares.

Our North-American Indians have their style of big medicine or bath cure. They build a small lodge of skins, heat a number of stones, and pile them in the centre under a rude couch made from ash saplings. Then shutting close the apertures, they dash water on the stones until the lodge is filled with the hot vapor. After they have enjoyed this for a while, they start on a full run for the nearest brook or pond, and plunge in the cool waves, where they rub themselves briskly, and *throw off the disease*, which is supposed to be taken up by the water-*sprites* and carried away.

A simple and easy method of taking a vapor-bath on a small scale at home is this: Seat one's self unclothed on a cane or other porous-bottomed chair, under which place a very hot brick on a plate; wrap a large blanket around you from the neck downward, inclosing the chair, and carefully close the covers. Pour, from time to time, a little hot water on the brick, and the body will soon be in an atmosphere of highly-heated vapor. When the perspiration has lasted from fifteen to twenty minutes, throw aside the blanket, and *plunge* into a tub already filled with cold water, or take a cold shower-bath. The only *warning* needed in this procedure, but a very important one, is *not* to allow the body to cool gradually between the hot and cold stages. The transition must be sudden and the cold dip or shower must last

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but for a second or two, otherwise trouble may result. *After this, the person should be rubbed thoroughly*, and the face especially should be well dried with a soft towel and light friction, as well as thoroughly powdered, unless the person has a prejudice against powdering.

There is a place in Switzerland, in the valley of the upper Rhone, Soueche-les-Bains, where every day one can see from fifty to a hundred guests of both sexes seated on chairs in the bath, with the water reaching nearly up to their arm-pits. Before them are small tables, upon which they play cards or chess, write letters, and rest their books or needle-work; and it is not unusual for some of them to remain in the water for six or seven hours every day.

As the springs still continue famous, and great cures are often reported from them, it is natural to presume that the *magnetic* properties of the water *counterbalance* their exhaustive powers, and that thus the patients gain more than they lose.

Soap and water are the great agents advocated by most writers on health; but they should be used with due judgment and moderation; and for the face, any soft, smooth powder is better than soap. One reason is, that it is difficult to obtain a perfectly neutral soap, that is, one that contains no excess of alkali, and that has in it no undissolved oil or injurious coloring matter.

The so popular brown Windsor soap is said to be colored caramel or cacao; but burnt grease and even burnt bones are often used in its manufacture, which makes it exceedingly irritating and unhealthy for a delicate skin. The dark lines in castile soap are produced by a preparation of *iron*, which is harmless. Soaps containing sand or pumice-stone are rarely needed, a piece of the pure pumice being better to polish the nails and soften the rough portions of the epidermis.

There are medicated soaps which may be used with benefit for diseases of the epidermis, especially *carbolic* soap, which is cleansing and healing for any kind of sores, ulcers, or eruptions. Carbolic acid being in itself the most effective of all known disinfectants, gives it an immediate advantage over other medicaments.

Sulphur soap, too, has its advantages in the cleansing and renovating of the skin; while a little sulphur-flour used with clear water, and well rubbed upon any slight eruption or discoloration, will tend to make the epidermis soft, smooth, and healthy.

A person who has a shiny, polished complexion owes it to a secretion of fatty matter by the skin; and if the person is not content simply to scour the face dry with powder, or even with a soft towel persistently used, she had better wet her face night and morning with

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a weak solution of borax and a little pure glycerine. But this is not necessary with a healthy skin.

The celebrated Dr. Wilson, of London, recommends constantly in his practice, as of great efficacy in whitening and cleaning the complexion, lotions of citric acid. Now, citric acid is simply the acid of lemons, and the following preparation, which any one can make in a few minutes, is as efficacious as any: To a pint of rain-water add a gill of lemon-juice and a little wintergreen for perfume, or a few drops of ottar of roses. If the face and hands are thoroughly cleansed, then wash with this lotion, allowing it to remain on three or four minutes before wiping, and then dusted lightly with powder, the skin will be found to grow fine and firm.

In France, great cosmetic virtues are ascribed to the juice of the cucumber; and horse-radish used with sour milk or buttermilk is also highly recommended. But probably the slight acid they contain is their principal cosmetic virtue.

We would here remark that a fresh, healthy, and attractive complexion can never be retained unless the secretive organs are in a healthy state, and the *excretions carried away by the kidneys and bowels every day regularly.*

Sun and air give a ruddy, healthy glow to the face, but they also roughen and brown it. In the Orient, and in Spanish countries, women of the better class rarely go abroad except in thick vails with apertures cut for the eyes. This custom arose from the necessity for guarding the complexion against the burning sun and scorching winds of those hot climates.

It would be well if vails could be used in the same way here; for the sudden change from our furnace-heated houses to the keen outdoor cold is very trying to the skin, especially when it is weakened by too much washing.

Our readers may think that in a work devoted to health and magnetism this talk regarding the personal appearance is vastly out of place. *But in this they are mistaken.* All the magnetic currents are so delicate that any mental action disturbs or encourages them. Therefore it is a part of health that a person should feel as well as possible.

A clear complexion can not be maintained by one who continually frets, is easily angered, or nurses any of the harsher feelings or passions. What is universally wanted and needed is a method of life and education which will give existence itself a *pleasant flavor* and fillip, and through the jocund health thus naturally had, the nerve-stimulant of electrified blood charged by nature herself, will dissolve

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all morbid accumulations in the system and vacate them thence forthwith. Health of that sort is attended by strength on one side and beauty on the other. It will clear the veins and arteries of all morbid accretions and effete matters, and magnetize the blood, rendering it clear and limpid; will make the nerves sound, steady, firm, but sensitive; tone up the genital system, strengthen the action of the brain, and increase and refine the magnetic power.

So says Randolph, and he says too, that tears are neither useful nor beautiful. He has analyzed them. They contain a little phosphate of lime, some chlorate of sodium, and much water. Therefore make as little use of them as possible; for they are salt and bitter; *they drain the heart and ruin* the complexion; therefore employ them but sparingly.

There is a magnetism in beauty which may be made one of the most powerful allies for doing good. But let every one remember that beauty of person, of form or feature can never in any way compensate for *deformity of heart or soul;* and that no beauty is so powerful or so attractive as the love which is strong enough to bear all things, and divine enough to forgive all. For "love is the best of life," and true friends are the most precious possessions that can possibly be granted to mortals.

Be careful, then, to fill every hour with as much of happiness as you can make it hold. Think of your friends' *best qualities* and of their kindest traits. If they have unpleasant peculiarities, *pass them over* lightly, and do not dwell upon them. If they commit indiscretions, or are guilty of discrepancies which you think you never can forgive, remember you are not God, you are not called upon to forgive sin or error or shortcomings. You are but called upon to make as bright and cheerful and attractive as possible the little spot in the world where you live, where your influence can be felt. Thus alone can you grow truly beautiful and attractive by giving much and asking little; by appreciating as a blessed boon every kind word or loving act that fate and circumstances throw in your way. Thus alone as the years go by, can you garner the warmth of all their summers in your hearts, while the frosts of passing winters fall but lightly on your heads.

Make yourselves as beautiful and fair to look upon as you can, that you may feel content, and then give no more thought to mere external appearance.

But carry with you the pure, strong magnetism of good-will toward all, and you will soon see of how little value are mere personal beauty and attractiveness.

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TWENTIETH SECTION.

ON INSANITY.

Children not properly born—The unwelcome babe—Trouble should be met with fortitude, manfully—Premature exhaustion from bad pre-natal influences—Passions should be controlled—Self-government most important—Children should not be unduly confined—Should be early taught to work, and boys to all kinds of work—The brain an epitome of the whole body—Only a certain amount of gathered force to expend—Danger of cutting the hair short on back of the head—Mechanical excitement of the passions one of the most fruitful causes of insanity—Cause of baldness—Of rheumatism—Shun tobacco and obscene books—Associate with the virtuous and pure and high-minded—Meanness of young men—A woman's first impulse—Individuality sacrificed—Insanity will soon be treated successfully—Model inebriate asylums—Cures by unconscious magnetism.

FOR healthy and self-reliant action, the brain must be radically sound to start with.

If the brain of a child be well organized and healthy at birth, and receives no injury, and acquires no improper impressions during infancy, it will very seldom become diseased in later life.

But the grand trouble is, children are not born properly.

I do not intend here to encroach upon the subject that Dr. Warren has chosen to treat, in regard to marriage and maternity; but after a life as long as mine was on earth, spent almost constantly among diseased or weakened brains, I think I may be pardoned for entering every possible protest against perpetuating or reproducing the horrors I have witnessed.

Of course, I can but repeat the apology we are always making, that any lack of terseness in expression or familiarity with the subject being treated must be attributed to our imperfect control of a

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faulty human organism, rather than to any want of knowledge on our own part.

And it is as a first principle essential that children should be well and happily born.

Too many mothers, when they first find the germ of another life



FIG. 66.—UNFORTUNATE SPECIMEN OF CHILDREN GENERATED UNDER SUCH CONDITIONS.

within their own, mourn and lament as though some terrible misfortune had befallen them; too many try all means within their power to rid themselves of the new burden; and the unwelcome child is dead before it is born, or fights its way into the world, where its first weak, inarticulate wail usually arouses the sleeping mother's love in

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her troubled heart, and the babe has found its home, but often too late to remedy the evil already done. The brain is diseased, and sooner or later the disease manifests itself.

Morbid passions, uneasy fancies, excessive sensitiveness are the first indications, followed by desire for excitement or shunning of all society, and very frequently thoughts of murder and suicide grow to the most fearful consummations of crime from this terrible pre-natal influence.

Many people feel, when trouble comes, recklessly despairing, as though it made no difference whether they lived or died.

This is not the proper way to meet trouble of any kind, and as soon as a person finds that sort of feeling taking possession of him, he should immediately seek the best magnetizer he knows, and besides taking regular treatment, should *seek cheerful society* and endeavor in every way to throw off all despondent feelings before they have become an incurable disease.

I remember a woman with whom I was acquainted forty years ago.

She was young then, and married to a likely young man, who had just commenced business for himself as a grocer.

For a time all went well; but the young man was ambitious, enlarged his store more than his income warranted, bought more than he could sell to advantage, and at about this time their oldest child, a girl, was born.

For a year or so he struggled on, trying to gain a firmer foothold; his wife was patient and affectionate, and interested in every thing that interested him; but times grew hard, and they found that failure was inevitable. He failed, and shortly afterward their second child, also a girl, was born.

Both children were fair and healthy, and grew strong and bright; but a very striking difference in temperament soon manifested itself.

The young couple were sadly cast down for a time, but rallied again at last, commenced more prudently and cautiously, and in two or three years were firmly established in a good business, when a boy was born to them.

Time passed, success continued, and other children came.

But the eldest girl was fretful, impatient, always wanting something just beyond her reach, incessantly active and never satisfied unless busy herself and doing something to keep other people busy.

At eleven years of age, she was the best scholar in school, surpassing many girls of fourteen or fifteen years.

At thirteen, symptoms of consumption appeared, and before she

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had reached the age of sixteen, she was dead, literally worn out and dying of exhaustion like an old person.

The second girl, totally unlike the first, was quiet, almost hopeless from the first; with large languid eyes, and a strange fixed sadness on her face.

She would do nothing without urging, was shy, easily discouraged, indolent, and an expression I have often heard her use was, that she was not worth saving any way.

Early in her teens, she became interested in a young man, and, with the natural intensity of such lethargic natures when once aroused, she idealized him, and thought a great deal more of him than he deserved.

Probably if they had married, working-day life would have toned her dreamy fancies down somewhat; perhaps raised the standard of his worthiness by constant association with worthier thoughts; and if he had died, she would have been petted and sympathized with for some gentle grieving; but he proved faithless, and married another girl in every way inferior to his first love.

Then the sadness and despondency of her nature grew to settled melancholy; she had nothing left to live for; she wished she was dead, and several attempts to commit suicide ended by the young woman being placed in a retreat for incurable insane.

There I met her, remembered part of her history, learned more by careful inquiry, took her under my own care, commenced a course of temperamental treatment, which I know now was only one form of magnetizing, and by diverting her mind, encouraging her self-respect, laughing at her whims and fancies, and interesting her fairly in life, she was led out of and beyond herself, and made at last a healthy, heartsome woman.

She is a happy, reasonable wife and mother now; watching and guarding her children both before and after their birth, that they may be shielded from unpleasant influences, and given at least a safe launch on the great sea of life.

This is only one of many similar incidents which have come under my own observation, where insanity seems not only curable but preventible.

I trace the peculiar temperaments of these girls almost entirely to pre-natal conditions.

The mother did not think enough about the little unformed intelligences gathering strength and life from her.

The boy, born later and under happier circumstances, was a brave, hopeful little fellow, and has always held that nature for himself.

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But after children are safely born and have scampered through childhood securely, another critical period dawns.

And not only must every thing be done as youth advances to prevent morbid affections of the brain, that may lead to insanity, but the appetites should be cautiously governed and the passions controlled.

Self-government is the most important lesson to be taught between the ages of twelve and twenty. And a child who has learned obedience will learn independence, both of thought and action, easily and safely; but one who has not been accustomed to depend upon any authority will find his own weak, vacillating will and uncertain judgment a very poor dependence.

Children should associate together, in families and in schools, and as they grow older, such association should be continued.



FIG. 67.—OUT-OF-DOOR MAGNETIC EXERCISES OF CHILDREN.

They should eat light, nourishing food, grains, fruits, and the freshest and sweetest kinds of vegetables; and no child less than twelve years of age should be confined for more than three hours in succession in one room, without being allowed to exercise freely in the open air for at least an hour.

No person less than twenty years of age should be confined to any one occupation, either mental or physical, for more than six hours out of twenty-four. And when working or studying hours are over, there should be pleasant recreations, light talk, and careless laughter, merry games, music, marching, dancing, impromptu speaking, and all the changeful variety of entertainment that will bring every mental and physical faculty into action and leave no nerve or muscle dormant to become diseased from lethargy.

The true way is to have children begin to work as soon as they begin to play; to let them feel that they are of some use in the world to themselves and to others.

They will be happier and stronger to feel that even their play is

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accomplishing something, and teaching them lessons for the future as well as serving for occupation in the present.

Every child should have the privilege of setting its two small feet on the grass, and digging in the brown earth, where is garnered a wonderful store of magnetic strength ready to flow out to all who may seek for it there.

Every child should learn to plant seeds, to pull weeds, to care for its own small garden, and to help others. Boys and girls should work together at these tasks; and after working for an hour, they should vary the occupation so as to call other muscles and other thoughts into action.

Boys should learn to sweep and dust, to make beds and wash dishes, to cook and prepare food for the table; not that they need all expect to become professional cooks, though even that position is not to be despised.

Why, boys, when I was confined more closely to Boston and vicinity than I am now, I learned that the head-cook in one of our first-class public houses there received every year a thousand dollars more as a salary than the president of Harvard College.



FIG. 68.—BAKER.

And it would be no disgrace to either of those gentlemen to be able to change places with each other, and have all the machinery of their respective shops run on smoothly without break or jar.

The human brain is a very incomprehensible piece of mechanism.

Exactly in what way it receives its supply of vital power it is impossible to tell. But all through the system a net-work of fine white nerves proceeds; and if from any cause one of these nerves is severed, the part or member it was intended to vitalize loses either the power of sensation or motion in consequence.

The brain is an *epitome* of the whole body. Every power, every passion, every possibility has its seat and sequence in the brain.

And the brain has only a certain amount of gathered force to expend. Whatever is wasted in one way can not be saved in another. Whatever is lost in one way can not be gained in another.

The brain is the centre of life and the engine of thought. From the brain proceeds the spinal cord, protected by the spine, downward the whole length of the body.

Every person knows that in case of wound by knife or bullet, if the heart is reached, the wounded person dies. If the jugular vein is severed, death is inevitable; and if the temple is pierced and the

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brain penetrated, the machinery of life stops instantly, because these are all vulnerable and vital points.

But not every person knows that a place more vital, a point more vulnerable, is situated at the back of the head, where the spinal cord commences.

There is a small oblong cavity, filled with a whitish, semi-fluid substance, and that is the fountain-head of the will-power.

A cambric needle penetrating there, would cause instant paralysis of the whole system.

One very important reason why the *hair should always be worn long is to protect that portion of the brain.*

Cutting the hair very short on the back of the head, especially if

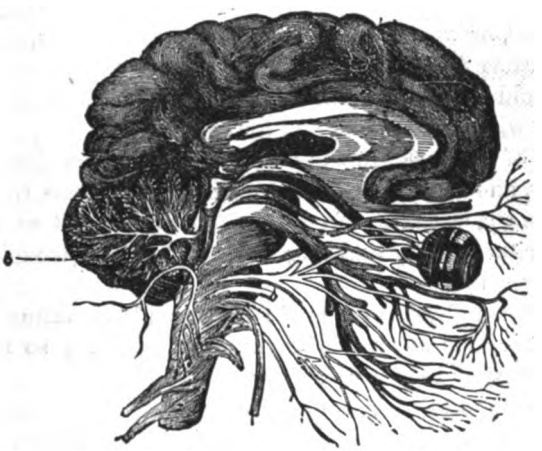


FIG. 69.—SECTION OF THE CEREBRUM AND THE CEREBELLUM; SHOWING THE NERVES OF THE CEREBELLUM, THE SEAT OF THE WILL; ALSO THE EYE, THE OPTIC NERVES, AND NERVES DISTRIBUTED TO THE FACE.

the person be much exposed to changes of temperature, or to the direct rays of the sun, will tend to paralysis; and tying the hair up tight and high, thus exposing this portion of the head, tends to produce nervous diseases and weakness of the will, thus making *hysteria* more likely to occur.

But this reservoir of will is only distributed to one half the nerves that go from the spinal cord to the different parts of the body.

The nerves of motion are nearly all under the control of the will; but the nerves of sensation are not.

"Life is life that generates," says Emerson; and in order that the perpetuation of the race may be sure to go on, the natural desire for reproduction is implanted strongly in every healthy nature.

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But when any one passion or inclination is allowed to become dominant, all the other powers must suffer.

The ecstatic thrill of pleasurable emotion caused by natural sexual intercourse between two people who are magnetically and temperamentally adapted, and who truly love each other, is like nothing else on earth, and as impossible to describe as to conceive of without actual experience.

But a faint counterfeit of this sensation is sometimes attained by mechanical means; as little like the real emotion as it would be for a hungry man to be allowed the smell of savory food without the privilege of tasting it, and expect to keep from starvation thereby. And worse; for while the smell of food to a starving man is merely tantalizing, and the process of starving is not hastened thereby, *mechanical excitement*, or *masturbation*, *wastes* the vital forces, depletes the brain, and ruins *the intellect*, besides destroying the physical health, causing untold suffering, and making a skeleton and a wreck of what might otherwise be a healthy and happy man.

It is one of the most fruitful causes of insanity, particularly among young men, and many who are not really insane are troubled with *loss of memory*, *weakened individuality*, and *almost entire lack of will-power* without fully realizing the cause of the trouble, or what the cure might be.

I have known physicians to tell young men that masturbation once in eight or ten days was not injurious, or at least not so injurious as amative dreams and nocturnal emissions.

I think such physicians can profitably study the mechanism of the human frame and its varied functions for a long time yet.

The seminal secretions are in direct correspondence with the brain, because, as I said before, the brain is the centre of intelligent life, and by the semen new life is to be created.

To waste the semen, therefore, is a waste of life itself, and the loss of a single ounce of semen, without any reciprocal magnetic return, is equal to the loss of a hundred ounces of blood.

The seminal fluid is albuminous and lubricatory, besides being nervous and full of vitality. Any undue excitement in that direction calls the nerve-power from the brain; but if no ejection take place, then the vital power is *not* lost, but goes to strengthen the nerves, while the particles of albumen and oily substance are *absorbed by the blood*, increasing the growth of the hair, nails, and other appendages, besides hardening and strengthening the bones.

One frequent cause of baldness is a waste or excessive discharge

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of seminal fluid, and one very frequent cause of rheumatism and neuralgia is the same excess.

Of course, the next question is how to break up the habit of masturbation, or prevent the periodical recurrence of nocturnal emissions.

To this I would answer, live well and regularly, eat coarse, light food, exercise every day until every muscle is thoroughly wearied, and brain and nerves are ready to supply them with recuperative energy.

Row a boat, walk, skate; if possible, find a piece of earth, and dig it up thoroughly, plant it and weed it and watch with some interest whatever you can raise there.



FIG. 70.—SKATING FOR HYGIENIC EXERCISE.

The earth is full of magnetic strength, and by magnetism *alone* can the will-power be strengthened to control the nerves of motion, and thus leave the nerves of sensation unexcited.

Take no stimulants, shun tobacco and low, obscene books or conversation; seek the society of ladies, women, girls, *good, true-hearted, pure-minded females*, to whom you would be willing to introduce your mother or sisters; talk with them, sing with them, dance with them, if such amusement be admissible, and you will feel more worthy of respect and confidence if you always treat them in a straightforward, honorable manner.



FIG. 71.—DANCING.

Never indulge in sexual intercourse because you have been a certain number of days without it; never allow any thing but pure, disinterested affection and magnetic attraction to influence you in that.

I am writing now as though my words were to be read by conscientious and honorable young men, men of some sense and principle.

Alas! no one knows better than I how few such young men there are, especially in our large cities, where diseases of both mind and body are most prevalent.

If men and women would only remember that in *helping each other they strengthen themselves*, one great object in life would be gained. No phrase in the English language sounds so thoroughly

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weak, mean, contemptible, and wicked to me as when a young man *boasts* of having obtained an *advantage* over a girl. It means this: that they are both human beings with natural instincts of right and wrong, and natural passions and desires, which reason tells them should be *governed* and *controlled* by the higher or *moral* faculties.

Women have, naturally, finer perceptions than men, and, other things being equal, stronger desires to do right.

But always a woman's first impulse is to please the man she is interested in; to give up her individuality, to subjugate her will in his favor.

Then how easy and how noble it would be for him to lead her to do right! to help her honor God and man by honoring herself, and following only the highest and *purest dictates* of her own conscience and self-respect. *Does he do this?* No!

The advantage he speaks of is, when, by artifice or persuasion, sometimes by open fraud, he has prompted and persuaded her to do what society, education, and her own soul tell her is *wrong* or liable to lead to most *disastrous results*, while her yet undisciplined human passions plead for indulgence.

Very often I hear women talking with young people as though they had some real, tangible standard of right and wrong. They bid them do this or that because it is right to do it, and shun various things because they are wrong.

But this is an argument I very seldom hear men use. They tell young men to do certain things because it will help their credit, or make business better, or make people think better of them; and to avoid certain things that may injure their prospects or hurt their reputation; but the plain fact of absolute right and wrong is evaded at every point.

I wish this were not so.

I wish women would be more tolerant and charitable, men more strict and moral, and all more reasonable.

The truest comfort I have in this direction is that the human race is constantly improving, growing more thoughtful and spiritual and better.

Insanity does not increase so fast in ratio as population increases; and I rejoice to think that the time is *soon* coming when a few *simple rules of health and hygiene, and magnetic* treatment, will *cure ninety per cent* of all cases of *insanity* now considered incurable.

One prevalent cause of one fearful form of insanity is appetite; especially appetite for alcohol and other stimulants. And diseased appetite is one of the hardest diseases to meet and fight and conquer.

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Asylums for inebriates are not conducted upon true philosophical principles unless they provide employment for all the inmates suited to their tastes and capacities.

And one very essential point is gained when the mind of the patient is kept so busy and so pleasantly or profitably engaged that the appetite for drink is overcome by the mental force being used in

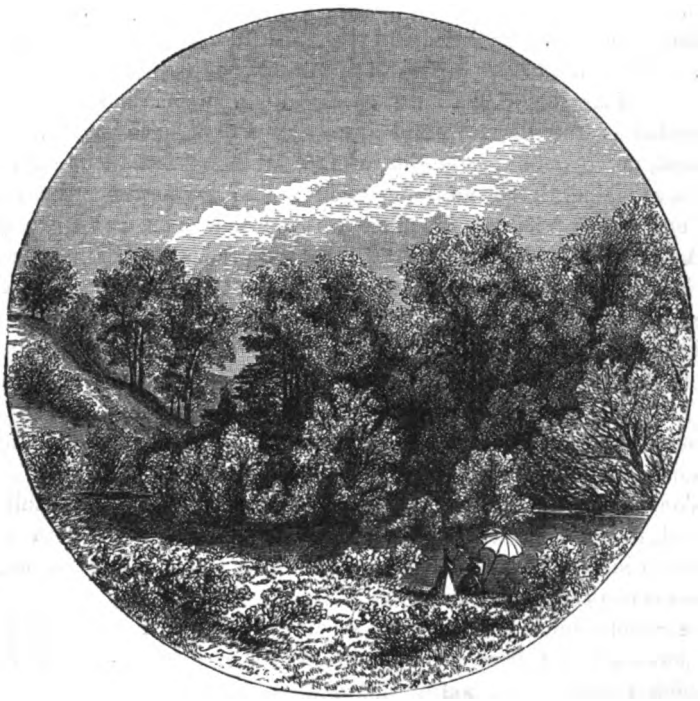


FIG. 72.—ILLUSTRATING A MODEL HOME AND RESORT FOR INEBRIATE PATIENTS.

another direction. Every asylum should be connected with a farm, and be made a self-supporting institution.

Every insane asylum could be conducted in this way; for insanity is a disease that often does not affect the physical health, and *exercise of the muscles will often withdraw the electro-magnetic currents from the brain, and aid it to healthy action.*

But a diseased and weakened will-power is the usual immediate cause for inebriety. Often this is hereditary and sometimes pre-natal; but usually it is caused by bad training and bad habits in childhood,

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and can be remedied by careful attention to the education and surroundings of the young people.

After the appetite has once become established, and the desire for strong drink is a fixed disease, then some other course must be adopted than a merely educational one.

Magnetic treatment, the control of a strong will over a weak one, will often prove a complete cure for intemperance, if judiciously applied.

But it requires patience and the faithful co-operation of patient with physician. I have a plan in my mind for the building and management of asylums for all classes of unfortunates afflicted with mental maladies and diseases, and some time I expect to have my ideal realized, my plans out-wrought in material life. I shall be happy to feel at any time that I am doing good and aiding suffering humanity to a better or a purer standard of life and character, and I can wait.

A few hundred years more or less make very little difference when one is sure of eternity, and has the will and the power to work for the good they wish to attain.

It is not a proper place here and now for explanations of my plans in reference to asylum homes. The subject is a broad one, and needs the most comprehensive treatment; needs time and means, and abundant patience, to carry it out to any thing like a successful completion.

Therefore I have only to say in regard to treatment of insanity in general, that the patients should be constantly supplied with good magnetic influences, the will strengthened, and, as far as possible, the wishes consulted and acted upon.

In conclusion, I will give a brief account of an interesting place only twenty miles from Antwerp in Belgium; a town called Gheel, in which a large proportion of the inhabitants are insane persons, who share in all the daily toils and pleasures of their sane fellow-citizens.

They live in fraternal equality, taking part in the simple religious festivals and ceremonies.

This custom has lasted for centuries, and tradition has preserved a sad and tragic legend concerning the origin, which it is scarcely worth while to transcribe here.

Sufficient to say that early in the seventh century, a chapel was erected on the desert lands of the Campine,* and dedicated to St. Martin, the apostle of Gaul.

* An arid, sandy tract, forming part of the Provinces Antwerp and Lainberg, 300,000 acres still unreclaimed waste.

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The few pious pilgrims who built their huts in the neighborhood were the founders of Gheel.

In this desert place, a runaway princess, the fair Dymphinia, was overtaken and murdered by her own father, a wicked king of Ireland.

Tradition states that some lunatics, who were witnesses of this cruel deed, were restored to reason. The miraculous cure was ascribed to the beneficent spirit of the murdered princess, who from that time became the patron-saint of the insane.

A custom then arose of leaving lunatics in the charge of the few inhabitants who had settled there. The cluster of huts became a village, and later an important town.

In the twelfth century, a large church, dedicated to St. Dymphinia, took the place of the old chapel of St. Martin, and in A.D. 1400 the popular belief in the miraculous power of the saint was confirmed by a bull of Pope Eugenius IV.

At this distance of time, it is impossible to discover whether those first cures were real or imaginary; but at all events, we can easily perceive how what at first was a work of charity and piety soon became a source of prosperity to the country and benefit to the insane who were brought there. At Gheel, the combination of a northern climate with the sandy soil of the south rendered the means of livelihood difficult to obtain.

Economy as well as kindness prompt the sane to live in common with the insane guests. Their guardians, who could ill afford the time to keep and watch them within-doors, usually took them with them to the fields when they went to work, and thus gradually the lunatics in their lucid moments became fellow-workers in the fields as well as companions in the house, and lived freely and fearlessly with their keepers.

It is wonderful to see how soon the lunatics accustom themselves to the regular hours and habits of their guardians.

This is one of the strongest cases of *unconscious magnetic influence* I have yet found; and philanthropists who visit that spot will become convinced of the advantages of an institution which alleviates the wretched condition of lunacy, and while giving the sufferers reasonable freedom, restores them sooner to health and to society.

LUTHER V. BELL.

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TWENTY-FIRST SECTION.

THE TREATMENT OF CRIME AS A DISEASE.

The moral aspects of crime—Comparative degrees of crime—Diseased condition of will—Kleptomania—Violence—Brute force—Error of punishing children physically or by brute force—Pre-natal causes and influences—Self-culture and self-reliance should be taught the child early—Present methods of treating crime aims at *effects* instead of *causes*—Prisons should be considered as hospitals—The effects of solitary confinement in deranging the harmony of mind—Affecting instance of maternal insanity from murdering her own child—Society secure only in the general culture and moral elevation of its members—The natural genius or bent of mind in children should be encouraged, *not* thwarted—Melancholy result—A case of a promising young sculptor—Dean Richmond—Capital punishment should be abandoned—Prison officers should be teachers—Law-makers should understand the causes of crime—Bad results of unhappy marriages—The law of love and magnetic attraction should be patiently studied—Better principles of education should be adopted—Girls should be educated *first* to be women, *then* true mothers.

SCARCELY you will expect to hear from one who has so lately left the earth-sphere, and the scene of my active labors and peaceful rest.*

But I want to give you some views I have long entertained in regard to criminals and their treatment.

When I was quite a young man, I think not more than twenty-four or five years old, I went as assistant-surgeon on board the old ship of line, Franklin, on a cruise to the tropics and along the South-American coast.

I remember our commanding officer was a stern, strict man, perhaps not unnecessarily so; but being young and light-hearted, I associated much with the men and learned

* This lecture was transmitted within four months after the author passed on to the spirit-world.—ED.

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their ways of life, and also their ideas of discipline, of crime, and of punishment.

Here for the first time the idea dawned upon me that crime was a disease, a sort of *mental* and *moral dyspepsia*, caused by improper training in early life, sometimes by hereditary taint and trouble.

And crime seems to have a myriad shades and degrees, some of them far more harmful than others.

There is a species of falsifying, unintentional and almost harmless in its nature, born of an active, imaginative temperament and sometimes of a too strong desire to please. And this, I think, is the first and faintest form of crime. We might call it the effect of a diseased imagination, and many people who suffer from this, never develop any further or more serious form of disease in that direction.

But next in order comes the intent to deceive; the willful falsehood willfully told; sometimes told that its effect upon others may be noticed, sometimes to advance personal means, either of vanity or apparent necessity.

I say "apparent necessity," because I have taken the ground that in a healthy and natural state of society, the absolute truth may be spoken at all times, and not to speak it indicates a diseased condition of the *will*, and is a constant source of trouble and annoyance to the patient as well as to all whom said patient may come in contact with.

Next to this form of crime or disease, which is known under the general term of lying, we find the quite as general term of stealing.

It is difficult to tell where this disease ceases to be a virtue, and becomes a vice.

With the present way of making and administering the laws of the land, there are opportunities for appropriating, and slight legal advantages that can be taken, that pave the way by easy steps to fraud and theft.

It is doubtful if the wary shop-lifter who dexterously bears off a bit of spoil from the heavily-laden counter is any more a criminal than the *glib-tongued salesman*, who, in the interest of his employer, represents his goods to be what they are not, and takes money from the unsuspecting purchaser, for which he knows he has given no just equivalent.

However, it is impossible in a treatise of this kind to deal with abstract crime.

We know there are certain actions recognized as theft, and considered criminal, and I believe they are caused by *diseased ideas* con-

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cerning property; either ignorance of or misapplication of the laws of possession and personal rights.

Following the various forms of stealing and appropriating, comes the graver disease of violence, the using of brute force either as a means of offense or defense.

Morally and spiritually, it is a crime for any man to strike one of his own species.

In some rare instances of daily life, in compelling domestic animals to do the work assigned them, it may be necessary to enforce obedience by goad or blow or stinging lash; and in encountering wild animals, of course murderous weapons must sometimes be used, either in self-defense or for the purpose of capturing or killing them.

But personal violence toward a reasoning, thinking being should never be used in anger or excitement, excepting strictly in self-defense or the defense of helplessness against drunkenness or insanity.

No parent should ever strike a child, under any possible circumstances. No teacher should punish a pupil by violence or force.

And of course the next question which arises is, How shall government be administered?

Of the pre-natal influences that contribute so largely toward forming character, I can not now speak; but children should at least be fed with proper food, be supplied with fresh air and exercise, be properly clothed and cared for, and allowed to grow through infancy under the most favorable conditions possible.

Then every child should early be taught *self-care*, *self-culture*, and *self-government*. And as soon as they reach the age of three or four years, schools should be established at which they may learn not only to read and study, but also to play and to work; to wash their own faces and comb their own hair; and, as they grow larger, to plant and tend the garden, to cultivate flowers and fruits, working, of course, only a few hours in a day, and that under guidance as *strict* and *careful* as that which governs any other branch of study.

A series of rewards and punishments might be established as connected with out-door sports and duties, that would encourage the timid, awaken ambition in the indolent, keep the nervous from over-exertion, and in every way *equalize* the *natural forces*, thus aiding and establishing habits of industry, order, and regularity, so that every child would be better fitted to earn an honest living, and thus one of the prolific sources of crime be annihilated, or at least immeasurably reduced in power.

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But I am talking now as though we could commence with the little children and build up society anew, and fashion the world according to our own ideas of right, which I know very well can not be done at present.

I am firmly convinced that if we *could* commence with the children and educate them all to healthy, natural, and useful lives, crime would soon come to be considered not only as a disease, but as an exceptional disease, requiring exceptional treatment.

But we must take the world as it is, and the statistics of crime as they stand, and see what can be done for the safety and protection of the whole human family.

Every method we have of treating crime seems to aim at the *effect* and not at the *cause;* seems to be designed to *punish*, not to *prevent.* This is not the right principle.

To return to our first classification of criminal diseases, I would suggest *that a diseased imagination be taught to govern itself by reason.*

This can easily be done. People who have merely diseased imaginations, especially if they be children or young people, can learn to understand the truth themselves; and once thoroughly understanding that truth is better, more serviceable, and more simple than any class of falsehood, they will readily adopt it.

The surplus of imagination can then be used up in writing stories which are known to be not absolute truth, and therefore are not deceptive, or in representing fictitious characters in drama, or in painting, or poetry, or any of the arts.

The willful falsifier demands a more thorough course of treatment, to awaken the moral sense, to arouse the dormant faculties, to point out the actual harm done, and the little good gained by his pernicious course. Parents and teachers should alone be able to check and control these forms of disease as soon as they begin to develop.

It is harder to teach the laws of mine and thine, the true line that marks the distinction of property, and requires steadier training and more powerful magnetic treatment.

Cases of theft are constantly occurring, and the sole result of the present method of punishment *is*, not to make a man more honest by teaching him that it is wrong to steal, but to make him more cunning and cautious, by showing him that it is unfortunate to be found out.

What we want is a powerful police corps, always active and vigilant, and every one chosen for the power of will, the magnetic influence they possess.

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We want them to be considered, not as the especial enemies of all evil-*doers*, but as the enemies of all evil *deeds*. And we want them to look upon criminals exactly as the good physician looks upon his patient. When, in the wild delirum of fever, the patient tries to strangle himself with the bell-rope, or stab himself with the carving-knife, or take a shower-bath of ice-water, the physician only says to himself, "If he were well, he would not do these things."

So he puts him in a place of safety, and keeps him until he is well.

All our prison-houses, jails, and penitentiaries should be considered as hospitals; and all the men and women who have charge of these institutions should be looked upon as physicians and nurses.

The only punishment the worst case would ever need would be to be deprived of their liberty, and kept more or less isolated from companionship. Every one who has had any experience in these matters, knows how the dark cell is dreaded, and how the wildest and most reckless cases become tamed to the most abject humility after a brief period of solitary confinement, with only their own thoughts in the darkness for company.

I remember an instance where a large, powerful ruffian was confined in a cell that had a single small, very small window heavily grated. One day the attendant had taken the usual allowance of food to this man (whose name was Grey), and as he left the cell, I saw Grey reach both arms out toward him with a pitiful, imploring gesture, while an expression of agony seemed to distort his face.

Partly from curiosity and partly fearing that some real wrong had been done, I entered the cell alone and asked the man what was the matter.

He held down his head for a moment, and I saw two tears on his face as he answered me, that, for several days since his confinement there, a fly, an ordinary little house-fly, had buzzed on his one window, and that, as the attendant went out just now, the fly went out with him.

"He be a powerful deal o' company, sur, in a place as there's nothing movin' all day but that speck o' light on the floor; and now he's gone, I be all alone," the man said with such a voice of hopeless horror as one does not often hear.

I remember, too, a woman who was kept in solitary confinement for the crime of having twice tried to kill her babe, once by abandonment and again by violence.

She tamed a mouse so that it would eat from her hand, and nestle for hours in her bosom.

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She seemed at last to conceive an idea that her baby was dead, and its soul had entered the body of the mouse; for once, when listening out of sight, I heard her crowing in strange motherly fashion over the little animal, saying, "Poor baby, pretty baby! Mamma knew she would starve to death. Mamma is glad her baby is not hungry and sick and cold any more. Nobody knows how near to Mamma baby is now." And so on for hours, if she was not interrupted.

But when any one tried to talk with her about the crime she had committed, she grew at once morose and unreasonable, fiercely denying all knowledge of it, purposely misunderstanding questions and refusing to give facts. She became at last hopelessly insane, and died smiling and talking senselessly to the spirit of her dead baby.

Now, I contend that the punishment allotted to that woman, slight as it may seem, only solitary confinement, was more than she was able to bear.

You may think that no punishment could be too severe for a crime so heinous; but consider further:

If that mother had been assured that the minimum of support would be supplied to herself and child, the morbid idea of murder would never have developed itself in her brain or been wrought out by her hands.

Society, for its own protection, needs that all its members should have more culture; that individual tastes and preferences should be more consulted; and that the true millennium of peace may arrive, when every one can feel that they are cared for, without being controlled.

And if any tendency toward crime is discovered, the mind and body should both be set at work in the opposite direction as fast as possible.

If there is any thing a person particularly desires to do, and the desire is natural and healthy, he should be taught and encouraged in that direction.

One more personal reminiscence, and I leave this fragmentary dissertation.

A young man, Henry Powell by name, had been sentenced to twenty years' hard labor and solitary confinement, for arson.

He was at work at stone-cutting, and his face wore an expression of the most stolid apathy.

Yet something about him interested me, and in watching him I saw him hide away bits of bread from his coarse and not over-

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abundant fare, which he afterward moistened slyly, and moulded into miniature models for statuary.

With much care I gained his confidence and learned his story.

He was by trade a machinist, but from boyhood had always had a desire to become a sculptor; fashioning grotesque snow-men and queer clay images, that were soon superseded by quaint wood carvings.

But friends and relatives discouraged this useless work, and insisted upon his learning a trade, which he was accordingly apprenticed to.

In his leisure hours, he had managed to secure a block of marble, and fashion therefrom a sort of satyr or wood-nymph, a rude attempt at mythological representation, with hoofs like a deer, claws like a dragon, and face of a pretty girl. Before he had finished this piece of work, he was taken sick, and the physician who attended him offered to take the unfinished statue as payment for his services.

Young Powell had no money, and knew it would be long before he could earn any; he was flattered, too, perhaps, by the physician's evident admiration of his rough work, and so he let it go.

Some weeks afterward, when he had recovered his health and was again at work, he wanted to finish his statue. So he went to the physician, told him he did not consider the work completed, and begged he would let him take it back to his room and go on with it.

The physician laughed at him, told him to stick to his bench, and not try to become an artist; for it was only wasting marble to make such things as that.

The young man listened with silent rage in his heart, and went away.

But day by day, as he passed to and from his work, he saw through the long window of the conservatory, amid tropical blossoms, green, bright leaves, and the tossing spray of the fountain, his poor statue, with the distorted smile his chisel had left on its sweet mouth, and the awkward block, not yet wrought into a graceful coil of hair.

Often he tried to think of some way to obtain possession of it, and gave up every plan as impracticable.

At one time he thought he would call and ask the physician to allow him to bring his mallet and chisel and work on the marble as it stood in the conservatory; but the memory of his last visit there and its result still rankled like poisoned fire in his brain, and he forbode to go again.

The desire to possess that image at last became a *mania*.

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He could not afford to buy another block of marble, nor did he want the tiresome work of making another model and blocking it out; he wanted *that.*

And so one night he tried to steal it; but the crash of breaking glass aroused the gardener, and Powell was obliged to escape by flight.

Still the idea haunted him, and gradually developed into a plan.

He bought a can of inflammable oil, and a long wax taper. He whittled soft pine shavings and saturated them with turpentine; then carried them all to the familiar spot, thinking, as he said, that he could set the end of the conservatory on fire, and then, in the attendant confusion, rush in and bear off the statue, while the fountain and abundant moisture would prevent the fire from reaching the house, or doing any very material injury.

The light frame upon which he had poured the oil as high as he could reach blazed up merrily, the roof caught, servants wakened, an alarm was raised, and with the first cry of fire, Powell sprang from his hiding-place, entered the green-house, and threw one arm around his Fannie, as he called it, only to find that said Fannie was firmly riveted to an iron pillar that supported the roof, while both her ugly claws were fastened to a heavy bronze harp, around the slender strings of which graceful vines were clinging.

"Oh!" he said bitterly, "that the flames had burned me, or the water drowned me, or the smoke poisoned and suffocated me where I stood." But no! In less than half an hour he was arrested and lodged in jail.

His trial was brief, his sentence stern and irrevocable. Not a word of evidence given in his favor, not even by himself, for he pleaded guilty.

And yet, I say, that man's crime was an indication of disease.

He did not like his work in the machine-shop—he hated it.

And it bred disease in his mental organism, just as the wearing of a galling chain or the eating of improper food would breed disease in the physical organism.

The remedy still is education, and proper means taken to allow every young person facilities for choosing and following that path in life best fitted for their own powers.

As a noted business man (Dean Richmond) used often to remark, "It is entirely useless for one man to undertake to do business by another man's telling, or for any man to try to tell another what to do. Every man's business must fit him like a garment, and he must

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like it, and enjoy devoting himself to it, in order to be truly successful."

As for what should be the punishments for crime, after all means for prevention have been exhausted, I have very little to say.

Capital punishment has done its work, and will soon be abolished by law. In fact, it is only administered now spasmodically, and for nobody exactly knows what.

It is only another form of murder, murder by the law-makers instead of by an individual, a remnant of old barbaric might, when force was the only recognized power.

It is said that capital punishment is needed to hold in check the worst classes in society.

But I think its "holding-in-check power" must be somewhat diminished, when the whole thing becomes an experiment, as it is to-day; when the principal question in the prisoner's mind must be, not whether he will be convicted of murder or not, but whether, being convicted of murder, he will be sentenced to be hanged or not, and whether or not, having been sentenced, the sentence will be executed. There have been few executions for several years; and the probability is that public opinion, growing bloodthirsty, will demand more victims soon, and the gallows will be full-gorged for a time.

Still in this very spasmodic action we see plain indications of decline, and we are glad to notice it, whatever may be the cause. We want all our jailers to be teachers, and all our law-makers to understand the *causes* as well as the *effects* of crime.

There is another form of this disease called crime, which is a mysterious growth peculiar to civilization, and known as "the social evil."

The physical effects of this disease I do not propose to treat here.

But it is very evident that, morally considered, the social evil is a perversion of nature's best and holiest right.

The only remedy we can suggest for this is, that the natural laws of magnetic attraction be more carefully and patiently studied; that people marry with a better knowledge of self, and a truer and more kindly appreciation of each other and each other's needs and wants. Sexual intercourse should be at least a *mutually* desirable caress, and excite a mutually pleasurable emotion. This without especial reference to its spiritual significance, and the possibility or probability of conception, which always should be considered.

It is not a suitable subject for legislation. It depends upon the thorough and pure education of girls and boys, of men and women.

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Girls are educated to make wives. They should be educated first for *women*, good, true *women*, then for *mothers*, wise and kind.

Finally, I have but to repeat that in the proper education of children, in teaching them all and each as individuals, with rights to be respected, tastes and preferences to be consulted and cultivated, powers to be developed, and passions to be subdued, lies the great hope we have of preventing future crime and misery.



FIG. 73.—PLAY-GROUND.

Every school should have connected with it a play-ground, a garden, a work-shop, and a home; and all these could, I believe, be easily made self-supporting by proper care and management.



FIG. 74.—WORK-SHOP.

Every boy should learn to play ball, to fly a kite, to march with military precision, to play on some kind of a musical instrument, to make shoes, or clothing, or hats, or furniture, or write books, or bind them; to paint a picture, or a house, or a carriage; in short, to do many useful things. And every girl should receive the same kind

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of culture. Boys and girls should be taught to work together, to share each other's hopes and plans and interests in life ; in short, to help each other.

Then they will protect each other, and guard each other from error, from failure, and from crime.

ADRIAN R. HOFFMAN.



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TWENTY-SECOND SECTION.

REMARKABLE CASES OF CURES UNDER THE DIRECTION OF OUR INSTITUTION, IN ACCORDANCE WITH THE NEWLY-DEVELOPED SYSTEM OF TREATMENT BY VITAL MAGNETISM AND THE OBSERVANCE OF THE LAWS OF HYGIENE.

IN THIS section we only intend to publish a type of some of the leading or otherwise PREVALENT classes of diseases; which, although of themselves *specifically* are *not* new, but owing to modern developments, progressive civilization, artificial habits, gross inconsistencies in foods, in conditions of eating and living, the cultivation of artificial habits of appetite, social licenses, incontinency, etc., have become extremely *complicated* in their nature and consequently *afflictive* in their effects, as the narrations strictly copied will discover.

The *first* and *second* cases relate strictly to diseases of the kidneys, known as calculary, resulting, generally, in the formation of gravel or stone, or both, producing the most direful misery and suffering that the human system is liable to. The following cases, therefore, should not only be read but *reread* and carefully *studied* by every living person, until every *point* and every cause is understood, and the indication of each phenomenon is legitimately traced to its primal origin.

It is but little more than a year since Napoleon III. fell a victim to this class of maladies. His strong mind and body succumbed to the great nervous prostration produced in the endeavor to cure himself.

You read of lithotomy or lithotrity, almost of daily occurrence, both of which comprehend the most imminent danger to life, saying nothing of the suffering to be endured by the pitiful victims for the time being: although the suffering may be deadened by unconscious

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sensibility from chloroform, yet this gives him no guarantee of safety from its dangers to a speedy transportation under the operator's hands, to a bourne so intangible, supposed so spiritual, he can not compass. So dangerous are these anæsthetics becoming known that but yesterday the Massachusetts Dental Society passed resolutions emphatically condemning the use of chloroform as an anæsthetic, and declaring any member administering it liable to expulsion. (Read the lecture of Professor Simpson in the fore part of this book.)

Although females are not so generally liable, from their peculiar organization, to be subject to these dangerous operations, they are correspondingly subject to more exquisite morbid sensibility from a higher development of nervous power.



FIG. 75.—CASE OF MRS. H. E. HAIN.

THE LIKENESS STANDING AT THE HEAD OF THIS SECTION BUT BESPEAKS the *candor* and *earnestness* so graphically described by her pen.

MY DEAR DOCTOR: I feel it not only a duty which I owe to myself, to my physician, but to suffering humanity, to write a history of my painful case, that it may be published, so that others similarly situated may know to whom to resort for a cure.

While residing in the city of South-Bend, Indiana, in April, 1870, when my little girl was seven months old, I was taken sick, not confined to the bed, but only just able to go about the house.

Consulting our family physician, he pronounced my complaint *prolapsus uteri*, or falling of the womb; he believing me to possess a strong constitution naturally, said by keeping in a horizontal position

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(bad advice) for a few weeks would strengthen the ligaments and thereby perfect a cure. After remaining in that position for nearly five weeks, I was taken with a calculary disease; when urinating, I would have severe pain in the bladder, and the urine would be streaked with blood, as I believed. The disease increased daily, until there seemed to be no urine, but to all *appearance clear blood.* I became so very weak I could but just walk across the room, and even that exertion would cause me to urinate.

I continued under this physician's treatment until it was decided he could do me no good whatever. I then ceased taking drugs. In July of the same year, I was reading much of buchu; so tried a bottle or two of that, with at first some apparent good results—so much so, that I gained strength considerably.

The last of August, just before starting for Missouri, I overtaxed myself, and about that time found in the urine a clot of blood, within which was a piece of gravel or lime, the first I had ever seen. I resorted to buchu immediately. After arriving at my future home in Missouri, I was taken with hemorrhage again, as I termed it, it being just as severe if not more so than it ever had been. Again I resorted to buchu, but to no effect; thus the disease continued. Soon I began having a fine, gravelly, gritty matter pass with the urine, which caused great pain and irritation; also severe pain in the kidneys and the loins.

I tried a great many different remedies, but could find nothing to benefit me. In November, I sent to a friend in Homer, N. Y., to send me a remedy that had been highly recommended me, but *all* to no purpose. The disease was fast preying upon me, and one year ago this time I was suffering perfect *agony*, not being able to lie down at all through the day, and being obliged to rise several times during the night. So great was the irritation of the neck of the bladder, I was unable to retain the urine longer than an hour at a time, and often large chunks of gravel would pass in the urine, the size of a pea.

I continued suffering in this way, each day my strength decreasing and my whole system becoming diseased.

In January, 1872, I wrote to a physician in Wisconsin, from whom I had some treatment, but which only made me worse, not only with the urinary complaint; but now a catarrh and bad cough ensued along with them, pain in the side, symptoms rapidly menacing consumption. Now my limbs became numb, almost paralyzed, so much so, I could not use my arms or hands; the disease of the urinary organs causing all the other.

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I now became confined to my room, painful symptoms becoming more numerous, and existing affections of cough, pain, night-sweats, cold chills, and general prostration more and more intense. My agony was so great, when passing urine, that large drops of sweat would stand on my face, and my clothing literally wet from profuse sweating. Then again a second or continued spasmodic coughing would set in, causing an expectoration of clear matter, evidently showing the lungs were becoming involved. I had, now, lost all further confidence in medicine, and about given up all hope of being any better; indeed, I felt my case to be incurable. My agony was so great I looked forward to death calmly as the only relief.

Reader, if you have ever suffered thus and could find no balm in Gilead, you alone know. It was thus in my agony a friend found me to be suffering—one who had formerly been a patient of Dr. Stone. I had just been suffering the most intense agony, had seated myself in an easy-chair, feeling weary and worn out with pain. I commenced telling him of the nature of my disease. After listening to me for some time, this friend recommended Dr. Stone, of Troy, N. Y., as the physician who had saved him from an early grave. My husband was anxious I should write to Dr. Stone; and if he gave any encouragement, to make *one* more trial; when after a few days I wrote my case—forwarding a vial of my morning's urine for analysis. In the *mean while*, I suffered such intense spasms that it took two people to hold me. Even at the time of receiving the box of treatment from Dr. Stone, my agony was so great that it was some time before I was able to read the prescription; and when I did so, his prompt and scientific investigation of my case merited my gratitude and gave me new hope of at least benefit if not an entire cure. I ascertained at once, from the report of the analysis, my case was not what the other physicians had termed it; what I had supposed was really blood was but red sand or deposits of crystals of lithic acid, mixed with lime, ammonia, etc. It was the crystals of lithic acid passing through the kidneys, the ureter, and irritating the whole surface of the bladder, and especially the urethra, the neck of the bladder, that had given rise to so much mischief and intense suffering, by abrading the mucous coating of these organs and exposing the raw surface to the action of these morbid materials as they almost constantly accumulated and passed away.

Dr. Stone's scientific explanation of the nature of my case, namely, that there was a peculiar *abnormal diathesis*, to be corrected by regulating the *dietary*, selecting such articles of food as would not generate morbid acids in the stomach, and giving others that would

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restore the alkaline principles, or the potash salts, as he termed them, in order to produce a balance between the two in the system, so, for a time at least neither should preponderate in the blood; that the urine must be brought thereby into as much of a neutral state as possible, to give a disposition and opportunity for the coatings to be restored and the parts made sound and well.

His remarkably lucid explanation of the laws of hygiene in various ways, which had been perverted not only in errors of diet, but dress, temperature, ventilation, etc., looking directly to the vitalizing or contaminating the very fountain of health, was to me like removing at once the clouds of darkness and pouring in the effulgence of the noon-day sun. And, as I continued to read further, and learned that all medicines, or *correctives*, as he termed them, that he was giving me, must not be looked upon as doing the cure, but merely palliative, and would become but very temporary in relief, unless the conditions of hygiene were *very rigidly observed*, and the whole cure prospectively promised become futile unless I so obeyed, I exclaimed again with gratitude, "There must be one honest and noble physician yet in the world."

For the benefit of *other suffering ones*, let me briefly recapitulate the complicated nature of my case on receiving Dr. Stone's treatment: every symptom of aggravated pulmonary consumption, torpid liver, enlarged spleen, prolapsus uteri, with great nervous prostration and irritability of the brain and *whole* nervous system, existing with the intense morbid derangement of the kidneys and bladder, inducing almost perpetual torture.

I commenced, therefore, with the most renewed faith and hope with the treatment, taking the remedies, adopting the hygiene; and after the first day, I had no more spasms; in one week's time, my cough was decidedly better, the expectoration changing from a yellow matter to a whitish color. In three weeks' time, the irritation in the bladder had subsided to such an extent that I was not obliged to rise more than three times during the night. In seven weeks' time, I was not obliged to rise at all during the night; and in two weeks more, sleeping *soundly* and *refreshingly*, to which I had been a stranger for so many long months. My progress to health was rapid and beyond all expectation, both to myself and friends.

The first of September found me without pain, the neck of the bladder healed, so much so that irritation had entirely left me, and to-day I am feeling well and enjoying better health than I have for five years. I do a great deal of work, house-work, sewing, etc. etc. I can walk and ride with ease.

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The cure Stone has done in my case is truly wonderful. Looking back to the state my system was in one year ago, and to the intense *agony* which I suffered, it makes my blood run cold, and I can scarcely believe myself that I am so well. People that were daily expecting to hear of my death seem amazed to see me in the streets. My weight, which was but 90 pounds when I began treatment with Dr. Stone, has increased to 121 pounds.

I feel that I can not be sufficiently grateful to my Heavenly Father for the providential influences used in bringing the meritorious claims of Dr. Stone to my notice. Your friend and patient,

MRS. H. E. HAIN.

WINDSOR, Mo., Nov. 20, 1872.

SECOND CASE OF CALCULARY DISEASE.

This class of maladies is so extremely prevalent, and so unsuccessfully treated by physicians of the old school, that sufferers do not know to whom to apply unless they learn, as this patient did, by fortunately becoming acquainted with a patient we had successfully treated. This patient is now under treatment, with every prospect of a permanent cure. Let it be studied with interest and attention.

WEDNESDAY EVE (writing in bed).

Well, Doctor, since I commenced this letter to you, I have had two hard spells (meaning spasms in the ureter, from the passing of an accumulation of gravel or sediment and the attending inflammation); one that I had Sunday night was the hardest I have had for more than a year, lasted all night long; was taken real bad about six o'clock in the evening, did not get any relief until nine o'clock in the morning; tried every thing you suggested—hot hip-bath, rubbed with chloroform externally, and finally had to take one grain of morphine before I could get any relief. I had another spell yesterday, though it did not last me so long. Doctor, I do not see how I can do without morphine or some other anodyne that will deaden the pain. When I commenced doctoring with Dr. M—— of H——, he put me on one grain of morphine a day, half in the morning, half at night, and so continued it for one year while under his care. Do you blame me for being discouraged? I have but just arrived home from one whole year's siege, and now I am just as bad off as when I commenced.

[Let the reader remember that where the patient had been treated, the doctor or doctors *only* treated her symptoms, without in any way looking *at* or for *causes* for such intense suffering, and removing them.

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No wonder the treatment and great sacrifice of money was all thrown away—where *effects* only are sought to be lulled by opiates. This case proves the fallacy of the general practice of treating symptoms.—Ed.]

Thursday morning.—I will once more try to finish this letter. I am up and dressed for the first time since Sunday; I have not taken any morphine since day before yesterday, but I fear I can't go very long without it, as I have not missed having one of those hard spells more than three or four days at the longest for two months; always have to stay in bed two or three days after having one. *Have not commenced taking my hot-air baths yet. Want to, to-morrow.*

That urine we sent you, doctor, was not nearly as highly colored as it is most of the time, nor was it streaked with blood and matter as it is a good part of the time. I had just had one of my hard spells the night before, and had taken so much morphine, which always makes the urine lighter colored, and more profuse; as a usual thing, it is high-colored and scant.

When I have those spasms, awhile before I get relief I nearly always get very sick and often vomit; and just before I get easy, the pain seems the hardest, and then it goes off almost instantly. There will come a sharp pain from my left kidney and groin that feels just like a knife running through me, and always feels as though *it cuts something away.*

[The above symptoms always indicate gravel or stone passing from the kidney down into and through the *ureter.* The ureters are two tubes, one leading from each kidney into the bladder.—Ed.]

Then I can pass urine quite freely. But nearly always at such times there will be lumps pass me, and often they are streaked with blood.

This patient writes, January 4th, 1875:

Friday night, I had almost half a pint of blood pass from my bladder; it did not all pass at once, but at several times, when I would get up to pass urine. The first that I noticed that there was blood passing, I felt a great desire to urinate, as though I could not wait until I could get up; but when I did so, I could not pass water at all, but instead great clots of blood, and my bladder pained me very much. After a little time, I had a desire to get up again; this time I could pass water.

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[We are particular to copy the very distinguishing features of the case as given in the graphic language of the patient; for it plainly, to us at least, shows the very *characteristic* nature of the disease and *its* varied complications: First, the intense spasms after a lull, in the ureter (left), indicate that there will be an accumulation of sediment, mucous or calculary matter in the left kidney; when it begins to pass out of the kidney into the ureter, the tube, then the spasm commences; but the spasm does not relinquish until *relaxed* by some anti-spasmodic agent, to allow the extraneous irritating material to pass on to the bladder. Secondly, the passing of blood proves most conclusively the inflammation that has a long time existed with more or less ulceration, healing *almost* in times of respite, when a fresh accumulation of irritating particles will abrade the surface and cause fresh hemorrhage. But in this case the points are *yet* blind whether the hemorrhage is from the *ureter* or in the *bladder*, or both. In all probability in the upper portion of the ureter, near or connected with the left kidney, where the seat of greatest suffering seems to centre. But, thirdly, the constant desire to micturate, with pain and burning, scalding sensation at the *neck* of the bladder, the *urethra*, proves, too, a complete abrasion of the mucous coating of these parts. And, fourthly, as in the preceding case, while the urine is either strongly alkaline or strongly acid, but little opportunity is afforded the powers of the constitution to heal.

Fifth. The *urine* needs to be, in all such cases, kept as nearly *neutral* as possible, to save the *irritation*, and also to prevent the almost constant misery such poor victims have to suffer.

Sixth. The great practical instructions of this case lie in the effect of a hot-air bath, or the Turkish bath *at a pretty high temperature*, relieving the intense spasms as *well* and far *better* than opiates or morphine, thereby saving the brain, nervous system, and the blood from being constantly contaminated with such a narcotic; while the effect of the bath is mainly *external*, calling the blood to the *surface*, relieving the *internal congestion* and *inflammation*, and giving the system (nature) an opportunity to recover her exhausted forces and bring about the cure. Let the patient speak for herself.]

I am better in some respects; in fact, I know I am better of those spasms. I have not had one of those hard spasms for nearly six weeks; that is the longest I have gone for a long time; I have not taken a bit of morphine in that time, either. I have had strong symptoms of them several times, but have kept them off by going into the dry HOT-AIR BATH. I take the bath every morning.

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What man can read the misery and suffering detailed in the foregoing letters, but must have a desire, if he possesses the attributes of humanity, to know of the causes?

We reply, they are legion; but it is only a humane duty, a solemn obligation, that *some* at least of the principal ones should be made known. Let the spirit of the learned Sir Benjamin Brodie speak.

"I come to-day, my earthly friend and brother, to talk with you upon a most delicate subject, one which is very imperfectly treated in all medical works, and which deserves, and will soon receive, more general and careful attention, namely, WOMAN'S SEXUAL FUNCTIONS AND RELATION TO THE WORLD.

"In the first place, women know too little about themselves, and the medical fraternity make every effort to keep them in a state of ignorance. We hear a great deal about the social evil; but I believe the worst evil in American social life to-day is the prevalent system of abortionism, and *later*, infanticide, practiced by hundreds who are called respectable, winked at by thousands, who call themselves religious. Unconsciously but not less truly it is woman's agonizing protest against being a slave to man's passions and her own ignorance.

"Of course, the first remedy that suggests itself for this appalling evil is abstinence from sexual intercourse until such time as the woman considers it best that she should become a mother. But the men and women of to-day come from generations of uncultured parents in that direction, and passion is stronger than principle.

"Nor do I think the pleasures of sexual intercourse should be confined merely to the reproduction of the species, any more than that of eating should be confined merely to the function of supporting life. But surely undesired maternity can not be a blessing. I know if woman is healthy and natural in her conditions and functions, and if she hold any love relation at all with man, it is as natural, both spiritually and physically, for her to desire maternity, as it is for sick people to desire health. She desires it as a fulfillment of the law of nature, as the completion of her own and her husband's life, which without this is always incomplete.

"But there be sickly and groaning thousands who are not fit to become mothers, and yet, having accepted the marriage relation, know not how to escape MATERNITY. For these there should be some preventive agency, simple, cleanly, safe and sure, which they could use at their own option. (See Dr. Warren's lecture on MATERNITY, page 167.)

"I know cold-water injections are used for the purpose, and I know they are not safe, not sure, and *positively injurious*. The sudden

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application of cold water when the organs are in an abnormally heated condition, gives a shock to the nervous system, and often causes a sudden contraction of the womb and the walls of the vagina, retaining effete particles of secreted matter there, and causing inflammation and subsequent ulceration. These ulcers, being filled with pus, are liable to be broken by the entrance of the male organ, and any slight abrasion there becoming inoculated, inflammation follows, and sometimes more serious results. Therefore I say cold water is not safe, while hundreds of women could assure you that it is not sure in its results."

Let the great spirit of the immortal Powhatan be heard on this subject, so all-important to the well-being of every female, aided by the queenly efforts of his daughter, Pocahontas.

"Pale-face, these questions go away back beyond your own beginning, and the cause for so much disease and early sacrifice of life has its origin and is indebted for its power to the organs of fear; and that fear of death has always kept mortals in an unnatural condition, making men, women, and children cowards, and holding them in gross ignorance of every law of life, binding them by the authority of the few who have in order advanced only as a more perfect organization has developed more boldness; fear of death, fear of sin, fear of going nearer to God, through the only given way of drawing nearer to him, by the *natural* process and change called death. Women have lived ages upon ages in fear and dread of child-bearing, and at this day, while civilization is boasting of its rapid strides toward perfection, women of refinement and culture in art and dress are guilty of the *darkest* crimes that ever shaded human life and staid human progress. Child-murder leaves its impress upon the soul, and those who think they have shirked care, gotten rid of a responsibility, may rest assured that in *this* (the spirit) world of realities a certain reward awaits them, which will be paramount to the sin committed.

"I have not the time now to dwell as I might upon this point; but will give you chapters in some future hour upon this dire evil.

"We were called *savages;* but believe me, my brother, when I tell you that no Indian woman ever sought to destroy her child, and no amount of reasoning could in my day ever have induced an Indian to have submitted to such modes of murder.

"The highest office of humanity is that creative power which enables a world to develop more of Deity, and it is high time that SAVAGES taught pale-faces the glory and the purity of creating a superior race.

"When this is done, then our brothers will have, first of all, the

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proper beginning to know how to live. Civilization seeks for happiness in all that is false to the spirit, false to nature, hence antagonistic to the great central Soul whose breath is harmony and whose life is truth and love."

But shall we give men further evidence for the cause of so much disease and suffering among their wives? We will copy *verbatim* from a letter *now* before us from a lady under treatment, telling us of a recent illness or rather *relapse* from a promising stage of convalescence, and hinting in doleful language at the cause. "Doctor, I can not use my eyes to look at any thing without increasing the distress in my head. My nervous system is very much shattered from some cause. It is killing to me to sleep with a man. I have wished so much that I could go away and stay for three months until I recover in a measure. As for having children, I have two, and that is all I can take care of in my feeble health."

No wonder this feeble patient, having suffered for years with untold miseries from hidden chronic inflammation of that delicate, sensitive, nervous structure, the womb, extending up the spinal column and nerves to the kidneys, the loins, the stomach, causing dyspepsia and impaired nutrition, and *that* in turn extending to the very citadel of life, the *brain*, wants to go away from home to escape a constant abuse of the sexual passion on the part of her husband.

No two persons should ever sleep together in the same bed, unless it be for curative purposes, where the magnetic relations are fully understood, and it is directed by the intelligent physician to that purpose, for the time being. This physiological, magnetic condition is clearly recognized and explained in the case of King David of olden time.

The diseases evolved and produced by two persons sleeping in the same bed, the miseries entailed thereby, will be known *only* in that day when the "great book shall be opened," and the most secret and *apparently* insignificant act and motive will be found therein recorded. The language of the Revelator has an awful meaning, "They will call for the rocks and mountains to fall upon them and to hide them;" more appalling than *this age*, with all its boasted light and knowledge, will admit; for when it is declared that our Heavenly Father's government is so perfect and so minute, so all-searching, "that not one hair of the head is left unnumbered, or one sparrow falleth to the ground without his notice," some ingenious sophistry or subterfuge will be palmed off upon the credulity of the ignorant to induce them *not* to believe that it has any relation to the laws of physical entity or that it concerns the harmony of every life.

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Well might the prophet of old exclaim, "Fools die for want of wisdom."

Men and women *fain* marry, and at once go to sleeping together in the same bed, without ever thinking of, or asking the question, Are there any subtle or spiritual unseen laws involved in the physiological *contact* and relative *conditions* assumed?

Time passes on; at length diseases not only of the body spring up, but, worse still, diseases of the mind—of a moral nature, discord, inharmony, coldness, estranged and repulsive feelings, that once they would have been incensed to have heard even suggested; little comprehending that they were, through ignorance, infringing the all-pervading law of VITAL MAGNETISM by *blending perpetually* while in such proximity; and that it is a law of mental dynamics and electric affinities that, when two opposite bodies come together, they NEGATIVE and repel with *precisely* the same degree of force.

Hence one, at least, of the great causes of social *un*rest, family or domestic jars and quarrels, elopements, divorces; all tend to, all struggling for a readjustment of *new* relations; forgetting still the laws underlying the social relations are as real, as inflexible as those that move the ponderous celestial orbs. "There is nothing that will so derange the nervous system of a person who is eliminative in nervous force as to lie all night in bed with another person who is absorbent in nervous force. The absorber will go to sleep and rest all night, while the eliminator will be tumbling and tossing, restless and nervous, and wake up in the morning fretful, peevish, fault-finding, and discouraged. No two persons, *no matter who they are*, should habitually sleep together. One will thrive and the other will lose."

The time is approaching when these laws will be recognized and acted upon.

Again, science can not estimate the anomalous morbid manifestations growing out of the conditions: the excess of sexual intercourse so liable from a constant pandering to the passions, that with proper hygenic relations would be obviated—hence so much latent, hidden disease, so much anguish and misery, that we, as medical men, are called to listen to and witness.

Upon husbands, then, and those who would become husbands, rests the awful responsibility. "The ignorance of the law excuseth no man." Can you expect either yourselves or wives to have health without knowing how it may be preserved? Sickness is the result of ignorance. If you understand not the subject, not the laws that govern your organism, you are like one walking in darkness over yawning precipices, every moment liable to slip and precipitate himself on the rocks below.

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TWENTY-THIRD SECTION.

CASE THIRD.

A remarkable cure of Bright's disease of the kidneys, general dropsy of the body and lower limbs after two years' standing, and unsuccessful treatment by three physicians—The true pathology of albuminuria or Bright's disease explained, following the case.



R. A. L. BURGESS, aged about thirty-two, of Marathon, Cortland County, N. Y., consulted us at our Institution in January, 1874. His belly was remarkably pendulous, his legs and feet swelled to nearly or quite twice their natural size. He could walk moderately and wieldily well by the aid of a cane, but was clumsy in his movements. There was yet a brilliancy of the eye, the appetite good, function of bowels quite normal, his rest or sleep refreshing. We proceeded at once to make an analysis of a specimen of his urine passed that morning, which required but little scientific research in our chemical laboratory, before we made the discovery of a large amount of albumen and nitrogenous compounds, proportionate to the quantity examined.

It should be understood that when Dr. Bright, of London, first wrote upon and published his select report of cases about 1827, his conclusion was that all such cases where albumen largely escaped in the urine were *incurable.* Why so? Because his reports were made from morbid specimens; hence his conclusions were from erroneous premises.

But this unhappy and fatal impression then made by Dr. Bright swayed the minds of a vast number of well-read and otherwise thinking scientific medical men for years; and even down to the present time does it bear its baneful sway.

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We declined treating the case; but otherwise threw no icy shudders over his already cast-down spirits. For our conclusions were based upon his history, that he had been treated by drugs extensively by three if not four physicians for two years, and *they had* abandoned the case as incurable. We well knew that medicine *alone* could not cure such a disease, and that the hygienic agents we had confidence in to reach the case, if cured at all, and if adopted, required more sacrifice as well as more WILL-power to make effectual, than we feared he, in his present disheartened condition, could command. It was therefore upon these considerations that we declined treating the case, when the patient, with liberal generosity, paid the consultation-fee, and retired to spend the night where he had left his companion.



FIG. 76.—THE GOOD SAMARITAN POURING IN THE OIL AND THE WINE.

As our aim is to do good, to extend a knowledge of diseases so generally prevalent, and often allowed to prove *too* fatal for the want of dissemination of light and knowledge, familiarly expressed, to come to the comprehension of the common reader, we must be familiar to this end in our way of giving the history of this case, *because* it will meet the needs of hundreds of other similar cases.

This patient, then, was accompanied by an old and long-tried friend of ours, George Clark, Esq., of Millerton, N. Y., whom we had treated successfully, some twelve years since, for calculary troubles, and who nearly lost his life when passing some calculi.

Our friend felt such confidence in our ability, he was loth to have us abandon the case, and came again, spent the night, and persuaded us to reconsider our conclusions, and make one effort at least to save the life of the patient, in pity if no more for a young wife and child.

In order to make the case instructive, we must explain some physiological laws of the animal economy as we go along. There are some

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five at least great emunctories for eliminating the effete matter from the blood and system, the lungs, the skin, the kidneys, the liver, and the bowels. Of these five, the skin and the kidneys have almost perfect collateral sympathetic relations. If the skin, which when in health secretes and exhales from thirty to forty ounces in twenty-four hours, should be almost or even entirely suppressed, some vital organ must feel a desperate shock in congestion, inflammation, apoplexy, hemorrhage, or burning fever, unless some compensating function, as the kidneys, step in and perform, for the time being at least, a double duty.

Now, in the case of our patient, the function of the skin was almost entirely suppressed. He was a butcher by occupation; his business had been on the road much, running and heating and sweating himself after his cattle, until, subjected to alternate heats and colds in sudden transition, the pores of the skin had become firmly closed; indeed, the skin was glued, the pores almost hermetically sealed. This disordered condition of the skin function had completely *un*balanced the system, thrown these two great functions out of all harmony. The kidneys had been compelled so long to do a *double* duty, they had grown very feeble; the tissues, delicate at best, had become debilitated in the extreme, so much so that the albumen, the fibrinous matter of the blood, strained directly through them.

Under this condition of things, *what should be done?* What does the reader, who will feel deeply interested in the case, suppose could be done to be of any avail? Not by any means continue drugging the stomach and the blood, and driving through these delicate organs (the kidneys) acrid diuretics in the shape of nitre, potash, iodide of potash, squills, digitalis, buchu, etc. etc. This had already been done by the three physicians who had abandoned the case in despair. Common-sense would teach to the *un*professional *even*, that the kidneys at least required perfect rest in order to recuperate their forces, recover their tone, and that the *dormant* function of the skin must be restored, and *made* to do *its* function, which it had so long failed of doing, and had been the cause of the enormous accumulation of water in the body, limbs, etc.

This course being decided upon, the next consideration was, what agent could be *best* used to effect the *result*.

The DRY HOT-AIR or TURKISH BATH was the agent relied upon for the cure *mainly*.

Now, we wish to disabuse the minds of most people of the *false* notions they have of what is *really* a Turkish bath. Because air, heated to a high temperature, was first systematized and used very

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generally in Turkey not only as a curative agent but as a luxury also, it came to be known as a Turkish bath, and so the unlearned and unthinking class drew the very unreasonable conclusion, and do to this day, that in order to have a Turkish bath they must go to Turkey, London, New-York, or at my friend's, Dr. Shepard's, on Brooklyn Heights, or some other high-sounding name and place to obtain it, when the *fact is*, every one can have it at his own home with comparatively little trouble or expense. So in the case of Mr. Burgess. We gave all necessary instructions how a room should be be prepared and the air heated to a suitable temperature of 140°, 150°, or 160°, as *his particular condition required*, in order to arouse the dormant energies of the cutaneous exhalants and unload the cellular tissue of its freight of accumulated water and effete matter.

To further accomplish this end, we sent our assistant with him, who put the bath in practical operation, and staid by him until our patient and his kind wife saw plainly the desired results that were coming of it.

Some extracts from his own letters will clearly show the progress of the case on to a complete cure :

DR. STONE : January 26, 1874.

DEAR SIR : I send you three specimens of urine, the respective dates of each affixed. I am feeling very well ; I have reduced myself two inches around my body, and my limbs are a great deal smaller than when I was at your Institute. I take the bath regularly every day. I stay in for one hour each day, and sweat all over now, which I did not do at first. We think I have got along finely since I commenced the treatment. You will please reply as soon as convenient.

A. L. BURGESS.

DR. STONE : March 3, 1874.

DEAR SIR : I send you two specimens of urine for your analysis—one February 24th, one of 2d instant. I am feeling smart ; I have reduced around my body two inches since my last letter, making nine (9) inches in all, since I saw you. I am *now* down to about my natural size. I am wearing the pants that I used to wear before I was sick. Please send soon and oblige, yours truly,

A. L. BURGESS.

MARATHON, N. Y., March 25, 1874.

DR. STONE :

DEAR SIR : Again I send you a specimen of my urine. Can I go to work? I feel able to do so. I am uneasy. I walked further yes-

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terday than I have walked for a year, with ease and without injury. I am a member of a brass band, and our boys want me to play with them again. I feel well enough to do so if it will not injure me. Answer soon. Yours truly, A. L. BURGESS.

Here the case was dismissed as cured. And to the credit of modern science and the development of new and more rational ideas, let the cure stand *recorded.* A very rapid and progressive cure indeed, in less than three months to do, *without* medicine, what three physicians had *failed* to do *with*, in two whole years!

We gave no medicines only as we *magnetized* them, and for the purpose of keeping up a *magnetic* connection with our patient. We relied upon vital magnetism alone for the cure, combined with a judiciously select dietary, forbidding such articles of food as were found too hearty for assimilation. Strict attention was given to magnetic garments and clothing, magnetic rubbings, percussion, the magnetism of sunlight—all calculated to condense the very thin and scattered globules of iron in the blood which had become very thin and watery. Verily, the science of medicine is progressive, and the time will soon come when all diseases will be cured without drugs, and scattered by the subtle power of vital magnetism, as the meridian sun disperses the fog and sombre clouds which hang around the horizon.

THE PROGRESSIVE VITAL MAGNETIC AND HYGIENIC SYSTEM OF THE INSTITUTION, FOR DISEASES OF THE RESPIRATORY ORGANS, IN STRIKING CONTRAST WITH THE OLD SCHOOL PRACTICE. CONSCIENTIOUS REASONS FOR ITS ADOPTION.

What, let us ask, should we treat, if we expect to cure? Should we not treat the disease? Yes. Where is it? It is in the lungs. Well, then, why put your remedies into the stomach? The stomach was designed for food, and to make blood for nourishment and sustenance. The lungs are clogged; the bronchial tubes and air-cells are filled with cheesy, tubercular bodies. What is to be done to remove them? If medicines are valuable at all, should they not be carried where the disease is? Well, how will you get medicines into the lungs? They are breathing organs only; nothing but air can enter with impunity. We answer, "Medicines can be volatilized and administered in the form of vapor, and given by every physician." That every rational person can see. Now, we give remedies by inhalation, which are breathed just as naturally, just as easily, into the lungs as air; and at the same time, oxygen and air are breathed. But we shall meet with the objection from the stubborn, blind disci-

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ples of the old school that inhalation is no new system ; that it was tried a long time ago. Well, let us ask, "How was it tried?" Very rudely : as rudely as medicines administered by the stomach—given in the form of steam, and what is the consequence ? Nothing can be more debilitating and relaxing than to breathe steam or hot-water vapors into the lungs ; for these tubercles, when they are formed in the lungs, become fatal only when they soften down into matter, and in the form of an abscess. Nothing will hasten on this process of softening like hot-water vapor or steam ; hence, this treatment is unsuccessful, unscientific, and destructive as a system. To do away with these objections and contingencies, our system fulfills every desirable indication, in accord with physiological laws and the laws of life, in that, namely, we give our vapors at the natural temperature of the atmosphere, in a cold state ; so, instead of their being debilitating, relaxing, or softening to the tubercles, they arrest the softening process, stimulate and arouse the absorbent vessels, causing the tubercles to be absorbed—be dispersed.

In the next place, the composition of the vapors is such that tubercular matter in its incipient stages of formation on the mucous surfaces of the bronchial tubes will be dissolved by it, and caused to be expectorated from the lungs, producing a benign condition for nature to heal.

We do not overlook the nourishment and building up of the system ; we do not put nauseating or devitalizing remedies into the stomach to deprive him of appetite or ability to eat food. Where an appetite or ability to digest food is wanting, we give such remedies as will provoke an appetite, energize the stomach, and cause food to be assimilated into healthy blood, to sustain the patient, and furnish resources in the blood—in the constitution—to heal the ulcerated caverns.

So successful has been our treatment that we have cured hundreds of cases, so far gone when we prescribed for them that we had but faint hope of their recovery.

We consider consumption to be as curable and amenable to a rational system as any other common disease. No one need despair, for that would only stimulate the disease. The great danger is here: The nature of the complaint is such as, for the most part, to excite hope so inordinately that procrastination, the thief of time, is indulged until the precious season passes by, and the more aggravated symptoms, which are now being developed in the harassing cough and hurried breath, night-sweats, and burning hectic fever, admonish him to seek relief, but too late.

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Because a few such are so allured by hope as to allow the precious moment when they could have been cured to pass by—that forms no objection to the efficiency of our system of medicated inhalation; for, had they applied at a seasonable moment, the cure would have been certain.

Should there remain any doubts as to the efficiency of our treatment for the cure of consumption, let them read the certificates appended.



FIG. 77.

This cut illustrates the instrument for readily introducing into the blood, through the medium of the lungs, the air-cells, the medicated vapors for curing pulmonary maladies; but thus, too, are nearly all our remedies administered, assisting the function of other organs, namely, diuretics for the kidneys, vitalizing material for the blood, alteratives for the liver, tonics and correctives for the stomach, and laxatives for the bowels. For in the developed form and manner of magnetic concentrations, it is no longer necessary to sicken and disturb the stomach with a mass of noxious, sickening drugs. The integrity of the stomach is preserved for food and healthy digestion. Medicaments are spiritualized and breathed, and a babe can now be cured without longer poisoning with drugs. Let the people think and progress with the age.

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TWENTY-FOURTH SECTION.

CASES OF CURES.

CASE OF ABRAHAM O'DONNELL.

MOST ASTOUNDING CURE OF TUBERCULAR AND BRONCHIAL CONSUMPTION.

TROY, New-YORK, March 17, 1866.

MY DEAR DOCTOR: It is from a deep sense of gratitude that I owe you and suffering humanity everywhere, that I now address you.

Being aware that you are about bringing out a new work descriptive of your scientific system of treatment for diseases of the lungs, respiratory organs, and chronic maladies, I desire that you would publish, after a lapse of eight years, my complete recovery and restoration to health.

As you have my cure published in your large book on Consumption, I need not go into detail otherwise than to state that, in the spring of 1856, I became entirely prostrated with a disease of the lungs, from too close confinement and application to my business—that of a compositor and printer—so much so, that I was entirely unable to work, and hardly able to get about. I had not done a day's work in five months.

I made a number of unsuccessful efforts at a cure from several medical sources, but all to no purpose; when at that time you first made your appearance in Troy, and I was induced to consult you. You directly examined my chest, tested my vital capacity on your PULMOMETER, and proved so conclusively to my judgment that you understood, not only my case, but your profession perfectly, I put myself at once under your treatment. Notwithstanding you thought

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that you could cure me so that I would be able to enjoy health in the *open air only*, during the balance of my life, I got so well by the fall of the same year—1856—that I again entered the printing-office, where I have continued ever since at hard work, and am also in the enjoyment of good health. My vital capacity has been increased in the mean time one hundred cubic inches, as proved by your pulmometer; and there is not a vestige of disease left in my lungs.

I desire that you publish this account for the benefit of suffering humanity, and permit any one in any part of the world to refer to me by letter or personally. Very truly yours,

ABRAHAM O'DONNELL.

NOTE.—Mr. O'Donnell is at this time, January, 1875, in good health, doing hard work daily at the printing-press, proving the cure perfect, which he with all generosity attributes to our treatment.

FROM W. S. AUMOCK, PRINCIPAL OF THE AMSTERDAM ACADEMY, AMSTERDAM, MONTGOMERY CO., N. Y.

GREAT DERANGEMENT IN THE DIGESTIVE FUNCTIONS.

DR. STONE:

DEAR SIR: About a year ago, I took a severe cold one day, and awoke the next morning to find myself literally speechless—not being able to utter an audible word. Thinking it to be a temporary hoarseness, to which I had been occasionally subject from overtaxation or protracted use of the voice, I neglected it for some days, trusting to the recuperative energies of nature. Aphonia still continuing, however, I began the use of domestic remedies recommended by various friends; then applied to a regular physican, who prescribed gargles, and used the probang with slight relief; then tried a few of the infinitesimal doses of the homeopathist; but all would not do; they did not reach the *seat* of the disease, which was chiefly in the larynx, and apparently extending toward the lungs.

In the mean time I was obliged to resume my school duties, which, of course, were performed chiefly by proxy under my personal supervision, but with great inconvenience both to myself and the school.

At last, when I began to despair of a cure after repeated trials of six or eight weeks, and a change of vocation seemed almost imperative, I was referred to Dr. Stone, of the *Troy Lung and Hygienic Institution*, as most likely to restore my health and speech. Like a drowning man I caught at what, I frankly confess, I then considered as a *mere straw*, and paid him a visit.

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He pronounced it, at once, a serious case of "*disease of the larynx, throat, and bronchia, with complications of derangement of the digestive functions*," to which I had been for years more or less subject; but was confident of effecting a cure by general and local treatment. So ready and clear was his diagnosis of the case, and so confident was he of success, that I gladly and trustingly placed myself under his care and directions.

The inhalation acted almost by *magic* on the vocal organs, and in three days I was able to resume my official duties in the school-room, conducting all my recitations personally, while the use of the general remedies with the dietetic and other sanitary observances prescribed, gradually restored all the functions to their normal activity, and in less than a month I was in a better condition of health than I had been for years before.

I make this statement as an act of justice to Dr. Stone, and with the hope that I may, through him and the Institution he represents, be of some benefit to suffering humanity. W. S. AUMOCK.

AMSTERDAM, N. Y., July 10, 1862.

P. S.—I send you the inclosed statement of my case last year, and its cure. If you are suited with it, you are at liberty to use it at your discretion. W. S. A.

CASE OF MISS AMANDA E. GREEN, NOW MRS. A. S. NICHOLS.

REMARKABLE CURE OF TUBERCULAR CONSUMPTION, ATTENDED WITH BLEEDING AT THE LUNGS.

In November, 1860, Miss Green was confined to her bed, as she had been for about three months, attended by an allopathic physician, who had abandoned her case as incurable, and given her up to die, in the last stages of consumption. It was at that time that her brother consulted us by letter, stating her case, and asking our opinion as to the probability of cure.

She inherited consumption on the side of both father and mother, her father having died some years previously with it, and her mother, at the time she consulted us, was laboring under a disease of the lungs and hemorrhage. So the case to us appeared one so aggravated in its nature that we gave but faint hopes of cure; but offered encouragement that our treatment would, at any rate, soon soothe the distressing cough, assuage the night-sweats, and smooth her pathway to the tomb, if it should not succeed in restoring her.

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In this condition she was placed under my care. I prescribed for her the COLD, MEDICATED VAPORS and VITALIZING TONICS, with a thorough system of hygiene. In three weeks we were gratified to learn that our patient was able to sit up all day, had obtained a good appetite, her cough and night-sweats had abated, and she felt strong enough to ride out, asking our opinion.

Suffice it to say that, in nine weeks from the day that we prescribed for her, she was able to ride on a cold winter day, take the cars, and come seventy miles to consult us in person. She continued to gain strength and health until the cure has become complete.

Since that time, she has been able to do much hard and exposed work. We saw her personally during the summer of 1865; and to-day, March 17th, 1866, have heard directly from her, that she remains in sound health.

This affords another one of the most striking cures of TUBERCULAR CONSUMPTION performed by our improved system of treatment by medicated inhalation, vitalizing tonics, and rational hygiene; demonstrating that medicine is a progressive science, capable of great and astounding developments which may be continued through all coming time, until it arrives at that state of perfection when it will meet every physical emergency, and afford a balm for every wound.

The case of Miss Green is reported at great length in our large volume on Consumption.

NOTE.—Mrs. A. S. Nichols, *née* Miss Amanda Green, is now, January, 1875, in the enjoyment of almost perfect health; considers herself entirely cured of all the disease that formerly affected the lungs, in 1859. Since that period, has and is doing much exposed and hard labor even. She too, with all gratitude, has been the means of influencing many consumptive invalids to adopt our system of treatment. We mention these long-standing cures with *emphasis*, to prove to the world the perfect curability of every form of consumption, and the perfect fallacy of the old school doctrine.

CASE OF A. D. KEYES, ESQ., NOW OF FARIBAULT, MINN.

ASTONISHING CURE OF TUBERCULAR BRONCHIAL CONSUMPTION.

Mr. A. D. Keyes, a young man aged twenty-one, residing in South-Acworth, N. H., was induced to consult us in the summer of 1865, by the recommendation of Rev. E. S. Foster, of Claremont,

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N. H., a clergyman of great intelligence and ability, who had been cured, by treatment from our Institution some nine years previously, of an obstinate bronchitis, and who, by the way, is constantly bringing our claims to the notice of suffering invalids, and sending us new patients almost every month, such is his confidence in the rational and scientific nature of our treatment.

On making a personal examination of the case of Mr. Keyes, we found the top of both lungs seriously affected with tubercular deposit; and in the top of the right lung, an ulcer or cavern of considerable extent was already developed. To this was added extensive bronchial inflammation. The case, therefore, combined the two forms of bronchial and tubercular consumption.

Mr. Keyes was at once put upon a discriminating course of cold medicated vapors, combining the tonic, the balm, and the balsamic vapors, with the design of fulfilling all the indications, subduing bronchial irritation, causing a free expectoration of the ulcerated matter, and stimulating at the same time the ulcerated surfaces of the lungs, to put them in a condition for nature to heal. To fulfill the last indication, the electro-stomachic vitalizing tonics were administered to give tone and energy to the digestive organs, and cause healthy blood to be made.

At this time Mr. Keyes was extremely debilitated with night-sweats, occasionally with hectic fever and with bad digestion, and had expectorated blood at several times. He returned home with a full determination to prosecute the treatment to the very letter, and live up to our rigid sanitary, hygienic rules which we pointed out to him.

He writes us, under date December 14th, that his cure is complete; that he has had no more bleeding at the lungs; and that he has entirely recovered from his cough, his night-sweats, has good digestion, gained many pounds in flesh, and is now able to do a hard day's work. And further says, had it not been for our treatment he probably would have been in his grave some months since; that such is his confidence in our system of treatment that he is recommending it to every invalid who comes in his way.

NOTE.—Since his recovery, with a most commendable ambition, Mr. Keyes has successfully prosecuted a course of collegiate studies at Dartmouth; has graduated at a law-school; and informs us that he is prosecuting his profession with zeal and prosperity in Faribault, Minn. So much for Dr. Stone's system of cold medicated inhalation.

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CASE OF DAVID H. PIERCE.

CURE OF AN AGGRAVATED CASE OF PULMONARY CONSUMPTION IN ITS ADVANCED STAGE, AT THE HOME OF THE PATIENT, WITHOUT SEEING HIM, BY FORWARDING THE TREATMENT.

LIMERICK, ME., Jan. 5, 1874.

DR. ANDREW STONE:

MY DEAR SIR: Four years ago, I was very sick with consumption of the lungs. I had suffered for three years with a bad cough, night-sweats, hectic fever, pain in my chest, soreness of the throat, and hemorrhage of the lungs; most of the time loss of appetite; was very much emaciated and debilitated; had *not* done a day's work for three years. In the mean time tried seven of the best physicians in New-England without any benefit, but constantly grew worse. Hearing of your great skill and success in curing one of my townsmen, I determined to try your treatment; wrote you, and obtained your opinion and terms, and immediately placed myself under your care by letter and correspondence.

Judge of my surprise; in one week there was a marked change in all my symptoms, a decided relief of many of my sufferings. I continued the treatment about nine months, when I considered myself cured. My progress to health was rapid indeed, and beyond the expectations of my friends, altogether beyond the expectation of the family physician who had attended me, and far exceeded my own expectations.

And now, after a lapse of three years, I am gratified in being able to announce to you my restoration to perfect health. I have been able to work every day during this time (of three years) on a farm. I seldom ever take a cold. I am convinced that, had it not been for your treatment, I should not have been living now. I permit you to refer any one to me with *pleasure*, and publish this letter for the encouragement of other sufferers, that they, too, may find in you a balm of hope and relief. Truly yours,

DAVID H. PIERCE.

CASE OF ALMON H. GOVE.

CURED OF TUBERCULAR CONSUMPTION BY INHALING DR. STONE'S COLD MEDICATED VAPORS.

WEST-BUXTON, Me., Jan. 1, 1866.

ANDREW STONE, M.D.:

MY DEAR SIR: Three years ago, I was very sick with consumption and disease of the lungs. I had suffered extremely, for months.

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with a bad cough, night-sweats, hectic fever, great restlessness, pains in the chest, soreness of the throat; most of the time loss of appetite, and was very emaciated and debilitated. I had tried all our doctors, both in my own place and towns adjoining, without any permanent benefit from their treatment, but it rather aggravated my symptoms than otherwise.

At that time, hearing of your great skill and success in the treatment of pulmonary affections, I wrote you, obtained your opinion and your prices, and put myself under your care and treatment by letter or correspondence. Judge of my surprise, in a very few days after commencing the use of your inhaling vapors, and tonic and invigorating remedies, my symptoms began to give way; the night-sweats were soon checked by your medical applications, the hoarseness and harassing cough became quieted, and balmy sleep, to which I had been a stranger for long months, once more returned to refresh me and make my pillow inviting. My progress to health was rapid, and beyond all expectation to my friends and physicians who had attended me, and far beyond *my own* expectations; for I had given up all hope of ever being cured; I had not been able to work for more than a year. And now doctor, after a lapse of three years, I am gratified in being able to announce to you that my cure is perfect; I am divested of every symptom of pulmonary affection, and have been able to work, in fact, do a hard day's work, for more than two years.

I am convinced that, had it not been for your treatment, I should have been buried a long time ago. Since my recovery, I have recommended your *system of treatment* to many of my friends and acquaintances—it has been alike successful with them.

I permit you to refer to me at pleasure, and to make whatever use you see fit of this letter for the benefit of suffering humanity.

Truly yours, ALMON H. GOVE.

January, 1875.—It is now nine years since Mr. Gove wrote us to publish his cure; he is still alive and in good health. After having purchased and worked on a farm for more than three years, has retired to less laborious business in Portland, Maine. He has, with a philanthropy worthy of all praise, recommended many consumptive invalids to the claims of our treatment, who in turn also have been cured; and many others who were too far advanced to be cured had their stay on earth prolonged, and their sufferings greatly mitigated, and their pathway made smoother by the palliating, soothing effects of our treatment.

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We have treated and cured many patients in Maine during the last fifteen years, and out of that number never saw but few of them personally; sending the treatment to them after a minute investigation of the cases, scientifically, as we have elsewhere described. The seaboard of parts of Maine, of Massachusetts, and the New-England States is peculiarly liable to develop bronchial and pulmonary consumption, and such will ever be the case unless her population will awaken to the momentous necessity of paying a greater attention to physical education, and the propagation of a hardier race of offspring in which shall be implanted in the very vital germ itself stronger hearts and lungs, as suggested by the spirit of the immortal Laennec.

Hence, the importance to all her valetudinarians and consumptives to have at command the most reliable curative treatment which will be furnished from our Institution at all times; but also will be accompanied with the scientific literature, to impart the knowledge of the primeval organic laws to institute the radical physical reform hinted at.

CASE OF MRS. FRANKLIN SAWYER, OF MILBRIDGE, MAINE.

NEURALGIA, LUNG, KIDNEY, AND BLADDER DISEASES, WITH COMPLICATIONS, CURED.

DOCTOR STONE:

MY DEAR SIR: You will recollect that, early in the spring of this year, I corresponded with you in relation to my wife, who had been a long time sick, and then was prostrated, confined to the house and the bed for much of the time. Her maladies seemed to be numerous and complicated: suffering at times with extreme neuralgia of the loins and kidneys and irritation of the bladder, as well as shortness of breath, cough, and many other painful affections.

I had employed many physicians, who attended her *personally* almost daily, and without giving her relief. At this stage of her suffering I was informed of your great skill by some of my neighbors whom you had cured of similar affections, and wrote you. When I had concluded to adopt your treatment, she was taken so much worse that I called in another *new* physician, who attended her personally for seven weeks longer, and all to no purpose. When at this stage of her suffering, I again wrote to you and put her under your treatment—you sending your remedies and directions without seeing her. It may be of some satisfaction to you to know that you have cured my wife of bad dyspepsia, constipation, painful menstruation, leucorrhœa of eight years' standing, and also relieved her of the intense

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irritation of the bladder attending the passing of water. She is now eight or ten pounds heavier than she was three months ago. All of these benefits I credit solely to your treatment. I have much to feel grateful (with her) to you for what you have done.

FRANKLIN SAWYER.

MILBRIDGE, ME., Sept. 19, 1863.

P. S.—I have been using your catarrh remedy for one week. It suits me exactly, and I am perhaps too confident when I say I think I shall be entirely cured in a few weeks. At any rate, I shall be satisfied if I feel so well and remain so clear of my catarrh as I now am. It has had a wonderful effect. F. S.

CASE OF MRS. SARAH E. HODGKINS.

CONSUMPTION, BRONCHITIS, AND NEURALGIA CURED.

DR. ANDREW STONE:

DEAR SIR: I was much pleased by receiving a letter from you a few days since, inquiring as to the state of my health. I am very happy to inform you that I am now quite well: better than I have been for some years previous. My cough yielded to the soothing influence of the medicated vapors in a few weeks after commencing their use.

Six months ago, I was thought by most of my friends to be in incurable consumption. Now I am freed from almost every symptom of it. I have an excellent appetite and good digestion. I feel that under Heaven I am indebted to you for the good health which I now enjoy. Words would but feebly express the gratitude of my heart for this. Very respectfully, your friend, SARAH E. HODGKINS.

CHERRYFIELD, ME., Nov. 29, 1864.

CASES OF CURES IN NEW-JERSEY.

CASE OF MISS ANN E. ANGLE.

DELAWARE STATION, N. J., Feb. 24, 1874.

DOCTOR STONE:

DEAR SIR: I received the bottle of inhaling vapor and one of catarrh remedy all safe; find inclosed the amount, which letter will be registered. I think it advisable and judicious to keep by me these most invaluable remedies of yours, that I may, when I take a cold or become again attacked with my bronchial difficulty, arrest it at once; for I find no remedies or treatment that will compare with yours in affording relief.

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You will recollect, I presume, that before I applied to you, now something over four years, I had been very ill for a length of time with a complication of disorders affecting the air-passages, catarrh, bronchitis, laryngitis, etc. I had tried treatment from our physicians near home, without any benefit, undergoing much suffering all the while. At length, hearing of your treatment by hygiene and inhalation, I decided at once on a trial. After using your medicines for one month, there was the most marked relief. I continued the treatment for three months, when I found myself so well I was again able to assume my usual duties. I am *now* enjoying good health, for which I owe all to your system of treatment. Yours, very respectfully,

ANN E. ANGLE.

CASE OF ISAAC A. LONGCOR.

DYSPEPTIC CONSUMPTION CURED.

ANDOVER, SUSSEX Co., N. J., Aug. 27, 1869.

DR. STONE:

MY DEAR SIR: It is with feelings of gratitude that I sit down to write a few lines to let you know how I am getting along. I am following your directions; I am nearly relieved of all the pains that have so long affected my chest, lungs, and other parts of the body. My appetite has improved, my food does not now distress my stomach, and I have gained six pounds in flesh since I was at your Institution. I intend to follow the treatment until I am entirely cured.

Yours, truly, ISAAC A. LONGCOR.

CASE OF THOMAS H. CLARKE, ESQ.

DR. STONE: NEWPORT, R. I., April, 1872.

DEAR SIR: My gratitude for material help received through your ministrations and medicines has led me to recommend many to you for treatment; not wholly as a return to you, but that I might benefit suffering humanity. In every case of those who have taken your course of treatment, the testimony is the same—relief and cure. I have been thanked over and over again for recommending Dr. Stone.

Now, I have done no more than my duty to you and my neighbors. You helped me in 1860; you also helped me again in 1870. For both I am truly grateful, and I would show my gratitude not only to you but to others; to that end I inclose names of men I know, now seeking health in Florida, that you may forward to them your book, and whom I believe you might cure, if they will only put themselves under your care. Yours, gratefully, THOMAS H. CLARKE.

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CLARKSVILLE, TENN., Aug. 30, 1868.

DR. ANDREW STONE:

DEAR SIR: Having experienced so much satisfaction with your treatment of myself, I have recommended you to a lady friend. Will it be necessary for her to visit you in person, or can you treat her by correspondence? Respectfully yours,

M. L. KILLEBREW.

PROFESSIONAL TESTIMONIALS.

It is very cheering to us to receive testimonials from our progressive brethren, to whom we tender our thanks; we will ever take them by the hand in the cause of that humane science which we are proud to be engaged in, and which above all others lies nearest our heart.

FRANKLIN, TENN., Feb. 12, 1872.

DR. ANDREW STONE, Troy, New-York:

MY DEAR SIR: I take the liberty of writing to you upon a subject in which I feel deeply interested; that is the reformation which your indefatigable industry and perseverance are producing in the practice of medicine, for which every friend of humanity should feel grateful to you.

Like yourself, I was educated in the allopathic school of medicine. But after an experience in active practice of ten years, I was convinced of the fact that, as a system of physic, it was not only multiplying diseases, but increasing their fatality. Therefore, believing that no amount of conscientiousness could possibly excuse the evil I might commit in adhering to an erroneous system, I considered excommunication preferable to the principles and sophistries so eloquently harangued by the devoted votaries of inconclusive theories. For a mere blind conformity to what we may have been taught, can never justify a credulous trifling with human life. But it devolves on every medical practitioner to endeavor by honest investigation to discover the truth, and when found, by an inflexible conscientiousness follow its teachings.

Since I came to this conclusion, I have sought instructions of institutions of a progressive character. I have perused volume after volume; still there appeared to be a void which was never filled up in my researches so well as when I read, a few weeks ago, your book on the system of "Vitalizing Treatment."

It appears to me that you have rightly opened the medical door, and I wish you every success. Most respectfully yours for truth and progress, DR. M. MCFALL.

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CASE OF REV. JOHN H. BROCK.

AN AGGRAVATED CASE OF BRONCHITIS AND LARYNGITIS COMPLICATED WITH LIVER COMPLAINT AND DERANGEMENT OF THE NUTRITIVE FUNCTIONS.

DR. ANDREW STONE:

MY DEAR SIR: It is with no feelings of reluctance, but on the contrary with a cheerful heart, for the sake of sick and suffering humanity, that I relate to you the following facts. Last June, I was attacked with chills and fever, which very much reduced my system. After suffering from the disease for a few days, I commenced raising blood from the throat and lungs. I was, of course, entirely unable to preach. I had, in addition to the above, a very torpid or inactive liver and constipated bowels, which made my case still more complicated. Naturally skeptical, I hesitated for a time, after being introduced *even*, by letter, through a clerical friend, to Dr. Stone, Physician to the Troy Lung and Hygienic Institute, about trying your treatment. Yet I commenced inhaling your cold medicated vapors. I followed your directions of hygiene carefully. In one month, I had greatly improved. I found my strength returning, and as that came back, the disease subsided.

I continued on, however, and in less than six months preached my first sermon without feeling any the worse for so doing.

I am now preaching once every Sabbath. My liver is much better, and my friends say that I have not looked so well for years. In fact, my weight is more than it has been for years. If I may be allowed to express an opinion of your system of medical treatment, I should say that it is in every way harmless to the constitution, meeting what seems to be the demand of nature, and also in accordance with common-sense. Hence it is *scientific* and progressive in its nature, and the effects upon the constitution in harmony with the laws of hygiene.

Hoping that this brief letter will prove beneficial in bringing you into greater confidence with *strangers*, and with all who may read it, and thus make you the means of relieving the suffering.

JOHN R. BROCK,
Pastor of the R. P. D. Church,
Spring Valley, Rockland Co., N. Y.

SPRING VALLEY, March 25, 1867.

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TWENTY-FIFTH SECTION.

METAPHYSICAL ASPECTS OF THE PHYSICAL AND ORGANIC LAWS, IN RELATION TO HEALTH, AND THE RELATION AND SUBORDINATION OF ALL DISEASES TO AFFECTIONAL CONDITIONS.

The secret of life—A motor—Spiritual ether—Continual change necessary to form life—The lily—Physical basis of life the same in vegetables, animals, and men—Material elements demanded—Man more attentive to the needs of the lower animals than his own—The mother's-mark not to be disregarded—The wail of feebleness teaches a fearful lesson—Who shall roll away the stone?—Nature's grand protest—Baneful effects of drastic medicines—Awful sacrifice of life by bloodletting—Eclecticism a great advance—The healer of the future—The medical *savants* in spirit-life are not forgetful of the needs in their chosen profession—The mother brings her babe for restoration—The exercise of the believing will necessary—Hunger signifies cause—Supply the want—Fling to the winds all compulsory practice.

THE Secret of Life," which is proving to be a problem too intricate for your profoundest men of science, may be best made approximately clear by this illustration: Your atmosphere is composed of oxygen and nitrogen. Wherever it is found in the minutest or largest expansion, there are the infinitesimal particles of the two elements. Thus the ether in which the conscious existences of the higher life abide is composed of two properties best comprehended by you as positive and negative. Infinitely minute yet perfect atomic globules, each enshrining a *motor*, which can be understood through your uses of the words attraction, affection, desire, although neither term gives full scope to our meaning, and only the essential significance of the three, wherein they are most nearly synonymous, approximates thereto.

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As each form of your life absorbs of the oxygen or nitrogen according to its needs or desires (again synonymous), so is drawn from the spiritual ether the positive or negative atom, with its ever-active motor, continually reaching after the element from which it is for the time abstracted. And this eternal attraction, affection, desire, produces the never-ceasing action which is life.

A perfect equilibrium of these forces is *inertia*. A continuous changing and interchanging, attracting and eliminating, produces the infinite variety of manifestation with which the infinite universe teems.

How divinely the pure white lily gathers unto itself, by virtue of this motor, from the dark crude soil, the sullen storm, air, light, and heat, atom by atom that which perfects it in its fragrant loveliness!

Place it where this native desire can not reach its fitting pabulum, and it fades, withers, is disintegrated, as the particles lose their positive power, and are drawn to other unmet particles to be absorbed by them, and, entering new combinations, to eliminate new forms of life adapted to the existing conditions by the same self-adjusting principle.

As the physical basis of life is the same in vegetables, animals, and men, so the indwelling motor that forces such varied forms from the protoplasmic cell floats equally from the great ocean of spirit for all, and the name we shall confer upon it, as condensed from affection, attraction, desire, is *demand*.

Contrast the two fields of the skillful and the unskilled husbandman, the luxuriant, luscious growth of vegetables, fruit or cereal, on the one hand, with the scanty, shriveled product of the other! And through what principle is the superiority gained? Simply by placing within the compass of this out-reaching attraction a due proportion of each element that responds to its demands; so much of heat, of light, of liquid phosphorus, lime, etc. etc. And he who fully learns to supply precisely the required properties produces, or rather *aids*, the perfect growth. Thus equally in the animal kingdom, the added functions and freer scope only causing the demands to be more extended and imperative. Thus far the consciousness of man has been partially instructed by all-powerful cause and effect.

But the next step taken, in the sublime height gained wherein that consciousness should reign supreme, is the sphere of the human, and behold its vision is obscured by the varied hues of the stained glass of tradition, superstition, fear, and ignorance. Attraction, affection, desire are doubted, enslaved, outraged. Bind the branches of the tree, and they are dwarfed or deformed. Deprive it of *sun-*

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shine, and it sicklies; of rain, and it withers away. Feed it with all requisites, and its magnificent, wide-spread boughs are red and golden with its perfect fruitage.

Do you listen in vain for the song of the bird, or wonder at its drooping plumage, how quickly you seek to know its native habits, its instinctive desires, and how eagerly strive to surround it with that which is most gratifying!

But alas for the higher organization, the human! "It is totally depraved," says the theologian. "Hence when it asks for the breast, give it physic," says the M.D., and no pleadings of hunger (*demand*) or moanings of protest save it from the outrages upon its native affections which commence before it beholds the light. "Give me joyous welcome!" cries the weakened protoplasm when penetrated by the positive life-atom with its enshrined motor. And the womb that has received it responds with angry tears of dislike. And as each attracting atom gathers from its surrounding material that which is to constitute its growth and consciousness, instead of being built up with thanksgiving, gladness, pride, power, anticipation, and aspiration, it is compelled, in its insatiate hunger, to feed upon fear, dis-
epining, and regret, and *too often overwhelmed with murderous*

s kind and philosophic to the highest form of earth-life than
, or beast, or vegetation, the demands of the new-born child-
ruthlessly disregarded.
ive me freedom!" is its second demand; "freedom to form
gan of a human body in symmetrical proportion." And the
are drawn tightly, the weight of drapery increased, and the
atings of the heart of the procreator are tutored to ignore its
e. "Give me abundantly of pure nerve-fluid, the psychic force
lies the finite to the infinite, that I may so *infill* that human
hat I may be a power, a benefaction, and a joy upon the
' it cries again unto its keepers. And lo! utterly regardless
nal interests at stake, the supplying fountains are befouled,
ed, exhausted in *sensuous excitements*, in material gratification.
ive me the calm repose of a contented exaltation, that my la-
ry may be a heaven and its creations divine!" once more it
o its surroundings. But its cares of this world, and "the de-
ness of riches," and tyranny of custom, and slavery of habit,
... all responses to its far-echoing petition in a Babel-like confusion.

The eloquence of the disfiguring mark, representing some unsatisfied craving, has been only partially comprehended, leading simply

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to a carefulness not to disregard wants of diet or of drink; but not accepted as an index to the cause of all mental, moral, and physical defects.

Hence the self-formative spirit ushers its new creation upon the earth-life stage of action dwarfed and unbalanced, every atom of its being plaintive with protest against the grand defrauding; when it might have been a perfect, artistic, human-divine, worthy to be called the son of God as well as the son of man.

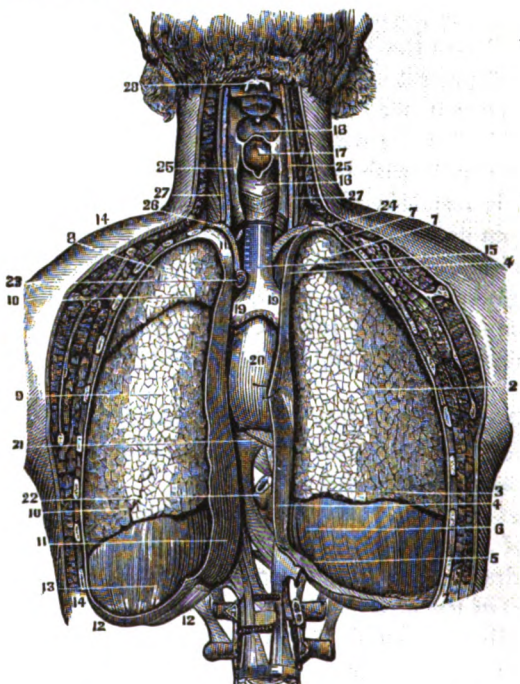


FIG. 78.—The posterior portions of the lungs, and below, the broad muscle that separates the chest from the abdomen, conveying the danger of compressing and restraining these organs, as is almost universally practiced.

The young child having made its *début* through agonizing compulsion rather than instinctive energy, the quick, eager, pleasurable pantings after the lacteal fluid, of satisfactory, healthful conditions, degenerate to the suffering wail of feebleness and starvation. "It is sick," says the careful nurse, and regardless of its native desires or protests, its stomach is forced to receive that which still further depletes its organization by yet another compulsatory, unnatural action; the organs intended to simplify and gently relieve the system of such

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material as had yielded up all needed properties being forced to drain the whole body of vitalizing elements by repeated purgation.

The lungs, struggling anxiously for the oxygen that is too often measurably excluded with the sunlight from their function; the muscles, feebly striving to assert and develop their powers; the blood, flowing with its freighted vessels of aliment through every channel of the body, *these are compressed*, restrained, impeded by the unwise swaddling, dictated by the caprice of any passing fashion.

Alas for the motor, the spirit, attraction, affection, desire, demand, imprisoned in each deprived atom of the beseeching being! Alas for the real needs so utterly unheeded! What shall respond to the far-penetrating cry? Who shall "roll away the stone from the sepulchre" of wisdom?

Every organ in common with the lungs, heart, and brain, has been constrained from its legitimate action, and thus is laid a broad foundation for the physical, mental, and moral defects denominated *disease*.

And yet you are at a loss to know why your race is more liable to sickness and premature death than the animals that do your bidding —why care and culture are less sure to perfect your children than they are to produce satisfactory results with the fruit-tree and the flower! Let us solve you the problem.

To a normally-generated, rightfully-balanced organization, with an unfailing supply for all its instinctive and intuitive demands, desire is an impossibility. But by the actors upon earth's stage to-day, perfectly normal conditions are unobtainable, and it is our purpose to treat of human interests from the stand-point of the present.

Of the inhabitants of my once beloved home, your beautiful planet, from extreme age to earliest infancy, every one is even now experiencing more or less of suffering and disease. And its surface is thickly dotted with the manipulations of medicine, morality, and theology, that are intrusted to the corrective measures against these growing evils, by its credulous inhabitants. "Break the will, and change the heart, and crucify the affections," exhorts the preacher. "Fine, imprison, and hang!" commands the judge. "Bleed, vomit, purge, leech, sweat, and blister!" counsels the physician; and "Robbery, robbery, robbery!" sighs depleted nature at each added outrage. Again we assert that *disease* is a deficiency, and not an excess, although its *manifestations* may be through some excessive action or accumulation. And the true philosophy of all cure is to supply the lacking elements and restore the original powers; any forced, unnatural action invariably being followed by an equally abnormal reac-

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tion which renders the "last state" of the victim "worse than the first!" Almost all cases of chronic diseases and life-long invalids are the result of drastic medicines, and not of original derangements; and could calomel become a conscious personality, it would be entitled to the very throne of the Inferno, for its fiendish subjugation of the physical interests of the human family. (See cut of salivated patient, page 12.)

The law upon which the allopathic mode of practice is founded is this: The self-formative, self-protective, self-adjusting power, which is the indwelling spirit, rouses with increased energy to repel all foreign destructive agents introduced into the system. Hence, if from some defect there is an accumulation of the waste substance which should be expelled through the appropriate channels; if the subject be over-bilious, or dropsical, or phlegmatic, the self-adjusting force produces fever to burn out the obnoxious particles. Then if there be a *poison* introduced into the stomach, the threatened danger is so much greater that the whole citadel is aroused, and the lesser evil, swallowed up of the greater, is combated with increased vigor, until both enemies are expelled, if sufficient vitality remains: but with a fearful expenditure of the native supplies of life-sustaining forces! The poor victim of a mistaken *materia medica* lies stranded, dismantled, helpless, until, little by little, the drained atoms can draw from magnetic spheres, and the vivifying atmosphere, and the eagerly craved diet, each exhausted property, and nature becomes herself again.



FIG. 79.—THE OLD MAN BORNE DOWN WITH ALLOPATHIC DRUGS.

It is as though you were slowly and wearily toiling upward with a burden too heavy for your strength, when suddenly it is doubled upon your shoulders, with the imperative necessity of reaching a certain point in the distance. With a mighty compulsatory effort of the will, you rush on with accelerated speed, but only the more quickly to fall exhausted by the wayside.

Or, as in the case of a civil war, the unalarmed government moves slowly and cautiously, confidently aware of its capability to subdue the traitors without harm or exhaustion to itself; but if a foreign power rush in to the aid of the authorities, every resource is violent-

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ly taxed to meet the new expenditure, without regard to suffering and devastation, until the enemy is effectually conquered. But the ravages of the so-called curative far surpass the injurious effects of the native disease.

Gradually the light of the true principle is dawning upon the schools. The champion agent of the false idea of heaping robbery upon robbery, the *lancet*, has fallen into deserved disrepute. And even the fact that *bleeding* was once an approved method of destroying life under the pretense of preserving it, has nearly passed from the memory of the oldest inhabitant.

But while it was in vogue, woe to any disciple of reform who zealously proved to the enfeebled victims that to deprive their physical body of its most important, life-sustaining supply was to destroy life, and not to save it. Even yet the sanguinary scenes of professional bloodletting fling a shadow upon the soul-life of its advocates and practitioners, filling them with increasing earnestness in their desire to introduce an *improved* practice based upon *logical* premises.

Bloodletting was only a more palpable robbery than the various remedial practices still extant ; and as increasing intelligence held it up to contempt, so continually are advance steps being taken—a blind reaching after the true philosophy.

Hahnemann made a great advance when teaching his followers to rely upon the secondary or reactionary effects of drugs reduced to infinitesimal doses, for its benefits desired, in the stead of the first violent result of huge quantities, invariably followed by conditions far worse than the original disease.

The reaction being salutary, no greater harm is done than aggravating by a very little symptoms already existing. And in many cases the true idea is touched, though not comprehended, as the *symptoms* in each individual case are only indications of nature's mode of cure ; to increase them in complete harmony with nature's plan is to aid nature in effort at self-adjustment.

The difficulty lies in making sure that poisons and deleterious substances are so fully understood that all their consequences are certain to be in harmony with nature's self-instituted action. As a corrective of allopathic misapprehension and depletion, and by substituting a mode of practice relying upon the secondary instead of the primary effect of drugs, and minute rather than heroic quantities, homeopathy has done immeasurable good ; but it has utterly *failed* of announcing hygienic law—of becoming an intelligent interpreter of nature.

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Eclecticism is the result of still further insight, an attempt to aid nature by supplying needed elements; unlike the schools before mentioned, successful just in proportion to individual comprehension, and susceptible of continual modification and improvement; not enslaved by arbitrary formulas of the past. But it is yet *superficial* in its scope; dealing with material atoms rather than spiritual forces, with effects rather than causes; partially understanding and reaching after the *true idea*, but not fully *en rapport*. Still further toward the light the *electrician* presents his claims as a medical reformer,



Fig. 80.—The Mother offering her Child to the Healer.

with vast advantage to the world. But, again, while wisely calling in one of life's vitalizing forces to remove obstructions and restore an equalized circulating action throughout the system, while striving to restore the equilibrium which is health, the practitioner falls short of the ultimatum in so far as he deals with unconscious material agents, to overcome physical defects, regardless of mental discontent and spiritual moods.

The *healer* of the *future*, the apostle of the new school of *restoration*, catches intuitively the cry of the unmet *demand* of the patient, and by so much as he is a developed medium for higher intelligent powers, is enabled to comprehend and supply it. *For the medical* savants *of the past are neither idle nor forgetful of their chosen profession*,

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and, pursuing their researches in the realm of *causes*, are acquiring the knowledge and the power to impart through the organism of the psychic just the required elements, whether spiritual, mental, or physical. He stands by the wayside, like the Nazarene of old, and, sustained by the influx from the higher life, "virtue goes out of him" down into springs of human existence, responsive to the imprisoned motor in each famished atom whose complaining call for proper aliment is disease.

An overburdened mother places her puling child in his arms. Poor child! who has ever given a thought to the struggles of its soul-life for recognition and sustenance? or has realized the least necessity for regarding its intuitive desires?



FIG. 81.—THE HEALER RESTORING THE PARALYZED, THE GOUTY AND RHEUMATIC.

He neither commands it to thrust out its tongue, nor counts the pulsations of its wrist; but folding it to his bosom, from his magnetic fullness he fills it with joyous strength and hope and love, teaches how to understand its varied wants, and judiciously supply them; and sends it forth with every organ quickened to perform its function, enabled to gather into itself a vigorous humanhood.

A young man wallows to his feet from the very slum of dissipation. So abjectly sin-sick, and sick of sin, that he can not choose but be touched with compassion, as he pleads for help to put on again the garments of an honored manhood. The controlling power casts out the debauching demons, restores ambition, faith, and self-respect, inter-permeates the entire being with high resolves, elucidates the effects of baneful habit, the consequences of disregarded law—and degradation is but the absence of positive good, as darkness is only the absence of light; by infusing the spiritual properties of all positive good he is "every whit whole."

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With beating pulse, and throbbing temples, and burning surface, a poor sufferer from pitiless fever next approaches the apostle of restoration. Again the magnetic hand is stretched forth, a medicated electricity passes from "the crown of the head to the sole of the foot," aiding the natural forces, first, to open the pores; secondly, to eject the secretions; thirdly, to equalize the circulation; fourthly, to repose in a refreshing sleep; and fifthly, to "*believe* and be saved." For, as the exercise of the *believing will* is necessary to call into action the appropriate organs to accomplish any desired purpose, so is the exercise of the believing will equally a requisite to the *reception* of the spiritual elements that shall render those servants of the spirit sound and energetic in their action. Thus believing, the dim of vision, the dull of hearing, the obtuse of touch or taste or scent, the lame, the halt, the palsied, are inter-permeated with the supplying ethereal fluid, quickening, cleansing, impelling and expelling, and more than all *feeding*, through the psychic vicegerent of the angel-world, all the exhausted forces.

The healer of the future will be prepared for his specific labor by a *birthright* of generous sympathy, of affectionate impressibility, of magnetic purity and power and spiritual consecration.

Already the voices "crying in the wilderness" are heard all over your planet; already the glow and sparkle of health and happiness is lifting up the features long pallid with hopeless suffering, induced by an unenlightened *materia medica.*

Already are the vivifying rays of the sun, the exhilarating forces of a varied atmosphere, the purifying power of ocean, spring, and shower, the constructive capability of a well-ordered diet, and the proper equalizing of the clothing and warmth of the body, becoming topics of discussion, interest, and faith to the superseding of an ignorant *swallowing of drugs.*

Already is the fact dawning upon the consciousness of the progressive that the suffering can obtain instantaneous relief, the exhausted immediate rest, and the despondent sudden hope, faith, and joy by sympathetic association, or even entering the sphere of those whose spiritual development and physical organization abound with "virtue" that went out from the Jesus of Nazareth.

Already very many have been released from the apparent clutches of death, raised to hygienic enjoyment never before experienced, by the touch of the healer and the control of the disembodied; and this beneficent provision of the infinite is too needfully desirable to be disregarded: thus the ratio of approach unto the *true idea* will be as the ratio of the accelerated speed of falling bodies, by the law of gravitation. Therefore, ye who first have clambered upward into

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the rays be not disheartened, though the multitude hear not now your voice. More persuasive voices than yours will soon reach them through intuition and experience.

"Hunger will break through a stone wall," asserts the ancient adage, and disease is the breach in the wall which it is useless to repair until the assailant is opposed.

Food for the bone, food for the muscle, food for the blood, food for the brain, food for the mind, etc. etc., until all that constitutes a perfect human being is abundantly supplied, is the continual demand or *hunger* that may *not* be disregarded with impunity.

Feed the child with that which does not properly build up his whole being, and if he gorge himself to his own hurt, it is the unappeased hunger that is the cause; the *excess is* but the *effect*. If the *quality* is adapted to the *need*, the quantity craved will never exceed it. But the longer and the more arbitrarily the required property is withheld, the more clamorous is the want, the more desperate the effort to meet it, and therefore the more dangerous the excess. And what is true of the child is equally true of the adult, while each dearth and excess has continually widened and deepened the "breach" in the wall, and rendered the assailant more formidable. Every additional surfeit having caused an exhaustion of vital forces that lessened the control of the will, and increased the vehemence of the craving by producing conditions requiring still larger supplies of health-restoring material.

And however unfortunately balanced the brain may be, the same law holds true. Its demands are legitimate to its formation.

The ravenous beast is no longer ravenous, but tame and passive when thoroughly satiated. And would you teach the lower to do the bidding of the higher, it must be by approaching and controlling it when in a passive state.

Therefore, we would say to the theologians, "Break not the will, but enlighten and crown it!" And to the judiciary, "Remove temptation by supplying needs, and substitute early culturing kindness for later punishment." And to the physician, "Supply or instruct your patient to gather all that flesh, and blood, and bone, and muscle, and nerve, and brain, and *soul* require, and fling to the winds all depleting, compulsatory practice."

Thus shall the mental, moral, and physical deficiencies gradually be restored, and resulting disease grow less as affection, attraction, desire, demand are indicated and respected, until "the kingdoms of this world," mineral, vegetable, animal, and ethereal, are become the kingdoms of the children of men.

JOHN ABERNETHY.

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TWENTY-SIXTH SECTION.

HEREDITARY DISEASE ERADICABLE BY THE "TRUE IDEA" HEALER.

Power of habit over nature—My moderate glass does not hurt me—Tobacco does not hurt me—Opium does not hurt me—Strong tea and coffee do not hurt me—Tight lacing does not hurt me—Procreative powers impaired—Nature pays no interest except on accumulated capital—The exercise of a part strengthens a part—The dyspeptic lady—The bowed-down old man—Bad liver—Pills and physic thrown to the dogs—Magnetism and magnetic sleep substituted—Hereditary scrofula—Allegory of temptation—Sad cause for deficiency of nerve-force—A mighty resolve to be clean—A grand ambition to make the body a fit temple for the immortal spirit—No drug can reach, no priest console—The queenly MONARCH, Health, only waiting to dethrone Habit—I have not long to live—You must live forever—The engine reversed—A grand resolve—Nature a most beneficent mother.

IN a preceding dissertation we explained that *disease* is a *defective condition* of the organs, fluids, or forces of the being; and that its symptomatic manifestations, as pain, fever, lethargy, etc., are the self-adjusting struggles of nature—an index to the deficiency; that the "True Idea" of *healing* is *restoration*, and a supplying of those properties the absence of which is the cause of the derangement; that the "Healer of the Future" is a rightfully organized psychic, so susceptible to the influence of the higher intelligences, the disembodied human beings, that they can impart just in the needed proportion, through his agency, the spiritual properties of all substances, and the vital forces of all life, to those who believe in and accept his ministrations. While that condition is but partially attained, the healer must necessarily rely upon the co-operation of the patient, in seeking for himself

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the material to supply any organ or force, whose normal measure is not full.

That he may do that effectually, he must be able to analyze and suitably adapt the diet and drink, the atmosphere and magnetism, of his patient to his needful conditions.

If the derangement is recent and its symptoms acute, nature is quick and energetic in her recuperative efforts—the required changes plainly indicated, and the desired results easily produced. But if the deficiency be transmitted and the disease *hereditary*, the very self-adjusting property of nature becomes itself an ally, and an abnormal "second nature" is induced, that is dangerously quiescent; as the most alarming form of disease is that wherein it gains insidiously upon its unconscious victim, and makes no demonstrative sign. An illustration of this latter proposition is found in the pernicious habits of using stimulants or narcotics. "My moderate glass does not hurt me!" exclaims the middle-aged drinker. "I have taken it every day for thirty years, and am none the worse for it." And yet for twenty-five years he has been kindling in his whole being that which slowly and surely has been burning out his native constitutional powers, until they have no strength to protest against the mistake; and without warning he falls at last, overcome of some attack at which nature would have laughed if left in possession of her faculties.

"Tobacco does not hurt *me!* I have used it from boyhood!" insists the inveterate smoker and chewer; and yet an invidious enemy has foully subjugated the entire citadel of his person, and all its operating servants are abject slaves, not to their original gracious monarch, Nature, but to a wretched traitor, whose every emanation is a *disgust* to the truly pure.

"Opium-eating does not hurt me!" contends the doomed devotee of this vice. "It is meat, and drink, and rest, and satisfaction." And even while exclaiming, destruction of mind and body is in rapid progress.

"Strong tea and coffee do not *hurt* me; they sustain me through miracles of effort that I could not possibly endure without their aid." And even while the speaker speaks, the throbbing brain and trembling nerves and sleepless pain, are revealing the "trail of the serpent," all the way of the life-line.

"Tight lacing does not *hurt* me!" is another weak assertion; while a growing imbecility, *both* of body and of mind, proves itself most fully by the fact that it is not realized.

All these are examples of nature overcome, and the substitution

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of a vitiated *second nature* whose cravings should *never* be mistaken for the healthful affections of a normal development. *Resulting from such pernicious habits, and the impaired procreative condition occasioned by them, is hereditary disease.*

The grand difficulty in removing, or rather repairing, it consists in the fact that nature is in a degree overcome, and fails to cry aloud for the natural remedies. Such being the case, the instinctive and intuitive demands of a well-balanced, healthful organization must guide to the gradual supplying of the deficiencies and elimination of the superinduced second nature.

"*Consumption* is hereditary in our family!" sadly thinks the anxious mother as she carefully guards the life of the precious first-born, fearful of the summer's heat and the winter's cold. Bearing his burdens, she unwisely pampers an indolent effeminacy, until, breathing in the atmosphere of foreboding solicitude, he is indeed overcome, as nature pays no interest except upon accumulated capital.



FIG. 82.—DYSPEPTIC YOUNG LADY.

"He came of a consumptive family!" infers the "True Idea" healer, as he observes the narrow chest, and pallid lip, and lingering pace; and he places him among the cheerful, the active, the strong, and encourages him to imitate their robust appetites and habits, teaches him to expand and exercise each enfeebled organ, and *feeds* him with all that can build up blood, and nerve, and muscle; and above all, stimulates *faith*, *hope*, and *courage:* and the restoration is a certainty. It is the exercise of a part that *strengthens* the part, always supplying all needed properties to sustain every effort. You recognize this principle in your care for your animals, adapting the contents of the crib with observant wisdom to the bearing of burdens, the flying of races, or the recuperative rest, ever conscious that persevering use is a requisite of increasing power.

Here is a young lady constitutionally dyspeptic. The drooping "second nature" inclines her to shrink from the open air, and cold water, hearty diet, and active exercise. She compresses various parts of her body, impeding circulation, loads some parts with clothing, and

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leaves others thinly protected; sits in enervating gases of a furnace-heated "register;" burns out all healthful sentiment by the constant, sickly excitement of sensational fiction; and grieves that *hereditary disease* is incurable. Our healer bids her take long, *useful* walks that shall exhilarate the higher faculties of the mind as well as the powers of the body; to confine herself to the plainest and most nutritious articles of diet, varying and increasing in strict accordance with the healthful appetite wakened by profitable fatigue; but most strictly to refrain from urging, tempting, or stimulating it when indifferent, or capricious, or trespassing upon the stomach's needful, well-ordered rest.

Yonder lies a prematurely old man—an invalid of more than a score of years, haggard and discouraged with intense suffering! "Hereditarily, and therefore incurably so"—he confidently tells you; and the healer interrogates him as to his practiced methods of attempted recovery. "My liver is *bad*, so bad that I am compelled to take *calomel* frequently. My kidneys do not properly perform their functions, and I make constant use of *digitalis*. I am so *weak* that I am *compelled* to use stimulants freely; so nervous that the most powerful anodynes can scarcely give me rest." With the might of a generous sympathy and overshadowing spirit-power, he seizes him by both attenuated hands to pull him from the hill of wretched habits into which he has fallen. "Are you strong?" he asks, "brave, and strong, and persevering? Can you endure a tithe of what you have suffered in the *descent*, for the sake of *regaining* what you have lost?" Then he casts into the fire—less fierce than those they have kindled—the instruments of torture and dissolution that have flattered him with false hopes; of which each had begotten the necessity for the others—the purgative for the stimulant, the stimulant for the nervine, the nervine for the diuretic, and they again for the favorite mineral of the profession, in a continued rotation, ending only in entire destruction of all nature's provisions for sustaining the operations of human life. The treacherous poisons con-



FIG. 83.—THE PREMATURELY OLD MAN. "MY LIVER IS BAD."

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sumed, the process of *reconstruction* commences. Oh! how slowly and painfully she gathers up the broken threads, rearranges warp and woof, adjusts her loom, and plies again the shuttle of human life.

With persistent lovingness the healer passes his magnetic fingers soothingly down the nerve-centres of the vertebra, to restore from his own nerve-forces the loss occasioned by the use of stupefying drugs the reaction of which redoubled the uneasiness. Oh! oh! how long and patiently he labors; for the sufferings through the artificial craving are pitiless indeed. But at length magnetic sleep, most blessed physician, softly but firmly holds the pulses of the patient. *Not* the locking-up of the external faculties, while intensified thought in troubled labor struggles with the grotesque or the terrible, until the later weariness continually exceeds the first; but calm, sweet forgetfulness, which refreshes body, soul, and spirit.



FIG. 84.—MAGNETIZING.

Magnetic sleep! that brings the whole being en rapport *with the angel-world, and feeds it from the exhaustless forces of infinite spirit!*

Then the slow cleansing and renewing, by *sunshine, air, water;* the rejuvenating by fresh *inspirations* and *aspirations;* and the mighty awakening of a righteous will. How wearisome and laborious are the processes by which the broken bone is joined together in nature's wonderful laboratory, each atom joined to its appropriate atom, and all fully restored to original uses! So wearisome and laborious are the processes by which each of these defective organs is recuperated, atom by atom, until the wheels of time turn backward, and, buoyant with more than the fire of younger years, with an *intelligent* instinctive health, the sometime invalid breaks the prison of "hereditary disease" and slavish habit, and "Richard is himself," far more than his former self, again.

Hereditary Scrofula, what a terror it has been to many and many a heart! How many have seen loved one after loved one sink into an untimely grave, of lingering disease accounted for by that terse sentence! How many have lost heart to hope or strive for vigorous health by discovering its relentless signs, enlarging joints and increasing glands, or labored breathing, or cankered membranes! And

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yet that, too, is subject to natural law. The "Puritan Fathers" have been strenuous in claiming all the duties of children. Alas! that they failed to instruct parents with regard to their duties to their children.

As it would seem that a supreme power constructing vessels of clay, endowing them with the *necessity* of suffering or enjoyment, whether they will or not, and *compelling* an eternal existence, from any conscientious stand-point would be considered under highest obligations to make that existence tolerable; so fathers and mothers violate all honorable sense of responsibility if they force upon children a life, all too meagre at the best, and fail to do their utmost to render it acceptable. And yet every additional example of scrofula is a verdict of *guilty* against fathers and mothers, an evidence of disregarded obligations.



FIG. 85.—GOITRE OF THE NECK OR THYROID GLAND, SHOWING HEREDITARY SCROFULA.

Pitifully enough, the pedigree extends farther back than the "oldest families" can boast, and the "coat of arms" never needs reburnishing, as it becomes more and more conspicuous in each succeeding generation.

"In the beginning" it was by disregarding the natural law of *reproduction;* by an undesired *exhaustion of nerve-force* that should have fed the new life, and a consequent psychological impress, passional irritation.

In the second step, it was the attraction of one individual, thus *deprived* of *self-controlling will*-power, by a deficiency of nerve-force, and *abnormal* cravings, for another similarly organized, and a *second* generation inheriting a two-fold proportion of like propensities. And so on and on, down an inclined plane, until "the third and fourth generations," when excesses and abuses too often will have culminated in loathsome disease—*white-swellings, fever-sores, lung complaints, a suppurating disposition all over the body,* often modified by a mingling of pure blood and healthful nerve-fluid, more frequently aggravated by like attracting like.

A mighty resolve to be clean!

The healer finds his task, in the most deplorable cases, a truly arduous one. First, he must arouse a mighty resolve to be *clean.*

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And since the will-power has become so enervated, he must from his own psychic force *supply* the capital stock of the renewing resolve. Then, by winning encouragement, he leads his patient to vigorous abstemiousness from all exciting or stimulating habits of living or of thought; a plain, spare diet, active exercise in the open air, vigorous friction and bathing of the entire surface of the body, to induce energetic circulation that shall remove all obstructing impurities, and a careful supplying of all exhausted elements with health-restoring material; while making sure that the waste matter of the system is removed at the proper times by the natural processes.

A grand ambition to make the body a fit temple for an immortal spirit, is the first great requisite of soundness, and purity, and a harmonious life.

The healer's only hope of success rests in his capacity of awakening that ambition, and sustaining its active operation, through the



FIG. 86.—THE BREAKWATER.

long scenes of trying effort necessary to the restoration of this class of patients. But it is a choice between a living death of continuous suffering and incompetency, which no drug can reach and no priest console, and a conquest, greater than the armies, over the pursuing foes of ages, which constitutes him at least the saviour of himself and possibly of many to follow after him.

It is the rearing of a breakwater against inflowing tides of degeneracy, well worthy years of fortitude and contest. O ye scrofulous of to-day! apply to the healers who alone can aid you in your self-restoration, and, patiently striving until nature is re-established upon her throne, obey her highest law, and give to the world a future race of untainted men and women, of conscientious fathers and mothers, considerate of the *rights* of their posterity; of men and women with their "second-sight" so intensified that they can look

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backward and forward, and learn wise lessons from the sorrows of time; and who, tracing the fearful law of *consequences*, will never dare *lightly* to invoke from the realm of the unknown an immortal human consciousness; but holding in such reverence the highest office of procreation, that all other interests and emotions shall become subservient to its infinite importance. Down brakes, and re-

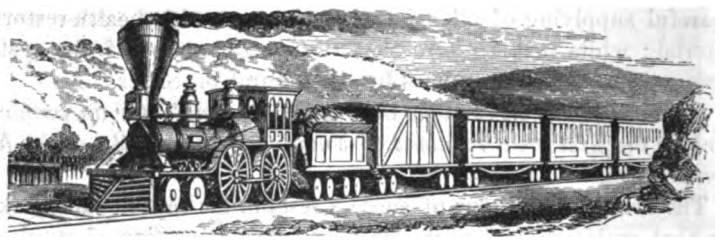


FIG. 87.—DOWN BRAKES, AND REVERSE THE ENGINE!

verse engine! and however rugged the ascent, clamber higher and higher, until you have combated and conquered every habit that causes a deterioration of the human race.

Without this radical reconstruction of motives, activities, and habits, upon a truly rational basis, the quieting of suffering, often mistaken for the cure of disease, is only the cutting back of its buds to give it a more hardy and vigorous growth. Especially is this true if the suffering be quieted by suspending natural action, and blocking all the wheels of life's conscious machinery, as is the approved mode of dealing with the great schoolmaster, *pain*. And the more inveterate the practice, the more quickly will the upas overshadow the whole being.

It is in the circumstance of hereditary disease that the *necessity* for the official aid of the "True Idea" healer is especially manifest, as it is only then that nature is inefficient; and inefficient there only because she has been subjugated or turned aside from the normal exercise of her powers.

The engine may be whole; the water in the boiler, and the fuel properly adjusted; unless the spark is duly applied that kindles the flame that produces the steam, which is the motive-power, the train remains helplessly *inert*. So the capacity for self-restoration may not be hopelessly destroyed: the queenly monarch, *Health*, may only wait for the dethroning of her rival, *Habit;* her suffering subject may be groaning beneath the usurper's burdens, and long to return to his rightful allegiance; but he has become so much the slave of the existing tyranny that some electric spark from the altar of a loyal life

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is absolutely needful to the kindling of the glowing fires of faith hope, pride, and resolute determination, which alone can produce the motive-power sufficient to proceed to the desired end.

"I shall stay but briefly at the best. My anodynes, and stimulants, and appetizing dainties render life possibly supportable; and why not languidly slide down the hill, though the thorns are lacerating all the way? I *can not* fight the dreadful battles with this 'second nature' that must be to subdue it, for I have no courage left." So think and feel the millions who are constructing hells of suffering imbecility for succeeding generations.

"You have not long to live"? Why, you *must* live *forever!* and the longer you go *downward*, the farther and more difficult the ascent to the serene heights of self-approbation.

"You have no courage left"? Then let me fill your empty cup from the overflowing fountain of my own enthusiasm, saith the "True Idea" healer; and it is a real substance from an abounding vitality that he imparts to every faltering atom until the weak are strong, and the coward brave, and the "engine" at last reversed, the spark applied to nature's reserved supply of fuel, and the train moves onward—slowly—laboring against head-winds at first, scant of motive-power at first, shaken by every obstructing obstacle at first, puffing, and groaning, and swaying, with its mighty efforts at the first; but gathering power, and gaining speed, and assuming majesty of invincible determination as it gets fully under way.

In co-operating with the healer for the eradication of hereditary disease, the patient should become assured of the changes really needed to restore normal conditions; of climate, of atmosphere, of water, of diet, of rest, of exercise, of recreation, of magnetic states, of social surroundings. This knowledge gained, whenever he finds the power of habit too extreme for his strength of will, whenever he finds his power of body too severe for his fortitude of mind, whenever he finds himself failing to walk in the light of that knowledge, then let him be sure and hasten to the *healer* (the council fire), to be impressed anew with horror for the conditions of the past, and a grand resolve to dignify the body, as the only means of eventually glorifying the spirit.

Nor is it upon the principle that "sacrifice" of offering is meritorious, or self-denial a virtue, that he thus rigorously perseveres in a sublime self-control.

The fury of the battle will render the peace gained by eventual conquest a very heaven of content.

The alterative effect of each self-denying abstinence will give a

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new relish to viands no longer harmful, a compensating zest to natural appetites, and a heartier appreciation of health, and purity, and self-approval than *could* have been enjoyed but for the fiery ordeal into the crucible of which his nature has been cast.

"I do not believe so much in contest; I think *nature* about *right*." Reverently we observe, "Yes!" But it is the deformities and sorrows of hereditary defects against which we contend; and the more relentlessly we assail them, the more worthy are we to become *her* hand-maids and high-priests; the more shall we flourish in the sunshine of her smiles, the more luxuriantly *grow*, full-fed from her bounteous table.

But how to distinguish between the genuine and the counterfeit! between the rightful, gracious sovereign, and the low-born usurper!

By a close analysis of cause and effect.

Whatever lowers the standard of physical purity, beauty, and strength; whatever detracts, by never so little, from the highest sense of honor, self-respect, and magnanimity; whatever retards in any degree the fullest intellectual and spiritual unfoldment, is the outgrowth of hereditary defects, and is to be treated as the abnormal second nature, resulting from hereditary defects. Every practice of the life should be thoroughly assayed by each individual long before it becomes a *habit;* for *then* he will mistake the voices, and too often listen to the deadly foe, and think it the voice of the true friend. Oh! how wretchedly nature becomes subjugated before she will cease to cry out against tobacco, alcohol, opium, and the various outrages of custom and fashion! And alas for the traitor to her laws, when her voice is finally hushed, and he listens to the importunities of habit! But she is a most beneficent mother, and the children who listen to her voice and are instructed by the discipline of pain and sorrow, although sadly warped by pre-natal mistakes, will be safely guided back "to the green pastures, and beside the still waters" of her ever-delightful domains. And her voice is never more persuasive than when the *healer* approaches. What a gentle hush of calm content, of delicious *restfulness*, of hallowed joy, steals over the satisfied senses when receiving the spiritual influx, even from "the hem of his garment"!

And each increase of development intensifies this susceptibility and appreciation. The dividend on the bank stock of nature is *continuous*, with wonderfully increasing ratio. Innumerable instances of entire eradication of hereditary disease by this gradual returning to normal conditions through the aid of the healer are already known. Individuals to whom life was a burden, who had sought all through

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the domain of drugs and artificial appliances, and been "nothing bettered, but rather made worse," made whole by a brightened hope and strengthened will-power, and received vitality; a firm overcoming of evil, and a healthful supplying all health-restoring demands. And there can be no *miracles* performed! It is they who expect some marvelous display of *unnatural* action who are disappointed; not they who are willing to "dip in Jordan seven times."



FIG. 88.—A PLUNGE-BATH IN THE SEA.

The simplest methods of restoring deficient particles or elements are not to be despised. A walk in the open air, a plunge in the sea, a draught from the mountain or mineral spring, subsisting for the needed time upon fruit, or fish, or unbolted meal, just what is most requisite to supply the lacking property, or that which *fails* to feed abnormal appetites. In referring to the inefficient efforts of cure, we only include those acting upon the false basis of *depleting* instead of *replenishing*. The higher life has impressed many a noble soul yet in the form, with curative measures of untold benefit.



FIG. 89.—Inhaling.

Take, for example, the "Inhaling Tube," and "medicated apparatus" for breathing pure medicated vapors into diseased lungs, of ANDREW STONE, M.D., which supplies the lungs with nature's own ingredients, as they could in no other way be reached.

(See further illustration and description in section "Consumption," page 76.)

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It will yet become one of the supplies of each household, as people learn that *health* is the one great requisite of happiness, the foundation-stone of all human excellence and achievement, the one thing needful, possible, and an uncompromising *duty*.



FIG. 90.

Take also the magnetic inductor, where its quick, powerful action may overcome *torpidity* or *paralysis*. Take any and all means to *restore*, that have not the first or secondary effect to weaken or destroy; relying, O immortal! upon the divine life within and above you, to impel you to never-tiring efforts to render the body a fit temple for the pervading presence of the wise and noble, the tender and true inhabitants of the more satisfactory sphere whose brightness is round about you alway.

JOHN ABERNETHY.

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TWENTY-SEVENTH SECTION.

SYMPATHY THE "TRUE IDEA" OF HEALING.

The true healer is born—Jesus the prince of healers—The agonies of Gethsemane no fable—Diagnosis intuitive with the true healer—Diseases induced by the law of sympathy—The most energetic will degenerate if his powers are not used—Negative condition dangerous—The law explained—The positive physician or nurse seldom takes the disease—Doubting, boding people should not nurse or be with the sick—Perfect harmony between patient and healer should exist—Insane people should never be shut up together—Insanity cured only by right magnetic conditions—Jesus cured the insane—The same law now exists—Young and old people should not mingle together—The law—Error of husband and wife sleeping in the same bed—The young child should not sleep with an aged or negative person—Danger of young marrying the old—A sympathetic healer injured by absorbing tobacco and opium from the patient.

THE "True Idea" healer is *born*, not made! He inhales and exhales the virtue which emanates from Jesus, the prince of healers, with his first demands upon his native element; and gives ample occasion to his own "Madonna" to "ponder" wonderful things "in her heart." Waning matrons delight to enfold his tiny form in their arms, to rejuvenate upon the nectar of his life, the balm of his breath. Sickly children reach out for the dew of his moist palms, brighten in the warmth of his smiles, and sit down strengthened and contented in the *aura* of his presence, all unconscious of the principle or power that attracts, overshadows, and enthralls them.

Are any sad? his full eyes glisten with pearly pity while yet their own are dry; and he laughs with glee among the joyful, even though they give no outward expression of their self-gratulation.

Whoever may be gathered together, all wait for the *one* satisfac-

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tory footstep. Whatever voice is heard in relating opinions or occurrences, *all* listen for the *one* contenting tone.

There is a hush and hum of concentrated will, of successful effort, of restful, pleasurable *life* of which he is everywhere and always the pivoted centre. Do we speak of a human prodigy? By no means. Every gathering of unrepressed childhood supplies a more or less perfectly developed representative of our model.

Enviable? not wholly so; for "he takes your infirmities and bears your sicknesses," sinks with your despondency, falters with your weakness, and is poisoned by your impurity; the great antitype of the scape-goat bearing away the sins of the multitude into the wilderness of his own interior conflicts.

By so much as others are refreshed, to the like extent is he laden with burdens not his own, which ofttimes impel him unseen and unheard to give wild vent to sorrows that come he knows not whence or how, and to shrink dismayed from moods and impulses that have no hidden spring in his own ingenuous nature. The agonies of Gethsemane are no fable, neither confined to the one worshiped hero of an obscure past.

Yet by the very nature of the genus to which he belongs, and perforce of his appointed mission, he is *content* to walk with unwashed, bleeding feet through dark, treacherous ravines of trial and disease, if he have only safely bridged them for the pleasant passage of the many tender and unwary ones, who never dream of the *cost* of their immunity from peril, as they gaze upon the calm serenity of his uplifted brow or *feel* the dauntless energy of his beneficent spirit.

Happy the age and the people that shall recognize, understand, and benefit by him from "the beginning;" strengthening with his strength and growing with his growth; enkindling anew the dumb embers of their chill benevolences at the ever-genial flame of his glowing enthusiasms.

To-day men presume to rebuke and condemn him for that very diffusive sympathy that is salvation from disease, that exuberance of life-fullness that is feeding the hungry with his flesh and his blood; and the serpent-tongue of detraction darts its venom at that which it may well fear, since it will in time banish *it* from society as effectually as St. Patrick performed that office for other snakes of the "Emerald Island."

He needs not to diagnose disease, babbling with learned ignorance of spines, and livers, and diaphragms; he *feels* the pain, the uneasiness, the defect that is reaching out for the needed elements, the

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required particles which it is his province to supply, and can recount to you far better than you can relate to him, all that nature's voices of warning or entreaty are causing you to endure by your denominated aches, pains, sickness, or disease.

Not only does *he feel* them, but suddenly *you* find them relieved, and yourself "every whit whole." You make no heroic effort to expel by violence the darkness and the cold, you admit heat and light, and they are gone already. Thus it is needless to attack the organs of the body as traitors and rebels, who must be coerced into performing their legitimate duty; by supplying the native forces through this wondrous sympathetic interchange, the whole machinery of the mysterious human mechanism moves harmoniously to the desired results.

Nor is it the *body* alone that is replenished; rather is the mind first quickened to its normal tone through the grand equipoise of this sympathetic, natural-born healer, and its power over the body renders the second process only normal. A majority of all infirmities, indeed, are induced by the same law of sympathy, because not understood and fully developed.

Here is one with a birthright inheritance of the healing power, who knows nothing of its laws, or even of its existence. He takes upon himself the disordered conditions of those who are *en rapport* with him or magnetically attracted to him, and exercises no effort of the will, no intelligence of the mind, to regain an equalized circulation.

In the mean time the magnetic vital forces which, *understandingly employed*, would be constantly refreshing himself and others, are becoming like stagnant pools from disuse, instead of limpid, gurgling streamlets, which they should be. Thus he, *naturally so powerful and positive, becomes pitiably negative, and subject to accumulating ills.*

All around you are examples of this sad result of undeveloped natural gifts. Let the best practitioner of sympathetic healing refrain from exercise of his powers, at the time of his most perfect physical equilibrium, strong, robust, hopeful, happy, and he will rapidly degenerate into the dyspeptic lassitude that will render him an easy prey to all sufferings of those who surround him.

Let the asthmatic, lymphatic, nervous, quiescent psychic be compelled to treat vigorously and scientifically half a score of sick people each day, and he will soon find a renewed life tingling through every fibre of his being, and becomes vitalized from the crown of his head to the sole of his feet.

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But you may ask, how he shall learn to employ his gifts scientifically. How does the young bird learn to fly? There is a natural instinctive guidance, if we will but follow it. It is *use*, continual practice, in accordance with these intuitive impressions, that *explains* the *science* hidden therein. Observe such a born healer as we have attempted to delineate, and you will find him as soon as he can totter to the side of any one in pain, patting with gentle hands and murmuring with soothing tones until the sufferer is quieted. The only difficulty is in the cultivated incredulity and repression.

The child who is thus endowed above his fellows is too often made to feel that he is "a strong child," subjected to ridicule or reproof, or, at the least, treated with no recognition of his powers and acknowledgment of his success.

Hence he endeavors to re-cast himself into the same mould that has given shape to his companions, and his inheritance wastes away.

Whoever of any age, station, or employment, feels this impelling desire to hasten to the suffering with such efforts at relief as are a spontaneity, should religiously obey the sacred voice of a higher nature both for his own sake and humanity's. Otherwise, he, too, will find some mysterious disease from some unknown cause sapping the very fountains of his life. For this sympathetic condition reaches beyond the material life. And whoever thus becomes negatively inefficient assumes an attitude peculiarly favorable to obsession.

Here is a weak one just released from the material form, whose maladies had been petted and nursed, until they were a cherished part of his existence. He is not able to emerge from that abnormal condition at once, yet he can find no field for its indulgence among the disembodied; therefore, through the natural law of "like to like," he gravitates unto such a defenseless organization; and the well-enlightened seer after he beholds these darker spirits reproducing the old maladies upon patients who do not dream of the origin of their pain, and who can only be relieved by instructing them to come in sympathy with healthful, active, well-balanced intelligences. And how can this result be produced? In the same manner that you would encourage a child in its first attempt at locomotion. *Infuse self-reliance*, courage, ambitious energy, into both the embodied and disembodied. The healer will baptize both into a powerful magnetic spiritual buoyancy until the lame man shall leap as a hare and the insane become clothed and in their right minds.

The phenomena of infectious diseases result in a great measure from the same law of unemployed sympathetic conditions. It is not the zealous nurse or the forcible physician who falls a prey to them.

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They who, without fear or dread, exert every power to throw off the disease from others, with an overmastering faith that they shall succeed, are sure to stay its progress and remain unharmed ; while those who become panic-stricken, and, making no mental effort, *expect* the worst, realize the fullness of their expectations.

Of course cleanliness and purity, and all wholesome conditions, are presupposed as indispensables, in every case to which we refer.

Let every one who harbors a doubt of the recovery of a patient or the success of a treatment, overcome it with positive hope, if possible ; if not, they should remove themselves so far from the scene as to leave no shadow of their want of faith behind them.

For this principle of sympathy is so subtle that that doubt will increase and multiply itself in all minds and become a positive power in active contest with the angel of healing whose brooding pinions can not penetrate this antagonistic element. Let every one who is indifferent to the patient also withdraw, as the presence of such chilling natures in the atmosphere of sympathetic healing is like a cold draught through a sunny parlor, overcoming all the vivifying warmth.

One grand law always to be sacredly regarded is this : *there should be perfect harmony and affectionate attraction between the healer and the patient.* No one should ever permit the treatment of a healer, however successful in other cases, *whose presence is irksome, whose touch is unpleasant, or whose efforts produce weariness ;* for the existence of such emotions proves conclusively that the true sympathetic relations necessary to beneficial results are not established between the two. *This necessity of adaptability between healer and patient can not be too strenuously insisted upon.*

The great truth that *all* are healers unto all such as are cheered, brightened, and stimulated by their presence, can not be too persistently inculcated. The stern reality that the weak, diseased, may fatally prey upon the sympathetic who do not understand the necessity of becoming positive to them, and the method of throwing off disease, can not be too authoritatively asserted.

The approved fact that no individual can be continually surrounded by, and acting in, presences and conditions that are repugnant to his highest nature, that torture his finest feelings, that oppress and depress him, without deteriorating *physically* as well as mentally and spiritually, and eventually becoming a confirmed invalid, should be made so effectively apparent as to open the prison-doors of all thus circumstanced, and convict them of crime if they persist in such suicidal permissions. For this sympathy is a transforming power,

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modifying every living creature to the similitude of its surroundings, in a greater or less degree.

Hence the manifest folly of shutting up together the poor unbalanced brains of the insane. A perfectly sane, sympathetic person placed among them would soon become the veriest madman of them all. What hope, then, of restoration where there is every thing to aggravate the condition, and nothing to overbalance it? The majority of those confined in mad-houses were first weakened by ignorance of psychological laws, and negatively sympathetic; then, oppressed by some disappointment or physical derangement, they attracted to themselves spirits equally unfortunate, and each increasing and aggravating the maladies of the other, they are eventually incarcerated within the very influences which are most deleterious, namely, with other poor creatures in the same pitiable condition; and thus, as the mountain streamlet becomes at length a mighty river by combining its waters with other rivulets no larger than itself, so the comparatively trifling evil becomes overwhelming by these manifold complications.

We hesitate not to assert that the harmonizing influence of a fully developed sympathetic healer, one who is magnetically attractive to him, and undisturbed by any opposing current of thought or feeling, will quickly restore him to the right use of his reason. And it is, indeed, time that the attention of an enlightened age was forcibly called to this momentous subject.

The restoring of the reason, or "casting out devils," was one of the chief of Christ's labors of love, one of the evidences of his embodied Godhead. And yet, who accepts the glorious prerogative of becoming his true apostle in this most commendable work? since He came not to destroy the *law*, but to fulfill! This also was accomplished through adherence to the law of a well-balanced mentality.

That law is not abrogated, and the time is swiftly approaching when it will again be understood; when the first approaches of insanity will be followed by untiring efforts to place the victim—not among hundreds more crazy than himself—but under the control of some loving, pitying magnetizer, who shall so readily enter into his needs and supply them, take upon himself the darkness, and fill the overburdened mind with rest and light, that the danger is scarcely realized before it is forever overcome! But you will tell us that the insane grow rapidly worse many times, under the anxious solicitude, the loving cares of their most sympathizing friends. True! But it is either those who are either *negative* to them, and continually *manifest* their *fear* and solicitude, thus setting free mental forces that are

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directly opposed to harmonizing conditions, or they practice the positive assumption of authority, which equally repeats, over and over again, to the tortured consciousness, "You are insane! You are insane!"

Place a perfectly rational, but negative, easily psychologized person among people who fully believe him to be insane; let them persistently treat him as if he were so; shut him out from all influence of those who understand and have faith in him, and he will become so saturated with the thoughts and feelings that surround him that he will actually *be* to all intents and purposes just what they suppose him to be. Per contra, place a really disordered mind among those stronger than itself, who have perfect faith that it is rapidly resuming its normal condition, and it will become permeated with that spirit likewise, and the acting and reacting of that faith will help to work out its own accomplishment.

Not more sure is the law that heated bodies will give out of their caloric unto the surrounding colder ones, until the temperature is equalized—the cold warmed, and the warmer cooled—or that differing solutions of liquids, when mingled with each, impart their qualities unto the other, until there results a compound of all unlike any of the simples, than that human beings, by association, interchange the peculiar elements, thoughts, feelings, and conditions characteristic of their individualities.



FIG. 91.

They only who are certain of an unfailing influx from higher life should venture to submit, in a degree disproportionate to their positive control, to surroundings which can *lower* them in the tone of their moral, mental, or physical being. *The mingling of the aged and the young is a violation of this law, only in a yet more objectionable manner.*

It is only the most lamentable ignorance that will place the tender, sympathetic, affectionate child in the same couch, or too much in the same room, even, with the enfeebled old man or woman. Whoever does so will find it soon fading, and becoming languid and listless, entirely bereft of the buoyant energy appertaining to its years.

Many a little one has had all the dewy freshness of its young life exhaled by the drouth of feverish, waning age; or the unhealthful conditions of those who have it in charge; and when it faltered and drooped, *poisonous drugs were sent ravaging through its withered luxuriance to complete the devastation begun.*

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[We call to mind many instances of this nature witnessed in the years of our general practice; but more vividly one pretty female child about four years of age, whom we had frequently seen while attending others of the family, then possessing the ruddy hue of health, and who became endeared to us because she strikingly favored a darling daughter we had not long before buried in a coral reef in Florida, and also, because her mother had gone to the spirit-world.

At *length* we were called specially to administer to this little girl, who was fast drooping. Finding no organic disease, we inquired if she did not sleep with a maiden aunt with whom she was living, and who also was subject to painful paroxysms of spasmodic asthma. On being answered in the affirmative, the whole cause was easily understood. The maiden aunt was living at the awful expense of the child.



FIG. 92.—HEBE.

We at once advised a correction of magnetic relations, with other hygiene, when the child soon recruited without any use of medicines, and resumed her cheerful, healthy vigor and glow. —ED.]

So, many a Hebe of youth, beauty, and strength has grown old before her time, prematurely faded, wearied, and disgusted or vailed with the green sod, by uniting herself with one very much her senior, and *feeding him from her unreplenished fountain of life's precious capital.* Yet in all these examples there is a wisely-ordained method by which the ageing in years may be constantly young in all life-full characteristics. We do not advocate the depriving of *them* of any needed supply; we only inculcate the wisdom of confining all expenditures to the *surplus* in the treasury, and never infringing upon the original capital.

For example, there is a superabundance of animal spirits always engendered by the youthful, as nature is ever very bountiful in her provisions. This overflow should be sacredly dedicated to the feeble or the aged, with the earliest lessons received by the child. Thus the intelligent habit would be formed of employing beneficially all the good gifts of being, broadening their rivers, and deepening their springs, until the capacity for giving and receiving would be-

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come continually increased. "For there is that giveth and yet increaseth."

This practice of rendering all exuberance beneficent in its use would not only preserve the activity and enjoyment of the older members of society, but would effectually relieve society of all reckless dissipation, which is only the foam and effervescence of unappropriated, excessive animal life.

And yet men compound nauseous bitters, and powders, and pills, adding misery to misery, when the natural outflow of life-supplying elements are only becoming enemies by disuse or abuse.

Here, again, in the domain of sympathy, is the wretched result of *befouling* all the psychic forces of the system, the electric aura, the magnetic emanations most intensely realized. What do we mean? Simply this: you have exhausted the power of some organ of your body by taxing it too heavily. Its proper functions are not performed. The consequence is oppression, weariness, pain. A sympathetic senses all your suffering and approaches your sphere to impart of his abounding vital strength. But he *is* a sympathetic, and as such sensitive to all that is thrown from your body in the invisible perspiration. He is nauseated by tobacco, narcotized by opium, intoxicated by drugged alcohol, poisoned by dyes, paints, and pomatum, nerve-strained by tea and coffee, and clogged with unwashed disease. He finds a wall less penetrable than if made of brick or stone, between him and the unfortunate victim of ignorance and vice; for all filthy, deleterious habits are vicious, as abundantly proven by their tendencies and results. This is neither fanciful nor exaggerated.

Sympathetics daily are overpowered, for the time, by a deathly sickness, rendering life intolerable, through immersion in these contaminated spheres; the results of sitting by or conversing with those whose habits are unwholesome, whose thoughts are impure. How important, then, to the daily happiness, to the most absorbing interests of all humanity, that this law should be understood!

Hence, as you love and desire the *most perfect* of all things, the newest, freshest, fairest, fullest, ripest, mellowest, so perfect your own being by understanding and obeying all hygienic, spiritual principles, that *you*, too, may be loved and desired, attractive and attracted, to the *best*. As you shrink from the decaying, blighted, worm-eaten, tainted, or filthy, so preserve your physical, moral, and spiritual nature from *all things*, from heinous crime down to a carious tooth, that shall attaint these emanations from your person. For it

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rests with each individual to choose, through his mode of life, whether he will be as a summer rain or deadly sirocco to the fair fields of humanity through which his orbit passes.

JOHN ABERNETHY.



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TWENTY-EIGHTH SECTION.

THE NECESSITY OF A COMBINATION OF HEALERS.

Fading and sinking of the young wife—She needs genial, cherishing influences for a sore heart, instead of calomel and quinine, affectionate kindness instead of scorpions of poisonous drugs—A unity of forces—A failure of the most celebrated in *some* cases no argument against the principle—Causes of failures explained—Faults of mediums—How to be avoided—Be upright, truthful, pure, you will then be guided to unfailing fountains—Excessive depletion of nerve-force the cause of ill-health—How restored and balanced by the new gospel of healing.

THE conditions of the present age, as developed by the era of *force*, are extremely adverse to the grand possibilities of the "True Idea" of healing.

The very walls of every public hall, and building, and conveyance, almost of every dwelling, are psychometrized with influences spiritual, emotional, and physical, fiercely antagonistic to the fair Goddess of Hygeia, who presides over this beneficent art.

Laboring individually, the healer repairs to the dwelling of his patient to enact the restoring angel, and repair the ravages of erroneous habits and untoward surroundings. He finds, perhaps, a fragile and beautiful flower, fading before the summer has scarce commenced its career, a wife and mother sinking beneath her duties at the very threshold of her kingdom; and he called upon to supply the prematurely exhausted fountains of strength, and force, and courage. If he chance to have all the requisites of the case in his organization and control, he still finds the same *causes* that have induced the present state of the patient in full force and operation. If he lifts her out of the weakness, pain, and gloom, it is only to find her gradually sinking again and again into the same unfortunate position. Why? Because the

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causes have not been removed. The delicate peach must have soil, atmosphere, and climate adapted to the daintiness of the peach ; and the mighty oak that which its majesty demands, to perfect their respective *developments;* and none the less the tender sensitives of humanity must have all *genial, cherishing* influences to perfect and retain the exquisite bloom of their beauty. To impart vitality to such a one while still surrounded by all things gross and inharmonious and laden with burdens exceeding the power of her being, is only to imitate the school-boy, who laboriously drags his little playmate to the top of the hill, only to see him slide rapidly back again to the original starting-point. And then the world tells him he has performed no cure ! To *restore* is quite enough to expect of the healer. To so *obey* his instructions as to maintain the restoration is only the *reasonable duty of the patient*, or those whose unwholesome lives have been the occasion of disaster.



FIG. 93.—THE YOUNG WIFE AND MOTHER SINKING AT THE VERY THRESHOLD OF HER KINGDOM.

Decaying vegetables in a basement, imperfect and foul sewerage, uncleanly, offensive closets, and even unventilated rooms and unwashed persons, will rapidly counteract all the psychic virtue of the healer. None the less so will indolence, luxury, or discontent ; likewise undue excitement, or indulgence in any emotion or passion. And still more counteractive, more delusive, more difficult to overcome, are the unfavorable social influences. Many a wounded one has taken calomel or quinine for a sore heart, and asking for the bread and fishes of affectionate kindness has been fed with the "stones and scorpions of poisonous drugs."

In each individual case, the healer must be so thoroughly in sympathy with his patient as to readily reach beyond symptomatic

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effects and divine the *causes* which require to be removed ; then so powerfully positive to the patient and her surroundings, as to introduce through all her orbit the psychometric and psychologic atmosphere that shall revivify her life, to so impress upon those who hold her destiny in their hands with the necessity of removing all that is repulsive to her, and supplying all that is desirable of refining, purifying, brightening all things that affect her, that she shall move in a new world that shall nourish and not destroy her. But he who is sufficiently gentle, winning, and generous to assimilate with the finest is rarely sufficiently positive and authoritative to overcome the coarsest.

Hence the call for a combination of healers, a unity of forces ; the more so as the healers themselves have yet reached but imperfect development, and the age of belief in and acceptance of their mission has not fully arrived. Just so much of the force of will as is required to overcome incredulity and superinduce belief, is refracted from its direct course to the seat of the disease ; and, if this resistance be great, becomes like a spent ball when at last it reaches the mark. Therefore, the highest degree of success can be attained only by a *well-arranged battery of media* laboring in *perfectly harmonious unison* and yet widely differing in temperament and individual characteristics. As all the prismatic colors combine to give pure, colorless atmosphere, so all the wide range of adapting forces should combine in the united media to constitute the unfailing conditions of speedy and permanent cure.

Of the most celebrated and successful healers yet produced, it is commonly remarked, that they perform wonderful cures, and yet fail in the majority of instances. Every healer is himself aware of the fact that it is *only* upon *certain temperaments*, and under certain conditions, that he accomplishes complete cures.

Now, if this *board* of *healers* be so combined as to sustain and generate power for each other ; so graduated that one can lift the lower patients the first step in the upward ascent, and another can take those upon the first step and lift them to the second, and the next in order take them one degree higher, and so on and on until the beautiful height of well-balanced forces and vitalized being is gained, then there will be *no* failure, but *every* patient can be guaranteed an absolute cure, unless they put off their treatment until some vital organ is entirely destroyed. Where there is an accumulated psychometric influence of disbelief hanging heavily upon the very walls, where there is a dense atmosphere of gross materiality pervading every apartment of the dwelling, where ignorance and as-

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surance back each other combatively against every innovation upon their crudeness, a medium who is not so far above their plane as to be hopelessly repelled and crushed by it, who *is* so far above it as to be powerfully positive to it, having an exceeding amount of combative assurance, combined with intelligent magnetic and electric control, and indomitably generous energy, is necessary to do wonderful works. And if his powers are expended in overcoming the original antagonisms, then *another* endowed with the winning persuasiveness that can captivate the will and mind, then another that can supply the needed *vitality*, *sympathy*, *health*, etc.

It is true when the band of controlling spirits embody all these various characteristics, they can manifest them all, one by one, *through the same medium*, to a certain extent. But the system soon becomes overtaxed, and, after a season of remarkable success, they are surprised to find that the favorable results of their manipulations, which they had learned to expect as certain, no longer manifest themselves, and many that they considered cured soon relapse into their former condition. And thus losing faith in themselves, they fail to sustain the dignity and verity of this mission. Whereas, if only exercised in the capacity to which they are best adapted, if abundantly sustained by the freely-generated magnetism of a rightly-arranged battery, they are certainly *increasing* in power and capacity, continually excelling themselves in the magnitude of their accomplishments.

Again, to perform offices necessary to the restoration of a patient, various psychical conditions are necessary. For example, to see the positive appearance of the various organs of the system clairvoyantly, to learn in that manner how great are the ravages already made by disease, and what are the prospects of a speedy or retarded cure, is often necessary, to satisfy the mind of the patient, if for no other reason. To facilitate this spiritual insight, the medium must be in his most passive negative state, that the disembodied intelligences may psychologize him with this clear view of existing conditions. Having thus subdued his will-power and become subject to the will of another for the purpose, he is rendered unfit, for the time, for that positive exercise of this same potent will-power which is requisite to expel the disease and awaken the slumbering energies of the patient. Consequently he must induce upon his organization (or his control must do this for him) an entire change from positive to negative, then back again from negative to positive; which is as injurious in its effects upon the system as though he were to pass from a very cold air to a heated room, and from extreme heat to severe cold, again and

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again. It produces, indeed, a succession of shocks upon the system, requiring an expenditure of vitality which the fully-occupied medium can by no means afford to dissipate.

Ignorance of these truths, or a compulsory disregard of them, has caused many a most efficient healer to fall exhausted in the way, and make his exit from the mundane life when most sadly needed here.

It is not unusual for those who are investigating these phenomena to call upon a healer to enter a promiscuous company and tell each member of it, first, what spirit-friends he can see near him (condition number one, materialization); secondly, what they died of, when and where (condition number two, psychological retrospect); thirdly, their *names* (condition number three, clairaudience); fourthly, what ails him (condition number four, sympathetic *in*-sight); and fifthly, to remove the disease or give him treatment; involving a fifth condition entirely the reverse of each and all of these, a positive, commanding, powerfully electric condition.

If the medium is sufficiently passive and approbative to endeavor to meet all these demands, he does not fully succeed in any of them, and finds himself miserably exhausted by the futile attempt.

If he does *not* make the effort, he expects to be severely criticised and censured, and realizes his expectations.

Now, every medium should have his specific field of labor; should form his own conditions directed by his control, and never permit himself to be swerved from it.

He should never permit himself to take the position of a menial, and become subject to commands. He should be passive to his influences, when they are such as he desires, moved by them as they in the realm of causes, find how they can best act upon him, and, unmoved by the exactions of ignorance, and its twin brother intolerance, undaunted by failure or reprimand, he should hold himself entirely positive to those who consult him. Thus, and thus only, will he become the never-failing vehicle of electric "virtue," that is, life, health, strength, and happiness. As certainly as the seeker after spiritual light and healing assumes the position of commander, critic, and judge, so surely does he *fail* to receive his baptism from the angel-world. Here, indeed, is the necessity of becoming as little children in order to "enter the kingdom of heaven," fully demonstrated. Do we counsel you to set your own reason at naught? Nay, verily! we instruct you how to *be reasonable* in your treatment of an important subject. And as you expect every one in the material province of life to succeed just in proportion to his adjustment to

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that which is his natural forte, just as you feel it the workman's due to select his own tools, and his own mode of applying them; so in this higher sphere of action, leave every agent of the kind invisibles perfectly free to work out human weal in his own time and manner; throwing out no opposing influence of malignant feeling to thwart both him and yourself.

If you are suffering from any form of disease, only find the healer whose magnetism attracts you, whose electrical forces thrill you, whose presence inspires you with faith, hope, and courage, and then yielding passively to the mode of treatment adopted by his control, do not *demand*, but *accept!* freely receiving what is abundantly given, and the restoration is certain.

But, you may ask, are you not in danger of being imposed upon? If your own life is good and true, your own motives pure, and you follow the above directions, I answer nay! You will never be attracted to or have faith in an impostor. If you are *yourself* a living lie, then will you move in an atmosphere of falsehood, receiving measure for measure of such as you give to the world. It is not more certain that he who never takes his morning dram is sure to detect its odor in the breath of the drinker, while he who likewise imbibes discovers nothing, than that the conscientious, truthful person will be repelled by fraud and imposture, detecting the counterfeit by an instinct more subtle than the sense of smelling or of tasting, and equally unerring. If he is himself imbued with the elements of hypocrisy, then indeed he may pass by the ingenuous, and join hands with deceit, "like attracting like," according to immutable law. This is the beautiful, heaven-ordained principle of compensation. Hence, be upright, truthful, pure, and your attractions will guide you to unfailing fountains of "the elixir of life," floating downward from the risen pure ones for whomsoever "will receive it."

Do we refer to the attractions depending upon sexual differences? Certainly not! Although the same principle should guide every one in those important interests of life.

But the *healer* comes under the control of various intelligences of either sex and the control is adapted to the needs of the patient. Many a debilitated female owes her condition to excessive depletion in that direction. Treated by the opposite sex, she is confirmed in her complaints rather than lifted out of them. It is the exhausted female qualities that need replenishing, and the excessive male magnetism that requires to be absolved. In such a case, a female of positive feminity, of overflowing sympathy, of gentle, tender affection-

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ateness, controlled by some pure male spirit of high intellectuality, having long outgrown the impulses of the base brain, would be an irresistible magnet to the patient, and an unfailing physician.

Thus, a man who, from his boyhood onward, has been a reckless spendthrift of his life-forces through sexual excesses and abuses, will find a far more powerful fascination in a lofty, self-controlled, self-poised, luxuriant manhood, influenced by some stately DIANA of the spirit-world, white as the fallen snow, and chaste as the glittering ice, than any voluptuary of the other sex could possibly inspire. And



FIG. 94.—THE SPIRITUAL DIANA.

from such alone could he receive the power of a true manhood, after having reduced himself to the degraded plane of a debauchee. On the contrary, when the *individuality* has been defrauded of its constitutional needs, where the sins are of *omission* rather than *commission*, then, forsooth, the attractions will be between the two sexes, and should be as righteously obeyed. Still, be it understood, in our frequent allusions to the *attractions*, we have no reference to differentiation of sex. You pause to admire the beauty of the rose or the lily. It has attracted you through your love of the beautiful. You turn aside to inhale the odors of the heliotrope or mignonette. It has attracted you through your love of its fragrance. You gather eagerly the freshly-ripened strawberries and peaches.

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They have attracted you through your love of their delicate flavors. Each and all supply some demand of your system, feed some constitutional hunger, draw you to them by virtue of the satisfying supply which they contain for you. In like manner, the desire for health finds voice in pain, uneasiness, and an *attraction* toward those who hold the requisite particles or elements that are needed in restoration; one healer holding the attractive power over one patient; and another, of entirely different temperament and capacity, irresistibly calling another to his sphere; one overcoming the undeveloped spirits who hold a patient in abject thralldom; another overslaughing the gross psychometric influences that hang like an incubus to their surroundings; another, setting all the machinery of the physical organs into healthful activity by vigorous manipulations; another quieting all undue nervous irritation by soothing, magnetic, reposeful rest; another, lifting the mind to the serene heights of buoyant confidence, perforce of his own majestic strength; and so on and on, every human being holding the issues of life and death for many fellow humans in his own hands, if he will but be instructed, if he will but develop his capacities, if he will but follow his attractions.

From these analyses of modes, conditions, and necessities, you will readily perceive that to insure restoration to *all*, there should be a gathering of all the varieties needed, a harmonious blending of sexes and temperaments, of powers and controls; each sustaining all the others, all supporting and perfecting each member of the union; each following his own especial forte and mission, all so combining as to meet every need of every form of disease, every variety of organization, every freak of personality. That the time may come that all desirable qualifications may unite in one person, may be possible; that it has not yet arrived, proves the wisdom and beauty of such a fraternal union of the heaven-crowned disciples of the "new GOSPEL OF HEALING."

JOHN ABERNETHY.



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TWENTY-NINTH SECTION.

HOW TO BE RECEPTIVE, AND RESTORED BY THE VIRTUE OF THE "HEALER" ACCORDING TO THE "TRUE IDEA."

Hygienic conditions necessary for speedy cure—Fevers, boils, ulcers, etc., only curative indications—Diseases are nature's physicians—Bathing in some one form an essential aid to health—Self-government the most god-like, the most remunerative—Every dwelling should esteem its bath-room a necessity—Be made receptive—Blood indications—The compressed air-bath—Man an epitome of the universe—So far imperfect when deprived of whatever belongs to him—The solar rays mighty in their effects—The sun-bath—Earth-bath—The foot-bath—The shower-bath—Electric and spiritual forces.



N FORMER dissertations we have labored assiduously to impress you with the necessity of attraction, congeniality, sympathy, and faith between the healer and the healed. We have shown the importance of all favorable conditions to spontaneous, immediate, infallible cure. At this time we propose to make suggestions relative to the hygienic principles and mode of life which would place an individual in an attitude of ready susceptibility to the "Holy Ghost," transmitted by the higher intelligences through favorable human organisms.

We have already alluded to the necessity of a judicious diet, and will hereafter enter fully into the merits and application of the various fruits, vegetables, and cereals, fish, flesh, and fowl, in general use. For the present, we will call the attention to a most important adjunct to the electric forces of the healer, namely, bathing. The particles or atoms of our bodies are being thrown off from the body when they have subserved their legitimate purpose, involving an entire change to the bony structure once in seven years, and the

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remainder, in an active, healthful individual, nearly once in each year. These particles give place to the new formation, not yet exhausted of their life-sustaining elements, which are continuously supplied by the food you eat, the liquids you drink, the air you breathe, and the sphere of your associates.

If the involuntary nerves are enabled to keep up a perfect balance of power between these wastes and repairs of the body, nature will not be called upon to introduce *fevers* to burn up the unthrown-off, worn-out matter, or vomiting, or purging, or coughing, or catarrhal discharges from various sources, or ulcers, boils, tumors, etc. etc., to expel it from the system.

These *diseases*, as you term them, which you treat as enemies, are only nature's *physicians*, striving to perform a needed work, and so far from being *arrested* in their labors, should be *aided* to perform it without exhaustion to the patient; or, what is far better, the habits should be so ordered as to prevent our kind mother Nature from the necessity of resorting to such extreme and unpleasant measures.

If this waste, this effete, obnoxious substance, be freely and fully disposed of, this result surely will be gained. Remember, it is only *just sufficiently* to secure this end that we propose and recommend the aids upon which we are about to dwell at length. You may ask how you can know when that result is precisely obtained; how you can understand the so far and no farther? We answer, by careful observance of *effects*. That which refreshes and invigorates is legitimate. That which depresses, weakens, becomes repulsive, is in that "still small voice" peremptorily forbidden.

There are individuals who have passed their three-score and ten years who are as firm in flesh and muscle, as vivid in color, as lustrous in expression, as buoyant in feeling, and as powerful in bone, sinew, and *thought*, as any in their best "prime" can boast of being—kept thus by their habits. Question them, and you will invariably find that *bathing*, in its various forms, has been made a scientific aid in freeing the system of all unwholesome, decaying matter. The matron of seventy will come from her bath as rosy and glowing as the maid of sixteen, if she has made it her assistant from the beginning. And the snow-crowned sire will be as delicate of touch, or pure of breath and emanation, as the youthful Adonis, if he only order his habits with that intent from his youth through all the trying experiences of manhood, the too often blighting, withering, poisoning experiences of manhood. And it is, indeed, well worth the study, persevering, self-controlling effort. Of all governments ever instituted or conceived, *self-government* is the most

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godlike, the most glorious, the most *remunerative*. Its subjects are kingly and queenly *all;* are crowned with honors that increase, and brighten, and blossom into blessings through the enlarging cycles of a magnificent hereafter. Self-government, not in the guise of sacrifices and offerings and unreasoning denials, but as a judicious aid-de-camp to the divine instincts of an immortal being, as a firm resolve to do all that the highest development of a wonderful humanity requires. Deeply implanted in the divinest part of every consciousness is the desire to be attractive, to attract that which is purest, truest, loveliest. That which is laden with the old, worn-out particles of originally unwholesome pabulum, that which is reeking with nauseating effluvia, which is a drug and a drag upon the fresh elasticity of pure aspiration, is *not* attractive except to that which is more pitiable than itself. Hence we say that self-government is more highly *remunerative;* for the grandly self-poised, clean, glowing, powerful man or woman wins on all beholders.

As it requires different and widely differing HEALERS to meet the demands of different individuals and cases, so various modes of bathing are required, according to the temperaments and conditions of persons. The infant, accustomed *from the first* to a daily immersion in cool soft water, and the invigorating magnetism of a healthful hand, briskly but gently applied to the entire surface, will delight in that element in its natural temperature, sporting like the wild duck in its exhilarating waves. Other conditions being favorable, he will have a firm, polished surface, glowing and shining as he emerges from his daily ablution, proof against atmospheric changes and the sudden closing of the pores which causes so much of the existing sickness; the pores, those little escape-valves, covering *minutely* and sensitively every portion of the body, so numerous and faithful that there can be no opportunity for pent-up poisons if they are permitted to perform their office. (See illustration of the pores, page 155.) But if the child have not been thus reared, and the pores have not been habitually operative, then occasionally the process should be stimulated by a more effective mode of procedure. Every dwelling should esteem its bath-room as imperative a necessity as pantry or earth-closet. It should be so constructed that its appointments and various modes of application will invariably open the pores and remove the waste particles, by increasing the potency of the bath as the obstructions are more obstinate. The provision for daily immersions should be such that *weekly at least*, or more frequently if required, the temperature can be gradually increased, while the body in a perfectly easy, reclining posture, passively macerates

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until there is a free perspiration. Then there should be a *quick dash of cold water, to prevent a sensitiveness to the atmosphere,* by calling the blood *vigorously to the surface* through the reactionary effect. This, where there is confirmed disease, should be *medicated* according to the needs, as the pores are in a highly receptive condition, and readily absorb and take back to the places just vacated by the waste thrown off, such properties as are most needed. Then, indeed, is the healing "virtue" most readily received. "Receive ye the Holy Ghost," said Christ. The "breathing upon them" would have produced no effect had they not first been made receptive.

There may be certain conditions of the cuticle of the body, in which this free use of water is not desirable. If there is *dread and dislike* of it, such a condition is undoubtedly indicated, in which case the *temperature* of the room should be *gradually raised* until the pores are relieved by perspiration as before, followed by sponging off *thoroughly* of that which is thrown out, and brisk magnetic rubbing. If the blood is dark, thick, heavy, labored in its circulation, this thinning, quickening, refining process should be persistently repeated. If the liver and lungs and kidneys are seemingly toiling under burdens too heavy for them, and the whole system is continually *tired* before their impeded efforts, then, also, there should be unfailing reinforcements through these natural aids. When the cleansing process is perfectly performed, and the whole being is "swept and garnished," there still remains the necessity of supplying what may be lacking through previous infringements on natural laws.

Here is the sedentary person, who, confined largely within four walls, sits day after day over desk or needle, the life-sustaining oxygen so abundantly provided in the atmosphere they have failed to "receive." Thus the life-forces are meagre and debilitated.

No amount of *cleansing* would meet that peculiar need. Some mode of supplying rapidly and profusely that of which they have defrauded themselves, of which in all probability they will continue to defraud themselves, becomes a great requisite to their speedy restoration.

This need has been happily met in the

COMPRESSED AIR-BATH.

This great invention, by which the patient can be surrounded by an atmosphere enriched manifold in its quantity of oxygen, and inhale at each breath a larger proportion of the precious gas than he would receive in a day, in a close, ill-ventilated room, is to become a

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powerful ally in the work of restoration. Remember, its necessity can be guarded against by sufficient daily care to fully inflate the lungs and replenish the system with good outer air, and prevention is far better than cure. But as a curative to those long deprived by ignorance or indifference, it is invaluable. You are languid, nerveless, spiritless, and do not know why. You lack *oxygen*. You take a seat within this ingenious cage, and the air is pumped in upon you more and more forcibly till you feel every air-cell in your

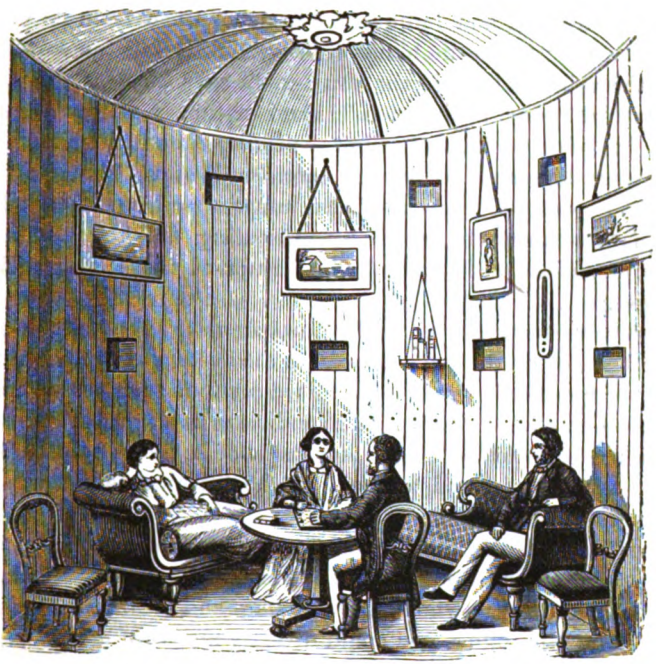


FIG. 95.—THE COMPRESSED AIR-BATH.

body filled to its utmost capacity. You go out with springing footstep and eager impulse.

You thought you were sick, and behold you are well. That continual asking for something needed that you call rest lessens, and discontent is satisfied, and you wonder at the change.

There is another most frequent defrauding of the human system of God's munificent provision. We mean the direct rays of the sun. *Warmth* does not supply their place. They have particles peculiar to themselves which must take place in the building up of a healthy human being. As man is but an epitome of the universe, and levies

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upon all forms and modes of existence to perfect himself, he is so far imperfect as he is deprived of whatever belongs to him inherent in any of those manifestations of being. *The solar rays are mighty in their effects upon all planetary animation.* The plant grows pale and sickly and dies, unsustained by them; and joyously, with all its tendrils and fibres reaches outward toward them, if the least crevice or fissure in its surrounding walls provide it the opportunity. The animal exerts all its instinctive power to secure to itself the utmost luxuriance of its brightness. But reasoning men and women permit pride, and avarice, and indifference to debar them from its vivifying blessedness. "Close the blinds tightly, and let fall the curtains, and wear the vails, and sit in the shadows!" says Pride, "the sunshine will tarnish your complexion." And nature revenges herself by faded, lustreless looks, and sallow, cadaverous countenances. "Shut out the sunshine and live in the basement!" says Avarice; "it will save the expense of renewing faded carpets and soiled upholstery." And nature revenges herself by presenting the huge bills of the family physician, with an attendant train of nurses and additional outrages.

Again we contend that an habitual securing of a suitable amount of the benefits of the sun's rays upon the system may obviate the necessity of remedial agencies in this direction. But as we are daily with people as we find them, and conditions as they already exist, we find an urgent demand for another mode of bathing, namely, immersing the entire surface of the body in the life-awakening rays of the bright centre of our solar system.

There should be a chosen retreat so protected from atmospheric changes and observation that in the sensuous enjoyment of the melodious summer insects who swim, and sing, and *revel* in the brightness of an August morning, you could divest yourself of *all* care, anxiety, inharmony, and clothing, and *bathe* freely in the unobstructed, dazzling ether. (See cut of the Sun-Bath, page 16.)

The temperature of the SUN-CLOSET should be a natural blood-heat, or so as to produce an *agreeable* warmth only. In mid-summer it should be tempered by ice, or sought at the early hour, otherwise the electric forces will be so intensely powerful as to *over-charge* the brain, and produce deleterious effects. A few months of daily experience in such a bath would rescue precious lives from the unexplainable decline, which baffles physicians and strikes terror to the soul in so many cases of the fair but fragile flowers, reared in *luxury* of *fashion*, but alas! with poverty of the heaven-ordained, life-sustaining elements, and restore them to strength, affection, and happiness.

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EARTH-BATH.

There is yet another bath, still less understood, but of great efficacy, the means of which should be provided by every complete institution for the restoration of all. Most of you have learned by experience how quickly the moistened earth will extract all poison, and relieve the pain, when you chance to be stung by a poisonous insect. The soil contains such a combination of elements or supplies an antidote for the excess of any one of them, which becomes destructive only through its excess.

In all infectious diseases, all sufferings from malaria, all putrid conditions, all offensive odors, every thing that indicates poison in the blood, a bath in a rich, generous portion of *soil* will act as efficaciously and supremely as it does in deodorizing excrementitial impurities. It extracts poison, cleanses, and counteracts the most loathsome affections.



FIG. 96.—LOCAL OR PARTIAL BATHING.

For this, also, there should be a CLOSET prepared, of equable temperature; an opportunity to take a perfectly easy position—sitting is the most favorable, as it is not easily shifted—and the soil should be arranged to cover every position of the body, and the position maintained until it becomes irksome or fatiguing. By a patient persistence in this bath, many a poor creature, *loathing* himself and loathed of others year after year, might be restored again to normal conditions.

There are, also, local baths, to which we might particularly call the attention.

Especially the FOOT-BATH, cold or cool when there is a tendency of the blood to recede from the extremities and oppress the brain. These should be taken each night, *only* water enough to cover the feet, continued until reaction produces a warm sensation in the water, then briskly rubbed and manipulated until the circulation is fully established; warm when there is inflammatory action about the vitals, and immediate relief is the object desired.

Also SHOWER-BATHS and DOUCHES for extreme cases when a sudden shock is required to restore equilibrium of the system, as in fits, falls, wounds, bruises, etc. etc.

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These are all preliminary remedial measures, to prepare the system for a receptivity of the electric forces, the spiritual virtue! The first may often seem to succeed without the last, and the latter without the former; but the healers should be fortified to cope with all cases and conditions, so that the resorting to them and submitting to their efforts should be equivalent to being made "every whit whole."



FIG. 97.—SHOWER-BATH.

AND WATER IS NATURE'S GRAND SOLVENT. It is the purifier that goes before and casts out the resident demons of Impurity, Pain, Imbecility, and Disgust, that the good angels Ease, Health, Strength, and Happiness may take up their abode in the beautiful, cleanly temple of a perfected human body. "I indeed baptize you with water," but the baptism of *fire* needeth to follow, the electric fire that is the life, the motor of all animation. *Water* is the John Baptist, preparing the way for the "Holy Ghost" of spirit-forces that is too nearly allied to the divine to permeate, and shine through, and etherealize the gross and the unclean. The confirmed invalid so loses energy, hope, ambition, that the necessary effort to perform this physical purification appalls him. Besides, only a very small minority have the facilities for such complete ablutions, or the wisdom to employ them judiciously; certainly not the resolution to put them into practice, and bring them to successful issue.



FIG. 98.—ONE FORM OF DOUCHE USED IN THE INSTITUTE.

Then, if they are a power for good, they are also a power for injury, as every light casts its shadow, and need to be thoroughly understood, in all their actions, reactions, and consequences! How important, then, that there should be provided some harmonious, happy HOME, under the supervision of spiritually enlightened, scientific minds, where *every* mode and shade and degree of hygiene help is

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constantly accessible; where those too dispirited to "work out their own salvation" from suffering and sorrow can be borne in the arms of the grandly strong, self-governed ones over the thorny ways of reconstruction. For so widely has the human family diverged from natural laws, so invariably are they addicted to pernicious habits, that the work of *regeneration* rises from all mythical obscurity to the proportions of a stern reality to those who would be perfect; since each body needs at least its "full year," to change all the particles of which it is composed, for those new ones pure, fresh, clean, that may be acquired by perfect habits.

Do you think we are robbing life of its enjoyments by imposing so much of effort, of self-control? Far from it! True it is that the enjoyment of the inebriate is banished for the time, if he abstain from his cups; but it is only to rise to the higher delights of a manly sobriety. Thus with every abstinence from the harmful. Its enjoyments soar as far above all baneful pleasures as the shining heavens over-arch the cloud-covered surface of the earth. And it is only against such gratifications as react in suffering and loss that we contend. It is only for such restorative measures as bring the delights of all perfect uses of all God's wondrous gifts that we plead, and persuade, and propose to prepare.

The restoration once complete, what a joy is life! what elasticity of spirit! what vigor of performance! what zest of appetite! what intensity of enjoyment! what exquisite anticipation! what sublimity of inspiration! what restfulness of soul!

O HYGEIA! they who will not strive for THEE, magnificent GODDESS! have no spark of the divine electric fire in their craven souls! They who will not fight valiantly to overcome *their* enemies deserve their vassalage, however galled, heart-sore, abject thou leavest them to be! They who will deprive thy kingdom of the pride and glory of lordly subjects, at the bidding of sensuous appetite, deserve the traitor's gyves and fetters with which they soon are bound.

Thou sittest in dazzling beauty enthroned upon the saintly heights of wisdom, and the sceptre that thou swayest glitters with this magic word that unlocketh all thy treasures, "SELF-GOVERNMENT."

JOHN ABERNETHY.

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THIRTIETH SECTION.

THE EXERCISE AND USE OF ALL THE ORGANS AND POWERS OF THE HUMAN BEING A PREVENTIVE AND CURATIVE OF DISEASE.

Every organ essential—The systematic use of, essential to harmony—The pores, their great function in eliminating effete matter—The electric forces, how eliminated and balanced—The brain the key-stone of the royal arch—Toil without the glow of satisfaction prostrating—Failure of clergymen in *not* properly exercising and harmoniously balancing every organ and faculty daily—A perfectly healthy mother essential to the development of the "coming man"—Lofty endeavor needed—The model health Institute must combine an art-gallery, a library, instruction in music, ingenious discussions, and logical philosophy—A cultivation of shrubbery or garden—While boating, sailing, fishing, sporting, and gymnastic exercises with music should be regularly alternated and varied—Far more satisfactory to build wisely than to repair—"I have not been well since the birth of my child!" the plaintive wail of thousands—A thousand little mounds upon the hill-side—Glowing advantages at our Hygienic Home.



HE inventor and constructor, who is wise in his department, has no cog, wheel, spring, or appliance of any kind in his mechanism but what is a necessity to its complete operation. The loss or disuse of the least detail in his design destroys the harmonious effect of the whole. And that which is most elaborate and ingenious in its construction always performs an office commensurate with the wonders of its construction. If man is an offshoot of the great designing power, he but follows the law of that power in thus adapting means to ends and permitting no waste of forces or material. Hence it is but logical to conclude that every capacity, every possibility of our humanity, which is so fearfully and wonderfully made, must be in harmonious action, to preserve its perfect equilibrium. The systematic use

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of every organ and faculty strengthens, increases, and perfects that part of the being. We dwelt at length upon the action and use of the pores of the surface of the body, in the previous lecture, and restorative measures when they have ceased to be active. But their imperfect action is but the result of some previous defective action of other portions of the body. A vigorous exercise of the wonderful machinery of muscle and sinew, which enables such subtle and various movements of the entire structure, will bring through the pores the waste particles, which, having yielded to the body all their life-



FIG. 99.—EXERCISE FOR THE MUSCLES.

sustaining elements, are useless, and hence to be cast out in that manner.

The frequent starting of the perspiration is a provision of the body which can not fall into disuse without disastrous effect upon the healthful conditions. And the vigorous exercise of *any* of the organs or forces, consequently, has a tendency to produce that effect. Therefore, if any of them fall into disuse, this free circulation is by just so much impeded, and the whole system gradually undermined. It is equally true of the circulation of the blood; also of the electric forces. Vigorous exercise of the mental or material machinery of

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the body sends them tingling to every part of the system, keeping up a perfect equilibrium of action, in proportion to the skill manifested in keeping up an *equality* of exercise of all the capacity of the being. Commencing with the key-stone of the royal arch of mental and physical, namely, the *brain*, every organ which is found in its wonderful mechanism (and their number will be greatly increased as man becomes enlightened sufficiently to *find* and locate them), every organ, which is but an index of power and capacity, should be called

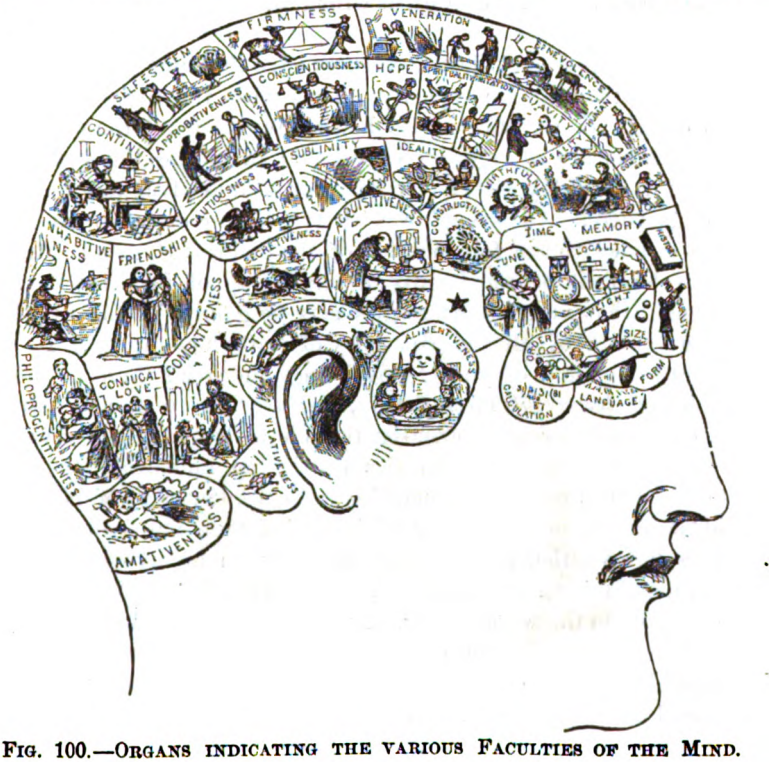


FIG. 100.—ORGANS INDICATING THE VARIOUS FACULTIES OF THE MIND.

into exercise to the full extent of its possibilities. Take individuality and benevolence, for instance, the front and crown of the whole structure; when fully active in their highest manifestations, the whole person is thrilled, glowing, moistened, for the time *well*. A weary invalid will rouse from the languid couch to most unusual exertions at their kindly call, and find the effort peculiarly beneficial. The toil without the glow of satisfaction accompanying it would leave them prostrated with fatigue, unless it result from the pleasurable employment of some other legitimate power. Who has not

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seen the weak and fragile aroused to superhuman exertion at the bidding of reverence and marvelousness? The calling into intense action of these organs by religious excitement will account for the seeming supernatural powers often attending these conditions.

It is nature's inexpressible delight in being so far understood and believed in as to be trusted with such work as she is conscious of being abundantly competent to perform. Equally wonderful is the sudden energy, endurance, and might, that feeble persons will exhibit in avenging themselves of a great wrong, or destroying some dangerous beast or reptile.

Combativeness and destructiveness have the same great pleasure in proving their innate capacity. Thus with the social faculties; what delight in an affectionate household, when all the powers of every member are in vigorous exercise in preparing the sweet surprises of the holiday gifts! No time for sickness, languor, and complainings there. All are aglow with the loving *activity* that is an "open sesame" to the fair mansion of the goddess Hygeia! And if the development of one faculty or one group of faculties be thus beneficial, what magnificent results may be gained by the full, harmonious action of all the capacities of the whole being! If you look into the faces of your fellow-beings and read there the hieroglyphics of *discontent*, misanthropy, and weariness of life, be assured that, consciously or unconsciously, there is within that breast a sense of *unused powers*, of possibilities worthy an immortal being that have never been called into manifestation, a knowledge of latent capabilities crying out against the injustice of their imprisonment. It matters not whether there be one talent or ten in any direction, the folded napkin is an instrument of torture that leaves its ever-sensitive scars upon the whole being. Not more surely do moth and rust corrupt materials fallen into disemployment than discontent and consequent disease seize upon organisms whose every capacity is not fully and agreeably called into exercise.

Neither can the base-brain predominate in activity over the top-brain, or the top-brain be exercised to the exclusion of the organs below it, without throwing the system out of balance. Nor yet can the muscular system be developed to the exclusion of the mentality, or the intellectual drafted upon to the neglect of bone, sinew, and muscle. And even between the upper and lower limbs the same equilibrium should be maintained.

The curiously underlying and interconnected muscles starting at the base of the brain, and extending between, over, and around the shoulder-blades and down the arms, may be developed to a wonder-

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ful degree of power, and the touch of the finger to astonishing precision, as mechanics, artists, and various employments demonstrate; but he who neglects to give the equally remarkable muscles of loins, and hips, and legs their due proportion of activity, soon suffers in some way from this lack of equality, and becomes an *unbalanced* individuality. He whose employment makes heavy demands upon the intellect should surround himself early with all social delights, should see to it that every faculty not especially called upon by his particular profession shall have free scope and a due share of his attentive culture. And unfailingly should he make sure that every muscle of the body, every nerve and fibre, is so employed each day as to raise



FIG. 101.—BOATING FOR HEALTH.

no mutiny in his system, through a sense of injustice. If your clergy will observe this admonition, the long vacations will become preventives and not cures, and you will not find them broken and debilitated in the prime of life. Let them ride, and walk, and *boat*, and enter into all athletic games that, while calling upon muscle and sinew, also stimulate competition and *awaken* all the organs of the brain disused in their clerical endeavors. Let them see to it that no faculty remains dormant, and instead of dyspeptic, abnormal views of life and its duties and privileges, we shall have a broad, divine humanity stimulated into growth by their teachings.

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Equally let your barristers remember the devotional, conscientious elements of their being, with a neglect of no law, as principle of their nature, with some attention to physical activity, and they will escape the usual idiosyncrasies of their class. And the mechanics and farmers who shall arouse in them the absolute necessity of cultivating all the mentality, and developing "whatsoever things are lovely" while following their avocations! Will you say that we are teaching impracticabilities? That to excel in any direction one must be devoted to a specialty? We answer, that the seeming loss of time and concentration is far more than repaid in enduring health, unfailing energy, and the buoyancy of mental and physical equilibrium. It is as though you bring a solid phalanx of armed soldiers to the contest, instead of a scanty number, continually conscious of an undue proportion of heavy burdens. All your powers working together will "remove mountains," where the few over-taxed members of the body would succumb to mole-hills.

Never until these principles are acted upon, will your planet exhibit a race of *mothers* capable of bequeathing to its progressing ages the "coming man" so anxiously desired, the coming *manhood* that will redeem all the dark features of the present.

The affluent ride and dress and exhibit, the teachers teach, the seamstress sews, and the domestic serves, all with one accord seeking upon whom they may roll the burdens of their existence and become *settled.* Here and there, thank heaven! a glorious exception, who strives earnestly to play upon every string of the golden harp of humanity intrusted to her, and thus produce a grand, full symphony of harmonious existence, instead of the one solitary key-note that grates so harshly always heard alone.

O woman of the nineteenth century! are you capable of active exercise, of deep reasoning, of ingenious constructing, of lofty endeavor, of benevolent enterprise? Fail to use the last and best of your capabilities, and you become the *helpless, peevish, puny, suffering, discontented* creature that gives the world slum, and not glorious, human, divine creations for the succeeding generation.

But we are treating of curopathy and the means of restoration for those who have not been reared in these hygienic measures. An institution, to meet the wants of mankind as they *are*, to enable the evangelists of the new gospel of health to successfully perform their mission, should contain facilities for calling into pleasurable action such powers of the patient as have been overlooked or neglected, and thus, through entering their protest, have produced the disquietude of disease.

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For the perceptive faculties there should be an Art-Gallery, paintings, and sculpture, and all things curious and instructive; also every facility for cultivating whatever talent is longing to represent itself in that direction.

In the selected band of healers one at least should be qualified to enter into sympathy with the naturally artistic, and aid them to the full enjoyment of their native gifts. The pleasurable excitement of this alone would lead many a crushed genius out from the gloom of many maladies into the enjoyment of healthful conditions.

Then for the reflective faculties, libraries expressing every science, all history, the cream of poesy, and the desirable of fiction.



FIG. 102.—ART-GALLERY OF THE INSTITUTION.

Apparatuses for illustrating the occult sciences: teachers to explain the same.

But would not this be a *school* rather than a "medical institute"? *Certainly*, the great SCHOOL OF RESTORATION, the seminary of perfect health, including mental, moral, and physical balance.

Then the claims of the top-brain should receive their share of consideration. Grand anthems of devotion, the sublime of the spiritual, and all that can be known of the *supermundane*, should have every advantage for their enjoyment and investigation. Deep discussions, and profound utterances, and frank admissions, and ingenious doubtings, and subtle reasonings, until *all* can project their interior growth unto the conciousness of others. All can free themselves of the pent-up emotional thought that becomes morbid if

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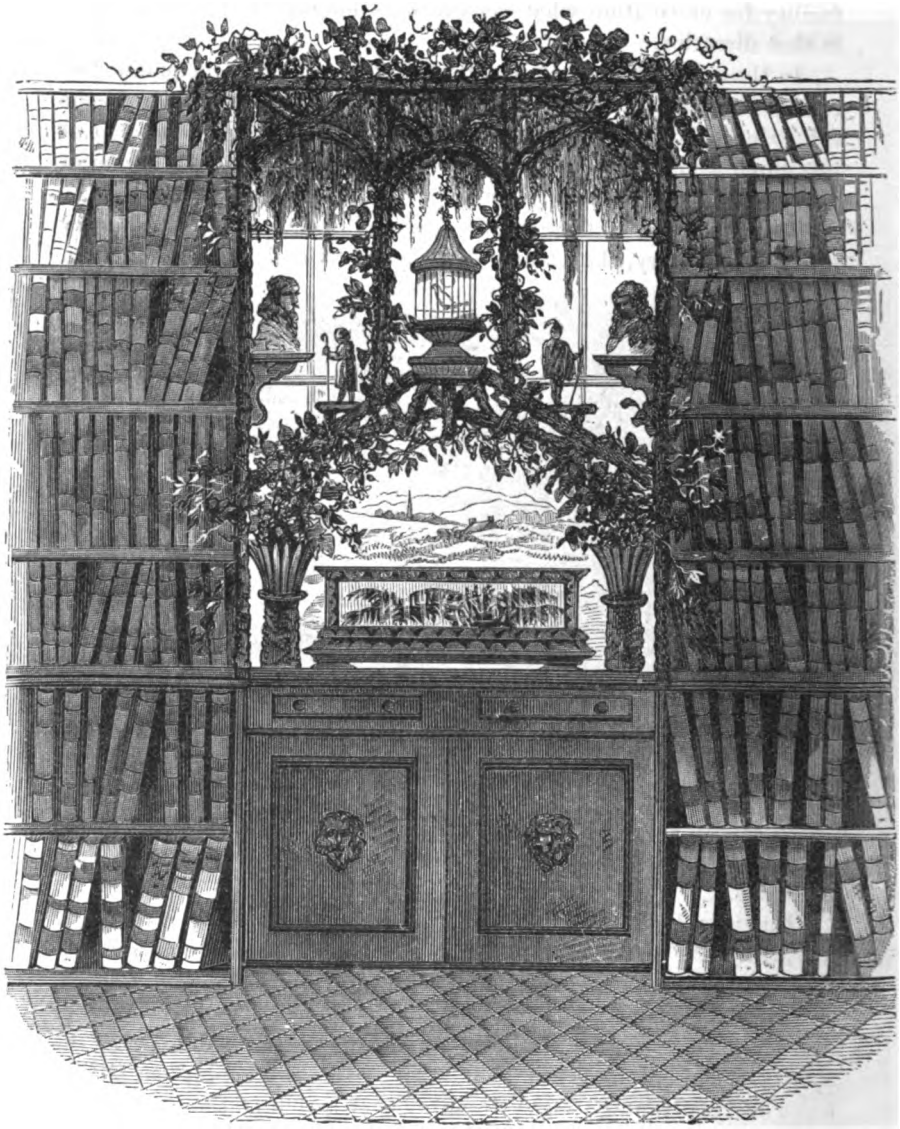


FIG. 103.—LIBRARY OF THE INSTITUTION.

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inert, as standing pools must even stagnate. So from the highest to the lowest, free scope for all in their legitimate, discreet, perfected uses; the useful and the agreeable so skillfully combined that the agreeable is always overflowing with wisest uses, and the useful is always blossoming with highest pleasures.

In developing the muscular system, this may be equally true. The performing of instrumental music calls a large variety of most subtle machinery into active exertion, at the same time it is giving most exquisite enjoyment to numerous organs of the brain.

So, cultivating shrubbery, fruits, and flowers brings another

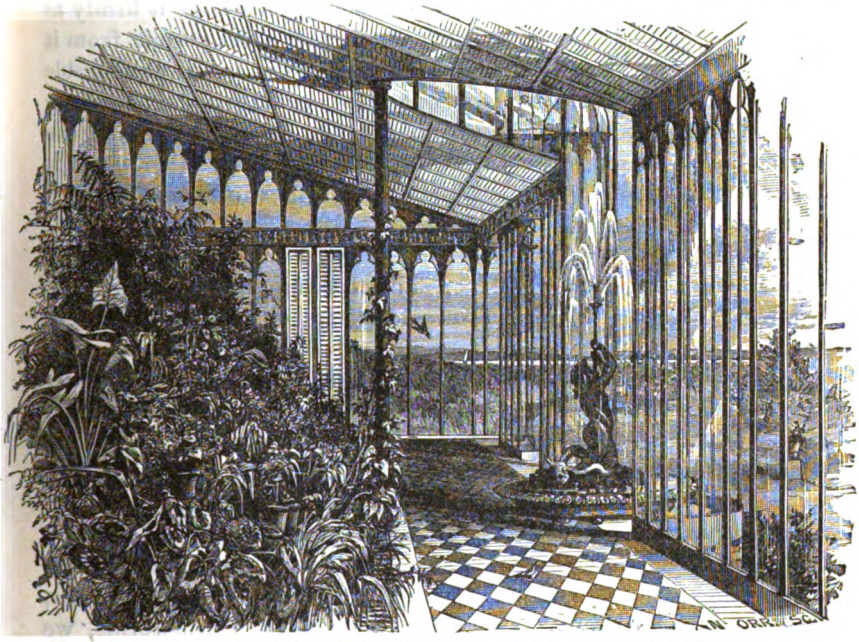


FIG. 104.—CULTIVATION OF SHRUBBERY DEVELOPS HEALTHY MAGNETISM.

range of muscle and fibre into activity; while the laborer is invigorated by pure air, he inhales the sweet sunshine in which he bathes, the earth's magnetic balm which rises to envelop him, and fragrant odors of vegetation in which he revels.

The long brisk walks needful for the development of most important mechanism in the human structure; these, too, may be made to the abodes of sorrow or of want, combining the best of the brain-power with the most important of the bodily, by gratifying benevolence, conscientiousness, and the social provisions by each hour of *useful* recreation.

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Dancing, so much misdoubted, so much feared, so much forbidden, so much *enjoyed*, is one of the most effective modes of calling a large proportion of mental and physical forces into intense employment. Because so intense it is *easily excessive*, and hence the many objections to its indulgence. Yet *wisely tempered* to the needs and capacities, it is an adjunct to all curative measures that can by no means be disregarded. Let it have its daily place, O ye wise developers and healers! only hold it firmly as your *servant*, and never permit from it the least aggression upon pleasurable duties. The glow of electric forces, the free opening of the pores, the rhythm, the grace, the æsthetic culture, the *delight*, should by no means be lost to society, because, forsooth, like every other *good*, it has also its possibility of evil. Each light must *necessarily* cast a shadow.



FIG. 105.—DANCING FOR HEALTH.

Boating, the peculiar movements of the arms, shoulders, the whole body even, occasioned by a skillful manipulation of the oars, can not be surpassed in its favorable effects on muscular development.

Gymnastics should be so understood and practiced that daily exercise of the *whole* body, until the surface of the flesh is moist and supple, should be a necessary of hygienic routine. Every thing tending to physical development that at the same time pleases, exhilarates, and delights, should be comprehended in the details of this "city of refuge" from the "avenger" of broken laws, disease.

Then, O ye puny, half-made sufferers! hasten therein, and be reconstructed! By the aid of all natural elements, all hygienic habits, all transmitted "virtue," and the wisdom of the spirit-worlds, we will build you anew. So much for bone, so much for sinew, so much for blood, for flesh, for nerve, for magnetism, for electricity, for *mentality;* atom by atom, we will *supply* all that nature has been prevented from gathering by the bonds under which false habits and conditions have placed her.



FIG. 106.—BOATING.

And ye who have taken upon yourselves the *responsibility* of calling from the great unknown a new *individuality*, who have placed a so finely organized, sensitively endowed, "fearfully made" being as *yourself*, under the stern necessity of *living*, see to it that

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you make that life a *blessing* and not a curse. You question the kindness of a creator who ordained a hell for his humanity, and yet stamp your progeny with the real hell before they behold the light. If, from the ignorance or fatuity of *your* ancestors, you have nothing but hell to bequeath to them, send the mother at the *beginning*, where, under all these life-inspiring and life-perfecting aids, she can build up hygienically the new being that will either bless or curse her in proportion as she performs her work artistically or otherwise.

This entire change of surroundings, this entering into a paradise



FIG. 107.—THE MADONNA OF THE PRESENT AGE.

of *active repose*, this being gladdened, purified, fed, and strengthened, through the mysterious accomplishments of gestation, will enable the mother to bestow upon the world such a grand creation of human beauty, power, and intellect, that she will be entitled to the salutation bestowed upon the Madonna of old, "Blessed art thou among women!"

It is far more satisfactory to *build wisely* than to continually repair. And for those whose surroundings are not such as would call the highest faculties of the mother into happy exercise, who can not aid her scientifically in performing her work for posterity in accordance with her absolute obligation to the new life she dares to

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summon, such an Institution as we are faintly outlining should be hailed as the greatest conceivable blessing. And the little, shapely, firm, and polished bodies, well-balanced brains, and happy dispositions thus developed, would be the redemption of the world.

"I have not been well since the birth of my child!" is the plaintive wail of thousands. And for each of those thousands, there are several thousands more, who suffer through their sufferings, and are dragged downward by their descent; and many thousands of little mounds upon the hill-side, and in the valley, over which bitterest tears have been shed, and where brightest hopes have been buried, against the repetition of which nature is continually lifting up pleading hands of protest. And yet more fearfully sad, many thousands in insane retreats, in idiot asylums, in deformed conditions, in every position of wretchedness, calling for some mighty embargo upon this contraband traffic in human lives. So loud the cry, heaven and earth is moved to construct a temple of salvation for the mothers, who can be so sustained through those trying duties as to find life renewed and youth prolonged, every capacity increased, every pleasure heightened, every blessing multiplied an hundred fold; and for the *fathers*, who may glory in blooming *matrons* and sturdy *heirs*, instead of the waiting feebleness that will overshadow the most vigorous manhood; and for the children, who will not be compelled to crawl through the inefficient, misanthropic, suffering earth-life, and require reincarnation to gain a respectable spirit-form, but who will hail existence as a glorious boon, inheriting Archimedes' lever of electric power, and the fulcrum of a well-balanced organization upon which to sustain it.

A highly impressional motherly medium, or healer, especially adapted to this most important department, will be considered indispensable to Our Hygienic Temple.



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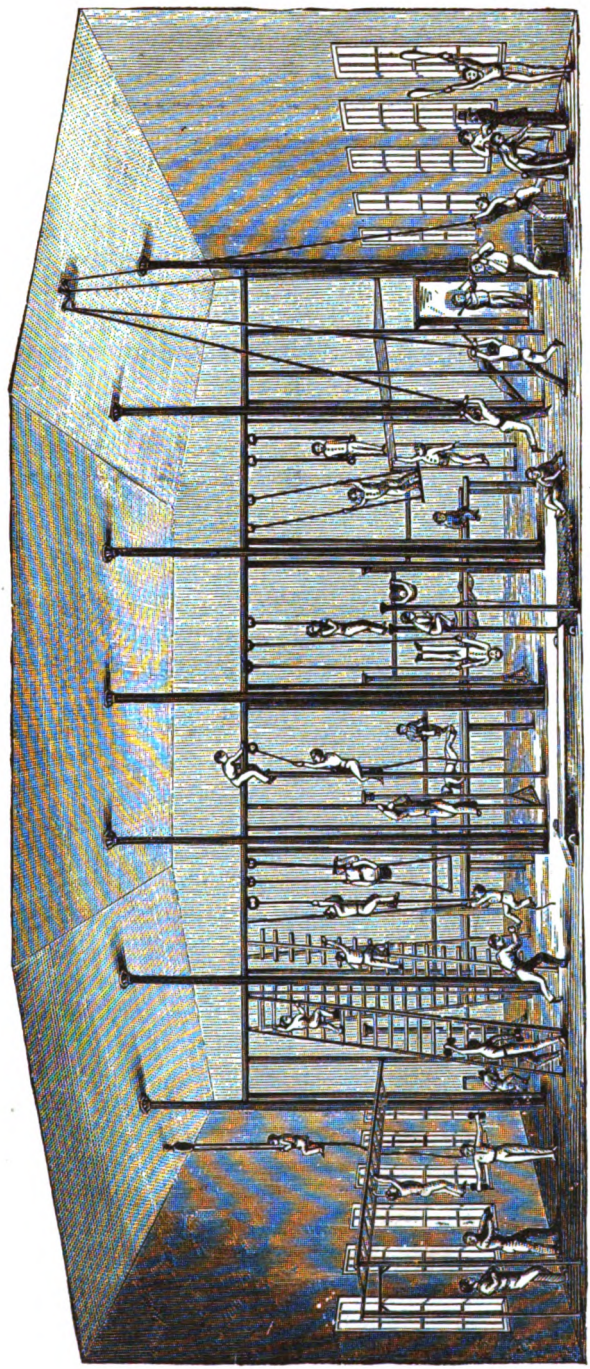


FIG. 108.—THE GYMNASIUM OF THE INSTITUTION.

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THIRTY-FIRST SECTION.

THE SCIENTIFIC SELECTION OF FOOD INDISPENSABLE TO HEALTH.

WE HAVE endeavored to impress the fact that all debility, pain, uneasiness, discontent, etc., are voices issuing from the atoms of conscious being, peremptorily calling for elements which have failed to reach them in the natural mode. We have argued that a normal, or perfectly healthful, appetite was a correct guide to the supplying of each demand.

We have also claimed that a most pernicious and unnatural habit of living, eating, and drinking, has so perverted these saving instincts that nearly every member of the human family needs a radical reconstructing to render it safe to follow his spontaneous appetites.

As every dose of active medicine creates a demand for its repetition by impairing natural powers and rendering artificial forces necessary, so every article of unassimilating food creates an unnatural desire for more of the same kind by throwing the forces of the system into an abnormal condition of active effort to adjust themselves to the superinduced state.

As, for instance, you excite the stomach to unhealthful activity by pepper and mustard and spices, you create a demand for something not legitimate to the system to overcome that irritation, and you send tea, coffee, ale, or wine to subdue the insurgents. In performing that office, however, they arouse new demands for other foreign aids, to restore the still more disorganized forces. And thus on and on *ad infinitum*. And as this corrupting of the natural instincts commences with an infancy already warped by inheriting pre-natal conditions, and moves through the daily life with constant-

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ly increasing power, there needs to be a scientific guide, through rigid analysis, to the actual required elements of the human system, looking to the daily diet for their supply.

We shall endeavor to show you how to select such articles of food as shall build up such parts and powers of the body as are most deficient, and hence diseased or debilitated. Are you lean, or cold, and restless, and nervous? You require such articles of diet as are rich in carbon, to supply fuel to the lungs, and heat to the system, and fat to the flesh. Only in such proportions, however, as are thoroughly digestible, or only what is fully and easily digested, is converted to the uses for which it is designed, going out into the blood and bone and muscle to meet this demand.

These carboniferous articles are fat meats, good butter, sugar, molasses, corn diet, rice, potatoes, etc.; that which is most appetizing and enjoyable always being selected, of course.

Have you much call upon the forces of the brain—mentality over-taxed, and a resulting nervous debility? Choose the diet rich in phosphates, oat-meal, fish, pearl-barley, beans, peas, milk, etc.

Are your bowels inactive, failing to perform their duty of regularly removing the exhausted, decaying substance rejected by blood and body, which is poisonous to the whole system if remaining where myriad little mouths and inhalers of all the vital organs must be continually taking up the decomposing effluvia? Then before you become a victim to that inveterate foe to health, confirmed constipation, persist in an abundant diet of all seasonable and to you most delicious fruits and vegetables, at whatever painstaking and cost they may be required. Let your bread be unbolted wheat-meal, your whole diet cooling, coarse, and plain.

If you have a craving appetite, and by gratifying it are becoming fleshy, dull, listless, indifferent, deficient in all mental power and desirable energy, then select the food less carboniferous and more abundant in nitrogen, lean beef, Southern corn, beans, oat-meal, barley, fish, cheese, etc. It often occurs that the system needs some of the properties of certain articles of food, to supply activity of brain and muscles, or some other vital force, while it is unable effectually to work up all the accompanying material. Nature, all-bountiful and wise, has a most satisfactory provision for this condition. The juices of all fruits and some vegetables contain *acids* which are useful in eliminating these unneeded and therefore harmful elements. And by this same divine provision the *desire* for these acids is clamorous when the system is overcharged with alkaline impurities. This desire should always be fully gratified.

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It is often the case that there will be a temporary disturbance of the bowels or other organs of the body, by a free indulgence in what is thus craved, and you may suppose that the articles do not agree with you. But by a little judicious persistence, you find that the very disturbance has wrought out a desirable and a beneficial change of condition.

Different fruits contain acids that variously affect the system, and the choice of the appetite indicates which will be best adapted to the existing need. These acids are variously denominated malic, oxalic, tartaric, citric, etc. Oxalic acid exists in plants rather than fruits, and particularly in sorrel. The only plant used at the table containing this acid is garden rhubarb, which is well adapted to the change of the system, from its wintry needs to the thinner blood and more passive of the early warmer months.

The fact that oxalic acid, as organized in plants, may be wholesome, however, should not deceive any one with regard to its poisonous nature when *disorganized*, or the result of chemical action, as in the case of the oxalic acid of the shops. This fact of the entire change of the effect of properties as they pass through chemical changes, should never be lost sight of, as from ignorance on that point arise the gravest dietary mistakes that are constituting the Americans a nation of dyspeptics.

The more nearly a native state is retained in the grains, vegetables, and fruits, the more perfect is the adaptation to the varying bodily needs.

Citric acid is especially adapted to the state indefinitely termed *bilious*, as in its intense, penetrating action, it resolves and throws out at the pores the clogged, thickened juices that by inactivity of the liver have been unhealthfully accumulating. This acid is found most abundantly in the lemon, orange, lime, citron, shaddock, and some others. It is also in the cranberry, currant, strawberry, raspberry, cherry, bilberry, and tamarind; but is there modified by an equal quantity of malic acid, and is milder and more especially adapted to the aid of digestion.

Tartaric acid is the name applied to the active principle of grapes, tamarinds, pine-apples, and mulberries, producing a slightly stimulating or tonic effect upon the quickened system, especially favorable in its action upon the sluggish, adipose individual who has indulged too freely in carbonaceous food.

The acid more especially developed in apples, termed malic acid, prevails in a large assortment of fruits and vegetables, pears, peaches, plums, cherries, elderberries, tomatoes, etc. etc. It enters into most

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healthful and invigorating combination with all articles of diet, and should in some form constitute an important part of every day's food. Every family should have a generous supply of malacized fruits where the appetite for them can be fully gratified, it being a much wiser provision than drugs and medicines, or prepared sweetmeats and stimulating foods, *which are equally pernicious in their effects.*

Many a spring epidemic and prevailing fever, with accompanying grief and bereavement, would be prevented by *accepting* this most friendly provision for our physical needs, and benefiting fully by its possibilities.

Professor Nye, of Cleveland, Ohio, has perfected and patented a plan for preserving fruits, vegetables, and all other dietetics, which should form a part of the furniture of every house; as by it every family can have for the entire year all these acids in their natural form of organized fruits and vegetables, perfect in flavor, and luxuriously healthful. When this preservator is generally understood and introduced, people will be induced to return to the primitive use of natural food, and thus learn to enjoy in the highest degree the pleasures of a luxurious table that is at the same time health-promoting, and the zest of a perfectly natural appetite.

The objects to be attained by such a fruit-preserving apparatus are simply coldness, dryness, purity, absence of light, sameness of temperature, exclusion of oxygen; and the exercise of scientific knowledge and constructive genius will enable many an individual to supply himself with this great desideratum of health and enjoyment; as, while life is preserved in either animal or vegetable matter, vital law is supreme; but when life ceases, chemical law assumes control, as manifested in fermentation or putrefaction, each of which is *disorganization*, and evolves deleterious elements.

Hence when the healthful craving for these native acids is answered by a supply of vinegar, or alcohol, or fermented wines, the beneficial results are impaired or counteracted by the chemical changes involving decay; while by having such a preservative, every man could have in his cellar his wine or cider, from the most delicious grapes, apples, pears, peaches, cherries, berries, etc., representing a choice of more than fifty different beverages, delicious and wholesome, containing in their natural condition all the acids which the system requires, without any adulteration with deleterious elements. In dwelling so fully upon the natural selection of food, the question may arise how to decide which is a normal and what an abnormal craving or desire. We will enable you to ascertain. First give the stomach and system an entire rest from all the effects of *habit* by living at least for one week upon some *one article* of well-

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known nutritious properties, such as oat-meal gruel or cakes, or cracked wheat, mush, or pearl-barley, giving the appetite abundant opportunity to become sufficiently pronounced and keen in its relish of that for which it calls when unbiased by the effects of deleterious substances. By an occasional discipline of such a nature, the sense of taste may be kept perfect in its discriminations, always provided there be no urging or unnatural stimulating of the appetite for food.

Especially should the prospective mother be intent upon an intelligent understanding and application of these principles, wisely selecting such a diet as shall give bone and sinew, firm flesh, and glowing blood, vitality, and intellect to the creation of her love. Let her live upon fine flour, rich cakes, highly-dressed puddings, and plenty of butter, and she will look upon her child with regret for its feeble, sickly appearance, with torture for its sufferings, with constant fears of its early loss, which doubtless will be fully realized.

Mothers especially should realize that sugar and butter have no elements at all to supply muscle, bones, or brains, and fine flour has very little. While, therefore, all animals in their natural state raise their young and bring them perfectly developed to full maturity, a perfectly-developed child is a rare exception to the general rule, while one half of these precious little ones are mourned and wept over in death before the age of five years, and a small proportion gain, through suffering and constant care, a more or less enfeebled maturity. And to every reflecting mind the reason must be obvious: We do *not supply* the life-forces in their natural proportions by a scientific understanding of the elements which we use as food.

In connection with *food*, of course *drink* should also be considered. And another great need of every family, indispensable to healthful conditions, is an approved *filter* for all the water permitted to enter the system. Without this, no water can be obtained perfectly pure, as even that which comes from the clouds contains traces of mineral, animal, and vegetable matter, while that procured from springs and streams is invariably impregnated with salts and mineral matters which are the sources of many diseases. And it is the more dangerous because its effects may be for a long time unperceived, and yet really laying up in store for the individual such diseases as colic, numbness, pain in the bones, loins, constipation, fits, cramps, etc.

Water containing organic matter can be effectually filtered through sand and charcoal. Boiling also purifies it, and is a means within the command of every individual. It is a good precaution *not* to drink water that has not been boiled.

These measures of using wholesome food and drink will prepare the way for the grandest results of healing.

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THIRTY-SECOND SECTION.

HERNIA OR RUPTURE.

BY SIR ASTLEY PASTON COOPER.

IT IS my purpose to treat this subject so fully at some time, as to make it impossible for those coming after me to have any such thing as hernia to treat of.

But in a work of this kind I can merely glance at the common and recognized forms of the malady, with a slight outline of the treatment to be pursued.

I want, and intend to write, a monograph that shall be suitable for children to read, that can even be used as a text-book in school, to teach young people how they may strengthen and preserve the abdominal muscles to *prevent* the alarmingly prevalent occurrence of this trouble.

Man as an animal having been evolved from the lower orders of animal life, demands a widely different arrangement for the support of the internal viscera, owing to his different position in the act of locomotion, that is, on two feet and erect, the vertebræ forming a very nearly perpendicular line from the head downward.

Perhaps nature has not made full and sufficient provision for this peculiarity of organization in man, or perhaps her plans are not perfected yet. It will be an interesting point in this connection to study the cases of hernia for a few hundred years back, and see in what proportion or ratio they have increased or decreased, when compared with the entire population.

I think the result will be largely in favor of the fact that men are less liable to ruptures now than formerly, though it is a trouble far too prevalent even now, and one that should be carefully guarded against. It would naturally seem that women would be far more

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liable to rupture than men, not only from their greater constitutional delicacy, but from the terrible strain that the whole system undergoes in the process of childbirth, as well as in the increased weight and pressure brought to bear upon the abdominal muscles during the process of gestation; but the statistics show that this is not the case.

More than four times as many men as women suffer from this trouble, and that too in different countries and climates, and under circumstances so various as to prove beyond a doubt that the predisposing causes are universal and not local. In the way of dress, too, it would seem that women labored under every disadvantage, wearing the clothes tight about the waist and heavy about the hips, thus pressing down upon the abdomen; but the compressing of the chest lessens the power of the diaphragm, and therefore does not leave so much force to be exerted in causing the muscles in the lumbar region to act. Thus it is that even apparent evils will sometimes counterbalance each other.



FIG. 109.

But children, especially boys, should be taught that sudden and violent muscular exertion is liable to produce permanent evils, from which they may suffer all their lives. Boys, and girls, too, should be taught to exercise regularly, and develop every muscle up to its full quota of strength, so that all the organs may be active and healthy, and the internal viscera firmly and thoroughly supported.

Many a boy, in playing ball, so wrenches and over-exerts himself that hernia is either the immediate result or the inevitable consequence.

Hundreds of cases of rupture can be traced to the wrestling and contending of the play-ground, hundreds more to the immoderate and injudicious exercise of the gymnasium.

Exercise is a good thing, a first-rate method of improving the strength and developing the muscular system; but there is always a possibility of making exercise useful, and people very seldom hurt themselves with work.

If the young men who go daily to the gymnasium, or pay from one to five dollars per week for the privilege of exercising at a "health-lift," should find some poor woman or deserving family, pay a dollar or so for coal, and then carry it up three or four flights of stairs, they would find their muscles improving, and heart and con-

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science paying a big interest on the money invested. Or, if in the country, they should resolve themselves into a wood-sawing and splitting committee, and have, in addition to the village lyceum, a regular system for shoveling snow, breaking roads, and cutting ice in the winter; or repairing the highways, and raising crops for the poor in the summer, much needless waste of strength might be prevented, and much good done, besides the prevention of hernia with its attendant evils.

The two extremes of not exercising enough and exercising too violently should be alike guarded against, and constantly increasing strength and safety will be the result.

It may be well to mention here, that a case of hernia is almost certain to be accompanied or immediately followed by a weakness and loss of power in the sexual organs, often resulting in paralysis or atrophy.

For this reason, if for no other, boys and young men should be especially careful about any spasmodic over-exertion.

Up to the age of twelve, hernia very seldom occurs, but from that time onward, it increases in frequency and severity.

There is, however, a peculiar species of rupture which occurs in infancy. This is fully treated in our work on the treatment of children, in sickness and health.

The umbilical rupture, generally occurring soon after birth, is a protrusion of some part of the intestines at the navel. This can be cured by the careful adjustment of a piece of ivory or other smooth substance over the protruding tumor, and fastening it securely, yet with as little pressure as possible.

This sometimes lasts for several months, rarely for a year. Any other rupture or apparent tumor in the case of an infant should be at once examined by a careful and practiced physician. But after this stage, rupture seldom occurs until, as I have already remarked, near the age of puberty.

It should then be carefully guarded against, the system strengthened by proper diet, the bowels kept regular and open by fruit and other laxative food, as *costiveness* has been known to produce and always aggravates rupture.

Hernia or rupture is of three kinds, known as reducible, irreducible, and strangulated hernia.

Though the word hernia may be used to signify a protrusion of any body or organ from its natural position through an abnormal or accidental opening, and may therefore occur in any part of the body,

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yet it is by general use restricted to signify protrusions of the abdominal viscera.

Some parts of the abdomen, especially the inguinal and crural rings, are weaker, and therefore more liable to hernia than other local points.

Reducible hernia usually shows itself in the form of a soft tumor or swelling somewhere about the lower part of the abdomen or groins. It occurs more frequently on the right than the left side, and shows that the membrane which surrounds and holds the intestines has broken or separated, thus letting a portion usually of the small intestine through the aperture thus formed, so that it rests against the outer wall of the abdomen, there causing distention or swelling.

This swelling often originates suddenly, and is subject to change of size, being smaller when the patient lies down than when standing, and larger after eating heartily, or any violent exertion, as going up or down stairs rapidly, lifting, running, or jumping. This very changefulness often leads the patient to think there is little or no danger, and perhaps that the trouble will cure itself. Vain hope!

When a rupture is first discovered, a truss should be immediately procured that will fit lightly and easily, affording the weakened part all necessary support without irritation. The patient should lie upon his back, and a good magnetic physician should put the protrusion carefully and gently back in place. The hand should be held over the swelling until a slight perspiration gathers on the surface, then the truss should be gently but firmly adjusted, and worn continuously, until it produces a feeling of weariness or irritation, only taking it off for bathing and rubbing freely, or for magnetic treatment. If a rupture is discovered or strongly suspected, and it is not possible to procure a truss at once, take a handkerchief or other soft bit of cloth, fold it into a thick pad about two inches square, dip it in hot water, and place it as hot as can be borne immediately over the swelling; then wring out a towel in cold water, wrap it around the person tightly, holding the hot pad in place. Put plenty of dry wrapping over this, and lie down quietly.

The hot pad will relax the muscles and allow the displaced membranes to return to their proper position, and the cold bandage will act as a tonic and strengthener. In mild cases, this has even been known to effect a permanent cure if the patient is very careful and lies still as much as possible; but it is better to have a good truss neatly and carefully fitted, as it will prove at once a safeguard and

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support; and if a cure be possible, nothing will do so much toward effecting it as a truss.

When the intestine has protruded through the opening, and become so large that it can not readily be returned, the hernia is said to be "irreducible."

In this state, a hollow pad should be fastened to the truss, large enough to receive the tumor and yet to press it very slightly. Good magnetic treatment will often cure a case of hernia that has been considered for years irreducible. It should be treated very gently, however, and with the utmost patience and caution.

The one other form of rupture that we can refer to here is the "strangulated rupture."

This occurs when so much of the intestine has been forced through an aperture that it can not be returned, and the opening has contracted, thus interfering with the circulation as well as the ordinary action of the intestines. This causes severe pain, nausea, vomiting, and other symptoms of distress.

The patient should lie down—a hard bed is best—copious warm soap-and-water injections should be given, to thoroughly evacuate the bowels, warm bricks should be placed at the feet and thighs, to excite perspiration, and the fingers should be dexterously and carefully used to return the protrusion to its natural position. Good magnetic treatment is of the utmost importance, in allaying the tendency to inflammation and reducing the swelling.

It has been the custom with some physicians to reduce the strength and relax the muscles by bleeding the patient until he fainted. Others use ether or chloroform to produce utter relaxation of the muscles and a species of faintness.

Both these experiments are dangerous and unnecessary. The knife has sometimes been resorted to for dividing the cincture caused by the contracted muscles; but this too is an operation attended with great risk and often permanent ill effects.

Patience and presence of mind will do all that needs to be done; but ten, twelve, or even twenty-four hours may be needed to accomplish the desired effect.

Do not become discouraged, but with the fingers lightly yet firmly push back the protruded membrane. Steadiness of nerve and a strong magnetic current are the best dependence. A battery can be used to advantage when the swelling is reduced; but care must be taken in its application, lest it cause the aperture to close too suddenly and thus constrict some portion of the membrane that has not already resumed a normal position and action.

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Rupture is sometimes said to be radically cured, when the visible tumor has been reduced; but let it be always borne in mind that a weakness of the abdomen is an inevitable consequence, and greater care and more constant thought must be exercised to guard against any future exciting cause of the difficulty.

It was estimated, at a certain time in France, that of the apparently healthy men, not in hospitals and not under the care of any physician, between the ages of sixty and seventy-five years, one in every four suffered from rupture.

There are various exciting causes which must tend in some degree to explain this. The constant use of wine, the unnatural stimulant that it supplies, and the consequent nervous excitement and frequent over-exertion to which it leads, probably has its effect in that direction.

But a proper course of living and exercise are the best preventives, and it is most essential in this class of troubles to bear in mind constantly that prevention is better than cure.

Some physicians apply ice or very cold water to strangulated hernia; but I have a dread of the nervous shock which these applications cause. I think warm water is better, as tending more to relax the constricted ligaments and aid in the return of the whole structure to its normal state.

Sometimes lying upon the back for a few days, and eating very little food with as little liquid as possible, will so act upon an apparently irreducible hernia that it will become reducible and may be returned to its proper position. Good magnetic treatment will then strengthen the whole system, and so make tense and firm the walls of the abdomen.

People liable to rupture or already troubled with it should be especially careful about becoming angry or excited; should study self-control, and treat themselves tenderly and with great consideration; should take no stimulants, but eat plain, light food in abundance, exercise much, but cautiously not violently, and spend as much time as possible in a recumbent position. If it be possible to lie down during the day, should do so, and make the nights as long and quiet as possible.

Bathe frequently, rub vigorously, especially about the loins, abdomen, and back, and always if practicable have some healthy person do the rubbing. If obliged to rub yourself, use a long-handled flesh-brush covered with flannel or a bit of lamb-skin with the wool on.

This will have a tendency to magnetize and strengthen the weakened ligatures.

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The sun-bath should always be resorted to in cases of rupture, whether children or adults; and we propose to have at Dr. Stone's Institute a set of apparatus constructed on the most radical and thoughtful principles, designed especially for the treatment, certain relief, and ultimately permanent cure of all cases of rupture. We intend to teach children and young people, too, how they may avoid the possibility of rupture by living strong, pure, healthful lives.

The brain should not be cultivated at the expense of the body, nor should any organ or set of organs be allowed to act to the detriment of the whole system or the depletion of the natural forces.

Sometimes a rupture is caused by a severe fit of coughing; to obviate which, people should never allow themselves to cough severely; and a person with a rupture should, upon any indication of a cold or irritation of the throat or lungs, provide himself with some simple *cold* inhalant, to be used at any time when needed.

Lifting heavy bodies should be strictly avoided, and the patient should be careful not to wear any clothing that in any way presses upon or irritates the protruding tumor.

There is a case recorded of a boy who, becoming highly excited in a game of cricket, struck the ball with such force that he dislocated his shoulder and at the same instant caused a rupture of such size and severity that it soon became strangulated; mortification set in before proper medical assistance could be procured, and there being no one present with sufficient knowledge and presence of mind to render the necessary treatment of the case, the boy died.

This and similar cases should warn boys to play with moderation, and not to make such excessive exertion as is liable to cripple them for all the rest of their lives.

For rupture or hernia is sure to bring an attendant train of evils, that every reasonable being might well dread and shrink from with a horror akin to loathing.

Therefore, boys, as you want to be strong, active men, avoid every form of indiscretion and excess in youth. Do not drink stimulants to steal away your brains, or exercise immoderately to weaken your muscles; but learn to make yourselves useful and reasonable, and in that way will you win true health and happiness.

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THIRTY-THIRD SECTION.

MEDICINE.

PHYSIOLOGICAL PROEM.

THE treatment of disease by medication can be traced back to very ancient times.

Frequent allusions are made to it in the writings of Moses, when the priests were the physicians; and they doubtless used magnetism, or laying on of hands, as a remedial agent even then, though the record seems to refer principally to the promoting of cleanliness and prevention of contagion.

Pythagoras, Democritus, Heraclitus, and others devoted their lives alike to philosophy and medicine; but Hippocrates was the first who set out with certain theoretical principles, which were derived from the generalization of facts and observations, and professed to make these principles the basis of practice.

For several centuries, there was no decided change in the history of medicine, until the establishment of the school of Alexandria, which was effected by the munificence of the Ptolemies, about three hundred years before the Christian era.

So early as this, there was a strong prejudice against bleeding, and the use of many of the powerful poisonous or irritating remedies.

This prejudice was largely owing to the teachings of Chrysippus, who believed in trusting mainly to diet, hygiene, and the curative principle in nature itself.

The strong, brave souls who have given themselves up to philanthropy have trusted their own intuitions, without need of law or rule. But in all ages, there have been many who have studied medicine as a pro-

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fession and practiced it for a livelihood ; and these, having little or no faith in themselves, must have rules and data, a record of the experience and observation of others, upon which to base their practice.

It is for this class of people that what little we know of the science and art of medicine is written out and preserved.

Andromachus prepared a medicine composed of sixty-four curiously compounded drugs, and named the Theriaca. It was extensively and popularly used for a long time.

Pliny, the naturalist, and Dioscorides gave the best work of their lives to the advancement of the art of healing ; but Galen came, with clearer insight, quicker and more accurate intuition, and strong, swerveless will. The work of other men was dwarfed into comparative insignificance by the great strides he took in the cure, as if by magic, of the most difficult and dangerous cases.

He had the most perfect faith in the wisdom and power of his spirit-guides, especially of Æsculapius, who came to him in dreams.

Galen was a voluminous writer, as well as a faithful and tireless worker. He left books, that are still preserved in the original Greek, treating upon the subjects of anatomy, physiology, dietetics, hygiene, pathology, diagnosis, pharmacy, materia medica, and therapeutics, including surgery, besides his philosophical and miscellaneous works, his commentaries on Hippocrates, etc. He was known to be what is now termed a medium ; that is, one who received and promulgated the views and teachings of disembodied spirits ; and so great was his influence that, though before his time the medical profession was divided into several sects, who were always disputing with one another, as, for example, the Dogmatic, Empiric, Eclectic, Pneumatic, and Episynthetic, yet after his time all these sects were merged in his followers. Again, the practice of medicine has become diverted from a single channel and divided into different schools. There is some natural rivalry between them, but not so much jealousy and ill-feeling as when, centuries ago, men were of less universal culture and kindliness than they are to-day.

We have no need now of a Galen to unite the contentious elements ; we only want to *teach people to use their own reason and judgment.*

There is a wide difference between the practice of medicine from fifty to one hundred years ago and the most advanced methods and theories of to-day.

To illustrate this, we will give a dissertation upon "Medicine as a Science and an Art," embodying the highest and best thoughts that the regular or old-school practice has taught.

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We give this principally to show our familiarity with the subject, and not as a rule of practice for any one to be guided by in treating cases that may come within his care or influence.

The drugs and chemicals referred to in the so-called "regular practice" we do not approve of or use, and we only speak of them as being connected with a former system of medication.

It was not until the ninth century that the works of Hippocrates and Galen, as well as those of Aristotle and Plato, were translated into Arabic.

But the Arabian physicians prosecuted their researches and experiments with such zeal and patience that many valuable discoveries and inventions were made by them.

They introduced to the European medical world the rich gums and spices of the East, such as cassia, camphor, myrrh, rhubarb, etc.; and they did good work in changing the crude mysteries of alchemy to the practical work of chemistry. They taught distillation, and the means of metals to their oxides and bases.

In the fourteenth century, we have the first record of the dissection of a human body. Though Galen gives evidence in his writings of a good knowledge of anatomy, it was derived from a study of the lower animals, as he refers to the fact of having dissected an ape, and deriving a knowledge of the human organism from it, which he had never before observed in any animal. He mentions, too, that the physicians who attended the Emperor Aurelius in his wars against the Germans had wonderful opportunities of studying anatomy by dissecting the bodies of the barbarians who fell in battle; and he also refers, with evident regret, to the fact that Æsculapius came from the world of shadows and bade him remain in Rome, even after the emperor had ordered him to attend his royal personage in the campaign. It shows plainly that a certain confidence in and regard for the words of an angel visitant must then have been prevalent, if even the commands of so stern and powerful an emperor could be set at naught by them. But in the year 1315, at Bologna, an Italian physician and anatomist, named Mondini di Luzzi, publicly dissected two human bodies, and demonstrated his teachings to his pupils by them.

After this time, anatomical studies and experiments were carried on by dissection of human bodies, always with more or less secrecy, because there were no legal means of providing dead bodies for that purpose until less than fifty years ago.

There are, however, good and sufficient means now lawfully made and provided for all who wish to study anatomy, and it is well for

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young people of both sexes to have a good elementary knowledge of the human frame and its most frequent troubles and disturbances.

Anatomy is variously divided. The comparison of the structures of different kinds of organic bodies is called comparative anatomy; the study and dissection of the lower animals is called zoötomy; that of plants, phytotomy. Theoretical anatomy is divided into special and general phases. General anatomy gives a description of the elementary tissues of which the systems and organs of the body are composed, and investigates their laws of formation and combination, as well as the changes through which they pass in various stages of life. Microscopic investigation, experiment, and earnest study have also added their quota of information in regard to the elementary textures, especially of the nerves.

Special anatomy treats of the several parts and organs of the body, and their relation to or connection with each other.

This should be studied in connection with physiology, and a good knowledge of structural anatomy will be found useful in whatever path of life a person may be called to walk.

We know very well that medicine *is not an exact science, and far from perfect as an art*, and yet we have chosen to treat it as a science and an art, perhaps the more vividly to show its defects. Anatomy, physiology, physiognomy, and phrenology should all be carefully studied by the student of nature who would understand the temperamental peculiarities of his patients.

It is true that much depends upon intuition, and the natural impressibility that renders one susceptible to impressions; but all those finer spiritual faculties may be improved, and their power intensified, by practice and careful observation.

To the student of medicine we would say, Never forget that the body is but the mystical temple wherein the soul dwells, through which it manifests itself more or less perfectly. And in all that you do for the body, do it with reference to the indwelling spirit, the soul.

It is the highest mission of humanity to raise and elevate the standard of life by which the mind of man is governed, and healthy mental power depends very largely upon strong, pure blood and active nerves.

It is difficult for the soul to manifest itself when the body is weak and diseased; especially difficult, almost impossible, for it to reach its own highest possibilities of manifestation. Therefore, to the physician is given a double charge and trust—that of ministering to the body, of relieving or preventing physical pain and suffering, and at the same time assisting the struggling spirit to express itself worthily.

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This is a branch of medical science not taught in the schools, not set down in the books, but worthy of consideration no less. And to the student who intends to make a life-work of the healing art, as well as to the humanitarian who intends to do all the good in his power to all who need his aid, we alike appeal for assistance in this work of advancing the spiritual interests and improving the facilities by which the work of spiritual expression and communion may go on.

We call upon all who are interested in the progressive work of the world, in the benefiting of humanity, to give to this subject its due and proper attention ; to study medicine, not merely as a science and an art, but as a means for improving human kind, and making people better and happier.

This is the true mission of the healer, and only in this way can the highest good be reached and wrought.

We give this treatise upon the science and art of medicine, not as an expression of the highest intuition, but merely as an evidence of the best regular teaching which the schools have so far offered, and more especially the old or regular school of allopathy, though I believe some physicians, and perhaps the whole faculty, repudiate that name of allopathic, declaring it to be only a nickname, given by those who call themselves homeopathists.

However, I use the word merely as a distinctive term, without wishing to enter into any discussion as to its significance.

And in the following pages, what is said in regard to "medicine" may be understood to refer entirely to the "old school" or "regular" practice, used in conjunction with various drugs and chemicals whose efficacy and necessity in the curing of disease were at one time fully believed in, even by us who *now repudiate them.*

Our object in treating disease is not merely to prolong the life of the individual, but to so act with nature as to allow the natural forces to reconstruct the diseased or debilitated organs, and thus perpetuate and reproduce natural and healthy life.

With this purpose always in view, we invite the reader's attention to the following.

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THIRTY-FOURTH SECTION.

MEDICINE A SCIENCE AND AN ART.



EDICINE is at once a SCIENCE and an ART. As a science, it treats of the causes, symptoms, progress, and terminations of disease, with the effects upon it of various medicinal agents. As an art, it consists in the application of the principles thus established to the cure or palliation of disease. Practical medicine evidently rests upon a thorough knowledge of anatomy and physiology as its only and true basis. For how are we to recognize diseased structure but by being familiar with the condition of the various organs in health, and minutely tracing every deviation from that standard? Or how can we distinguish perverted function unless we have studied that function in its healthy state, and accurately observed every departure therefrom? A familiarity with hygiene, or the means of preserving health and preventing disease, is also highly important.

The INSTITUTES or PRINCIPLES of medicine treat of those general facts and laws which have been observed to apply not only to individual cases or special disorders, but to certain classes of diseases, or to disease in general. Under this head are included general pathology, which treats of all that pertains to the *natural history* of disease, and therapeutics, which explains the principles that apply to its treatment. GENERAL PATHOLOGY may further be subdivided into etiology, which treats of the causes of disease; semiology, which sets forth its symptoms and progress; diagnosis, or the means of distinguishing diseases apparently similar; and prognosis, or the signs by which we judge of their course and probable result. Pathology also includes morbid anatomy, or a description of the various lesions and changes

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of structure which occur in the course of or in consequence of disease.

We have spoken, and shall often have occasion to speak, of disease. But what precise ideas do we attach to the word; how shall we define it? "Disease," says Andral, "is any derangement whatever in the physical or vital laws which govern the economy." Chomel defines it to be "a notable alteration in the position or structure of parts or in the exercise of one or more functions." Williams's definition is substantially that of Chomel, namely, "Disease is a changed condition or proportion of function or structure in one or more parts of the body." Dr. Symonds (in Library of Practical Medicine) calls it "an abnormal condition of, or a deranged action in, the whole or a part of a living system." And, again, according to Dr. Wood, "Disease may be defined to be a derangement of the organization, or of one or more of the functions of the body." It is manifest that all these definitions are in substance identical. None of them attempt to tell what disease in its essential nature is—in truth, we do not and can not know; but they all attempt to include its sensible phenomena. Instead of giving some distinction common to every class and species of disease, they point to the grand divisions of classification into structural and functional. They also define disease by calling it "a derangement" of the system, a departure from the natural or healthy state. Health has been defined as the state in which all the organs are perfect, and all the functions properly performed; but judged by this standard, there are very few healthy men. There are some words, such as time, truth, life, of which we have so clear an idea that it can not be improved by any definition. So it is with health, the gradations between it and disease are almost imperceptible, and it may be hard at times to draw the dividing line. On the whole, the old definition of Van Swieten is perhaps the best, "Disease is a deviation from health."

The various definitions of disease point to the nosological distinction of structural and functional diseases. Recent investigations in morbid anatomy show that many affections formerly supposed to be strictly functional are really attended with organic change. In this department, the microscope has already given important aid, and much may still be expected from its revelations. Yet the distinction seems to be founded in nature, and will probably always be received. United as the body is with an immaterial soul, it is but reasonable to suppose that affections of that soul—such, for instance, as some of those which produce insanity—should run their course without leav-

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ing any trace of physical change behind them. None but an extreme materialist would always expect to find organic change.

It has been a question for no little dispute what is the primary seat of disease. At one time, the Humoral Pathology prevailed, and all disease was referred to derangements of the fluids of the systems. Then followed the Solidists, who, overlooking the fluids, supposed the solids, especially the nervous system, to be the seat of disease. Neither theory was wholly right or wholly wrong; for diseases often seem to have a complex seat affecting both solids and fluids, blood and nerve. Thus in inflammation, a particular part seems first affected, and we have in it heat, pain, redness, and swelling. But soon the fibrine of the blood becomes notably increased, and the secretions of the organ affected become perverted, and thus the fluids too are deranged. On the other hand, in typhoid fever and the exanthemata, the blood is undoubtedly the part first disordered, but soon we find the disease manifesting itself upon the skin or the glands of Peyer.

Some diseases, as inflammation, cancer, and tubercle, may attack almost any one of the tissues of the body. Others, as dropsy, are limited to a few. Gout and rheumatism, though they may attack various parts of the body, seem to be confined to one anatomical structure, namely, the muscular and fibrous tissue. Age, climate, the season of the year, and certain unknown conditions of the atmosphere, as in epidemics, seem also to have great influence in determining the attack upon special organs and structures of the body. But considerations of this kind come more naturally under the next head, namely, etiology, which explains the causes that tend to produce disease.

ETIOLOGY.

The most general signification of this is, according to its derivation (Αιτία, cause, and λόγος, narration), the study of causes. In this connection, it is used to denote the study of morbific causes, that is, of every thing within and without the system which produces or tends to produce disease. The study is evidently one of no slight difficulty, since in the living system so many influences concur in producing a given result that it is not easy to assign their relative share of importance to each. Thus, four men shall be exposed to a certain morbific cause, as exposure to a draught of cold air; in one it may produce catarrh; in another, pneumonia; in a third, diarrhea; while the last shall escape unharmed. Here the previous state of the system operates so as to make one and the same cause produce effects essentially diverse. Again, many of the causes of disease are of so

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subtle a nature that they elude our most accurate and refined modes of investigation. Such are the atmospheric influences which produce the various epidemic and endemic diseases. Certainty in a subject so obscure and complicated can only be obtained by numerous observations and patient induction. Much doubtless remains to reward the future investigator in this interesting department. The progress of chemistry and microscopy, by enabling us to trace diseases to their earliest manifestations and simplest elements, may do much to reveal their real causes.

CLASSIFICATION OF THE CAUSES OF DISEASE.

The causes of disease have been variously classified, as into internal and external, general and special, mechanical or chemical and physiological, proximate and remote, etc. The best-founded division seems to be that into the predisposing and exciting. An illustration has already been given of several individuals exposed to the same immediate cause, and yet no two of them similarly affected. This is manifestly owing to the pre-existing state of the system, by which one was wholly protected, while in the others the morbific cause fell with its full power upon the organs least able to resist it. Thus whatever tends to weaken the tone and vigor of the system, or of any particular organ, becomes a predisposing cause of disease. The exciting cause, on the other hand, is that which is the immediate occasion of disease. Thus, a person may have tubercles for a long time lying dormant in the lungs, when some severe effort shall at once bring on a serious attack of hemoptysis. A highly plethoric person may seem to be in the enjoyment of vigorous health, but, upon some unusual excitement or exertion, be at once struck down with apoplexy.

A predisposing may by long continuance become an exciting cause of disease. A person of vigorous stomach may for a while indulge in eating quantities of indigestible food, and with apparent impunity. But a continuance of the habit is pretty certain to end in confirmed dyspepsia.

There is a class of mechanical and chemical agents, which, when brought in contact with the living body, always produce their special effects. Thus, cutting instruments brought in contact with the tissues will always divide, caustics and corrosive substances will always disintegrate them. Chloroform inhaled into the lungs in sufficient quantity will not fail to produce insensibility, nor prussic

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acid, if taken into the stomach, to produce coma and convulsions. These and similar agents have been called by Chomel general determining causes of disease. Another class of agents, as malaria, the virus of small-pox and syphilis, the contagious principles of scarlatina, typhus fever, etc., have been by him denominated specific determining causes, as always a specific form of disease. These classes may, however, come with propriety under the head of exciting causes.

PREDISPOSING CAUSES OF DISEASE.

These are generally obscure or almost imperceptible in their mode of action, and produce their effects by long-continued subjection to their influence. Some of them act upon large masses of people or upon the community at large, and others are confined in their operation to isolated individual cases. The former may be denominated general, the latter special, predisposing causes.

GENERAL PREDISPOSING CAUSES.

These are for the most part dependent on certain conditions of the atmosphere, or connected with certain local influences. The changes in the atmosphere which tend to produce disease, are especially those that affect its temperature and the amount of moisture, with the degree and kind of effluvia it contains. Sudden changes of the weather belong rather to the occasional and exciting causes of disease. A continued high temperature appears to increase the capillary and cutaneous circulation, and thus to create a tendency toward erysipelas and the various inflammations of the skin. By impairing the activity of respiration, it throws an additional burden upon the liver, of eliminating carbon from the system, and thus predisposes to *hepatitis* and biliary derangements. Heat, when conjoined with moisture, by diminishing the insensible perspiration increases the secretions from the mucous membranes, and thus produces a tendency to affections of the bowels. This cause is especially active in the neighborhood of marshes and other moist localities. To its influence in a great degree must be attributed the prevalence of that scourge of infancy in our country, the summer complaint or cholera infantum.

A cold, dry atmosphere stimulates the activity of the respiration, and thus contributes to produce affections of the lungs, as also to hemorrhages and deep-seated inflammations generally. The combina-

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tion of cold with moisture, on the other hand, predisposes to chronic diseases, as bronchitis, rheumatism, and tuberculosis.

Air which remains long confined soon becomes impure and decidedly deleterious. The researches of Fodere (*Influence des Agens physiques*, p. 401) seem to show that the stagnation of air in the ravines of Valais is a principal cause of the goitre which there prevails.

Light is an essential stimulus to the health of organized beings. Deprivation of it disposes to scurvy and anasarca. The researches of Milne-Edwards show that its action is essential to the proper development of the body, and that the absence of it tends to produce the deformity of scrofulous children. Hildebrand has also proved that the withdrawal of light favored the contagion of typhus, and we have all had occasion to observe how various pestilential diseases are generated, or at least greatly aggravated in the dark and filthy portions of large cities.

SEASONS.—The registers of death show a remarkable difference in the prevalence of diseases at different periods of the year. The diseases of winter and spring are more acute, inflammatory, and amenable to treatment. Those of autumn are more obstinate, more liable to relapse, and oftener leave unpleasant sequelæ in their train.

LOCALITIES.—Different climates and localities exert peculiar influences upon the human system. Southern climates are afflicted with yellow and bilious fevers. At the North, inflammations and affections of the lungs are more frequent. The extreme cold of the Arctic regions, with the filthy habits of the inhabitants, conduces to the singular violence of contagious diseases when once introduced among them.

City and country life dispose to different species of disease. The population of a crowded city, living amidst continual excitement, breathing an impure air, and often living on unhealthy food, are more subject to neuralgia, phthisis, and the diseases of debility; while the inhabitants of the country are more disposed to acute diseases, and chronic affections are comparatively rare.

A change of residence or of the mode of life, working as it does an entire revolution in the system, is a powerful predisposing cause of disease. The Irish, who in their own country know little or nothing of consumption, are here peculiarly liable, as statistics amply prove, to that desolating scourge. The inhabitants of malarious districts expose themselves with impunity to influences from which the stranger is sure to suffer severely. Persons removing from a cold or temperate region to one within the tropics are subject to

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fevers and affections of the liver and bowels. A resort to stimulating food or drink, to counteract the enervating effects of heat, is sure to aggravate the very troubles it seems to relieve. The only protection for persons thus circumstanced seems to be at once to adopt the customs, diet, and habits of the country to which they have come. Dr. Copland relates that "while traveling in some of the most unhealthy parts of intertropical Africa, he met with an Englishman who had lived there thirty or forty years in the enjoyment of perfect health, and who attributed this exemption from disease wholly to his having pursued as closely as possible the modes of life of the natives, and adopting their diet and beverage.

Political institutions and the customs of society have a marked effect upon the prevalence of certain diseases. In free and highly civilized countries, where the intellectual faculties are stimulated to the highest degree of activity, and in times of revolution and general excitement, mental alienation is far more common than where the people live in idleness and contented ignorance. Our own country has gained an unenviable pre-eminence for the prevalence of insanity.

SPECIAL PREDISPOSING CAUSES.

These are such as act on the individual, rather than upon society at large. They include all that he is by birth, education, habits, age, sex, circumstances, etc. First of these is hereditary predisposition. "The ailments of our parents," says Baillon, "are inherited as well as their goods, and this sad inheritance is far more surely transmitted than any other." It is well known that scrofula, mania, epilepsy, gout, asthma, phthisis, rheumatism, etc., run in certain families. Sometimes the disease passes over one generation or portion of it, but reappears in the next. This proclivity does not appear at birth; rarely indeed it is congenital, as may be the case with syphilis or small-pox, but generally manifests itself in the process of growth and development. Scrofula and epilepsy appear in infancy, phthisis in youth, gout and gravel in middle life, and apoplexy still later.

Age is another circumstance which has an important influence on the development of disease. Strophulus, hydrocephalus, and the affections which accompany dentition, mark the period of infancy. During childhood, or the interval from infancy to puberty, nature is especially occupied in developing the nervous system and apparatus of digestion. Hence we now find meningitis, epilepsy, chorea, disor-

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dered bowels, and verminous affections. This, too, is the period for the prevalence of hooping-cough, croup, and the various exanthemata. Puberty is peculiarly liable, especially in females, to derangements of the nervous and vascular systems. During middle life, fevers and inflammations are common. Then, too, are laid the foundations for various chronic diseases. In old age, all the vital powers are subject to slow decay. The effects of previous neglect of the laws of health now become manifest. Dyspepsia, gout, organic diseases of the stomach and liver, ossification of the arteries and the valves of the heart, urinary complaints, with cerebral hemorrhage and softening of the brain, now appear. Some of these, as apoplexy, scirrhus, and valvular disease, are almost limited to the period of advanced life, while typhoid fever rarely occurs after the age of fifty-five.

Sex.—To most diseases both sexes are equally liable. Her peculiar organization exposes the female to affections of the uterus and derangements of the catamenia. Besides these, she is especially subject to tubercular phthisis, cancer of the breast, chorea, hysteria, neuralgia, and indeed to the whole catalogue of nervous affections. Men, on the other hand, are more exposed to accidents and those complaints which are the direct effects of exposure to atmospheric changes, as rheumatism and inflammations, especially those of the deep-seated organs.

Temperament, which is characterized by a predominance or deficiency of some function, predisposes to various diseases and also modifies them when developed. Thus the sanguine temperament which is marked by activity of the circulatory system and abundance of red blood, disposes to hemorrhages and acute inflammations. The bilious temperament, which is characterized by sluggishness of the biliary and digestive apparatus, conduces to diarrhea, hypochondria, inflammations of the membranes and organic degeneration. The lymphatic temperament, which is accompanied by a languid circulation and excess of white blood-corpuscles, disposes to scrofula, chronic discharges, and dropsy. The whole system is marked by languor and sluggishness. Diseases here tend to assume a chronic form. The nervous temperament is just the opposite of this, and is marked by irritability and excessive activity both of mind and body, but without corresponding powers of endurance. It predisposes to the neuroses, and, in other diseases, to delirium and disturbance of the functions of the brain. It is seldom that a perfect example of either of the temperaments is to be found. They are more commonly mixed and blended in every possible proportion. According, how-

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ever, as each of the functions before mentioned predominates, will be the respective proclivity toward disease.

Different occupations and modes of living create, as we might expect, tendencies toward different diseases. Thus, literary men, clerks, and others whose habits are sedentary, are often subject to headaches, dyspepsia, and hemorrhoids. Singers and public speakers frequently suffer from affections of the throat and larynx.

The habitual use of animal food conduces to plethora and inflammation. The continued use of a poor, impoverishing diet is productive of scrofula, phthisis, and nervous derangements. Poverty, with want and anxiety which often attend upon it, is a fruitful cause of insanity, low fevers, and all the diseases which accompany or proceed from debility. Indulgence in intoxicating drinks, if long continued, destroys the tone of the digestive organs, deranges the liver, and over-stimulates the brain. The vigor and energy of the constitution are ruined, and the drunkard finally perishes, perhaps, from causes which would have been harmless to other men.

Breathing an impure atmosphere is another fruitful source of disease. It is only necessary to contrast for a moment the pale, cachectic appearance of the inhabitants of a crowded city with the ruddy countenance and sturdy frame of the mountaineer to be convinced of the influence of this circumstance. There is no more powerful cause of all the diseases which arise from or depend upon debility and impaired nutrition.

Previous disease, apart from its general effect of impairing the constitution, often has a tendency to reproduce itself. An inflamed organ is often so far injured in structure or in function that it is strongly predisposed again to take on the same diseased action. The morbid products of disease also are always prone, upon the slightest exciting cause, to degeneration. Disease of the heart, by deranging the circulation, produces congestions of the veins and viscera, with a tendency to dropsy and hemorrhage. Rheumatism, gout, gravel, hysteria, and epilepsy are extremely apt to recur. This is probably dependent on some constitutional cause, some change produced by the first attack, or some imperfection in the organs of assimilation or secretion. The tendency of tubercular and cancerous deposits again and again to return is doubtless owing to the same cause.

Excessive mental or physical exertion renders the system peculiarly susceptible to every morbific influence. If to the influence of these be added the depressing tendency of care and anxiety with loss of sleep, the nervous system becomes extremely irritable and is liable to sink from distinct disease. The depressing power of certain pas-

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sions of the mind, as fear, grief, and despondency, is strikingly shown in the increased sickness and mortality which often pervades an army after a defeat or while retreating before a superior enemy. During the prevalence of epidemic and contagious diseases, it is well known that those who are the most timid and cautious are often the first to suffer. So, too, persons who are especially fearful of certain affections, as phthisis and cancer, frequently fall victims to the diseases which they had so much feared.

The effects of dress upon the system may be resolved into those of heat, cold, and compression. Of the two former we have spoken, under the head of general predisposing causes. The third deserves a moment's consideration. Tight cravats, by compressing the veins of the neck, interfere with the return of the blood from the head, and thus may induce epistaxis, disordered vision, and cerebral hemorrhage. Small shoes deform the feet, produce corns and bunions, and by impeding the circulation may bring on in those predisposed attacks of gout. Still more serious are the effects of tight elastic corsets. They compress the stomach and liver, and thus interfere with the process of digestion; they prevent the descent of the diaphragm and diminish the expansion of the lungs; they press down the bowels and viscera, and thus give rise to more prolapsus and other uterine derangement than all the abdominal supporters ever invented can remedy.

Finally, pregnancy and the puerperal state deserve distinct notice as predisposing causes of disease. At this period, the female is peculiarly subject to vascular fullness and derangements of the nervous system and digestive apparatus. Parturition disposes to inflammation of the mammæ, peritoneum, uterus and its appendages. Anæmia, usually quite curable, we have found, when occurring at this period, singularly intractable and often fatal.

EXCITING CAUSES OF DISEASE.

These may be subdivided into the general, which may, according to circumstances, produce various forms of disease, and the specific, which are associated with some particular affection. It will be evident that several of those already considered under the head of predisposing causes may, when long continued or when sudden and energetic in their action, become immediate causes of disease.

Mechanical Causes.—These are endless. A few examples only will be given. Most of the accidents which fall under the care of the

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surgeon are produced in this way. Such too are the obstructions caused by the presence of foreign bodies in the windpipe, esophagus, bowels, or urethra. A stone in the ureters or bladder and a gall-stone in the biliary ducts may mechanically excite an intense irritation. Minute particles of stone, iron, cotton, etc., often bring on disease of the air-passages in the workmen employed upon them.

Chemical Causes.—These, too, are exceedingly numerous. Many of them are but partially understood, as our knowledge of animal chemistry and the various processes constantly going on in the economy is as yet very imperfect. To this head is to be referred the action of the acids, alkalies, and salts; also of heated metals, boiling liquids, and caustics. Some of these, as the preparations of lead, arsenic, and corrosive sublimate, from their producing serious effects when taken in minute quantities, are usually ranked as poisons. These may act in two ways; either by disintegrating the coats of the stomach or other tissues with which they are brought in contact, or by acting through the medium of the blood upon the nervous system. Animal and vegetable substances in a state of putrefaction generate a poison which seems to act by altering the constitution or impairing the vitality of the blood. Thus trifling dissecting wounds are, as is well known, attended by most serious results. Meat and vegetables brought to market in a state of incipient decomposition often suddenly produce, when eaten, alarming symptoms. The same poison may also be introduced into the system through the lungs, as by the pestilential air of large and crowded hospitals or besieged cities. All these diseases are of a typhoid or adynamic character, and usually attended by a fearful mortality. Somewhat similar to these are the effects produced by the bite or sting of venomous reptiles. Retention of the urine or feces also sometimes appears to give rise to a decomposition of those excretions, and the evolution of a poison which speedily deteriorates the blood, and diseases, if it does not destroy, the whole system.

Sudden Changes of Temperature.—The general effects of heat and cold, when long continued, in predisposing to disease, have already been considered. They also act when in extreme degree as direct excitants of disease. A temperature above 212° Fahrenheit, if continued any great length of time, will of itself destroy life. In a lesser degree than 35° cold benumbs the sensibility, contracts the solids, and diminishes the capillary circulation. When the whole surface of the body is exposed, the blood is forced inward upon the internal organs, the action of the heart is impeded, the innervation diminished, and unless relief is speedily afforded death may ensue.

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In a still less degree cold arrests the cutaneous exhalation, impairs the innervation, and by forcing the blood upon the internal organs tends to produce in them congestion or inflammation. The organ nearest the part exposed, or the one that is weakest and least able to resist morbific influences, usually suffers most. Thus the air-passages, lungs, and large joints are the parts most frequently affected by colds.

But it is when the body is freely perspiring and the whole system relaxed that sudden exposure to cold is most dangerous. The capillaries being all relaxed, the effect of cold in driving inward the blood is then most seriously felt. The cutaneous exhalation is at once arrested, the entire system chilled and depressed, and the secretions generally suspended. A feverish reaction at length, and then the organ most intimately associated and sympathizing with the part exposed or most debilitated by previous influences is very liable to become inflamed.

Some have attempted to explain the *modus operandi* of cold by supposing it to act upon the nerves of the part exposed, and through them upon the central nervous system. A difficulty in the way of this explanation seems to be, the effect produced is not at all proportioned to the sensation which it excites. The severest colds are often taken unconsciously. A person may suffer a degree of cold actually benumbing without any bad result. But let him get his feet damp and chilled, or let him when perspiring be exposed to a draught of cold air, and though there may be but slight uncomfortable feeling at the time, he is pretty sure to suffer for his imprudence.

Heat.—This agent acts more frequently as a predisposing than as an exciting cause of disease. A very high temperature rapidly exhausts the nervous energy, depresses all the functions, and finally brings on collapse. This seems to be the true explanation of the phenomena of sun-stroke, since experience has fully shown that the stimulating plan of treatment in cases of this character is generally the most effectual. A less degree of heat stimulates the circulation and tends to produce a state of feverish excitement. In a hot-air or vapor-bath the pulse is quickened, the skin becomes full and red, the head hot and throbbing, until the excessive heat is reduced by copious perspiration. In warm climates, inflammations of the eyes and skin are very common.

There are several other agencies, as errors in diet, excessive habitual discharges, sudden suppression of discharges, loss of blood, fatigue, mental emotions, fear, anger, etc., which may act as exciting causes of disease: but most of them have been discussed under a previous head.

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SPECIFIC CAUSES OF DISEASE.

By specific causes we mean, not only those which produce certain distinct forms of disease, but those which are the only causes of those affections. Some diseases, however, which are ordinarily propagated by contagation, do sometimes appear to be generated spontaneously. Syphilis, for instance, which, in the immense majority of cases, is spread by direct contact, is believed by many authorities to be capable under certain circumstances of being produced *de novo*.

The diseases induced by this class of causes are denominated endemic, epidemic, and contagious. Endemic, from ἐν, among, and δημος, the people, are those which are produced by influences strictly local, and are generally limited to certain seasons and localities. In marked contrast to these are the epidemics, from επι, upon, and δημος, people, which may occur at any time, and visit any place, traveling often with fearful speed from city to city, and country to country. Both seem to depend upon certain atmospheric influences, sometimes limited, sometimes wide-spread in their operation, obscure in their nature, and frequently baffling the most rigid investigation as to their origin and primal cause.

Endemic diseases may, under certain circumstances, become epidemic. Thus the plague seems to originate in Upper Egypt, but sometimes sweeps over the world like a pestilence. India is the home and birthplace of cholera, but in epidemics it knows no country nor limits.

Endemic Diseases.—These are permanent in the same place or recur at regular intervals. Among these may be enumerated goitre or hypertrophy of the thyroid gland, often accompanied by mental imbecility, an affection common in the valleys of Switzerland and the adjoining countries; also, elephantiasis in the West-Indies, ophthalmia in Egypt, plica polonica in Poland, and cholera infantum in the United States.

But the largest and most important class of endemics are the diseases dependent on malaria. In countries where the temperature, for any considerable portion of the year, is above 80° Fahr., the neighborhoods of streams, marshes, and other moist, damp localities are apt to be infested with diseases marked by a peculiarly periodical character. This consists of a chill, ending in fever, and followed by a more or less complete remission. And this attack returns regularly at certain intervals.

It is obviously impossible to give any satisfactory explanation

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how or why malaria produces the effects it unquestionably does. We can only observe its laws and mode of operation. Now, abundant experience shows that the essential conditions of the generation and prevalence of miasmata are a protracted high temperature, moisture, and the presence of vegetable decomposition. Malarious diseases seldom appear beyond the 56th degree of latitude, and they increase in virulence as we approach the equator. They also rarely occur at a temperature below 60° Fahr., even under circumstances otherwise favorable. In New-England, although a few days of every summer are intensely hot, the warm season is too short to produce them. In regions where they do occur, they seldom prevail till late in the season, and are hence often termed autumnal fevers.

A certain degree of moisture seems essential to the production of marsh miasmi, yet excessive rains act rather as a preventive. At such times it has been noticed that high grounds which ordinarily escape are more liable to suffer, while low lands are unusually healthy. It is after heavy rains, when a warm season with rapid evaporation and exhalation succeeds, that malarious diseases are most dangerous. The drawing off of an old mill-pond or reservoir during the summer is pretty sure to be followed by the evolution of miasmata.

The presence of vegetable decomposition seems to be another requisite to the production of malarious diseases. They occur most frequently in the neighborhood of marshes and swamps where vegetable matter has been accumulating for centuries. The deltas and banks of sluggish streams in tropical climates are sure to be infested with them. The same cause may explain their occurring late in the season when vegetable life has run its course and its various organic products are ready to be resolved into their primitive elements. To the same principle may be referred the virulence of miasmata in newly-settled countries. When the primitive forests are first cut off, and a virgin soil turned up to the rays of a burning sun, it is evident there must be a rapid decomposition of the organic elements in which such a soil must abound. With the progress of cultivation, as the land becomes drained and the soil covered by a new vegetation, malarious diseases gradually diminish or disappear.

It seems to be a property of malaria that it seldom rises much above the surface of the ground. Thus the lodgers upon the lower floor of a house will not unfrequently suffer, while the occupants of the upper stories escape. The exhalation seems to resemble a fog which creeps along the surface of the ground, gathering over marshes and along the banks of streams. Like fogs, too, the malaria seems

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to prevail in the early hours of morning and after the dews at night. Hence an important rule of prevention is to avoid, as far as possible, exposure at such hours. During the middle of the night, the miasm is peculiarly dangerous, especially during sleep, when the power of resisting every noxious agent seems to be diminished. Hence, armies in line of march or encamping in a malarious district, sleeping, as they must, in tents and on the ground, often suffer severely. Winds, too, seem to exert an important influence upon the prevalence of miasm, often carrying it with them to a considerable distance from the place where it originates. On the other hand, hills and trees seem to obstruct its progress. Thus mountains, perhaps by their affinity for vapors and exhalations, often protect regions beyond them. A grove of trees along the banks of a stream will sometimes check the spread of the malarious poison, and it has happened that a forest or an avenue, cut away for improving the prospect, has rendered a place previously healthy uninhabitable.

We have spoken of malaria, the conditions of its origin, and the manner in which it is disseminated. But what in its essential nature is it, and how does it act upon the human system? These are questions to which, in the present state of our knowledge upon the subject, we are not prepared to give a definite answer. Various theories have been proposed to account for its phenomena. The most plausible is that of Varro, revived in modern times by Dr. Holland, which attributes these effects to the existence of innumerable microscopic animalcula, and that of Dr. John K. Mitchell, which supposes them to be caused by the spores of cryptogamous plants. Both those theories account for many of the phenomena of malaria, but both are lacking in positive evidence amounting to proof. In the present state of the case, they can only be regarded as elegant hypotheses. All that we really know is this, that in the circumstances and under the conditions already enumerated a certain something, called marsh miasm, is produced, which is capable of exciting in the human system the phenomena of intermittent and remittent fevers.

Miasmata probably act upon the system by being taken into the lungs in the process of respiration. The air, Dr. Copland remarks, undergoes upon the respiratory surfaces a kind of digestion, certain elements entering into the circulation, and certain others given off, which have served the purposes of the economy. This author supposes that miasmata produce their effect by acting upon the organic nerves distributed to the lungs and bronchi. It seems, however, a more probable explanation to suppose that it is absorbed into the blood,

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and thus brought to act directly upon the central nervous system. A strong argument in favor of the last supposition is the fact that the blood undergoes certain marked changes in the class of diseases now under consideration.

EPIDEMIC CAUSES OF DISEASE.

The name endemic has been applied to the ordinary diseases of a region or place which apparently depend on strictly local causes. In this sense, typhoid fever might be called the endemic of New-England. But aside from these, there are occasional visitations of disease, prevailing over more or less extensive sections of country, and of a character strikingly different. These usually occur without any obvious cause, affect many individuals at the same time and place, continue for an uncertain period, and then disappear to recur perhaps in a few months, perhaps not for many years. To such complaints the name of epidemic has been applied, since like a blight they come at once upon a whole people.

Some of this class of diseases may be traced to causes already mentioned, as cold, heat, moisture, sudden changes of temperature, etc. Thus, catarrhs, croup, and rheumatism abound during the damp, chilling east winds of spring, diarrhea and dysentery in the latter part of summer. But occasionally new forms of disease occur, or old ones assume a new and formidable aspect, without our being able to ascribe them to any assignable cause. In this way, influenza may appear at any season and rage for a while, and then as mysteriously disappear. So diseases which are ordinarily propagated by infection, as typhus fever, small-pox, measles, etc., suddenly occur and spread with a rapidity and to an extent which can not be explained by the causes to which they are ordinarily due. Such has been the case from the earliest records of medicine, and indeed of history. Various have been the attempts to account for and explain; but after all the study and speculation there has been upon the subject, it may perhaps be truly said that we know as little of their real causes as did Hippocrates.

But though we know nothing of the origin and essential nature of epidemic diseases, we can, as in the case of endemics, trace their effects and study the laws according to which they act. One peculiarity of this class of diseases is that they often give, to a greater or less extent, their own character to other diseases prevailing at the same time, and indeed sometimes for a long while subsequently. Thus, when cholera or dysentery prevail epidemically, all other

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affections of the stomach and bowels have a strong tendency to run into them. When affections of a typhoid character are very common, even inflammations take on that general type, and no longer admit of free depletion. This general tendency of disease to assume a certain type, often remains long after the epidemic which imparted it has passed away.

The consideration of the medical constitution or diathesis of a season is often a point of great practical importance. For instance, puerperal fever is ordinarily an inflammation of the peritoneum, or of some of the appendages of the uterus, and in such cases the treatment hitherto has been unsparing depletion. But, according to the authority of many close observers and men of great experience, it sometimes, with the same general symptoms, takes on a malignant form, in which *bleeding is speedily fatal.*

Erysipelas and scarlatina are also diseases which vary extremely in their virulence, degree of danger, and proper treatment. Pneumonia and dysentery, affections of a marked inflammatory character, and ordinarily requiring vigorous antiphlogistic treatment, at times assume a typhoid type, and require a cautious resort to stimulants.

This epidemic tendency or diathesis seems to change after a time, and to be succeeded by another and another. At one time, inflammations of the lungs or bowels are accompanied by marked derangement of the liver, and are hence called bilious dysentery or pneumonia respectively. Again the tendency will be for these complaints to be complicated with affections of the brain. A consideration of these facts may explain why it is that remedies which are at one time used and relied on, come afterward to be discarded.

Another peculiarity of epidemics is, that they are most virulent at the outset, and as time goes on, they gradually decline, or, as it were, wear themselves out. At first, every plan of treatment frequently seems useless. This may be partly explained by supposing that those most predisposed are first attacked, while afterward the disease assails others who are more capable of resisting its influence. Be this as it may, the fact is undoubted, and in consequence remedies and modes of treatment used during the decline of the disease often acquire, in this way, a reputation entirely unwarranted.

The prevalence of epidemics is sometimes owing to ordinary causes of disease. Thus, typhus fever often follows famine like a destroying pestilence. So dysentery, in the latter part of summer, is almost sure to follow in its malignant form upon the trail of a large army. Persons suffering from general causes of debility are most liable to suffer from epidemic diseases. It has been noticed, during

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the prevalence of cholera, that a larger proportion of drunkards become its victims than of other classes in the community. In influenza, the old and feeble are the first, and frequently the only ones who fall, and it has been already remarked that in every epidemic those who are most fearful of the disease are most likely to contract it. These circumstances have all been enumerated among the predisposing causes of disease.

We have spoken of an epidemic tendency sometimes impressed for a series of years upon diseases, and that this after a while seems to decline, and is succeeded by a very different tendency. Thus in the time of Dr. Rush, and the early part of this century, fevers and other complaints assumed an inflammatory type, and depletion was carrid to an extent which would now be thought hazardous. A typhoid character has since been so strongly impressed upon disease that it has led some physicians almost wholly to abjure the lancet. Some observers have thought that they were able to discover a kind of periodicity in the return of epidemics and epidemic tendencies. And some have even gone so far as to predict the reappearance of certain diseases. More extended observations, however, seem to be requisite to settle this point.

INFECTION AND CONTAGION.

These terms are often used indiscriminately. In strictness, however, the former applies to the communication of disease by a certain effluvia, as is the case with scarlatina and typhus fever; the latter, to those which are propagated only by direct contact, as porrigo or gonorrhœa. Small-pox, on the other hand, seems capable of transmission in either mode. The whole class of diseases have the peculiar power each of reproducing themselves in those who, under favoring circumstances, are brought within their sphere of influence. The contagion of small-pox, porrigo, gonorrhœa, etc., always gives rise to the same affection. The modes in which these diseases are communicated are various. Small-pox, syphilis, etc., are transmitted by bringing a fluid which contains their specific virus in contact with the abraded surface of the skin, or with one of the mucous membranes. In other affections, as measles, typhus, etc., the contagious principle, which in this case seems to be seriform, and an exhalation from the bodies of the sick, is taken into the lungs, and thus probably absorbed into the blood. Scabies and porrigo are communicated by direct contact.

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The proof that strictly contagious diseases are directly transmitted from one individual to another is easy and convincing. Inoculation of a healthy individual with the specific virus is a ready and certain test. That infectious diseases are also communicated is inferred from the fact that those who are brought in contact or connection with the sick are far more likely to be affected than others. This proof is far from demonstrative, nor have we any certain test, when a disease is prevailing epidemically in a community, to determine how far it is infectious. Accordingly there has been no small dispute among medical men upon this subject, some almost entirely denying that any disease can be transmitted in this manner, some asserting the contagiousness of cholera, dysentery, yellow and typhoid fevers. These questions have had an important practical bearing upon quarantine regulations, the distribution of patients in hospitals, etc.

There is no doubt that many diseases ordinarily propagated by contagion may be at times produced by other causes, and, when produced, extend themselves in the usual way. On the other hand, it seems highly probable that diseases not ordinarily contagious may, under certain circumstances, become so. Single cases of typhus, an affection which is beyond all question infectious, seldom communicate the disease to the attendants where proper precautions are observed. It is where many patients are crowded together in close and ill-ventilated rooms, that there is most danger of communicating the disease. A new source of contagion seems to be generated. Erysipelas, cholera, dysentery, etc., may perhaps, under these conditions, become infectious. Typhoid fever, as it exists at Paris and in our country, is not supposed to be communicable. Yet it is said that there is abundant evidence of its being so in the villages and communes of France.

A person is exposed to an infectious disease, but it is several days or weeks before any symptoms of it manifest themselves. This is called the period of incubation. During this time, the disease appears to be in the system, and working there. Liebig supposes that the specific virus acts like a ferment upon the blood, modifying all its elements and relations, chemical and vital. Other observers account for the fact by supposing the virus to contain the ova of animalcula or vegetable germs which thus find a lodgment in the body, and during the period of incubation multiply and develop themselves into parasitic insects or microscopic plants, and that these constitute the disease. These speculations are purely hypothetical, and have no practical bearing.

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A striking peculiarity of several infectious diseases is that they affect the human system but once. A single attack seems to exhaust all elements upon which the disease is capable of acting, and thus secures the patient from further danger. This protection, however, is not absolute, nor does it apply to diseases propagated by contact. One attack of syphilis or psora is no security against another.

The matter of contagion may be absorbed by clothing, bedding, etc., and thus be conveyed to a great distance. Upon this property is founded the theory of quarantine, to prevent the importation of disease. Physicians attending cases of erysipelas, puerperal fever, and other infectious complaints, have need of extreme care lest they in turn become the means of spreading the disease. For the same reason, apartments occupied by the sick should be well ventilated, and disinfecting agents employed. A heat above 120° Fahr. is said to destroy the power of contagion. Cold does not seem to have this effect, as such complaints often prevail in winter and at high latitudes. Chlorine is probably the best and surest disinfectant.

The diseases produced by infection are attended by marked changes in the constitution and quality of the blood. They are generally of febrile character, and self-limited; that is, they run through a regular course of inception, progress, and decline, usually in a certain number of days. They are capable of being moderated, but not of being broken up or stopped by medical treatment. Most of them are of an adynamic character, and in their later stages require the use, often the free use, of stimulants.

It may be well here briefly to review the resemblances and differences in the classes of disease proceeding from specific causes. Endemics depend on local causes, and recur at certain seasons. They may attack several individuals at once, but do not extend from one to another, and absence from the affected spots is a sure preventive. Epidemics seem to depend on wide-spread atmospheric influences, are not confined to time or place, and do not especially attack persons in the neighborhood of, or attending upon, those first affected. Infectious diseases first attack individuals, and then spread in every direction from them as from a centre, attacking particularly those who have the care of or are in intercourse with the sick. The only sure preventive from them is to avoid all connection with those affected.

We have finished the consideration of the causes of disease, and now proceed to discuss the elements of which it is made up. Disease we have already defined as a deviation from health. Now, this deviation may affect the manner in which the vital processes

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are performed, in which case it is called functional, or it may go on to destroy the constitution and structure of the tissues, when it is called organic. Disease as it ordinarily occurs is a complex, often a complicated affair, involving various functions and affecting more or less various structures. We propose to analyze it as we would a compound in organic chemistry, and to consider it first in its simplest elements, and secondly in its proximate forms.

The basis of all the structures of the human body, physiology teaches us, is the simple nucleated cell. Out of this are formed and built up all the tissues that make up the entire frame. And doubtless disease in its primary action affects the constitution, development, or vital properties of these cells. But with regard to most derangements, whether structural or functional, we have not yet been able to carry back our analysis to these ultimate elements. At present, we are obliged to rest contented with observing the processes of disease in the tissues and membranes formed by the combination of cells.

Diseases are, in their commencement, generally functional. Frequently there are no apparent changes of structure, and if such do occur, it is usually at a later stage of the disease, and often as its results or consequences. We propose, therefore, to begin with discussing the functional derangements, first, of the muscular; second, of the nervous structures; third, of the organs of secretion and excretion; and finally of the blood and the various constituents of which it is composed. The study of these topics will prepare us to investigate the proximate elements of disease, anæmia, plethora, congestion, and inflammation. Afterward we may proceed to consider the various diseases which result from structural changes.

It is upon this general knowledge of the elements of diesase that special pathology is founded. Particular affections consist of these various morbid conditions and processes modified and combined according to the structure, position, and relations of the organs involved. General pathology stands in much the same relation to the study of special diseases as a knowledge of arithmetic does to the pursuit of the higher mathematics. It furnishes the general principles on which we are to proceed, and explains the processes which we are constantly compelled to employ.

Much progress remains to be made before our knowledge of these subjects approaches the character of a perfect science. But surely we are more likely to go right by constantly recurring to principles already ascertained, reasoning by rigid induction from the known to the unknown, than by a course of blind empiricism.

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PRIMARY ELEMENTS OF DISEASE.

Derangement of the functions of the muscular system.

The characteristic vital property of muscular fibre is its power of responding to its appropriate stimuli. Some physiologists have supposed that this power of contractility was derived exclusively from the nervous system. The recent progress of opinion, however, has not tended to this conclusion. It has been shown that the entire brain and spinal marrow may be removed, by slow degrees, from some of the lower classes of animals, without interfering with the action of the heart or of the muscular coat of the bowels. Yet we all know that a sudden and severe shock to the nervous system is capable of at once suspending the heart's motion. It would seem, therefore, that while contractility is an essential and inherent property of living muscular fibre, it is capable of being very much influenced by the state of the central nervous system. The natural stimulant of the heart's action is a proper supply of healthy blood. If the blood becomes increased in quantity or of a more stimulant quality, as may occur in plethora, the pulse at once becomes full and strong. If, from hemorrhage or insufficient nutrition, the blood becomes diminished or impoverished, the action of the circulatory system is faint and fluttering. The same rule doubtless holds good respecting the other non-striated muscles. Their healthy action depends jointly upon a due supply of nervous influence and arterial blood.

This normal action of the moving fibre may be deranged by becoming either excessive or deficient. Excessive irritability may show itself by the contractions being too strong, too protracted, or too quick and irregular. Thus, violent exertion, as in running, climbing, etc., by throwing the blood in increased quantity upon the heart, will stimulate that organ to more frequent and powerful action. So a man under high nervous excitement will accomplish feats of strength to which he is ordinarily inadequate.

Protracted muscular contraction produces spasm or cramp. The pathological condition on which it depends may be a derangement in the supply of blood or of nervous influence, most frequently perhaps the latter. Examples of spasm occur in the muscles of the leg, in the stomach and bowels, in the ureters and gall-ducts, in the glottis, bronchial tubes, and esophagus. It is often induced, as in asthma, colic, etc., by the presence of some foreign and irritating matter. The state of cramp is usually attended by intense pain, caused per-

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haps by pressure which it produces upon the nerves of sensation distributed to the parts. Tetanus is an example of spasm, affecting almost every muscle in the body, and, by exhausting nervous and vital excitability, speedily ending in death.

Quick and irregular contraction denotes excitability without corresponding power. Thus, in pale, delicate children, slight causes of irritation are often sufficient to bring on spasm of the glottis, laryngismus stridulus, and even general convulsions. So, too, in debilitated persons, dyspepsia or a slight over-exertion will induce irregular and fluttering action of the heart. The same thing is seen, in less degree, in sudden starts and quick, uncertain movements of nervous persons. Still more marked examples of it are seen in the clonic spasm, or alternate contraction and relaxation of the muscles in epilepsy and hysteria.

The treatment of excessive muscular irritability consists in measures to remove the pathological condition on which it depends. If there be undue supply of blood, we use depletion, sedatives, and evacuants. If the nervous system be unduly excited, narcotics, revulsives, and anti-spasmodics are plainly indicated. If the condition be one of excitability without proportional strength, we resort to tonics.

But muscular contractility may be deranged by being deficient as well as excessive, and this deficiency is often consequent upon a previous state of excitement. It is the order of nature respecting all the functions of the economy that every period of activity should be followed by repose. So over-fatigue and all unnatural effort or excitement are necessarily followed by exhaustion. Similar effects are sometimes produced by certain poisonous agents, as tobacco; also by concussion of the brain and violent shock upon the nervous system. Loss of blood, imperfect nutrition, or the presence of some acute disease, as fever or inflammation, may be followed by the same results.

Muscular irritability may, under some conditions, be difficult to excite. Extreme cold, and the influence of opium and other narcotics upon the brain, render the motions sluggish and torpid.

The remedies for deficient muscular action must manifestly vary with the cause. This may be depression or diminished activity, debility or diminished power, and diminished excitability. Thus, when the body is suffering severe pain or acute inflammation, there may be a sensation of weakness while the powers of life are really intact. The treatment for such a case is obviously to remove the disease, which, like an incubus, is oppressing the system. A resort to

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depletion and sedatives might be the only mode of restoring strength and vigor. If there be real debility, as from fatigue or insufficient food, rest and nourishment are the remedies required. If the system be under the influence of some poison or debilitated by disease, stimulants and support are plainly indicated; or if the degree of depression be chronic and less marked, a tonic plan of treatment may meet the end desired.

Perhaps there is no point in diagnosis of more practical importance than this distinction of real debility from that which is merely apparent. It is obvious that the two conditions may demand directly opposite plans of treatment. How often, at the commencement of acute diseases, when reducing measures are proposed to subdue the violence of inflammation, do we hear officious saying, "O doctor! he's so weak!" and at the same time, while the stomach fairly loathes every kind of nourishment, food is almost forced upon the unwilling patient. On the other hand, it is to be feared that the ineffective efforts of nature to rally and react against some depressing cause have been mistaken for inflammatory fever, and thus led to treatment which has only aggravated the disease.

DERANGEMENTS AFFECTING TONICITY.

Besides the vital property of acting responsively to its appropriate stimulus, muscular fibre has another by which it is always kept in a state of slow, moderate contraction. This property, termed tonicity, is especially characteristic of the non-striated elastic fibre. By means of it the heads of bones are constantly maintained in the sockets of the joints, and a steady and uniform pressure kept up on the contents of the intestines and bladder. Its action also in the muscular coats of the arteries contributes essentially to the equalized and regular distribution of blood to every part of the body. The tonicity of one set of muscles is sometimes impaired, in which case those which antagonize them act unchecked. Thus paralysis of the external rectus muscle of the eye causes strabismus. Lead-palsy, which affects the extensor muscles of the arm, allows the flexors to draw up the hand.

Excess of tonicity accompanies a state of plethora. The pulse is strong, the capillary circulation active, but the bowels are apt to be torpid and the secretions generally diminished. The tendency here is evidently to gout, hemorrhage, and apoplexy.

The remedies for this state are such as relax the system and in-

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crease the secretions. Moderate diet, exercise, warm bathing, and laxatives, will, if faithfully persevered in, seldom fail to work a cure.

The opposite state of deficient tonicity in which the muscles are feeble and flabby, and the whole system relaxed, is also common. The stomach and bowels fail to contract properly on their contents, causing indigestion and costiveness, and allowing them to be distended with wind. The heart's action is feeble or irritable, and the pulse soft and weak. In short, the whole body is in a state predisposed to disease.

A tonic plan of treatment is obviously the one adapted to such a state. Vigorous and regular exercise in the open air, cold bathing, nourishing diet, and certain medicines, as bark, iron, and the mineral acids, are the remedies required.

We proceed next to consider

FUNCTIONAL DERANGEMENTS OF THE NERVOUS SYSTEM.

The nervous system may be considered as divided into three parts: the cerebrum, which is especially the organ of the mind, and which presides over sensation, voluntary motion with mental and moral manifestation; the spinal cord or excito-motor system, the centre of involuntary or reflex motions; and finally, the great sympathetic nerve, which is supposed to preside over the functions of secretion and nutrition. The brain and spinal cord are sometimes termed the central, while the nerves distributed to the surface of the body and the muscles are called peripheral, portions of the nervous system.

The first of the cerebral functions is sensation. This may be deranged by being excessive, deficient, or perverted; and either of these derangements may affect the central nervous system or the nerves distributed to some particular part. Excessive general sensibility is owing to irritation of the nerve-centres. It occurs in active determination of blood to the head, in which the slightest stimulus of light, sound, or motion becomes intensely painful. Unreal objects arise before the eye more vivid than any thing in nature, while ringing and buzzing noises disturb the ear. A similar condition may occur when the system has been reduced by acute disease, chronic irritation, or wasting discharges. In a less degree, a similar state of things may be habitual in certain persons of delicate constitution and highly nervous temperament, especially where they have lived a life of luxurious self-indulgence and morbid excitement. Such are almost certain to suffer from headache, dyspepsia, low spirits, and various neuralgia

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pains. Sedentary life, inattention to the calls of nature, resulting in habitual constipation; a culture addressed to the imagination and sensibilities rather than the understanding or the heart, all contribute powerfully to the same result. Such persons at length become perpetual invalids; every sensation becomes painful, the imagination is disordered, annoyances trifling to others seem to them intolerable; they sometimes fancy themselves afflicted with all the diseases flesh is heir to, and their symptoms may so closely assimilate real disease that no small degree of discrimination is necessary to distinguish between them.

The physical conditions generally associated with this state of morbid sensibility are a weak pulse, diminished capillary circulation, coldness of the extremities, headache, neuralgia, pains in various parts, especially in the back, and spinal tenderness.

It is singular that symptoms so similar as those of active determination of blood to an organ, and mere nervous irritability affecting it, should depend on pathological conditions so opposite. The fact, however, is undoubted. A post-mortem examination of persons who have died from starvation exhibits the cerebrum highly congested. Children who have been greatly reduced by exhausting discharges from the bowels will often suddenly present all the symptoms of meningitis. Cholera and depressing poisons, as hydrocyanic acid, are often attended with convulsions, even at the moment of greatest prostration.

The treatment of an affection depending on such diverse causes must of course vary considerably. Determination of blood to the brain must be met by local depletion, by cupping, by purgatives, cold to the head, and counter-irritation and magnetic rubbings. After all arterial excitement has been subdued, narcotics may be useful; but previously to that, they only aggravate the existing congestion. Where, on the contrary, similar symptoms are owing to exhaustion, loss of blood, or wasting discharges, rest, nourishment, and even stimulants, may be indicated. There is sometimes a combination of local congestion with general debility which is extremely difficult to manage. In this case, we are obliged to give nourishment and support while we strive to divert the excessive supply of blood from the brain to other organs. Here we must rely on local depletion, with cold to the head and counter-irritants.

Those cases in which the whole constitution has become deranged and morbidly sensitive are often exceedingly troublesome. In females, this condition is generally united with disordered menstruation. This should be corrected, the bowels regulated, and any other of the

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functions, as the respiration, digestion, etc., which may be affected, examined and attended to. The skin, which is apt to be dry and harsh, should be stimulated by bathing and friction. Exercise, amusement, fresh air, change of habits, with the use of the vegetable and mineral tonics, will do most that can be done toward effecting a cure. In these cases, faith often has a mysterious influence. Accordingly, it is among nervous and hypochondriacal cases that homeopathy and hydropathy boast of their greatest triumphs.

But nervous sensibility may be deficient as well as excessive. The most striking example of this is coma, in which the action of the nerve-centres is suspended by pressure upon the brain or the effusion of a clot within its substance. Poisoning by narcotics, as opium, produces very similar effects. Excrementitious matters retained in the system seem to suspend the production of nerve-power, and stupor of course follows. There are persons who are constitutionally deficient in nervous susceptibility. They are usually of a sanguine or bilious temperament, good muscular development, and enjoy vigorous health. The tendency, however, with them is to costive habits, diminished secretion, plethora, and ultimately gout or apoplexy.

The remedies for diminished sensibility must vary with the cause. If this be congestion of the brain, derivants, etc., are indicated. If it be the condition of paralysis following congestion, electricity, strychnia, and other nervous stimulants may be tried; but not until all arterial excitement has been subdued. In persons of torpid, lethargic temperament, cold bathing, exercise, and attention to the various secretions may be useful.

Where sensibility is increased, it is also frequently perverted, especially in anæmical subjects. The appetite craves all kinds of disgusting things. There are prickling, tingling, burning sensations in various parts. These symptoms are usually combined in the female with menstrual irregularities, and called hysterical. The proper treatment is a course of purgatives and tonics, especially the chalybeates, with attention to all the secretions, and exercise in the open air.

Thus much for functional affections of the nerve-centres. We now proceed to

LOCAL DERANGEMENTS OF SENSIBILITY.

These, like those of the nerve-centres, may consist in excess, deficiency, or perversion. Particular portions of the body may become extremely painful and tender; the slightest touch may, as in rheu-

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matic inflammation of the joints, be agonizing. The natural sensibility of the surface may be at once increased and perverted, with intense itching, smarting, or burning. The special senses may, from local irritation, become unnaturally acute. The eye is intolerant of light and the ear of sound. In some cases, all objects appear flame-colored to the patient; in others, he sees sparks, fire-balls, etc. Haziness, dark, wavy points or lines often occur, with derangement of the circulation, either sluggishness or local congestion. So humming, ringing, moaning sounds in the ear frequently occur in fevers, and also in anæmia. They are also heard in inflammation of the ear, or partial closure of the Eustachian tube.

Severe pain in an organ not seeming to depend on any disease is considered neuralgic, and named accordingly. Thus, we have gastralgia, nephralgia, cephalalgia, etc. The last accompanies almost every acute febrile disease, besides being produced by sympathy in various derangements of other organs and functions. It is a marked symptom in nearly all diseases of the brain or its membranes. It may also be induced by derangements of the stomach, constipation, prolonged study, etc.

Many of the structures which in health seem devoid of sensibility, in disease become the seat of extreme pain. In a healthy state, the processes of digestion are performed unconsciously, but in dyspepsia become almost intolerable. The bones, which ordinarily seem to act a merely mechanical part in the body, may, in inflammation or secondary syphilis, become the seat of almost insupportable anguish.

Diminished local sensibility may be owing to deficient circulation of the blood or to injuries either of the nerve distributed to the part, or to that portion of the brain with which that nerve was connected. A sudden cessation of pain in parts which have been the seat of acute inflammation, especially if attended by great prostration, is an unfavorable symptom, as it indicates that gangrene has already commenced.

The causes of pain are various: 1, congestion or determination of blood to a part; 2, a healthful sensation, too protracted or too acute, as hunger, thirst, etc.; also, too long-continued exertion, as of a muscle in lifting or straining; 3, a functional affection of the nerves of a part or of some part sympathetically connected with the first. From what has been said, it will be manifest that pain is no measure of the severity of a disease. Pneumonia, phthisis, typhus fever, are frequently attended with very slight pain, while colic or tic douloureux may be almost unendurable.

Severe pain deranges the functions of the suffering organ. This

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is a wise arrangement of nature to prevent the use of a part unfitted by disease for performing its ordinary duties, as in the case of an inflamed joint. Where, however, as in affections of the respiratory organs, the function is essential to life, this circumstance greatly increases the danger of the case.

A second effect of pain is, that it sometimes excites sympathetic disturbance in other organs, as vomiting may be excited by headache, convulsions by various pains. In its highest intensity pain, if unremitting, may exhaust the nervous energy and thus directly produce death. Oftener its evil influence is felt in gradually reducing the powers of life, as in cancer and other chronic affections.

The remedies for derangement of local sensibility must be adapted to the pathological condition on which it depends. If this be congestion or active determination of blood to an organ or part, the treatment is obviously antiphlogistic with magnetism. After all arterial excitement has been subdued, we may resort to anodynes and anæsthetics both generally and locally. Neuralgic pains usually require a tonic plan of treatment, with, perhaps, the use of alteratives, as iodine and bromine or salicine. If of an intermitting or periodical character, they may generally be stopped at once by quinine. Local pains are often relieved by warmth and counter-irritation and magnetism. Gastrodynia generally yields to blistering over the pit of the stomach, colic to hot fomentations, bags of heated salt, or oil of turpentine applied externally. Where sensibility is unnaturally diminished, we may resort to stimulant frictions and electricity. More benefit seems to have been derived from strychnia than from any other internal remedies.

DERANGEMENTS OF VOLUNTARY MOTION.

The second great function of the cerebrum is, as the organ of the will, to preside over voluntary motion. This function is closely associated with that of sensation, the *corpora striata* being, as physiologists tell us, the centre of the former, as the *thalami optici* are of the latter. Voluntary motion, being directly under the control of the brain, is even more susceptible than sensation to the influence of disease. Some of these affections have been spoken of under the head of muscular irritability; others belong more strictly to diseases of the nervous system.

Increased muscular strength is generally due to cerebral or nervous excitement. Such increase may indicate inflammation of the brain

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or its membranes; but more frequently, as in maniacal fury, depends on merely functional excitement.

The power of motion is diminished in most acute diseases. Lassitude and muscular debility are among the early symptoms of idiopathic fevers. In inflammations, motion is often attended with so much pain that though power to move remains, the patient is loth to exercise it. Later in these diseases, real debility may follow as a consequence of impaired nutrition, or of exhaustion of the vital powers.

The power of voluntary motion may also be diminished by impoverishment or deterioration of the blood. The effect of these causes in reducing muscular contractility has been already noticed. They also act directly upon the nerves and nerve-centres, by rendering the blood unfit to supply its wonted nourishment and stimulus to the brain. This is exemplified in low fevers, in which the normal proportion of red globules is materially decreased; also in retention and reabsorption of the urine and other excretions. In these cases, the effects of congestion and local stagnation of the blood are to be added to those resulting from deterioration in its quality. A higher degree of pressure upon the brain produces stupor and coma, with, of course, entire loss of voluntary motion. Similar effects may be caused by intense mental emotions, as terror, surprise, etc. In these cases, muscular power is not impaired, but the control of the mind over it suspended.

Paralysis, literally *relaxation*, implies entire loss of the power of motion. It usually follows congestion or inflammation, and depends upon structural injury to the brain or its appendages. When the lesion causing it is within the spinal canal, it affects both sides of the body below the point of injury, and is called paraplegia. More frequently it affects one side only, in which case it is produced by injury to one side, usually the opposite side, of the brain, and is called hemiplegia. Sometimes it is restricted to a single part, as to the extensors of the fore-arm in lead-palsy. Here it generally depends upon some injury, often functional, to the nerves of the part concerned. The lesion here referred to may be hemorrhage, effusion, the pressure of a tumor, or an altered condition of the blood-vessels. Loss of voice, retention of urine, paralysis of limbs, etc., are common phenomena in hysteria. They then come on without any apparent cause, and as suddenly cease.

Perversions of voluntary motion occur in chorea, delirium tremens, and other nervous diseases. Here the patient attempts to execute certain movements, but has lost the power of co-ordinating the muscles necessary for the purpose.

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In the treatment of diseases affecting the powers of voluntary motion, we must carefully diagnose the causes on which they depend. Excessive action may generally be reduced by vegetable sedatives, carefully selected, and cold to the head. Where the excitement is purely nervous, narcotics, anæsthetics, and anti-spasmodics may be used, together with magnetism if possible. The fury of mania may be best reduced by applying the cold douche to the head and spine, and by the use of magnetic passes.

When volition is suspended or impaired by pressure upon the brain, we must take measures at once to remove that pressure; here depletion, purging, and counter-irritation are plainly indicated. If it be the lethargy of narcotism or asphyxia, we should endeavor to arouse sensation and reflex action by dashing cold water in the face, friction, the use of stimulants, and, if necessary, artificial respiration.

Where impaired volition is owing to the presence of disease or to deterioration of the blood, it is merely a symptom of a more important affection, which demands all our attention. Here we may endeavor to support the strength, restore the suspended secretions, and follow out other indications which the case may present. Where paralysis is due to the presence of some poison, as lead, in the system, we aim first to eliminate this poison from the economy, and then, by electricity, frictions, stimulating liniments, etc., to arouse the natural action of the parts.

Where defective volition is owing to faintness or exhaustion, we endeavor, by means of position and stimulants, to restore a free circulation of blood to the nerve-centres. Rest, nourishment, an abundant supply of fresh air, may be sufficient to restore the failing powers of life. Sudden and powerful excitement will sometimes restore the use of parts which had long been lost. In this way, and by the influence of faith, we account for the success of metallic tractors; also of various juggleries of empirics, as well as the miraculous cures performed by the images of saints, etc.

Perverted volition, as in chorea, hysteria, etc., is to be treated by restoring the secretions, regulating the various functions, and removing, as far as may be, all sources of irritation and morbid excitement. Moral influences may also be employed to contribute to the same end. Amusement, pleasant company, exercise in the open air, a regular mode of life, are often of more service in nervous affections than any amount of dosing. To these may be joined a tonic course of treatment; especially the use of iron, oxide of zinc, nitrate of silver, and the ammoniated tincture of valerian.

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DERANGEMENT OF THE INTELLECT.

The cerebrum is the organ and seat of the mind. Its highest functions are mental and moral manifestation. These may be deranged by influences which do not act upon the physical system. They may also suffer from almost every disorder which affects the body. The intellectual powers may be stimulated to an unnatural degree of excitement, and thus exhibit brilliant manifestations of genius; but lassitude, depression, dyspepsia, and a long train of nervous derangements are sure to follow. We often see painful examples of its evil influence in precocious children who have been urged forward in study, by the vanity of ill-judging parents. Such a course is pretty sure to end in breaking down the powers of mind or body, or of both.

The intellectual powers are more frequently perverted or enfeebled by disease. The blood, changed from its natural constitution and quality, no longer affords a healthy stimulus to the brain. The patient is unable to think connectedly, or to fix his attention upon the object before him. His thoughts run on their course almost beyond control of the will.

Perversion of the intellect or insanity may arise from purely moral causes; in such cases, it does not fall within the limits of our subject. But delirium often occurs as a symptom or consequence of disease, and as such demands a notice at our hands.

Delirium may be *symptomatic* of disease of the brain, or it may be *sympathetic*, from disturbance of some other organ. It appears to follow inflammation of the membranes and surface of the brain rather than affections of its interior substance, with which disorders of the functions of sensation and motion seem to be associated. Physiologists represent the peripheral or vesicular portion of the brain as the source of nerve-power, especially of intellectual activity. With this portion the pia mater is most intimately connected, which may account for disorders affecting it so much deranging the mind. Delirium often arises from irritation of organs sympathetically connected with the brain, as in hysterical and puerperal mania; also from deterioration of the blood, as in low fevers. It may also originate in anæmia, or be induced by retained secretions, as the bile, urine, etc. Hypochondria or morbid depression of spirits is usually associated with derangements of the liver and apparatus of digestion.

Diminished mental activity and vigor occurs as already remarked, in most acute diseases. When habitual, it is termed dementia or

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idiocy. This state is often congenital. It may also be induced by epilepsy, congestion of the brain, etc.

The medical treatment of insanity is directed to remove the cause on which it depends. This is often a nice point to determine. Many a case of commencing insanity has doubtless been aggravated by depletion, merely on account of the mental disorder, when a careful consideration of all the circumstances would have shown an opposite plan of treatment to be necessary.

Delirium depending on congestion of the brain must be met by depletion and revulsives. But where congestion is associated, as it sometimes is, with diminished vitality, as in low fevers and anæmia, we must rely on counter-irritation, with rest, nourishment, and nervous stimulants, as camphor, Hoffman's anodyne, etc. Where delirium is caused by sympathy with disease in some other organ, as the liver or uterus, our main efforts are directed to subdue the primitive disorder. Delirium tremens, which is usually brought on by suddenly depriving the brain of its wonted stimulus, to which it has become so accustomed as to be unable to perform its functions without it, must be treated by opiates, rest, and the least possible amount of the usual stimulant.

DERANGEMENTS OF THE REFLEX SYSTEM.

The function of the spinal cord is to preside over involuntary motion. Under its control are placed the various sphincters which guard the outlets of the body, as also the iris and the muscles of respiration. It seems capable also, where the influence of the will is suspended, of acting upon the voluntary muscles. Thus in paraplegia, where all connection is cut off between the lower limbs and the brain, reflex motions may still be excited by application of appropriate stimulus to the nerves of the extremities. So, too, in convulsions, the reflex system seems aroused to take into its own hands muscles ordinarily under control of volition. The same explanation seems to apply to vomiting, retching, cramps of the abdominal and other muscles. Sneezing, hiccough, the spasmodic cough induced by intense local irritation, or the presence of a foreign body in the larynx, are farther examples of involuntary motor action. Tetanus is a remarkable form of general spasm. It is generally owing to inflammation of the meninges of the spinal cord, or to irritation from a wound of some tendon, fascia, or nerve. Sometimes it is limited to the muscles which close the lower jaw, and is then called trismus. Catalepsy is a disease in which both flexor and

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extensor muscles are put upon the stretch. The limbs are readily moved, but retain the position in which they were left. It has been questioned by some whether spasm can extend to muscles wholly involuntary, as those of the stomach, bowels, heart, etc. Some facts, however, such as the emission of semen, urine, and feces during an epileptic fit, the contraction of the muscular fibres of the urethra in stricture, and the impossibility of swallowing in hydrophobia, would seem to settle this matter beyond dispute. Every physician has had occasion to observe palpitation brought on by indigestible food, as well as general convulsions from the same cause. Spasmodic croup may be induced by irritations of the bowels, lungs, or gums in dentition, reflected from the medulla spinalis upon the glottis.

Clonic convulsions, or those in which muscular contraction and relaxation alternate, are much more frequent than continuous spasm. It is a singular fact that they are less dangerous in proportion as they involve a greater number of muscles. When one muscle, or set of muscles, is always affected, there is reason to fear injury to the nerve-centres. On the contrary, the diseases in which the whole muscular apparatus is concerned are curable, like chorea and hysteria, or of long standing, as epilepsy.

Convulsions are more dangerous in males than in females or children, more serious when they occur in the progress of acute diseases, than at its commencement. They are peculiarly alarming when they follow injuries of the head or profuse discharges of any kind. Convulsions not occurring in the course of disease are usually paroxysmal, and dangerous in proportion to their length, and the shortness of the interval between them.

The cause of these phenomena is to be found in irritation of the true spinal system. This irritation may be centric, from disease of the brain or spinal cord, as in epilepsy, or when they occur from loss of blood or wasting discharges; or, on the contrary, it may be eccentric, the irritation being transmitted by efferent nerves from the stomach, bowels, uterus, etc., to the medulla spinalis, and thence reflected upon the muscles.

The functions of the spinal cord, like those of all the other organs, are excited by an increased supply of blood. But apart from this, certain substances seem to have the power of directly stimulating its action. The most remarkable of these is strychnia, which appears to exert an immediate influence upon the vesicular portion of the cord. Traumatic tetanus has never been observed to be attended with congestion of the medulla spinalis or its membranes. The irritation is here propagated from some distant branch or nervous fila-

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ment, till at last the whole reflex system is brought under its influence.

Failure of the powers of the excito-motor system is a symptom of grave import, usually indicating the approach of dissolution. In this event, the functions which depend on the medulla spinalis are necessarily diminished or suspended. The sphincters relax, allowing the urine and feces to escape involuntarily. Deglutition becomes difficult, the respiration is diminished in fullness or frequency, and becomes irregular and gasping. At length, the muscles of inspiration get too weak to clear away the mucus which obstructs the air-passages, and soon we hear the rattling in the throat which immediately precedes dissolution. It is thus that death is produced by coma, anæsthetics, and narcotic poisons.

Remedies.—The first object in the treatment of convulsions is to determine the cause on which they depend. If it be, as is often the case, an overloaded stomach, an emetic should be at once administered. If they arise from pressure of a tooth upon the gums, these should be lanced. A purgative or injection may be used to act as a revulsive, and, at the same time, to remove any irritating matter which may be present. A warm bath will also be useful by relaxing muscular spasm, equalizing the circulation, and diverting the blood from the deeper organs. Cold to the head, friction to the spine, and the use of sedatives and anti-spasmodics may also be resorted to. Hysterical convulsions in persons of full habit may be treated with nauseating doses of lobelia, and, where there is spinal tenderness, with cups and counter-irritants to the spine. Certain agents, as hydrocyanic acid, conium, and the cannabis sativa or Indian hemp, act powerfully in depressing the action of the spinal system; but in full doses, there is almost as much danger from them as from the diseases for which they might be used. They are often useful to allay obstinate vomiting, nervous palpitation of the heart, and some other complaints. Marshall Hall, whose authority is high on all nervous affections, believing all medicines to be useless in the treatment of hydrophobia and traumatic tetanus, and observing that the slightest excitement, as that of a breath of air or of a person entering the room, seems to bring on fresh convulsions, advises that no medicine be given, that the patient be kept perfectly quiet and alone. In this way, he thinks the disease might wear itself out before the patient's strength becomes wholly exhausted, and that thus his life might be preserved.

Certain substances, generally reckoned as stimulants, seem to possess a calming influence upon the reflex system. Such are ether,

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camphor, musk, galbanum, and creosote. These often relieve hiccough and nervous excitability and slight convulsive affections. The mineral tonics, especially oxide of zinc and nitrate of silver, are capable of exerting considerable effect upon the nerve-centres. Perhaps this is partly owing to their invigorating and giving tone to the stomach and system generally. Be this as it may, they are often efficacious in relieving chorea, epilepsy, and similar affections. Exercise, diet, and a regular mode of life contribute to the same end.

Slight cases of deficient reflex action, as incontinence of urine in children, may be treated by the cautious administration of strychnia and by mineral tonics. Graver forms of the affection usually depend on serious injury to the constitution of the blood or to the nerve-centres.

Observation has shown that irritation or disease, in one part of the body, may induce pain in other parts sympathetically connected with it. Disease of the hip-joint, from the sensations produced, is constantly referred by the patient to the knee. Congestion of the liver is often attended with pain in the right shoulder. In diseases of the heart, the pain frequently extends down the left arm. Some have attempted to explain these and similar phenomena, by supposing that the irritation propagated from the parts affected to the spinal cord is thence reflected to the parts secondarily involved.

We have considered functional derangements of the cerebrum and spinal cord. The third great division of the nervous system, the sympathetic nerve, is so obscure in its mode of action, and so closely involved in all disorders of the organs of secretion and processes of nutrition, that its diseases may be best studied in connection with those of the various organs and structures to which it is distributed. We shall therefore at once proceed to consider

DERANGEMENT OF THE PROCESSES OF SECRETION.

The secretions may be divided into two classes, first, the exhalations, which depend upon the physical properties of animal membranes, as that of transmitting through themselves fluids of different densities according to the laws of endosmose and exosmose; second, secretions proper, which are produced by a truly vital cell agency. Derangement of the exhalations may be produced by changes in the constitution of the blood or other fluid, in contact with the animal membranes, or in affections of the membranes themselves.

The action of saline purgatives and diuretics is explained by the

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action of fluids of different densities in the intestinal canal on one side, upon the blood of the portal veins on the other. In certain diseases, the condition of the membranes seems to be altered so as to allow of the escape of fluids which should be retained. In albuminuria, the coats of the minute uriniferous tubes allow exosmosis of the albumen instead of the mere watery portion of the blood When excessively congested, those membranes frequently permit the exudation of the blood itself upon their free surfaces. Examples of this are constantly occurring in bleeding from the nose, throat, lungs, and bowels, rarely also from the skin and serous membranes.

The principal natural exhalations are those from the skin, from the mucous, serous, and synovial membranes, and, in females, the menstrual flow from the uterus. By means of the cutaneous transpiration, the body in health is preserved at a nearly uniform temperature, and certain excrementitious substances removed from the blood. Sudden suppression of the perspiration is believed to be a frequent cause of disease. An additional burden is thus thrown upon the mucous membranes, especially those of the lungs and bowels, often inducing catarrh or bronchitis and diarrhea. The various secretions appear to be remarkably correlated in this respect. When one is arrested, the others seem to take upon themselves to discharge its function. Thus, in jaundice, the yellow coloring matter of the bile is seen upon the skin and in the urine. When the action of the kidneys or bowels has been suspended, the odor of the urine and feces has been detected in the perspiration.

Increased perspiration occurs in rheumatism and certain fevers. More generally, however, in acute diseases the action of the skin is diminished or even suspended.

The proper office of the mucous exhalation seems to be to prevent the adhesion of the membranes, to render their surfaces moist, and facilitate the passage of substances taken into their cavities. In health, mucus consists of a watery fluid, containing epithelial corpuscles. It varies, however, in appearance and consistency in different parts of the body. That which comes from the neck of the uterus is clear and albuminous, that from the vagina thick and creamy. At the commencement of catarrh, and in the progress of severe febrile affections, the secretion of mucus is notably diminished. The dry tongue, as well as a hot and dry skin, are well-known symptoms of grave fevers.

Irritation of the mucous membranes is at first attended by a suspension of their natural secretion, but soon the production of mucus is increased and changed in quality. It may become thin and acrid,

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as in coryza; or limpid, as in bronchorrhœa; watery, as in serous diarrhea; or thick, white, and opaque, so as to resemble pus. It may also vary in color, so as to become green, yellow, or reddish, or mixed with streaks of blood and pus.

In health, the serous fluid is produced in just sufficient quantity to keep the membranes and areolar structures on which it is formed moist and lubricated, so as to glide easily over each other. The first effect of irritation or congestion is to diminish their production. Hence the friction sound from the grating of dry surfaces upon each other in the first stages of pleurisy and pericarditis. But if the irritation be continued, the overloaded vessels speedily relieve themselves by effusion of their serous contents, indicated by dullness on percussion, or where it can be felt by fluctuation. Serous effusions may also be produced by obstructions to the circulation of blood through the heart, or pressure upon the veins.

The synovial fluid resembles the serous in its properties, and the manner in which it is affected by disease. The menstrual secretion is, like the rest, subject to various derangements; but these, from their variety and importance, come more properly under the head of special diseases.

The most important of the secretions proper are those of the liver, intestinal canal, and kidneys. These also are at first checked, then increased and perverted, by the influence of irritation. The liver in particular is apt to become torpid. The intestines, being thus deprived of their natural stimulant, are liable to be constipated, while the discharges, destitute of the coloring matter of the bile, appear white or grayish. Meanwhile the skin, conjunctiva, and urine acquire a saffron hue, as if taking upon themselves to remove the excrementitious matter left by the liver. On the other hand, increased and perverted secretion of bile unduly stimulates the bowels, producing a bilious diarrhea, with perhaps vomiting, cramps, and colic.

Torpor of the bowels is common in persons who live upon rich, stimulating food, and take but little exercise. Here the excretions are either much diminished, or, not being removed from the body, a portion of them is liable to be reabsorbed. Innumerable derangements of the digestive and nervous systems may be thus induced. The blood becomes impure, and various organs, as the skin, stomach, kidneys, and uterus, functionally or sympathetically connected with the intestines, become deranged. Numerous cases of dyspepsia and neuralgic pains may be traced to this fruitful cause.

Excessive secretion may have a two-fold effect: first, weakening, relaxing the organs from which it takes place, as a protracted diar-

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rhea reduces the tone of the bowels, rendering them weak and irritable, and incapacitating them for performing their proper part in digestion; second, excessive discharges may diminish the quantity of the blood or affect its composition. Thus, in cholera, the serous element of the blood seems to be almost wholly drained from the body. On the same principle, the saline cathartics which produce watery discharges are the especial remedy for serous plethora. The peculiar office of the liver is to remove carbonaceous matter, as that of the kidneys is to remove nitrogenized materials, from the system. If either of these secretions be much increased, it is obvious that the constitution of the blood would be considerably affected. It is by their stimulant action upon the liver and intestinal canal that purgatives become efficient agents in cleansing the blood of various impurities; and, also, by directly reducing its quantity, perform an important part in general antiphlogistic treatment.

The secretion of urine, like the rest, is suspended or much diminished during the course of severe disease. It is greatly increased in diabetes and after hysterical attacks. When highly acrid, the urine may produce irritation in the ureters and bladder, and occasion a severe form of nephralgic colic.

The act of secretion seems to be performed by the ultimate cells, and is one of the vital powers with which they are endowed. The essentials to its proper performance are, a healthy condition of the organs themselves and a due supply of blood, charged with the elements of which the various secretions are composed. If an organ be sluggish and torpid, or if it has undergone structural change, it is evidently incapacitated to discharge the function for which it was designed. A deficient or excessive supply of blood we have shown to be a frequent cause of functional disorder. It is peculiarly so with all the secretions. Here the blood furnishes both the materials to act upon and the stimulus to act. A deficient supply is, for both reasons, attended with torpor. Congestion, on the contrary, by overloading the capillaries, produces much the same effect.

It does not appear that a connection with the nerve-centres is essential to the processes of secretion, although the state of the nervous system exerts an important influence over them. Surprise or alarm will in some persons bring on speedy action of the bowels; tears are excited by grief or strong mental emotion; the urine becomes loaded with the phosphates after severe intellectual labor. These and many similar phenomena go to prove that secretion, though strictly a process of organic life, is very much under the influence of the nervous system.

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The remedies for deranged secretions vary, as in other affections, with the causes upon which they may depend. Where this is simple torpor, certain agents which act as stimulants or local irritants are plainly indicated. In costive habits, we prescribe a diet which shall leave sufficient residue to act upon the bowels by the stimulus of quantity; and we may add to this the use of certain agents which have the power of directly increasing the secretions, or of promoting the peristaltic contractions of the muscular coat of the intestines. There can be no doubt that rhubarb, jalap, castor and croton oil have a specific power of acting upon the bowels; for they produce that effect, whether introduced to the system through the mouth or the skin or injected into the bloodvessels. In the same manner, colchicum, squills, and digitalis act upon the kidneys, and ipecac upon the skin. Calomel, whose first effect is to increase the secretion of the bile, becomes secondarily, by the stimulating influence of this bile upon the intestines, a purgative.

When defective secretion is due to an insufficient supply of blood, we resort to means suited to restore a free circulation. If the skin be dry and harsh, we apply stimulating frictions, with warmth. Stimulants to the general circulation, where this is enfeebled, may be employed for the same end. In low typhoid fevers, attended with diminution of nearly all the secretions, our attention is specially directed to keeping up the heart's action, and through this a due supply of blood to every part.

But defective secretion may be owing to too great, as well as too small, a supply of blood. The first effect of cold upon the mucous membrane of the throat and bronchial tubes is to produce a state of congestion, suspending the secretions which lubricate the parts, leaving them dry and irritable. Hence the tickling sensation and the hard, dry cough that mark this stage of sore-throat or catarrh. The action of the liver and kidneys is peculiarly apt to be arrested by congestion. In the commencement of inflammation of the bowels, the most active cathartics will often fail to produce evacuation until the capillaries have first been unloaded by general depletion. Certain remedies which diminish the heart's action and relax the system generally are often useful in restoring the secretions when suspended. Examples of this are antimony as a diaphoretic and expectorant, and digitalis as a diuretic. In cases of plethora and inflammation, the whole antiphlogistic treatment, indeed, becomes our most powerful agent in reproducing a healthy state of this function.

It has been already remarked that where excretions were diminished or retained, other organs seemed at times to take upon them-

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selves the office of removing these deleterious matters from the system. In this process we may attempt to imitate nature. Where dropsical effusions occur from disease of the kidneys, and it is not safe directly to stimulate that organ, we may endeavor to excite the skin and the bowels to perform its duty. Ascites may be thus relieved by elaterium, and the dropsy of albuminuria by the hot-air bath.

We may sometimes make use of certain artificial means as substitutes for secretions when arrested. Thus, harshness and dryness of the skin or hair may be remedied by the use of sweet-oil; sore-throat and cough may be mitigated by employing mucilaginous solutions; and some physicians have thought the same a sheathing and protection to the inflamed stomach. Inspissated ox-gall has been recommended as a stimulant to the bowels, where the action of the liver has been suspended.

Excessive secretion may be produced by a too great supply of blood to a part, or by a weak and relaxed condition of the secreting organ or of the system generally. The first effect of irritation and congestion consequent upon it is, as has been explained, a suspension of the process of secretion. But soon the overloaded capillaries relieve themselves by effusion, first of the watery elements of the blood, and then of the various other constituents held by it in a state of solution. Thus, persons with diseased liver may suffer from alternate suspension and excessive flow of bile. So constipation and diarrhea by turns succeed each other in persons whose bowels are not properly regulated.

In cases of this character, the remedies for congestion are obviously called for. These are depletion and counter-irritation. When diarrhea is caused by a congested state of the portal veins, it is often relieved by saline cathartics, which diminish that congestion. If the febrile action be of a higher grade, approaching inflammation to the abdomen or anus, a relaxed state of the bowels will contribute to the same result. Until arterial excitement and determination of blood has been entirely subdued, it is not safe to check profuse evacuation, since by this very means nature is striving to relieve a state either of general plethora or local disease. In such a case, we may, however, act upon the other secretions. Thus, in bowel complaints, we endeavor to excite the functions of the skin; in renal irritation, cholagogue alteratives, which stimulate the production of bile, are frequently beneficial; in bronchorrhœa, to relieve the excessive production of mucus, we give medicines to act upon the bowels and kidneys.

Counter-irritation is also a powerful means of diminishing congestion, especially when chronic. After subduing arterial excitement,

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blisters, sinapisms, friction, with stimulating liniments, are powerful agents in breaking up any remaining traces of inflammation or stagnation of blood in the capillaries.

A second cause of increased secretion is a weak, relaxed, and irritable condition of the parts involved. A good example of this is furnished by chronic diarrhea, in which the mucous and muscular coats of the bowels seem to lose their natural tone, digestion is imperfectly and hurriedly performed, the slightest error in diet sets up a local irritation, with profuse discharge, while the evacuations are thin and serous, as if the watery elements of the blood were passively leaking through the vessels in which it should be retained. Astringents are here required; agents which produce constriction of the muscular fibre. With these may be combined tonics to impart strength and vigor both to the parts concerned and to the system in general. The sulphates, zinc and copper, with some of the salts of iron, seem to exert a peculiar influence in correcting diseased action of the mucous membranes. Opium in some form may be added to any of these preparations, where required, to soothe irritability. This agent appears also to have a direct power of diminishing all the secretions except that of the skin.

Excessive secretion seems sometimes to be an effect, as it is often the cause, of an exhausted and enfeebled state of the vital powers. Such are the night-sweats and colliquative diarrhea of phthisis. The same effect may be produced by other chronic diseases, attended by irritation and profuse discharge. The remedy here is first, if possible, to remove the cause, which, where the disease is confined to a single limb, may sometimes be done by surgical interference. Where this is impossible, we must use tonics and astringents, and support the vital powers as long as we can.

The secretions often become perverted in quality as well as changed in quantity. The sour, acid perspiration of acute rheumatism; copious discharges of fat, which sometimes occur from the intestines; the lithic and phosphatic deposits, which take place in the urine, are examples of this character. The appearance of sugar in the urine of diabetes, and albumen in that of Bright's disease, are instances of the same character.

We attempt to remedy depraved secretion partly by agents calculated to increase secretion, and thus remove the congestion or irritating cause upon which this derangement may depend. Thus, disordered bowels are frequently rectified by purgatives; cloudiness and acridity of the urine by diuretics.

In other cases, we aim, by regulating the diet and administering

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remedies which act upon the blood, to bring about a state of the system which will not furnish material for these depraved secretions. In diabetes, we prohibit the use of starchy and saccharine articles of food. Where the urine is too acid, we administer alkalies, and where it is alkaline, acids. Tonics, remedies which improve nutrition, increase the tone and vigor of the entire system are useful. Certain medicines supposed to have the power of correcting depraved secretion, but whose *modus operandi* was obscure, have been denominated alteratives. At the head of these stands mercury, which has been often employed empirically in cases which puzzled the practitioner and baffled the ordinary remedies. It is very doubtful, however, whether these agents deserve the reputation they have obtained. More is to be hoped in such cases from the persevering use of tonics, diet, regimen, change of air, etc. Where these fail, we may sometimes obviate the ill effects of these complaints, by stimulating the other secretions, as in removing the dropsy of albuminuria; or afford relief by mechanical means, as by removing hardened feces from the rectum; or by a surgical operation, crushing or cutting for stone in the bladder.

We have now finished our review of functional diseases of the muscular, nervous, and secretory apparatus. Before proceeding to consider the proximate elements of disease, there still remains the subject of the blood, and the various changes produced in it by disease.

During the prevalence of the humoral pathology, the causes of all disorders were sought in vitiation of the fluids, and among these, impurities of the blood of course occupied a prominent position. And still among the vulgar, crude notions prevail concerning bad humors, and numberless are the quackish impositions which find popular favor by promising to purify the blood. It is only, however, within a few years that organic chemistry has been sufficiently advanced to give any clear and accurate knowledge of the subject. We have now careful analyses of the blood, and know both the proximate and the ultimate elements of which it is composed, and the changes wrought in them by disease.

Physiologists, unfortunately, are not yet well agreed as to the functions of some of these constituents, some contending, for instance, that albumen, and some that fibrine, is the principal element of nutrition. In respect to these, I shall endeavor to give the *facts* as far as known, the results of observation and experiment, leaving to others the part of theorizing thereupon.

The blood is a vital fluid containing certain corpuscles which float

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upon its current. Most of these are red, and have the form of flattened disks. By careful observation, a few white corpuscles may also be detected. These are larger than the red, and are greatly increased in certain diseases. The proportions of the various elements of the blood are stated to be in health as follows:

Corpuscles.....	.127	or varying from	.110 to	.152
Fibrine.....	.003	or varying from	.002 to	.004
Albumen.....	.080	or varying from	.072 to	.088
Salts.....	.008			
Fat and extractive..	.006			
Water.....	.776	or varying from	.750 to	.810

When drawn from a vein, the fibrine spontaneously coagulates, and entangles within its meshes the red corpuscles forming the clot or coagulum. The other constituents which remain in solution are termed "liquor sanguinis."

Each of these elements may become deranged, either in consequence of disease or itself producing disease. It is manifest that, distributed as the blood is to every part of the system, it must speedily become affected in every disorder affecting any part, and may again become the means of spreading that disorder to organs previously unaffected.

DISORDERS AFFECTING THE RED CORPUSCLES.

The especial office of the red corpuscles is supposed to be the conveyance of oxygen from the lungs to the various tissues; accordingly, they are observed to be diminished in phthisis and other chronic diseases of the respiratory organs. It has been found that "animals almost bled to death could be restored by injecting into their veins a mixture of red corpuscles and serum, although serum alone failed to do it. According to the observations of Andral and Gavarret, "the vigor and beauty of animals was proportioned to the amount of this element contained in their blood." From careful analysis, it appears that the corpuscles contain more phosphoric acid and more potassium than the liquor sanguinis. In this respect they correspond to the composition of the muscles and nerve substance. Hence, after performing their duty as carriers of oxygen, they are supposed to become materials for the immediate nutrition of those tissues. A minute portion of iron also enters into their composition. To supposed changes in the oxidation of this iron by exposure to the air was at one time attributed the difference in color between arterial

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and venous blood. A more probable explanation of this change is that which attributes it to a change in the form of the disks, which is bi-convex in venous and bi-concave in arterial blood.

Performing such important functions in the economy, we should naturally expect that these corpuscles would be subject to many and serious derangements. These may consist in excess, deficiency, or perversion. Excess of the red corpuscles might be expected to accompany an excited state of all the vital powers. It is a curious fact, that they exist in considerably higher proportion in males than in females, in the former being, according to Becquerel, one hundred and forty-oné parts in the thousand; in the latter, one hundred and twenty-seven. This deficiency is made up in the female by an increased amount of water, while the other elements of the blood remain nearly the same in the two sexes. Persons of a sanguineous temperament, according to Lehmann, have an increased share of these corpuscles. Andral and Gavarret found them in excess at the commencement of inflammations and eruptive fevers. Plethora has been attributed to the same cause; but Becquerel and Rodier found, as the result of a careful analysis of six well-marked cases, that the proportion of red globules was a little less than the standard of health. We must therefore explain the phenomena of this state by supposing it to depend rather upon an increase in the entire mass of blood. Indeed, plethora is not inconsistent with a marked decrease in the proportion of red particles.

The indications of an excess of this element are a florid appearance of the cheeks, lips, and other vascular parts, and by the deep crimson hue of the blood when drawn from a vein or artery. All the animal functions are exalted and in a state of excitability. The constitution is predisposed to apoplexy and the inflammations.

The red corpuscles are deficient in anæmia, and in persons reduced by protracted disease, or by hemorrhage or exhausting discharges. Albuminuria, tuberculous and scrofulous affections, diabetes, cancer and other cachectic diseases are accompanied by the same result. Persons habitually breathing an impure air, subsisting on unwholesome food, or living in districts infested with malaria, generally exhibit that pale sallow complexion characteristic of this condition. MM. Becquerel and Rodier found by analyses of the blood of thirty-five chlorotic persons, that the average of red corpuscles was reduced to .0947, while the watery element was proportionally increased. In extreme cases, the amount of red particles has been reduced to twenty-eight and even twenty-one parts in one thousand.

Assuming as we did that these corpuscles are the conveyers of

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oxygen to the tissues, we should naturally expect that such a decrease in their number would be attended by marked derangement of the functions of nutrition and calorification. The animal temperature in such persons is low, the extremities cold, and the circulation languid. Muscular power is diminished, the system generally enfeebled and rendered liable to chronic diseases, especially dyspepsia, phthisis, and the neuroses.

A marked decrease in the red corpuscles usually follows exposure to malarious influences. This phenomenon is accompanied by an increase of the white or colorless corpuscles, and enlargement of the spleen. Some have hence supposed it to be the function of this latter organ to produce the white particles, and that these afterward become developed into the red. Others have regarded it rather as a disintegrating organ, and the white corpuscles as the red in a state of degradation. The entire subject of the function of the white corpuscles, as well as that of the origin and production of the red, is still enveloped in obscurity.

The color of the red corpuscles is often changed by disease. In scurvy and malignant fevers, it becomes almost black, as shown by the appearance of petechiæ. The black-vomit is now admitted to be altered blood, and the black matter of melanosis seems to be formed from the coloring matter of this fluid. The life of the blood is spoken of in the Bible and by Hippocrates. This vital property is inherent in the red corpuscles, which are living cells having probably the power of secretion and reproduction. It is this life of the blood which seems to be destroyed in certain malignant fevers in which the patient sinks at once and without attempt at reaction under the depressing influence of the morbific poison. In such cases, the corpuscles have been actually seen dissolved in the serum. It is probable that in most contagious diseases the primary lesion falls upon this element of the blood.

We are as yet ignorant of the immediate cause of changes in the red corpuscles. There is some reason to suppose that they may be affected very much by nervous influence. It has already been shown that the secretions may be altered by perverted nervous action, and it would seem not improbable that the blood itself may undergo changes from the same cause. In the capillaries, moreover, the particles of the blood come into exceedingly close relations to the tissues, depositing a portion of their own elements for the nourishment of the structures, while others are separated from the solids, to mingle with the circulating fluid, and it is very probable that in this play of vital affinities, important changes may take place in the con-

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stitution and qualities of the blood itself. There is, in this field, wide scope for speculation and for further research. With the progress of organic chemistry, we may anticipate a rich harvest of discovery in this department.

REMEDIES.—Depletion is a sure and speedy method of reducing any excess in the red corpuscles. It is found that this element is diminished by bloodletting more rapidly than the rest. Low diet, abstinence from meat and highly-seasoned food, and the entire antiphlogistic treatment produce the same result, but more gradually. Mercury and other remedies which increase the secretions, also reduce the proportion of red globules, and of necessity all such causes should scrupulously be avoided.

To increase their number when deficient, we resort to nourishing and especially animal food with exercise and abundance of fresh air. The preparations of iron seem to exert a kind of specific influence in bringing about the same result. The red corpuscles contain, as is well-known, a minute portion of iron, and some have supposed that it was a deficiency in this element which gave rise to all the phenomena of anæmia. The proportion of iron normally contained in the blood is, however, so small, that in absence of any positive proof of its deficiency, there seems to be hardly reason to attribute all its remedial virtues to this cause.

The diseases in which the blood seems to be contaminated usually require a stimulant and tonic plan of treatment, at the same time keeping open all the secretions, thus allowing nature an opportunity to react and cleanse the system from the morbific poison under whose influence it lies depressed.

THE FIBRINE IN DISEASE.

The differences which exist among physiologists respecting the part which this element sustains in nutrition, would necessarily occasion different views as to its agency in the phenomena of disease. It is at all events the constituent of the blood most frequently altered in disease, and the one whose changes have been most carefully analyzed. In inflammations and affections of a sthenic character, it is always found in excess, ranging from four to ten and one half parts in one thousand. Pneumonia and acute rheumatism present examples of its greatest increase. The pustules of small-pox, the exanthemes of measles and scarlatina, and the intestinal ulcerations of typhoid fever are not followed by any such augmentation. This is doubtless owing to those diseases being essentially constitu-

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tional, and their local manifestations upon the skin or mucous membranes being only secondary. Fibrine begins to be augmented as soon as inflammation and the degree of its increase is closely proportioned to the violence of the attack and of the constitutional reaction. This is well exemplified in cases where pneumonia occurs in the course of typhoid fever. Before the intercurrent inflammation sets in, the proportion of fibrine is diminished; but as soon as this appears, the blood, which was previously but imperfectly coagulable, exhibits the buffy coat, and upon analysis shows an excess of this element. It has been observed that bleeding does not diminish the proportion of fibrine. Now, this remedy does often afford effectual relief in the phlegmasiæ, hence this class of diseases can hardly be caused by excess of fibrine. The experiments of Andral in the case of burns, also show that the affection of the solids precedes that of the fluids. He thinks, however, that it is owing to the latter that the affection becomes constitutional; in short, that the sympathetic fever of inflammation is produced by the increase in the blood of the fibrinous element.

The proportion of fibrine is reduced below the normal standard in all diseases of a typhoid character, also in the eruptive fevers, and in that condition of the blood induced by the absorption of an animal poison, as from a dissecting wound. In these cases, the blood when drawn from a vein does not readily coagulate, and in the worst forms of them shows no disposition to do so. The coagulum, if formed at all, is small and soft, while the buffy coat is entirely wanting. This state of the blood predisposes to hemorrhages, petechiæ, and stagnation of the circulating fluid in the internal organs, as often occurs in congestive fevers.

Venous blood contains less fibrine than arterial. Hence all causes which interfere with its due aeration in the lungs tend to diminish the proportion of this element. In cases of death from impeded respiration and from narcotic poisons, the blood is found in a state of fluidity.

In connection with this subject, we are naturally led to speak of the phenomena of coagulation and of the buffy coat. When blood is drawn from a vein, especially if received into a deep and narrow vessel, the fibrine consolidates, entangling the red corpuscles in its meshes, and forming a disk-shaped mass, which floats upon the serum. If both the constituents of which it is composed are present in abundance, the coagulum is large and firm. If the fibrine exceeds the red particles, the clot is small, firm, and contracted, most of the serum being thus pressed out. The upper portion of the clot, being first ex-

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posed to the air, is formed quickly; but the middle portion of it, being drawn down by the slow contraction of that below, presents a concave or, as it is called, cupped appearance. Where the fibrine is in excess, the surface of this clot is yellow, constituting the buffy coat, while the red corpuscles settle to the bottom, giving it a reddish hue.

The phenomena of coagulation and of the buffy coat evidently depend upon the existence of an abundance of fibrine in the blood, and, as they always appeared in inflammations, they were formerly supposed to be characteristic of that class of diseases, and were taken as a sure indication for the need of farther depletion. It is found, however, that they also occur in anæmia, chlorosis, and pregnancy, conditions of the system in which the red globules are diminished, and bloodletting of course contraindicated.

Coagulation, where the fibrine and corpuscles are both abundant, takes place slowly. It is hastened by being drawn slowly, and thus much exposed to the air. Certain salts retard or entirely prevent the formation of the clot. In diseases characterized by diminution of the fibrine, the coagulum, if formed at all, is loose and soft, resembling jelly, and breaking up at the slightest touch. Sometimes there is no true clot, but only a few flocculent coagula.

Much importance has of late been attached to the firm white coagula frequently found in the heart after death, before which event their toughness and freedom from globules shows that they must have been formed. Certain deposits resembling vegetations are often found after articular rheumatism and some other inflammations upon the valves of the heart. These doubtless consist of condensed fibrine, and much speculation has taken place as to their possible effects if loosened from their attachment and mingled in the current of the circulation. It has been surmised that they might close up the mouths of some of the smaller arteries, and thus interfere with the supply of blood to certain portions of the body.

Various opinions have prevailed as to the part played by fibrine in the economy. This is not the place to discuss this question, which is strictly a physiological one. It is admitted by all to be concerned in the repair of the gelatinous tissues, and in the formation of the false membranes and other adventitious structures, sometimes produced by inflammation.

Excess of fibrine, as already remarked, is not to be remedied. Indeed, the disease in which it most appears, acute rheumatism, is seldom much benefited by venesection. Probably cathartics, the neutral salts and alkalies act more effectually in this respect. On this principle, the alkaline carbonates are added to cough mixtures to diminish

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the viscidity of the sputa. Antimony, iodide of potassium, and especially mercury, have also the property of reducing the excess of this element.

Fibrine is a nitrogenized substance, and can only be formed from those articles of food which contain nitrogen. Hence, a saccharine or amylaceous diet must soon diminish the proportion of this element, and also of the albumen. And such a diet experience has long since shown to be best suited to all inflammatory affections. The narcotics, and other agents which lower the function of respiration, may thus reduce any excess of fibrine; and it may be partly upon this property that their acknowledged antiphlogistic powers may depend.

Where, as in chlorosis, excess of fibrine is united with deficiency of the red globules, we have a double indication to fulfill. We resort to iron and nourishing diet to increase the corpuscles; at the same time we regulate the secretions, to prevent increase of fibrine.

Diminution in the natural proportion of fibrine, whether we regard it as a cause or an effect, indicates an asthenic state of the system, requiring support and a tonic, or even stimulating, plan of treatment. As we have seen, it is almost characteristic of low fevers. Here we are often obliged to give nourishment in its most concentrated and most easily assimilated forms, as animal broths, beef-tea, etc. The functions of digestion, respiration, and secretion also require to be watched and regulated. The vegetable bitters and mineral acids are useful in increasing the appetite and giving tone and vigor to the stomach and bowels. As a deficiency of fibrine produces laxity of the tissues and a tendency to passive hemorrhages, those tonics which also act as astringents are especially indicated. As fatigue tends to reduce the due proportion of this element, rest should be carefully prescribed. The lungs should be closely watched, and measures at once taken to relieve any disease which might insidiously steal upon them. In cases where the deficiency of fibrine depends upon the presence of some septic or putrescent poison in the blood, we aim to support the system, watching against local complications, and keeping open the various secretions, thus aiding nature to relieve itself of the *materies morbi*. Provided that we can obviate the tendency to dying for a certain time, the system will seldom fail to work itself free from the depressing influence under which it has labored.

DERANGEMENTS AFFECTING THE SEROUS ELEMENTS.

The most important of these is the albumen. The essential part which this element sustains in the economy is shown by the fact that

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from the albumen of the egg all the tissues are constructed in ovo-viviparous animals. Whether we regard it, according to the old theory, as the material for the formation of fibrine, or, with later writers, as the immediate element for nutrition, its derangements demand careful investigation.

It is the albumen which imparts viscidity to the serum, the specific gravity of which it raises in health to about 1.030. The analyses of MM. Becquerel and Rodier prove that this element is diminished in inflammations, and indeed in most diseases, whether acute or chronic. Relatively it is increased in cholera by the rapid draining off of the watery portion of the blood.

It is most rapidly reduced in albuminuria, being here directly removed by the action of the kidneys. The fluid of dropsy also frequently contains albumen. The specific gravity of the serum is a pretty accurate measure of the proportion of this element contained. In Bright's disease this has been reduced as low as 1.015, or even 1.013. (v. Christison, in Libr. Pract. Med.)

The oily or fatty constituent of the blood is sometimes increased so as to cause the serum to appear milky. This, Simon assures us, is connected with organic change of the chylopoietic system, especially with scirrhus of the liver.

The variations of the saline elements of the blood do not seem to have been very carefully examined. Their proportions must vary, partly with the amount of salts taken with the food or drink, and partly with the activity with which they are removed by the kidney. The saline elements are deficient in yellow-fever and other malignant febrile affections, causing the dark, grumous appearance in such cases presented by the blood. In Asiatic cholera, also, the salts are rapidly removed, together with the watery portions of the blood, producing the lividity and obstructed circulation which marks the latter stages of the disease. This deficiency of serum is doubtless owing to the profuse evacuations. Its effects are the more striking, since the injection of saline fluids into the veins produces all the appearances of returning animation.

A deficiency of phosphate of lime has been supposed to be the cause of rachitis and mollities ossium, and this salt has been advised as a remedy in such complaints, I am not aware with what success. The presence of a certain amount of saline matters is evidently necessary to the fluidity of the blood and the nutrition of the tissues. A due proportion of these among themselves is also essential to their solution in the urine, the channel by which they are principally re-

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moved from the system. Further than to produce this effect, we seldom attempt to modify this element of the blood.

In all cases where the animal constituents of the circulating fluid are diminished, the watery portions are at once increased. After hemorrhages, and in anæmical states of the system, the blood becomes thin and watery. In the latter stages of chronic and wasting diseases, the organic constituents are greatly reduced. This diminished spissitude of the blood causes it to soak readily through the tissues, thus predisposing to dropsy and profuse secretions.

It is found that the watery elements are materially increased in pregnancy. The mean proportion of the red globules in this state is reduced to 113 parts in 1000. Nor does it appear that the albumen or fibrine is increased. The excess is in the watery portion, and this excess seems to be increased as pregnancy is more advanced. At the same time, the entire mass of blood is increased, producing over-distention of the bloodvessels and tissues, with the headache, vertigo, etc., which occur at this period. Thus, pregnancy is allied at once to plethora and anæmia, the whole mass of the blood being in excess, while there is a deficiency of red globules and of the animal constituents generally. This thin, watery condition of the blood may account for the edema and effusions which often attend the later stages of gestation. The deficiency of red particles may also explain the peculiar fatality of puerperal anæmia. The blood having already lost much of its vitalizing powers, it is not strange that even a slight additional hemorrhage, with the excitement of parturition, and the effect, perhaps, of some depressing influence upon the nervous system, should cause anæmia at this time to be unusually dangerous.

Liquids taken into the stomach are speedily absorbed by the veins, and thus thrown into the mass of the circulation. Any excess of fluids introduced in this way will be speedily removed by the action of skin or kidneys. Indeed, this may sometimes be a useful mode of stimulating the secretions of those organs. In irritation of the urinary organs, mild demulcent drinks are frequently serviceable, by diluting that fluid, and thus diminishing its acridity. It has been suggested that the "water-cure" owes much of any efficacy it may possess to its thus washing out the system. On the other hand, fluxes and profuse secretions may sometimes be reduced by abstinence from the use of drinks.

The functions of the blood are to furnish nourishment to the tissues, to convey oxygen to all parts of the body, and to remove waste materials from the economy. In the discharge of each of these functions, it undergoes itself certain changes, which, when properly

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performed, preserve it in a healthy and normal condition. But when these changes are not properly effected, whether in consequence of disease or from some other cause, the blood itself becomes impure, and unfitted to perform its usual work. Consequently, it becomes a part of our task to examine the variations which the state of the blood may undergo in consequence of diseases affecting these functions.

A prime office, as we have said, of the red particles is to convey oxygen to the tissues. In return for this, the blood absorbs carbonic acid gas, which is carried in venous blood to the lungs, there to be discharged from the system. Both these processes are absolutely necessary to the preservation of life. If the supply of oxygen be cut off, even though the carbonic acid be properly removed, the functions of nutrition and innervation are at once stopped. On the other hand, the carbon, if retained in the system, seems to act as a slow poison, and if its removal be entirely cut off, the circulation through the lungs is immediately brought to a stand and life is speedily extinct. This element is removed, partly by the liver as a fluid excretion, but principally by the lungs in the form of gas. In health, the rapidity and fullness of respiration vary with the waste of the tissues. If the circulation be hurried, as by exercise, the frequency of inspiration is immediately increased. Aeration of the blood in the lungs is probably never excessive, but often enough deficient. All diseases of the respiratory organs interfere more or less with this process. Mechanical impediments to respiration, and the presence of deleterious gases in the atmosphere, produce a similar effect.

It is a singular fact that, where the access of air to the lungs is gradually diminished, the system may be brought to subsist on a very small supply of oxygen. Thus, persons suffering from lingering phthisis continue to live after a large portion of the lungs has been spoiled. The quantity of the blood in these cases has been reduced, *pari passu*, with the diminished respiration. Muscular activity is almost suspended, nutrition and the production of nerve-power decreased, and all the functions, both of animal and organic life, sluggishly performed. The system is thus gradually brought to a condition resembling slightly that of animals in a state of hybernation. We know that these often exist for months, scarcely breathing at all, and all the vital processes nearly suspended. There is scarce any waste of the tissues, little carbonic acid gas produced, and the want of oxygen greatly reduced. But were the supply of this element suddenly cut off while all the functions were in full activity, carbon enough would speedily be accumulated to destroy life by asphyxia. This we see exemplified in acute diseases of the lungs.

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It is found that, where the hepatization of pneumonia involves more than one third of these organs, death is pretty sure to follow. These considerations may throw light on the efficacy of the treatment usually adopted in these cases. Expecting that a portion of the lungs will be for a while unfit for use, means to diminish the need of respiration. By depletion we reduce the mass of blood requiring aeration, as well as the activity of the circulation. By the use of sedatives, as antimony, digitalis, etc., we keep down the force and frequency of the heart's contractions, and thus decrease the amount of blood sent to the lungs. We enjoin perfect rest of mind and body to prevent unnecessary consumption of oxygen and waste of the tissues. Abundance of pure and fresh air is supplied to those portions of the lungs still unaffected. The secretions also are kept freely open, to remove by this channel carbonaceous matters from the economy, and it may be necessary to apply warmth to the surface to make up for the deficient calorification.

But there is a somewhat different condition of the blood, which exists in emphysema and cyanosis. Here the blood continues to circulate without being properly arterialized. The lips and cheeks are constantly livid, the skin and extremities cold; muscular power greatly enfeebled; the body and mind are alike incapable of any severe exertion. The processes of secretion and nutrition may be tolerably well performed, but all the vital powers are reduced to the lowest possible degree of activity.

Where the action of the lungs is still more interfered with, we have developed the phenomena of asphyxia. The blood becoming more and more loaded with carbon, is at last arrested in its passage through the lungs. How this is done we can not explain; the fact seems to show that a change in its constitution is essential to its passage through the pulmonary capillaries. At once the venous system becomes engorged, the lips and cheeks assume a livid hue, the jugulars swell and heave, the pulse becomes slow and feeble, and the heart, deprived of its natural stimulus, at length ceases to contract; life is speedily extinguished. If now, by artificial respiration or otherwise, air be again admitted to the lungs, the heart may sometimes be aroused to action, and phenomena of life be re-established. But death seldom occurs purely from the stoppage of the pulmonary circulation. The venous blood, partially oxygenated, often passes into the arteries, and, being unable to afford the necessary stimulus to the various organs, may produce congestions, delirium, and muscular spasm. So that the symptoms of asphyxia, gradually induced, may be those of weakness and debility, or of congestion and excited ner-

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vous action. The convulsions which sometimes attend this state have led some physiologists to consider carbonic acid as a stimulant to the muscular system.

We have already spoken of and explained the action of the remedies used to relieve acute diseases of the respiratory organs. In asthma, spasmodica, and pertussis, remedies which act by soothing nervous irritability are often useful. The most reliable of these are ether, belladonna, stramonium, lobelia, and tobacco. Where asphyxia is producing its depressing effect upon the circulation, stimulants may be necessary to restore this function. Friction and warmth to the surface answer the double purpose of sustaining animal heat and keeping up the flow of blood through the capillaries.

It has been suggested to compensate for impairment of a portion of the lungs by causing the patient to inhale pure oxygen. This may sometimes answer for a palliative. But an increased supply of oxygen must cause an increased production of carbonic acid, and unless means are provided for its removal, we shall speedily see its poisonous influence upon the blood. Experiments upon animals confined in oxygen gas show that they die comatose within a few hours. This may be due to exhaustion from excessive nervous excitement, or to the cause just mentioned. An experiment of Rolando would seem to favor the last supposition (*v.* Carpenter's Physiology). He tied the air-tube of one lung in a tortoise without seriously injuring the animal; but if one lung were supplied with carbonic acid gas while air was admitted to the other, the animal soon died.

In order to remove the congested state of various organs which attends sudden interruptions of the process of respiration, the secretions need active stimulation. The organs which suffer most in this case are the brain, lungs, and liver. Cholagogues, which increase the secretion of the bile, and by this means remove the superfluous carbon, seem best adapted to relieve this condition, and this may explain their well-known utility in acute pulmonary disease.

The secretions which most affect the constitution of the blood are those of the liver, skin, and kidneys. The presence of biliary matters in the blood is indicated by the yellow color imparted to the skin, conjunctiva, and urine. Various diseases have been imputed to the suspension of this secretion. Jaundice, which is its undoubted and immediate effect, is often unattended with any serious symptoms, while it occasionally induces coma, and finally death. Dr. Alison ingeniously attempts to account for this difference in cases apparently so similar by supposing that, in the milder cases, the bile has been duly secreted but reabsorbed, the deleterious elements being left be-

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hind, while in the more dangerous form of the disease no part of it has ever been separated from the blood, which thus acts as a direct poison upon the nerve-centres.

The most important element in the matters excreted by the skin is lactic acid, and as this has also been found increased in the blood during attacks of acute rheumatism, it has been supposed to play an important part in the phenomena of that disease. It is certain that this complaint occurs most in persons much exposed to cold and moisture, and hence liable to suppressed perspiration. The advocates for this theory say that lactic acid, being retained in the blood, acts upon it like a ferment, causing also the production of lithic acid, and exciting in vigorous frames rheumatic fever, and in more torpid constitutions various gouty and rheumatic affections.

In all chronic affections, especially those of the bowels and kidneys, the functions of the skin should receive careful attention. Many of these originate in *suppressed perspiration*, and in most of them the skin is dry and harsh, and the capillary circulation defective. Sometimes, however, an opposite condition of the cutaneous surface is induced. The patient is plagued with profuse sweating, particularly at night. This sometimes, as in the later stages of phthisis, seems to be indicative of a general breaking up of the system. In all cases, it is greatly reducing, seeming rapidly to exhaust the animal as well as the watery elements of the blood. It must be met by the use of tonics and astringents. The sulphate, sesqui-nitrate, and muriated tincture of iron are well adapted to cases of this character.

But the most serious effects upon the character of the blood are produced by retention or suppression of the urine. The urea seems to act as a direct poison upon the nerve-centres, speedily giving rise to coma or convulsions. In lesser degrees, it causes typhoid symptoms, with low, muttering delirium; it also acts as an irritant upon the serous membranes, tending to produce in them a low grade of inflammation, with profuse effusion. There is also a rapid diminution of the animal constituents of the blood, as is evidenced by the pale, cachectic appearance of persons suffering from chronic diseases of the kidneys. Diabetes is, perhaps, the only affection in which excessive secretion of urine appears to influence the constitution of the blood. The sugar here formed in the blood seems to act as a powerful diuretic, stimulating the action of the kidneys to the highest degree. The increase in the urine secreted is made up principally of water and saccharine matter, but doubtless the animal tissues, especially those containing nitrogen, suffer somewhat. The watery portion of

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the blood is maintained by the incessant thirst of the patient, which leads him to drink continually.

Where the blood is deteriorated by retained excretions, the true indication is manifestly to remove the morbific matter by stimulating the organs whose proper function it is to eliminate such materials; unless, indeed, those organs be already in a state of excitement. In this case, we may endeavor to get rid of the offending matters by acting upon the other secretions, or to take measures to render them, as far as possible, innocuous. Where the kidneys are diseased, we may remove dropsical effusions by purgatives, diaphoretics, and tapping. When we find ourselves unable to drive lithic acid and products allied to it from the system, we may sometimes diminish their ill effects by exhibiting the alkalies.

We have spoken of the mode in which the constitution of the blood is influenced by the various excretions. But a more thorough analysis of the subject may lead us to attach a wider significancy to that term than we have yet assigned it. In the words of Treviranus, who first broached this great principle, "Each single part of the body in respect of its nutrition stands to the whole body in the relation of an excreted substance." According to this principle, then, each portion of the body, in separating from the blood that part essential to its own nutrition, renders that fluid better adapted for the nourishment of every other portion. As an illustration of this doctrine, we may mention the hair of the fœtus and the mammary gland in the male. These of themselves answer no practical end. The only use we can attribute to them is that of separating from the blood materials which might otherwise be noxious to it. The thymus and thyroid gland and renal capsules may perform a similar part. We may even carry this principle still further, and assert that the existence of certain materials in the blood may determine the formation of certain organs for their elimination. Thus, where one kidney has been destroyed, the urea in the blood stimulates the other until it grows to double its natural size, in order to accomplish double its natural work. So, when the hydro-carbonaceous matters abound in the system, they cause an increase of the adipose tissues. In the same way, various diets exercise an important influence upon the growth of certain structures, as the bones, muscles, etc. This is still more strikingly exemplified in the case of plants and animals. It is well known that the soil, in one instance, and food and training, may go far to modify the constitution and essential nature of the original germ. These, and many similar examples which might be given, show that the nu-

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trition of the various tissues, and the composition and qualities of the blood, have a most important reciprocal relation.

The application of this principle may go far to explain the sympathies known to exist between certain organs. We have only to suppose them to sustain such a complemental relation to each other "that neither of them can be duly formed or maintained in healthy structure unless the right condition of the blood be induced and preserved by the formation of the other." In proof of this, we may adduce the fact that certain organs are closely connected in their nutrition, although there is no relation discoverable in their external functions. Thus, the growth of the beard in man appears simultaneously with the development of the organs of generation. In birds, the plumage becomes brighter and more deeply colored during the period of breeding. In the same way may be explained a connection in the production and development of other organs which are in no other ways related.

The same principle has an important relation to pathology. It is manifest that if one of two organs thus correlated becomes affected by disease, the other must also suffer, and that not merely from a vague sympathy, but from positive and definite change in the constitution of the blood. So also when the nutrition of one organ suffers, the elements which in a healthy state are removed from the blood by it remain to exert their irritating and noxious influence upon the rest of the body. Perhaps the secondary fever or sympathetic constitutional excitement which attends any severe local inflammation may be due very much to this cause.

The materials of which the blood is composed are constantly being deposited for the nutrition of the tissues or removed by the organs of excretion, and their place supplied by the assimilation of chyle. Upon the character of the materials thus added to the circulating fluid must in a great degree depend its own constitution and qualities. Many changes thus effected in the living laboratory are too obscure to be traced by our present means of research. We may instance, however, one or two causes of disease which seem to spring from this source. It is well known that gout and the lithic acid diseases occur most frequently in persons of luxurious and sedentary habits. The excess of nitrogenized food taken by such persons not being required for the nourishment of the tissues, either remains in the blood, a continual source of irritation, or deranges the kidneys in their attempts to remove it from the economy, causing nephritis or nephralgia. Even where the lithic acid or lithates have been removed by those organs, they are often insoluble in the urine, and

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form deposits of sand, gravel, or calculi in the kidneys or bladder. In case the excess of nitrogenized elements remains in the system, it is converted into lithic acid, and disorders the organs of digestion and the system generally, until at length some local cause fixes it upon a limb or joint and a fit of gout ensues. The *materies* is then often deposited in the form of chalk-stones, which consist of the lithate of soda; an abundant deposit of lithates perhaps occurs in the urine, and the patient is for a while relieved. The indication of treatment in such a case is evidently to prescribe a less azotized diet, the use of alkalies to dissolve the acid and render it less irritating, and finally by the use of colchicum expel it from the system. Another disease, supposed to arise partly from mal-assimilation of the chyle, is diabetes. Chemical analysis has established the fact of the existence of sugar in the blood before it has been eliminated by the kidneys, and it seems probable that it arises in part from imperfect digestion of the saccharine portions of the food. The investigations of M. Bernard have recently shown that the liver has the power of converting even the nitrogenized elements into sugar. This may account for that substance being still found in the urine, even when the patient is confined to nitrogenized food; but since its quantity is much diminished when the supply of saccharine material is cut off, mal-assimilation of the chyle must still be reckoned an important part of the affection.

In our study of the blood, we are to regard it not merely as a passive agent, but as *living* and endowed with *vital* properties. This life of the blood is especially shown in maintaining itself constantly in a state adapted to the nutrition of all the various tissues. Notwithstanding the diversity of materials of which it is composed, and the changes effected in it by the processes of secretion and nutrition, it still preserves the same condition and qualities, assimilating to itself all the elements furnished the organs of digestion, and excreting all the effete particles which it absorbs in its circuit through the system. But sometimes the blood, by exposure to the specific causes of disease (previously treated of under etiology), becomes poisoned, and its vital powers are for a while suspended or totally destroyed. Such seems to be the case in the worst forms of scarlatina and typhus. The powers of life seem to be at once prostrated by the violence of the morbific influence, and sink without any attempt toward reaction. There can be no doubt that in all severe fevers the vitality of the blood is seriously poisoned. Chemical analysis has not yet been able to detect the presence of any

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foreign substance, nor is it likely that it ever will. But the phenomena produced by it prove its existence just as surely.

The manner in which the constitution is affected by the virus of small-pox and syphilis may throw light upon this class of cases. Certain French pathologists have found that they could readily produce disease in some of the lower animals, by injecting into their veins the blood of a man who had died of putrid fever.

There are some diseases originating locally which may so alter the blood as to cause disturbance of the entire system or disorder in some distant organ. Thus, pus in phlebitis, mingling in the current of the circulation, may induce a low form of fever, and also abscesses in various parts of the body. The germ-cells of cancer also appear to be conveyed to various parts of the body by means of the circulation. Hence, when the disease has been extirpated in one place, it is liable to break out elsewhere, and perhaps in several points at once. In poisoning from the slow influence of certain metals, as lead and mercury, there can be no doubt that minute particles of them are carried by the blood to the points where they produce symptoms of local disease.

The indications in the treatment of this class of diseases are obviously to counteract the immediately morbific effects of these foreign substances, and as soon as possible to expel them from the system. The poison of infectious diseases is generally directly depressing upon the powers of life. In these, our business is to support the system, while nature gets rid of the disease, which she never fails to do, provided life can be sustained while she is doing it. For this end, we may use stimulants, anodynes, etc. At the same time, the secretions must be kept open so as to remove offending matters from the economy. The skin, the bowels, and the kidneys are the organs to which our attention should for this purpose be directed. Lead has actually been found by analysis in the urine of persons recovering from lead disease. The commencement of convalescence is often marked by certain critical discharges, by means of which we may perhaps suppose the *materies morbi* to be eliminated from the economy. The ancient physicians paid especial regard to these crises, and directed their efforts to produce them. In modern times, they have not, perhaps, received a due share of attention.

Having considered functional affections of the nerves, muscles, and apparatus of secretion, and also the various changes in the composition and qualities of the blood, we are now prepared to study these two classes of derangements when occurring in combination, thus constituting proximate elements of disease. Under this

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head we shall investigate, first, anæmia, and the results of deficient nutrition, namely, atrophy and degeneration ; secondly, hyperæmia and hypertrophy ; thirdly, inflammation and its products ; fourthly, peculiar morbid products, the results of perverted nutrition.

ANÆMIA.

This term, according to its derivation (*a*, without, and *αἷμα*, blood), should signify bloodless. By common consent, however, it is used



FIG. 110.—REPRESENTS THE LEADEN HUE OF THE COMPLEXION IN ANÆMIA.

to denote a deficiency in the quantity or quality of the circulating fluid, or in its distribution to certain portions of the body. In this affection, all parts of the system suffer more or less, being deprived of a due supply of that vivifying fluid so essential to healthy nutrition and functional activity. The red particles being too few to convey a proper quantity of oxygen to the muscles and nerves, a general sensation of weakness and faintness is the necessary consequence. The muscles of organic as well as of animal life suffer under the depression. The heart's action is ordinarily feeble and fluttering, but

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under excitement may become frequent and palpitating. The tonicity of the arterial system is also diminished, rendering the pulse weak and thready, the extremities cold and sometimes numb. Dyspepsia is another consequence of this condition. The muscular structure of the stomach and bowels shares in the general weakness. Hence, digestion is imperfectly performed, the food lying like a dead weight in the stomach, and causing a distressing sense of oppression. The bowels are also torpid, allowing the feces to accumulate, and by partial reabsorption, produce various derangements of the economy. Gas also collects in the intestines, distending them sometimes enormously, and causing intense pain. The mucous membrane of the intestines, being also insufficiently supplied with blood, is unable to perform its proper functions, in elaborating the gastric juice and other fluids required for digestion. Thus, the chyme is imperfectly prepared, and nutrition generally interfered with. The process of sanguification being thus impaired, produces a tendency for the remaining blood to become diseased, and all the effects of the disease intensified.

In part sympathetic with this derangement of the stomach, in part from deficient supply of its natural stimulus, the heart is apt to become deranged in the course of this affection. Its muscular structure becomes flabby, and it no longer contracts with its wonted force. Weakness induces irritability. Hence, the least cause of excitement brings on irregular action, palpitation, followed perhaps, by faintness and fluttering. The pulse is weak but quick and jerking, rising upon any little excitement, but constantly more frequent than natural. Any unusual exertion, as climbing a hill or a flight of stairs, is followed by tumultuous beating of the heart and faintness.

But the most remarkable effects of anæmia are manifested in the nervous system. The red globules, as we have already remarked, seem from their chemical constitution ultimately destined for the nutrition of the nerve-substance. Hence, when these are diminished in quantity, the nervous system is not properly nourished, and, in consequence, becomes weak and irritable. Again, these same red particles convey oxygen, the action of which upon the nerve-centres is necessary to the production of nerve and life-power. Hence, all the functions of the brain and spinal cord are liable to be disordered. Sensation is usually more or less deranged. Irregular pains are felt in various parts of the body; the eyes are weak and intolerant of light; noises are heard in the ears, which are inordinately sensitive to sound; there is also headache and frequently dizziness. The taste

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is often perverted, craving, especially in chlorotic females, chalk, slate, and other indigestible substances. Sometimes the mental and moral faculties are disordered, producing a species of insanity. More frequently the excito-motor functions are deranged, producing hysterical convulsions, catalepsy, etc.

We not unfrequently meet with a singular combination of general anæmia with local congestion of the brain and spinal cord, as evinced by headache, noises in the ears, spinal tenderness, with throbbing of the carotid and temporal arteries. This apparent anomaly may be partly explained by considering the character of the cerebral circulation. The walls of the bloodvessels in general are muscular, and by their tonicity keep up a constant pressure upon their contents. But this is not the case with the arteries of the brain; hence, though the entire mass of blood may be decreased, congestion may still be kept up within the cerebrum. Again feebleness of the heart's action may allow the blood to stagnate in the head. Thus, the veins and sinuses become congested, and symptoms of drowsiness, dull headache with impaired mental activity, ensue. Explain it as we may, it is a well-known fact that persons who die of want or starvation present all the appearances of congestion of the brain.

Besides these effects of anæmia on the nerve-centres, we find it producing various anomalous symptoms upon the peripheral nerves. Thus we find pains occurring without any apparent cause in the side, back, and limbs. Usually there is also tenderness over some portion of the spine. Sometimes patients complain of numbness, sometimes of pricking, smarting, burning, and various indescribable sensations. The power of voluntary motion is occasionally deranged, as in chorea and hysteria. Indeed, there is scarcely one of the innumerable derangements which may be referred to the nervous system, but is frequently connected with this state of the blood.

Anæmia, when long continued, is exceedingly apt to induce organic disease. This is especially liable to fall upon the lungs. Three, at least, of the four essentials of nutrition (p. 232 Kirke's and Paget's Physiology) are wanting; for we have here neither "a right state and composition of the blood" nor a regular supply of it. Nor is the nervous influence so necessary to the proper performance of this function in a healthy state. It is not strange, then, that the plasma of the blood should become degenerate, and form aplastic or caco-plastic deposits. Hence, we have the various indurations of scrofula and the formation of tubercle. The powers of life are too feeble properly to vitalize the new products of nutrition; hence they

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remain unorganized, and by their gradual decomposition destroy the textures in connection with which they are placed.

The lungs being themselves of a low degree of organization, seem especially to become the seat of such deposits. Moreover, the upper portion of the lungs being less perfectly expanded than the lower in the movements of the chest, retains a lesser degree of vitality, and is thus more liable to degenerate and become atrophied. These considerations may perhaps throw some light on the fact that tubercular deposit is so peculiarly liable to occur in the upper lobes of the lung; while inflammation, which is more disposed to attack parts of higher organization and functional activity, falls oftener upon the lower and posterior portions of the chest.

This tendency of anæmia to induce degeneration and tubercular deposit has an important bearing upon our prognosis and treatment. If organic disease has not already set in, the healthy condition of the blood can usually be restored by a faithful use of the appropriate remedies. But if tubercular deposit has actually commenced, the prospect of a cure is of course faint. Hence, in such cases, a careful examination of the lungs should be made before rendering an opinion positively favorable.

The causes of anæmia are various. Hemorrhagic discharges, by directly reducing the quantity of the blood, frequently produce it. Often it is owing to insufficient or improper food, or to breathing an impure atmosphere.

The inhabitants of malarious districts, even though they escape the fever, usually exhibit a pale, cachectic appearance. There seems to be something in the influence of the miasma which tends to diminish the red particles, at the same time that it increases the proportion of the white. Chronic diseases attended with wasting discharges impoverish the blood. Indigestion, by cutting off the supply of nutriment, may have a similar effect. Diseases of the kidneys and cancerous cachexiæ cause or are accompanied by the same affection.

It may be difficult to explain why uterine irregularity should cause this state of the blood, but frequent observation proves it to be true. Suppressed menstruation is pretty sure to be followed by all the symptoms of anæmia or chlorosis. We can readily understand why too frequent or too profuse discharges from the uterus should have such an effect. Pregnancy and the puerperal state are, as we have already remarked, often accompanied by excess of the watery and deficiency in the animal elements of the blood. Anæmia occurring at this time is peculiarly obstinate, frequently fatal. The

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excitement and loss of blood attendant upon parturition reduce the poor patient to the verge of exhaustion, and the remedies usually efficient in such cases lose their effect. The blood, watery and deprived of its fibrine, leaks from the vessels, and accumulates in the serous cavities. Thus, the breathing is oppressed and the heart's action impeded, till from asthenia death closes the scene. Frequently the kidneys will be found softened or studded with the deposit so characteristic of Bright's disease.

The treatment proper to anæmia has already been indicated in considering affections of the various constituents of the blood. For deficiency of the red globules, iron is the appropriate remedy, and where there is a relaxed state of fibre with wasting discharges, the more astringent preparations of this metal, as the sulphate, sesqui-nitrate, and muriated tincture, fulfill a double purpose. With iron may be combined the vegetable tonics, as bark, quassia, colombo, etc. Rest, proper exercise, nourishing diet, will contribute to the cure. Where affections of particular organs have been superinduced, they must be met by their appropriate remedies. Thus, in nervous complications, the salts of valeriana and salicine are often useful. When we find constipation with perverted appetite, purgatives subserve an important purpose. Attention should always be directed to the accompanying affection, whatever it be, and means at once taken to relieve it.

Anæmia may be local as well as general. A good example of this is furnished where the main artery of a limb is ligated, as for aneurism. The immediate effects are pain, weakness, loss of sensibility, and diminished temperature. As the collateral circulation restores the normal supply of blood, the limb gradually resumes its normal state. But if the vitality of the part is too low to wait for this, mortification takes place and the limb dies. Similar effects may follow from obstruction to the circulation by ossification of the arteries.

Another cause of local anæmia may be congestion of a neighboring organ. Thus, in peritonitis, it is common to find the mucous membrane pale and bloodless. So active, muscular exertion, or mental excitement, immediately after a meal, is sure to impede digestion by withdrawing its appropriate supply of blood from the stomach.

In the rigor of fever, or under the influence of extreme cold, the surface of the body is left chilly and blanched, while the internal organs are in a state of high congestion. The nervous influence has also much to do with the distribution of blood to a part. How quickly a sudden alarm will pale the ruddiest face! And why may

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not the same influence have a similar effect upon the internal organs, and if the state of mind conducive to such a condition of the organ be habitual, why may it not be the means of producing a permanent local anæmia? Perhaps we may, in this way, account for the weak stomach, disordered secretions, and torpid bowels, so common in literary and studious persons. The pale faces of men of nervous temperament and strong passions may be another example of the same kind.

Disuse of a part is another frequent cause of local anæmia. The structures of a part, being no longer brought into functional exercise, cease to call for their normal supply of blood, which is in consequence diverted from them to other organs. A limb which has been palsied or in any way made useless becomes cold and flabby, nutrition is gradually diminished, and the part becomes shriveled and atrophied. Organs which outlast the period of functional activity, as the ovaries, mammæ, and testes, pass through a similar process of decay.

Where local anæmia occurs upon the surface of the body, its presence is readily detected by the paleness, diminished volume and temperature of the part. But when it occurs in organs removed from sight and touch, we can only conjecture its existence from disordered function and sympathetic derangement. These, however, may arise from the opposite condition of congestion, and require to be interpreted by a careful consideration of the general state of the system. If the pulse be weak, the vital powers generally below par, and should there be particular cause for congestion in the parts affected, we may fairly assume the existence of local anæmia. In such a case, the cautious use of tonics would soon settle any remaining doubts. There is no question that dyspepsia is frequently due to this cause. At the same time, the symptoms may closely resemble those of chronic gastritis, or even scirrhous disease. If aromatics, stimulating food, and tonics afford relief, we may fairly refer the difficulty to local anæmia. There are numerous other symptoms which may be due to this cause. The feeble capillary circulation, especially in the extremities, the cold hands and cold feet, as also the innumerable local pains to which many persons are subject, are generally due to an insufficient supply of blood. Accordingly we find sinapisms, friction, and the use of stimulating liniments are often attended with decided advantage. Warm baths, fomentations, with due care to support and improve the general tone of the system, will contribute to a cure.

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WE HAVE NEXT TO CONSIDER ATROPHY AND DEGENERATION, CONDITIONS WHICH FREQUENTLY SUPERVENE UPON AN INSUFFICIENT SUPPLY OF BLOOD. Diminished nutrition is the natural consequence of diminished activity. Thus, in extremely anæmical persons, the heart has been found greatly reduced in size. In a man of fifty years, who died of cancer, it was found to weigh but five and a half ounces; in a woman of twenty-two years, who died of diabetes, it weighed but five ounces. Yet in both these persons the heart was competent to keep in circulation all the little blood that was left to them. So, in persons long bed-ridden, we find the limbs wasted and shrunken. The taper fingers, and slender muscles in the arm of the clerk or student, as compared with the brawny arm of the laboring man, are examples of atrophy from want of use.

A similar result is produced when the normal supply of blood in a part is diminished. In cases of fracture, that portion of bone which was thus cut off from the medullary artery does not die, because the circulation is kept up by anastomosis between the vessels of the periosteum and those of the interior of the bone, but it frequently does become considerably atrophied. It sometimes happens that an artery is obstructed by ossification or otherwise. In this case, the parts supplied by it lose their due share of nourishment and gradually waste or degenerate. Instances of this may be found in local softening of the, and in degeneration of portions of the heart and kidney.

Another cause of atrophy is inflammation or other structural disease of a neighboring part. In cirrhosis of the liver, the areolar structure contracts upon the vascular portion of the organ, thus interfering with its nutrition. The false membranes formed in an acute attack of pleuro-pneumonia may bind down a portion of the lung, causing its texture to grow thin and emphysematous. Sometimes in pneumonia and phthisis, certain bloodvessels are obliterated, and then the parts to which they are distributed speedily decay.

A deficiency of certain constituents of the blood will cause a deficiency in the corresponding tissues of the body. Where there is a diminished proportion of fatty materials in the food, the adipose tissue is rapidly reduced to furnish materials for respiration. In the same manner, the bones become soft when the blood is wanting in phosphate of lime, and the entire body may waste away from anæmia.

But besides a right condition and due supply of blood, there must be a certain influence derived from the nervous system, in order to a healthy state of nutrition. It is true that this process goes on per-

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fectly well in plants, and in some of the lower animals which have no nervous system. But we are not authorized hence to infer that animals which do have it may not, even in the strictly organic functions, be greatly under its influence. We have already shown that the secretions are very much affected by impressions transmitted from the brain, and numerous facts go to prove that nutrition is also much under nervous influence. We all know how quickly mental anxiety and depression will take off the flesh from the most robust person, and how much a tranquil frame of mind will contribute to the performance of all the various functions. On the other hand, extreme fear of a disease, as cancer, not unfrequently results in producing it. Cases have been reported where fatty tumors had been removed, which returned when the patient thought the disease malignant, but was scattered upon his being convinced that it was not. Certain inflammations, as herpes zoster, seem to follow in the course of the nerves. Paroxysms of neuralgia are sometimes followed by vascular congestion and effusion of serum. Irritation to the nerve of a tooth will often cause an inflammation of the neighboring gums.

From these, and innumerable other examples which might be cited, it is evident that a healthy nervous influence is essential to the proper performance of nutrition. Hence, we might naturally and correctly infer that any deficiency in this influence would be followed by atrophy and degeneration. Such, in point of fact, we find to be the case. A limb is attacked with numbness, obscure pains, and gradual loss of motion. These phenomena may have originated in a severe cold settling in the affected part, or may have arisen without apparent cause. The limb by degrees becomes withered, shrunken, and useless. Such cases are vaguely referred to neuralgia. Their real pathology is not a little obscure, but doubtless lies in some perversion of nerve-force. The precise condition of the nervous system which produces these derangements of nutrition is entirely unknown. The remedies found most useful are the various tonics, with iodine or bromine, and attention to the general health.

Closely allied to the subject of Atrophy is that of Degeneration. A deficiency in the quantity or quality of the blood insufficient to produce one may give rise to the other. The failure of the vital powers incident to old age causes some to become lean and spare, while it makes others corpulent. There is not only a general obesity, but fatty matter is increased in all the tissues, and especially in the bones. The most common seat, however, in which this form of degeneration is observed is in the muscles. In these cases, fat may form both outside of the fibres and within their proper substance. The

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most frequent cause of this change is inaction. Paralyzed muscles become rapidly altered in structure, and it often happens that, when the brain recovers its healthy condition, the muscular apparatus has so much degenerated as to be incapable of responding to the impulse of the will. Hence, we have an obvious practical indication not to allow paralyzed muscles to remain inactive. They should be frequently stimulated, by passing through them currents of electricity. In this way, they may be prevented from degenerating, and when the brain recovers its power of action, they are again ready for use.

Fatty degeneration usually begins in the contents of the cells or tubercles, the nuclei of which gradually shrivel up and disappear. This is the course usually observed in degeneration of the renal and hepatic cells, and of muscular fibre. In some instances, however, it seems to begin in the nuclei themselves. The whole history of this change seems to show that the fatty matter is not a mere deposit from without, but a gradual retrogression in the scale of organization dependent on a suspended activity of the nutritive process. The nuclei and muscular fibrils retain their natural form and position; but their natural constituents are slowly replaced by oil particles, which are, indeed, the products of chemical transformation when the controlling influence of vital power is for a while diminished or suspended. This supposition derives plausibility from the well-known fact that nitrogenous substances, under certain circumstances, undergo a spontaneous decomposition, and are transformed into adipocere. Dr. Quain has shown that in these instances the muscular fibres, bloodvessels, and nerves are replaced by fatty matter, which assumes the form, size, and arrangement of the natural structures.

That fatty degeneration occurs in consequence of deficiency, and not of disease in the function of nutrition, is manifest, since it is one of the normal changes in the progress of old age. It also occurs locally when the function of a part is suspended. The use of malt liquors, and of the hydro-carbonous articles of food, tends to produce the same result. The gin-liver of habitual topers is familiar to every one.

Another form in which degeneration occurs is the atheromatous deposit in the coats of arteries. The muscular coat is usually the first to be affected. A single row of oil-particles is first seen below the outer coat; these increase until the natural structures are completely wasted or absorbed. Sometimes the transformation is into a calcareous instead of a fatty substance. In either case, the strength of the artery is decreased, the liability to gradual dilatation, as in aneurism, or sudden rupture, as in apoplexy, greatly increased. This

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change is especially frequent in the arteries of the brain, and greatly enhances the risk of cerebral hemorrhage.

The bones also are subject to both the calcareous and the fatty degeneration. In the aged, the osseous system contains a diminished proportion of animal matter, while that of the inorganic elements is increased. A similar change takes place in cases of cancerous cachexia. Persons thus affected are peculiarly liable to fractures, which, when they occur, are not easily repaired. But in some cases, the gelatinous portion of the bone becomes more or less changed into fat. This is one, and probably the most frequent, form of mollities ossium. The bone retains its natural form and size, but all the interstices are filled with fat. Its general appearance is dark and greasy, and so soft does it become that it may sometimes be crushed between the fingers.

The treatment of atrophy and degeneration resolves itself into a treatment of the condition of system on which it depends. If this be old age, we can do little more than endeavor to prevent, by extreme care, any evil consequences, as fracture of bones or rupture of arteries, of a condition past remedying. Where the system generally is in a depraved or enfeebled state, we may rectify it by tonics, alteratives, and nourishing food. Local atrophy may sometimes be prevented or relieved by exercise, stimulating friction, and electricity. A good indication of the probable existence of these degenerations in the internal organs is often afforded by the presence of the arcus senilis or dim gray arches or ellipse, seen around the borders of the cornea in many old persons. This appears to consist in the accumulation of oil-drops between the layers of the cornea. Where it exists, unless plainly referrible to local causes, it may reasonably lead to the suspicion that a similar change may have been going on in other parts of the economy.

Degeneration may also affect the nerves, and even the brain itself. Nerves through which, from any cause, impressions are no longer transmitted, soon become changed in structure and composition. The distal extremities of nerves which have been divided, unless allowed to reunite, speedily degenerate. It has even been shown by Dr. Türck that those portions of the spinal cord along which impressions are transmitted from the various portions of the brain are altered in structure when, by apoplexy or otherwise, the influence of the brain over them is for any length of time suspended. This fact of the atrophy and softening of nerve-substance whose functional activity is suspended, associated with the corresponding degeneration of muscle in a paralyzed part, shows the importance in

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all such cases of replacing the natural stimulus of the nerve-force by the artificial one of electricity.

Another cause of softening of the nerve-substance is an insufficient supply of blood. It has long been known that, where the carotids have been tied, the portions of the brain to which they were distributed were liable to decomposition. A similar consequence may follow any inflammation of the brain or its membranes by which the smaller arteries may have been obstructed. But a recent discovery of Dr. Kirke's, that the fibrous deposits upon the valves of the left side of the heart may be dislodged and mingle with the current of the circulation until they get wedged into some of the smaller arteries, thus stopping the passage of the blood through them, has given a new interest to this subject. It is now supposed that this is a frequent cause of softening of the brain, and perhaps of degeneration in other organs.

For a full and accurate review of the subject of degeneration see Paget's Surg. Pathology, cit.

From anæmia and degeneration we turn to consider the opposite condition, namely, plethora, and its results, both general and local. The most common cause of plethora is the use of highly stimulating food, the materials furnished by which are taken into the system by an active digestion and absorption, but not expended in muscular or mental activity. Hence, they go on accumulating, rendering the blood excessive in quantity and stimulating in quality, until they are either removed by the secretions or excite active disease. The symptoms of this state are obvious in the red, bloated face, full, strong pulse, and swollen veins. There is also an inclination to sleep, an aversion to exercise, mental inactivity, dull headaches, with general torpor of the secretions. Frequently this state of the body relieves itself by bleeding from the nose, or from piles, or by profuse evacuations from the bowels or kidneys. Another cause of plethora is the suspension of some habitual discharge, or the drying up of some old sore. In either of these, the quantity of blood is increased, and morbid matters liable to be thrown upon the circulation.

Plethora may be united with either an exalted or depressed condition of the vital powers. In the former case, the pulse is full and strong, the animal functions vigorous, and the individual has every way the appearance of high health. Nutrition is carried on vigorously, and the heart, under the stimulus of a rich and abundant supply, is especially apt to become hypertrophied. This condition renders its possessor peculiarly liable to inflammatory diseases. Any disturbing force throws the entire system into commotion. The extreme activity of all the functions very easily runs into excess, and

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speedily we have inflammation, with high, feverish reaction. Or, under the influence of excitement, the pressure of the blood may be too much for the vessels to contain, and we have profuse hemorrhage or apoplexy.

But plethora is frequently asthenic; that is, combined with a depraved or even an enfeebled state of the general system. This species of plethora occurs in persons of phlegmatic temperament, or whose constitutions have been broken by excesses. Frequently, also, it comes on in consequence of suppressed discharges. Here the pulse is full but slow, and perhaps irregular. The heart is oppressed rather than stimulated by the quantity of blood thrown upon it; hence, there is often palpitation, with faintness. The venous system is distended with blood, which does not appear to be properly aerated in its passage through the lungs. The lips have a livid hue, and the face is purple rather than red. Often the extremities are cold, the bowels extremely torpid, and the urine high-colored. The limbs are numb, the special senses blunted, and the mind lethargic.

The consequences of asthenic plethora are congestion, passive hemorrhage, dropsies, and a tendency to apoplexy and structural changes; especially the degenerations already spoken of. The blood is apt to stagnate in the internal organs, as the lungs, liver, and brain. Nutrition is apt to be not so much deficient as imperfectly performed. If disease occurs, it is apt to be of a congestive rather than of an active inflammatory type, and to be accompanied with feeble constitutional reaction.

The treatment for active plethora is obviously antiphlogistic. The speediest mode of reducing the excess of the circulating fluid and of the red globules is by bloodletting. With this should be conjoined purgatives, exercise, and a spare diet. Asthenic plethora requires to be treated in a somewhat different manner. Depletion here would afford only temporary relief, while it might cause permanent mischief by increasing the serous elements and watery character of the blood. The object here is rather to excite the secretions, especially those of the skin, bowels, and kidneys. The saline purgatives with mild diuretics, cold bathing, and friction to the skin, are especially indicated, and should be for some time persevered in. The patient should take abundance of exercise, and in the open air; his diet should be nutritious but plain and easily digestible. Tonics, as the vegetable bitters and preparations of iron, may be used with alteratives and diuretics as taraxacum, the mineral acids, iodine, etc.

The consideration of plethora leads us to the study of congestion. The former is an excess of blood in the entire body; the latter

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implies an undue accumulation of it in certain organs. Congestion, like plethora, may be active or passive. The cause of the first is usually some local irritation; that of the second, mechanical obstruction to the return of blood in the veins, or atony of the capillaries. The former is sometimes called determination of blood; the latter more strictly is congestion. The first affects more immediately the arteries, and accompanies an excited state of the system. The seat of the second is in the venous radicles, and oftener attends upon debility. We shall first consider active congestion with its consequences, hypertrophy, hemorrhage, flux, and dropsy.

An unusual flow of blood to a part is a common occurrence of both health and disease. It may be readily produced either by nervous excitement or local irritation. The phenomena of blushing are a good example of the first; the redness caused by severe friction, of the second. Disease furnishes us with many examples of determination of blood to a particular organ or part. Every one has noticed the throbbing of the carotid and temporal arteries, with the heat of the head and flushing of the face, so often seen in what is familiarly called a rush of blood to the head. These symptoms are attended with pain, which may be dull, with a sensation of drowsiness and stupor, or acute, tending to delirium and convulsions. The pressure of blood upon the delicate texture of the organ deranges all its functions. Such phenomena may be observed before an attack of mania, epilepsy, or brain-fever.

Similar determinations of blood frequently take place in other organs, as the lungs, liver, and kidneys. Its effects are everywhere much the same, namely, distention of the vessels, increased heat and redness, with a feeling of weight and oppression. With these there is always functional derangement. At first, there may be a moderately increased activity, an example of which we may see in bilious diarrhea, by means of which congestion of the portal vessels often relieves itself. A higher degree of determination arrests functional activity, and if the organ be an important one, excites much constitutional disturbance.

The cause of active congestion may be some peculiarity in the quantity or quality of the blood, a derangement of the nervous influence, or some cause of irritation in the part affected. A state of active plethora must necessarily predispose to local congestion. The stimulant quality of blood, rich in red particles, might easily occasion excessive activity and irritability in the brain, lungs, and viscera. Irritating matters in the circulation increase the flow of blood toward the organs by which they are eliminated. It is thus

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that diuretics act upon the kidneys, cathartics upon the bowels, and diaphoretics upon the skin. Nervous influence has undoubtedly much to do with the distribution of blood to a part. We might instance the phenomena of blushing, the effects of mental excitement in increasing the flow to the head, the effect of cold applied to the surface in causing contraction of vessels seated deep within. In this way only can we account for the relief afforded by leeches and cupping, in the congestion of internal organs. Nowhere are the beneficial effects of these remedies more marked than in affections of the lungs. Yet the blood thus taken does not come at all from the vessels of the part diseased. The advantage of local over general depletion in those cases must consist wholly in the impression made upon the nerves of the part, and transmitted to those of the congested organ, causing its capillaries to contract. Now, antecedent to the general phenomena of congestion, there is usually disturbance of the nervous system, of what precise nature it may be difficult to say, but palpable in its effects. May not this nervous derangement have an important influence in diminishing the tonicity of the capillaries, and allowing that dilatation of the minute vessels which constitutes one of the most remarkable phenomena of congestion? A confirmation of this theory may be found in the fact that some forms of congestion, as those of the liver and spleen occurring in intermittent, are so much under the control of quinine, a remedy acknowledged to act mainly on the nervous system.

The last cause, and a very common one, of congestion, is a local source of irritation. The effect of this may be seen by watching the web of a frog or a bat's wing under the microscope, when some stimulant, as a drop of acetic acid or oil of turpentine, is applied to them. Speedily we see the bloodvessels enlarging and the blood flowing rapidly through them. A lesser degree of stimulus, as the touch of a pin, causes the vessels first to contract, but afterward they dilate again and remain open for some time. Similar to this, we may suppose the effect of a particle of dust upon the vessels of the conjunctiva, or of a mustard-poultice in reddening the skin. If the stimulus be continued, the circulation, at first rapid, becomes slow, and at length stagnates in some of the vessels. This retardation of the blood is perhaps the best dividing-line between mere congestion and inflammation, and will be more fully considered hereafter.

An effect like that produced in the bat's wing doubtless occurs when mechanical or chemical irritants are applied to any part of the

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human body. Probably some derangement in the proper tissues of a structure or organ is the most common cause of local congestion, although it may be difficult to determine its precise nature.

The increased supply of blood to a part, if moderate in degree and continued for some time, may produce hypertrophy. By this term we understand "enlargement of a part by the increase of its natural tissue, with retention of the natural form" and with increase of power. Its immediate cause is an increased activity of nutrition, which may be owing to the increased functional exercise of a part, to an increase in the blood of the materials suited to the nutrition of certain parts, or merely to an increased afflux of healthy blood. Most generally it is produced by increased activity to a part. Thus, the arm in blacksmiths, stone-cutters, etc., becomes enormously enlarged. But the most frequent examples of hypertrophied muscles occur in those not under control of the will, and the reason of this is obviously that assigned by Hunter, that "in the involuntary muscles the power is always performing some natural and necessary action; for whenever a disease produces an uncommon resistance in the involuntary parts, if the power be not proportionally increased, the disease becomes very formidable." (Hunter's Works, vol. ii. p. 299.)

Examples of this kind of hypertrophy are furnished in the increased muscular structure of the bladder in stricture of the urethra; in the esophagus, stomach, and intestines, when any portion of the canal below them becomes the seat of stricture. Valvular disease of the heart, causing an obstruction to the onward flow of the blood, is usually followed by muscular hypertrophy, to compensate for the increased resistance.

A good illustration of hypertrophy from the second cause, namely, the existence of certain nutrient materials in the blood, may be taken from the peculiar thickening and deposits often found upon the skull, especially in elderly persons. These occur around the original centres of ossification, and seem to follow upon the shrinking of the brain so commonly observed in the aged.

There is another form of hypertrophy in bones, which illustrates the effects of an increased supply of blood. Thus, where necrosis has taken place, the adjacent become more vascular and sometimes enlarge. Even where an ulcer has existed on the surface, the neighboring bone may share in the afflux of blood and enlarge.

Corns are an example of hypertrophy, being an effort of nature by thickening and hardening the epidermis to protect the parts

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beneath. Their painful character depends on the formation of a little sac or bursa between the hardened cuticle and the joint.

There are other forms of hypertrophy, as that of the cellular tissue of the lower extremities in elephantiasis, and of the capsule of Glisson in cirrhosis, which are not yet well understood. Sometimes they seem to arise from protracted congestion of the parts involved, sometimes their origin seems to be unaccountable, unless we attribute it to a superabundance of the materials for the formation of those tissues in the blood.

The second of the consequences of active congestion is hemorrhage. This is in some instances nature's mode of relieving the disordered balance of circulation.

Thus, plethora, with engorgement of the vessels, is removed by a copious epistaxis. The congested state of the uterus, with the sensation of weight and fullness which it occasions, at once disappears upon the commencement of the menstrual discharge. The application of direct irritants to the mucous membranes may cause profuse hemorrhage. Drastic purgatives may, in this way, induce dysentery, and the use of turpentine or cantharides cause bloody urine. The dilated vessels at length give way, and allow a free escape of their contents. Sometimes, however, as in the catamenial discharge, there does not seem to be any rupture of the vessels, only an oozing out from them of their contents.

An additional cause of hemorrhage in many cases is a weakness or disease of the bloodvessels themselves. These are often softened by inflammation or degeneration, and readily yield to the force with which the heart is forcing the blood into them. Occasionally they are laid open by actual ulceration.

It is obvious that active hemorrhage tends to relieve itself. It is nature's mode of bloodletting, and needs to be interfered with only when excessive, or when it occurs in organs as the brain or lungs, where it is likely to be directly injurious. The proper remedies for it in such cases are depletion, derivants, and cold. Besides these, we may use agents which diminish the force and frequency of the heart's action, as lobelia inflata in nauseating doses, digitalis, joined with perfect rest, a position unfavorable to the flow of blood toward the affected part, and the use of astringents. A too early or too sudden check to active hemorrhage may bring on inflammation.

There is a peculiar jerking thrill to the pulse while the blood is escaping, which is quite characteristic. It is probably caused by irregular contraction of the arteries, and perhaps abruptness in the action of the heart. If the flow of blood continues, the pulse may

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at length become weak and irregular till it ends in syncope. The effused blood may also cause derangement of function in the organ into which it has escaped. The clot in apoplexy may press upon the brain, causing coma or paralysis. In the lungs, it may interfere with respiration, and thus immediately destroy life, or, by breaking up their texture, bring on gradual disorganization.

The third effect of active congestion is flux or dropsy. Here, instead of the escape of the blood in substance, there is an effusion of its watery portion only. When this takes place upon a free surface, it is termed flux, as when it occurs upon the mucous membranes. But when the effusion is into the cellular tissue, or into the closed sacs of the serous membranes, it constitutes dropsy. Exposure to cold is a frequent cause of flux. The cutaneous perspiration being suddenly checked, the blood is suddenly thrown upon the internal organs, and if from any cause the kidneys are unable to discharge, in addition to their own function, that of the skin, the extra labor falls on the bowels. With some persons, wet feet will, at any time, produce an attack of diarrhea.

Sometimes, however, the effusion falls upon the serous instead of the mucous membranes, producing dropsy, and sometimes it takes place into the cellular tissue generally, constituting anasarca. It is possible that a superabundance of fluids in the circulation may cause general dropsy, but probably in such cases there is usually a deficient action of some of the great emunctories.

Serous effusions may be owing to congestion of some other organ. Often the distended vessels of the liver, in disease of that viscus, do not allow of the free return of blood from the portal veins, and ascites is the consequence. Relief of the diseased liver is followed by a speedy subsidence of the abdominal swelling. Disorders interfering with respiration, as laryngitis, asthma, etc., may induce congestion of the lung, which sometimes results in bronchorrhœa or hydrothorax.

Another cause of both these affections is disease of the heart, which may either throw the blood too forcibly and rapidly upon the lungs, or retard its circulation through them, in either case producing intense congestion.

The effect of local irritation in causing an increased afflux of blood, ending in effusion of its watery portion, is seen in the operation of various stimulants on the surfaces of mucous membranes. A grain of sand lodged in the conjunctiva will speedily cause injection of its vessels, and a profuse secretion of tears, by which the offending material will frequently be washed away. Irritating vapors

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cause accumulation of mucus in the air-tubes. Purgatives produce watery discharges from the intestines, and diuretics an increased flow of urine.

Permanent sources of irritation, by producing frequent or constant congestion, may give rise to chronic dropsy or flux. Tubercles in the arachnoid membrane lead to hydrocephalus, in the peritoneum to ascites. Ulceration, whether inflammatory or tuberculous, keeps up a chronic diarrhea.

The matters which constitute the effusion of these cases are the natural secretions or exhalations of the part, increased and combined with the water, salts, or albumen of the blood. Sometimes they are extremely acrid, as in coryza, leucorrhea, and some forms of diarrhea.

Dropsy and flux, like hemorrhage, are nature's mode of relieving congestion. In seeking to remedy them, we must first aim to remove the cause. The treatment for active determination of blood consists in depletion, by which we at once reduce the entire quantity of blood in the system, so that less can be sent to each part and diminish at the same time the vigor of the heart's action, so that the blood may be sent with less force to the part diseased.

Local depletion also reduces the amount of blood, but its great advantage, as previously explained, is that it causes the congested capillaries to contract and thus relieves their excessive distention. Purgatives are powerful depletives. In affections of the chylopoietic viscera, they are also useful by directly diminishing congestion of the portal system, and by removing irritating matters from the bowels. The milder cathartics should be resorted to in such a case, lest we cause more irritation than we relieve. In congestion of the brain, severe purging may act partly on the principle of counter-irritation.

Where there is excited action of the heart, even after free depletion, our best agents for subduing this are nauseating doses of lobelia inflata, and the sedative influence of digitalis. At the same time, all the secretions should be kept open. Rest and spare diet complete the constitutional remedies. As local agents, we may use with benefit the sedative influence of cold and counter-irritation.

Flux, from active congestion, frequently works its own cure by relieving the over-distended bloodvessels. In the lungs, it may interfere with respiration, and so require emetics or stimulant expectorants to remove it. At the same time, we may use remedies suited to remove the congestion on which it depends. In the bowels, it may generally be relieved by laxatives, which empty the distended vessels and carry off any cause of local irritation. Flux may depend on

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excess of fluids in the system. Its sources are then easily cut off by abstaining from the use of liquids for a while. In all cases, astringents should be used with caution.

In chronic flux, we must rely much on the regulation of the diet, on counter-irritation, and the use of the mineral and vegetable astringents, especially the nitrate of silver, sulphates of copper and zinc, or tannin or gallic acid. These act principally by substituting their own action for that of the diseased parts, and are applicable where the vegetable astringents are not. Here, also, we may use remedies to act upon the blood, as iron and the mineral acids. Opium may be employed to allay irritation, and derivants to draw the blood to some other organ.

The treatment of inflammatory dropsy is of much the same character. We aim, first, to subdue general arterial excitement and then to diminish local congestion. The most frequent cause of this form of dropsy, when general, is congestion of the kidneys, when confined to the abdomen or the liver. The obvious indications are to relieve the local affection by cups or leeches and counter-irritation, at the same time that we carry off the effused fluid by hydragogue cathartics and diaphoretics. Elaterium and the hot-air bath are remedies of great power in cases like these.

ASTHENIC CONGESTION.

We have spoken of the accumulation of blood in a part from active determination. But this is not the sole or perhaps the most frequent form of congestion. It is manifest that any thing which obstructs the circulation of the blood through the heart, or its return from any part of the body, must cause it to accumulate in the veins behind. An example of this is furnished in the arm ligatured for venesection. The veins swell, the fingers turn purple, and the fore-arm becomes tense and swollen.

Another and a very common cause of congestion lies in atony of the capillaries themselves. This occurs particularly in exhausted and debilitated states of the system. We have spoken of several forms of congestion in anæmia. Asthenic plethora is yet more commonly associated with this condition. The thin and watery blood has but a slight affinity for the living tissues, while the relaxed vessels fail to urge it onward with the usual *vis a tergo*. Hence it tends to settle in the veins and vascular organs.

This form of congestion is very apt to come on insidiously in typhoid fevers, and other diseases attended with debility. The blood

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seems to stagnate in the brain or lungs, sometimes as it were from the mere effects of gravity, where the patient has long been kept upon his back. Toward the close of chronic diseases, vessels of the lower extremities so far lose their tone as to yield to the pressure of blood above and allow its watery portions to escape into the cellular tissue. The diarrhea and wasting night-sweats which appear under similar circumstances are due to the same cause.

But this atonic state of the capillaries may arise from a sudden depression as well as from chronic debility. Thus, a blow upon the head or any severe shock to the brain may paralyze the heart, and thus cause the blood to accumulate in the lungs and the great venous trunks. The chill of fevers and violent internal pain may cause a similar state of the circulation.

When the capillaries of a part have been distended by inflammation, they require some time to regain their usual tonicity and degree of contraction. The conjunctiva may retain its injected appearance long after all active disease has subsided. The slightest cause of irritation is here sufficient to renew the old difficulty. This we believe to afford the readiest explanation of the sore eyes and sore throats with which so many are troubled. A similar condition of stomach doubtless exists in those who indulge habitually in the use of stimulant food or drinks.

We have previously explained how an active congestion of the liver or kidneys might cause passive congestion of the portal system or of the vessels generally. Cirrhosis and some other hepatic diseases may also interpose obstacles to the return of the blood, not only from the venæ portarum but also from the vena cava ascendens. An aneurismal or other tumor pressing upon any of the great veins may retard the circulation through them. A tight cravat may in the same way bring on apoplexy.

Valvular disease of the heart is a serious cause of passive congestions. By obstructing the flow of blood through that organ, it compels it to accumulate in the veins and capillaries. When the difficulty begins, as it usually does, on the left side of the heart, the lungs are the first to suffer, then the right side of the heart and the venæ cavæ become gorged with blood, the liver and brain are next affected, and finally it may extend to the whole venous and capillary systems.

The symptoms of this form of congestion are a sense of fullness, weight, and oppression in the part involved, with more or less functional derangement. Sometimes the distention of an organ with blood induces in it an excited action, but oftener torpor or perverted activity. Occasionally there is pain, spasm, or increased sensibility.

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There is less of heat, pain, and throbbing, than in active determination. Functional disturbance partakes less of excitement, bordering rather on depression or torpor. The redness from injection of the bloodvessels is of a dark or even purplish hue. The pulse may be full and soft, or even feeble. The skin is dry, but its temperature but little elevated.

This state of congestion, if it continue, is likely to result in effusion. This, if it takes place upon a serous surface or into the cellular tissue, constitutes dropsy; if upon a mucous membrane, it is termed flux, and as passive congestion is more likely to be protracted than active, its resulting affections are more apt to be chronic. A slight degree of passive congestion may result in increased nutrition of the part; but the additional structure will be of a lower grade of organization, if indeed the whole organ or part do not degenerate. Cirrhosis of the liver and granular degeneration of the kidney have been referred to this cause. The enlargements of the spleen and liver, which so often accompany malarious disease, are further examples of the effects of this species of congestion.

In the treatment of asthenic congestion, we aim, if possible, to remove its cause; and, where this is beyond our power, we try to palliate its ill effects. Where it is owing to weakness of the capillaries, there is a plain indication, by the use of tonics and local stimulants, to strengthen them. Means which tend to invigorate the entire system tend to restore their lost tone to the distended vessels. The beneficial effects of this course are seen in the relief afforded by perseverance in the use of iron and quinine to the abdominal congestions following exposure to miasm. The mineral astringents, which at once contract and give tone to the relaxed fibre, are often of great service. Even local irritants may occasionally be useful, as capsicum infusion in chronic sore-throat and brandy in flux from the bowels. But when the congestion is extensive or severe, we may be obliged to resort to depletives or evacuants. Scarification of the diseased parts at once unloads the distended vessels, and enables them to recover their natural contractility. Where, as in diseases of the internal organs, blood can not be taken directly from the parts diseased, we may apply cups or leeches to the adjacent surface, as to the chest for congested lungs, to the anus in dysentery, etc. Or, if the patient be too weak to bear the loss of blood, dry cupping, mustard-poultices, friction, with stimulating liniments, may still be used to draw it to the surface. Congestions of the portal system may be directly relieved by the use of evacuants, congestion of the lungs by expectorants, of the kidneys by diuretics.

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The choice of these various remedies, and the manner of applying them, will require judgment and discrimination on the part of the practitioner. Frequently we are obliged to employ depletives and tonics, laxatives and astringents, alternately, to meet the varying indication, at once to reduce the local congestion and sustain or renew the tone and vigor of the muscular fibre.

Where congestion is due to obstructed circulation, the indication is evidently to remove, if possible, that obstacle. This may be done, where it is merely to remove a ligature or to reduce an active congestion in some other organ. But it often becomes impossible, as where the obstruction arises from valvular disease, or from the pressure of intra-thoracic tumors upon the great venous trunks, or from cirrhosis. In such cases, we can only palliate the consequences of a condition which it is beyond our power to cure. Counter-irritation and the removal of all superfluous portions of the blood are about all that we can do.

Passive congestion may result in passive hemorrhage. This usually occurs in cases where the blood is thin and deficient in fibrine. It is often observed in typhoid and malignant fevers, which are attended with a dissolved state of the blood. We may, perhaps, suppose that this fluid is so altered in consistence or composition as to pass through channels where it ordinarily could not escape. It may be, also, that in debilitated states of the system the capillary vessels are relaxed, and unable to resist the pressure from behind. Thus, the blood in substance may be forced through the pores designed for the natural exhalants.

Passive hemorrhage, if moderate in amount, may be beneficial, or, at least, attended with no bad consequences. It sometimes occurs from the mucous membranes of the nostrils or bowels at the crisis of fever. Petechiæ, in fact, are nothing more than examples of interstitial hemorrhage. But when it proceeds, as it is apt to do, to any considerable extent, marked debility is the inevitable consequence. The pulse becomes weak, though excitable, the skin pale and waxy, and all the vital powers much enfeebled.

Our efforts to remedy this condition are directed to relieve congestion, by counter-irritation and position, and directly to check the escape of blood by astringents. The sedative influence of cold, where it can be applied, answers the double purpose of diminishing the flow of blood to the part and of constringing the capillary vessels. Opium is often useful in subduing any irritability in arterial action or any nervous excitement, such as is often present. Perfect rest, with such a posture of body as shall favor the return of blood

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from the congested organs, should also be employed. A firm and constant pressure upon the bleeding vessels, where they can be reached, will usually arrest the flow. Plugging the nose in epistaxis, and the tampon in uterine hemorrhage, are examples in point. Where the blood is deficient in fibrine or red particles, the means adapted for the increase of these must be resorted to, especially the astringent preparations of iron.

Flux and dropsy are, as might be anticipated, frequent effects of passive congestion. Indeed, there is no more common cause of diarrhea, or of the excessive expectoration that attends the decline of some bronchial affections. But effusions into the serous sacs or into the cellular tissue are yet more common results of obstructed circulation. In valvular disease, we find œdema of the extremities, with water in the pleura, and sometimes in the tissue of the lungs themselves. Where aneurismal or other tumors press upon the great veins, all the parts from which they are derived speedily become swollen and œdematous. Organic diseases of the liver, by pressure upon the portal vein, may cause ascites, and, where it falls upon the vena cava ascendens, may produce dropsy in the entire lower portion of the body. At the close of chronic and wasting disease, the extremities frequently become swollen, apparently owing to the vessels being too weak to carry up the current of blood against the force of gravity. Accordingly, we find that raising the limbs to a horizontal position for a while affords relief. Colliquative diarrhea and profuse night-sweats often occur under similar circumstances, from the relaxed condition of the capillaries and dissolved state of the blood.

It at first might seem a singular fact that diminution in the quantity of the blood should predispose it to escape from its vessels, but such is undoubtedly the case. Persons who have been greatly reduced by hemorrhage are extremely liable to effusions into the pleura, pericardium, and cellular tissue of the extremities. Repeatedly have we seen these results in that so dangerous form of anæmia which attacks puerperal females. The effused fluid presses upon the heart and lungs, and interferes with the all-important functions of respiration and circulation. Yet how can we remove this fluid without still farther reducing the patient? The blood which has been lost by hemorrhage is in these cases replaced by serum absorbed from the tissues, and readily transudes through the coats of the vessels.

We have already shown how anæmia tends to produce irregular action of the heart, together with an unbalanced state of the circulation. The same holds true in serous plethora. The motive power of the circulation being diminished, there is naturally a tendency of

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the blood to stagnate in the parts where the tonicity of the blood-vessels is most relaxed, and being itself thin and watery, it very soon escapes from the channels in which it should remain confined.

Congestion may operate in still another way in causing dropsical accumulations. The serous membranes and cellular tissues are naturally kept moist by a thin fluid or exhalation, the purpose of which is doubtless to prevent friction in the various motions of the body. Now, this fluid, like all other vital products, must be constantly undergoing absorption and renewal. But when the membrane from which it is formed is gorged with blood, absorption ceases, while production is greatly increased, and considerable accumulation must speedily ensue.

General dropsy is very commonly connected with granular degeneration of the kidneys. Indeed, its presence should always lead to an examination of the urine for albumen. It is evident that any thing which should interfere with the elimination of the watery elements must lead to their accumulation in the blood. At the same time, the albumen, which ordinarily gives spissitude to that fluid, is materially diminished, rendering it still more easy to escape into the tissues and serous sacs.

The pathology of this granular deposit is not yet entirely cleared up. It seems to be fatty in its character, and is doubtless allied to those other fatty deposits and degenerations which take place in other organs, and of which we have already treated at length. In confirmation of this is the fact that it most frequently occurs in persons whose vital powers are below par, and in those who are in the habit of using spirituous drinks or the hydro-carbonous articles of food. This condition of the kidney is usually accompanied by fatty degeneration of the liver and other organs. From all these circumstances, it seems probable that it is caused by prolonged congestion of the kidneys in persons whose blood abounds in fatty material, and in whom the constitutional powers are in a state of decay or depression. In consequence of this serious injury to the secreting structure, urea is imperfectly eliminated, while the albumen escapes with the watery portion of the urine.

Treatment of flux and dropsy from asthenic congestion is founded on the same general principles as the treatment of the condition on which it depends. A moderate degree of flux may be useful by removing congestion; but if it continues, it rapidly wastes the blood and reduces the powers of life. When interference becomes necessary, a mild laxative, to diminish congestion, with a moderate dose of Dover's powder to quiet irritability, may be all that is

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required. But, in many cases, this will not be sufficient. We may then resort to the astringents, vegetable and mineral, beginning with the mildest. The diet should be carefully regulated, so that the food may be mainly absorbed in the stomach, leaving as little residue as possible to go on and act as an irritant upon the bowels. In severe cases, the patient should be kept perfectly quiet, since every motion or jar communicated to the intestines tends to disturb and excite them. Attempts should be made to diminish internal congestion by applying warmth and even counter-irritants to the surface. The abdomen may be swathed in flannel, and the skin blistered or rubbed with stimulating liniments. The cutaneous functions are also to be regarded. The skin, in chronic flux, is apt to become dry and harsh. Warm bathing, with ipecac as a diaphoretic, is here of signal service. There are also certain remedies which are claimed as having an almost specific effect in excessive discharges from all the mucous membranes. The most efficient of these are copaiba and oil of turpentine, and they are perhaps worth a trial.

The treatment of dropsy resulting from asthenic congestion is directed, first, to remove that condition, if possible, and if not, to palliate its ill effects. Where the prime cause is sudden congestion of the heart, liver, or kidneys, we may often afford relief by derivants to the surface, and agents which tend to restore the suspended secretions. By cathartics and diuretics, we attempt to replace the dropsy by a flux; the effusion into the serous membranes or cellular tissue, by an effusion upon a free surface. Œdema of the lower extremities may be relieved by an elevated position, which enables the blood to return without encountering the force of gravity. Firm bandaging gives support to the enfeebled vessels, and prevents, in some degree, the escape of their contents. Where there is an obstruction to the circulation, permanent and irremediable, we can do little more than carry off the effused serum. The reliable agents for doing this are the hydragogue cathartics, especially bitartrate of potash and elaterium. The hot-air bath is a valuable auxiliary.

In most instances, the thin and impoverished condition of the blood demands attention. Sometimes this may be the root of the whole mischief, as when dropsy follows profuse hemorrhages. Even when it is an affair wholly secondary, it should not be neglected. The means of remedying this condition of the blood have already been pointed out, namely, tonics, iron, a nourishing diet, and attention to all the functions whose proper performance is necessary to health.

When all other means fail, and the effused fluid seriously interferes with the respiration, circulation, or secretion, surgery must be

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called in and the fluid removed by tapping, with slender hope, however, of any permanent cure.

INFLAMMATION.

Inflammation, considered in its relations and its results, is the most important subject in medicine or surgery. It comes in more or less as a cause or a complication of nearly all the ills that flesh is heir to. Postponing for the present all speculation as to its nature, let us attentively study its phenomena.

The distinctive marks by which this diseased condition is recognized are still those employed by Celsus, namely, heat, pain, swelling, and redness. In parts exposed to the eye, redness is the first peculiarity observable. This is also observed in active determination, but in a less marked degree. The cause in either case is the same, namely, the passage of a greater number of red corpuscles through dilated capillaries. The intensity of the redness will vary with the part affected and the degree and character of the inflammation. In the more active and superficial forms, the color is a bright rose, as in phlegmon and scarlatina, while it inclines to a dark or purple where the action is feeble, the vital powers depressed, and there is a marked tendency to gangrene. The two forms correspond to active and passive congestion respectively.

The increased flow of blood brings with it an increased temperature, arising probably from increased vital action. It is found, however, that the temperature of the part never exceeds that of the blood at the heart. Increased heat is less manifest in low asthenic forms of inflammation, and both heat and redness may disappear before all morbid action ceases.

Pain is one of the earliest, sometimes the earliest, manifestation of inflammatory action. It has been attributed by some to the pressure of the distended vessels upon the nerves of a part. Undoubtedly pain is much aggravated by this pressure, especially in parts which are from their structure unyielding. It is from this cause that inflammation of the bones and of the joints and theca of the fingers is so excruciating. But pain often occurs before increased arterial action, and, when swelling occurs, is even relieved by it. We must, therefore, regard it as an indication of derangement of the nervous influence which constitutes an important element in the complex phenomena of inflammation.

Swelling is at first the effect of distention of the capillaries, and in the mucous membranes it seldom amounts to more than this. But

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in parts abounding in cellular tissue, the effusion which soon takes place may cause swelling even to an enormous extent. Induration also frequently occurs from plastic deposit that takes place around the point where inflammatory action runs highest. A good example of this is furnished in a common phlegmon.

We have finished the sensible phenomena of inflammation; but it is obvious that when the internal organs are affected, these alone are not a sufficient guide; for all of them, except pain, which is sometimes wanting, and may at any rate proceed from other causes—all the others, we say, may be beyond the reach of our perceptions. Here we have to rely upon another symptom, derangement of function. This, as has been previously shown, usually accompanies congestion, but exists in still higher degree in inflammation. In simple congestion, the processes of secretion are increased; but when inflammation sets in, they are much diminished or even suspended. The throat and bronchial tubes become dry and husky, the secretions from the intestines scanty and passed with pain, the serous membranes become dry and grate as their surfaces glide over each other. But as inflammation goes on, effusion takes place, and the secretions are increased and also changed in quality. Together with the watery portion of the blood, some of its albumen and salts also escape, often forming a fluid quite acrid, and which excoriates the parts on which it comes.

It is obvious that those portions of organs like the lungs, brain, liver, and kidneys, which become inflamed, must thereby be unfitted for their ordinary functions. The air-cells, compressed by the distended vessels which envelop them, no longer allow the admission of air. The epithelial cells which line the radicles of the ducts of glands can no longer perform toeir office of secretion. This suspension of function is one of the great sources of danger in inflammatory disease. If any considerable portion of the lungs be even temporarily unfitted for respiration, it is manifest that death must speedily ensue. When the function is less vitally important, no little constitutional disturbance may arise from its suspension.

Let us now proceed to examine more minutely the changes going on in the inflamed part. If we place a bat's-wing under the field of the microscope, and irritate one of the arteries with the point of a pin, we shall see it first contracting, and after remaining a few moments in this state, it slowly dilates till it acquires a size greater than before the stimulus was applied. It continues thus dilated for several hours, and will not again contract without the application of a stimulus much more powerful than that at first employed. As the

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vessels contract, the movement of the blood through them becomes slow, and when they again dilate, it moves through them more rapidly than ever. It would seem as if the effect of the stimulant was not confined to the vessels, but extended to the fluid moving in them. If instead of a pin's point we use a drop of acetic acid or turpentine as a stimulant, the effects are somewhat different. The period of contraction, if it occurs at all, is so brief as to be hardly perceptible; the vessels appear to dilate simultaneously, while an increased current of blood rushes rapidly through them. Thus far we have nothing more than the phenomena of active congestion. But if the excited capillary action continue, we find that, while all the vessels remain dilated, the circulation through some of the capillaries begins to stagnate. It is at this point of diminished motion of the blood that we may perhaps draw the dividing-line between congestion and inflammation proper. The phenomena here presented are these: at the focus of excitement, stagnation of the blood; in and closely around, fullness of the vessels with retarded motion, that is, congestion; farther around, the vessels are full and enlarged, while the circulation sets rapidly through them, corresponding to active determination. The increased flow of blood, and, of course, of its red corpuscles, accounts for the bright redness of the inflamed part, while the lividness of its central portion is accounted for by the stagnation at that point. This obstruction to the free flow of blood may also explain the throbbing in the part, and the full, hard pulse felt in the arteries around. It is a curious fact that the stagnant blood does not coagulate, at least not until the part sloughs. Hence, when an inflamed part is cut into, the blood flows with great force. This is shown by Mr. Lawrence's well-known experiment of opening a vein in both arms of a patient who had an inflamed hand. In the same time, three times the quantity of blood flowed from the vein on the diseased side as from that upon the healthy arm.

The vessels in inflammation are not only enlarged, but undergo changes of shape. They are elongated as well as dilated, and, in consequence, are thrown into wavy folds, as may be seen in the tortuous course of the arteries in an inflamed conjunctiva. The dilatation, moreover, affects some parts more than others, causing the capillary vessels to appear aneurismal or varicose. These enlargements are, some of them, gradual and fusiform, others oval or pouch-like. It seems probable that inflammation never occurs without dilatation of the bloodvessels. The signs of it may indeed be observed in parts which have no vessels, as in the cornea and the

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articular cartilages; yet here there is enlargement of the neighboring vessels from which these parts naturally derive supplies.

We have shown that a change in the distribution of the blood was an invariable characteristic of inflammation. Equally essential is a change in its composition and qualities. The proportion of the fibrine in the blood is increased from 3.5 parts in 1000 to an average of 6 and a maximum of 10 parts, in the various phlegmasiæ.

Much stress has been laid, by some observers, upon a supposed increase of white corpuscles, and a disposition in them to adhere to the walls of the vessels. It has even been suggested that an accumulation of these corpuscles by blocking up the vessels, might give rise to the stagnation which occurs in the focus of inflammation.

But it seems that the increase of the white corpuscules can not well be estimated separately from that of the fibrine. Again, it is a well-known fact that the conditions of the system in which these corpuscles are most abundant, as the malarious cachexiæ, are not peculiarly favorable to inflammation.

There is a peculiar quality of the red corpuscles in blood taken during inflammation. This is a disposition to arrange themselves in piles or *rouleaux*, like pieces of money, while these piles cluster into a kind of network with wide interspaces. The same peculiarity is observed in the blood of pregnant women. It is undoubtedly one of the principal causes of the formation of the buffy coat, since the clustered corpuscles sink more readily below the surface before the fibrine has begun coagulating.

It is obvious, when we reflect what a degree of constitutional disturbance a slight local inflammation is capable of exciting, that some important changes must have taken place in the circulating fluid. Precisely what these are, is perhaps as yet undiscovered; for the increase of fibrine seems hardly sufficient to account for it. Probably it is some change in the vital properties of the blood, undiscoverable by the microscope or by chemical analysis.

Pain in an inflamed part has been already treated of as a perversion of the ordinary and healthy nervous influence. The degree of pain, however, is no measure of the height of inflammatory action, and it often ceases long before the disease has come to an end. The exact nature of the change of nervous influence we do not know, because we are ignorant of the nature of that influence as exerted in healthy nutrition. Apart from pain, there is certainly some disturbance of nerve-force which plays an important part in the phenomena of inflammation.

In proof of this, we may refer to the sympathetic relations of

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parts which obviously depend solely on nervous influence. Thus, excessive stimulus of light applied to the retina may cause conjunctivitis. The transference of irritation here can not be ascribed to any altered state of the blood or bloodvessels. We can only explain such a case by supposing that the excited state of the optic nerve was somehow communicated to the filaments distributed to the conjunctiva, generating in this membrane a state incompatible with its healthy nutrition. Another example of the same kind is a case mentioned by Mr. Paget (Surg. Path. p. 203), of inflammation of the testicle, caused by a calculus impacted in the urethra. Here disease in one part is produced by irritation in another with which the former has no vascular connections. Here, too, disturbance of the nerve-force must be the prime cause of all the phenomena of inflammation. Hence, we should regard this mode of diseased action as not confined to changes in the blood or bloodvessels, but as having a nervous as well as a vascular element.

There can be no doubt that inflammation may be caused by a disturbance of any one of the conditions essential to healthy nutrition. As a matter of fact, more than one, and sometimes all, of those conditions are more or less interfered with. To confine our attention to derangements of either blood or nerve, or of the vital properties of the part, would be taking but a narrow and partial view of the subject.

We have spoken of disturbance of function as a valuable symptom where inflammation attacked any internal organ. Another important symptom in such cases is the sympathetic constitutional excitement which usually accompanies them. We have seen that dilatation of the capillaries is attended with an increased and an accelerated flow of blood through them. This excitement of the circulation seems at first to be strictly local; but if it continues long or runs high, it soon extends to the heart, and involves the entire arterial system. The pulse becomes quick and hard, the skin hot and dry, the tongue thickly furred, the stomach disordered, and the secretions generally suspended. In short, we have inflammatory fever. The degree of this constitutional excitement varies, partly with the structure involved, and partly with the height of the local disease. Inflammation of the mucous membranes causes less fever than that of the parenchyma of organs or of the serous membranes. Diffuse inflammation excites less fever than when it is more limited and acute. Making due allowance for these circumstances, the degree of fever may be taken as a pretty accurate measure of the intensity of the local disease.

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But fever and local inflammation generally arise in a manner somewhat different. A person is exposed to cold or severe fatigue, the first effects of which are a depression of the entire system. There is a sensation of weakness and chilliness, the pulse is feeble, the countenance pale, and the extremities cold. Muscular strength is diminished and the spirits dejected.

Then comes a reaction, ushered in, perhaps, by rigors and vomiting. The pulse becomes quick and hard, the skin dry and hot, and there is intense thirst, restlessness, and loss of appetite, with pains in the head, back, and limbs; and now there may appear the symptoms of local inflammation. The lungs, the pleura, the liver, the peritoneum, or some other important viscus, is involved. During the cold stage, these organs have probably been undergoing intense congestion, which with the access of fever changes to active inflammation.

Now, in cases like this does the inflammation cause the fever or the fever cause the inflammation? or are they both effects of one general depressing influence, falling first upon the system at large, and then upon the organ or part least able to resist it?

The latter seems to us the most probable supposition. It is evident, however, that the two modes of morbid action mutually aggravate each other. The local affection, by its irritating effect upon the blood and nerves, must enhance the general excitement, while the increased force and frequency of action in the heart and arteries must drive the blood with irresistible power upon the already distended and enfeebled capillaries.

In other instances, however, constitutional excitement seems to follow, and to be wholly dependent upon, local injury. The fever which follows a wound is of this character, also that which arises in peritonitis from perforation of the intestines and escape of their contents. Here there is no room for direct constitutional shock. The general arterial excitement can only be attributed to irritation, propagated from the inflamed part.

On the other hand, in small-pox, measles, etc., the febrile excitement may precede by several days any symptoms of local inflammation. Here, at least, we can not doubt the constitutional origin of the disease.

The precise nature of the connection between the disordered capillary action and general constitutional excitement is not clearly understood. Some have attributed it to the irritation which an increased amount of fibrine may exert upon the heart and arteries. A difficulty in the way of this supposition is, that the fibrine is greatly increased in some states of the system which are not attended with

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fever, namely, in pregnancy and sub-acute rheumatism. Again, the fever often runs high before the appearance of the buffy coat, and subsides while that coat still continues. We may properly enough suppose that the increase of fibrine may have something to do with the accompanying fever. But we shall have to go beyond this to those mysterious sympathies which connect the well-being of each part with that of the whole for a full explanation of the matter.

Why sympathetic irritation should cause excitement of the circulation, while it depresses the function of secretion, is as yet unexplained. We can only receive these facts as they occur in the phenomena of fever. Where the exciting cause is something powerfully depressing, reaction, if it takes place at all, may be very imperfect. Thus, the fever which follows burns, certain poisons, and even cold if intense or long continued, may be of a typhoid or adynamic type. The inflammatory symptoms are sometimes superinduced upon a passive rather than an active congestion. In such cases, extensive local change may take place with little pain or constitutional excitement. Especially are the lungs liable to this form of inflammation, both primarily, but more frequently creeping on in the course of continued fever or some other debilitating disease. In such cases, the pulse, though frequent, is feeble, the skin cool, and there may be diarrhea instead of suspended secretion. So insidious is the disease, and so completely masked its general symptoms, that the patient may not be aware of his danger till actually dying. The physical signs furnished by auscultation and percussion alone inform us of the extent of the danger. I have known the lower lobes of both lungs extensively congested, even to such a degree as to be followed by death within a few hours, while the constitutional reaction was so imperfect that neither the patient nor his friends suspected any thing more than a severe cold.

We have traced the progress of inflammation up to the stagnation of blood in the capillaries, and have treated of the symptoms which accompany it, both local and general. Now, at this point, all the excited action we have described may gradually subside, and the part return to its normal condition, without undergoing structural change. This may be done in two ways, by simple cessation of the inflammation, or by metastasis, where it disappears, indeed, in one part, but only to reappear in another. The change in the diseased part is probably the same in both cases. The blood, which had become stagnant, resumes its motion. Determination of blood in the surrounding vessels gradually ceases, and the distended capillaries regain their tonicity and recover their natural state of contrac-

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tion. The latter may, however, be a work of time; for a state of passive congestion sometimes remains after all active symptoms have ceased. Clusters of blood-corpuscles, and perhaps fragments of fibrine, occasionally seem to be washed from the part and mingled in the current of the circulation. There is reason to fear that serious mischief may be done in this way, the "*materies morbi*" being carried from a diseased organ to one which was previously healthy.

As inflammation subsides in one part, it sometimes suddenly appears to be transferred to another. Thus, rheumatism, which affects fibrous structures, flies from joint to joint, and limb to limb. A singular instance of metastasis is that which sometimes occurs in inflammation of the parotid gland, where the disease is suddenly transferred to the breast or testicle. Some inflammations, especially those of an erysipelatous nature, slowly spread from the point where they begin, creeping on to involve the adjoining parts.

The subsidence of inflammation without structural change in the affected part is termed resolution. But if this does not take place, if the diseased action continue, further changes are speedily manifested. These may perhaps be best exhibited by contrasting them with those which take place in the ordinary process of nutrition. These variations consist, in the words of Mr. Paget, (1) "in a change of the material that is separated from the blood, into or upon the affected tissue; and (2) in changes of the tissue itself." Both of these changes usually occur, that is, there is an effusion from the bloodvessels and a deterioration of the structure of the part inflamed. The first of these changes differs from the ordinary repair and reconstruction of tissue in its tendency to the production of new formations, which are, however, of a lower organization than the original structure. The second is the consequence either of defective nutrition or of an increase in the ordinary process of waste and disintegration.

Let us proceed first to consider the history of the various effusions from the bloodvessels and the changes of development or degeneration which they undergo. The materials exuded from inflamed bloodvessels at first resemble those which escape in congestion, namely, serum and blood. Thus the serous cavities become distended and the secretions altered in character. But fibrine soon follows, giving to the swelling where it occurs in cellular structures a peculiar hardness and density, as is observed in phlegmon and hepatization of the lung. But the peculiar characteristic of inflammatory effusion is its containing exudation-corpuscles. These, in their development and degeneration, constitute the most important products of inflammation.

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Pure serum is probably seldom effused, at least by itself. What is usually called such commonly contains more or less albumen and fibrine, and corresponds more properly to the liquor sanguinis. Thus the fluid contained in a blister will readily coagulate when taken from the body. So will the fluid which distends the skin and cellular tissue during inflammation of the deeper parts. The same is the case with the effusion of pleurisy or peritonitis. The fibrine contained in these may remain liquid for weeks, and it is a fortunate circumstance that it does so, as, while it continues in this state, it admits of being reabsorbed after the inflammation has subsided.

Thus we often see large quantities of fluid which doubtless contained fibrine, removed from the pleura and peritoneum and from the joints after acute rheumatism. If this fibrine had coagulated, as there is always danger that it may do, the difficulty of removal and the risk of permanent structural injury would have been greatly enhanced. Why coagulation should under these circumstances be so long delayed is difficult in the present state of our knowledge to explain.

The presence of fibrine in inflammatory exudations distinguishes them from the effusions of passive congestion. The fluid which escapes in the latter is mere serum. The liquid which is poured out in ascites or anasarca from obstructed circulation will not coagulate. At most, a few flakes of fibrine only, may be found floating in it in extreme cases.

A second of the inflammatory effusions is blood. This is supposed to arise from rupture of the minute vessels, which have been over-distended and had their parietes weakened by the defective nutrition that accompanies inflammation. The extravasation of blood-corpuscles into the effused lymph and diseased tissues is common in pneumonia, and gives its rusty tinge to the sputa, which is so characteristic of that affection. It also occurs in red softening of the brain from cerebritis, but in inflammations of other parenchymatous organs is extremely rare. It is common enough, however, from the mucous membranes, especially from the lower portion of the intestinal canal, as in dysentery, of which it is pathognomonic.

There is another form of hemorrhage which may arise from rupture of vessels newly formed in lymph which has been recently organized. These vessels are peculiarly tender, and when ruptured either by external force or by a fresh attack of inflammation, may bleed profusely. Every one knows that any slight injury to a granulating surface may cause considerable hemorrhage. The blood that is sometimes found in the pericardium, tunica vaginalis, testes, and

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more rarely in other serous membranes, probably escapes in this way. Lymph has been effused and become organized, but the newly-formed and delicate vessels have been broken by some violence or sudden shock.

In some cachectic states of the system, the coloring matter of the blood becomes dissolved, and oozes out with the other effusions, to which it imparts its own tinge. The natural color of these exudations is a grayish or yellowish white; and when they are thus stained red by imbibition, it is an important indication of a depraved condition of the blood. It seldom occurs save in syphilis, scurvy, typhus and low, eruptive fevers.

Another of the products of inflammation, but occurring upon mucous membranes only, is *mucus*. This, when pure, is a peculiar viscid fluid of alkaline reaction, and intended to lubricate the surfaces on which it is formed. It usually contains floating upon it certain effete epithelial cells. Irritation increases the amount of proper mucus and often causes desquamation of the epithelium. When inflammation is established, materials resembling the lymph effused in other parts make their appearance. Rarely the exudation becomes fibrinous and capable of organization, as in pseudo-membranous laryngitis. Corpuscles also are sometimes found which apparently differ from those usually found in lymph, only in consequence of floating in a different fluid. These are commonly called mucus-corpuscles; they readily degenerate into pus, but rarely are they or the effused fibrine developed into any higher forms of organization.

But the most important and most characteristic of the products of inflammation is lymph, "coagulable lymph," as it is termed by the old writers. This is at first a clear liquid which exudes from the capillary vessels of the inflamed part, and possessing the peculiar property of self-organization, and of forming, by a process of development, structures resembling the natural tissues of the body. This lymph varies in its composition and tendencies according to the degree of inflammation, constitution of the patient, etc. etc. There are, however, two principal species, which may be termed, according to their microscopic characters, fibrinous and corpuscular, or, according to their ultimate tendencies, plastic and aplastic. Of course we seldom find either of these varieties perfectly pure. In particular cases, they will both be present, in all possible proportions; but according as one or the other predominates will be the general character of the effusion, and the probability of its terminating in a new organization or in degeneration. An abundance of fibrinous lymph

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is characteristic of adhesive inflammation, while an excess of corpuscles is as sure a mark of suppurative or destructive inflammation.

The fibrinous lymph is at first transparent, but as it coagulates becomes a yellowish or grayish-white substance, more or less opaque and elastic. Examples of this kind are found in the lymph exuded for the repair of injuries and in perfectly healthy subjects. For its proper development into new formations, the inflammation must be moderate in degree or have already subsided. Otherwise, fresh lymph will be continually effused, hindering the organization of the first and itself constantly deteriorating in quality, as the constitutional powers suffer from the prolonged disease. So in open wounds, even after granulations have formed, a fresh accession of inflammation hinders their development, and changes the new lymph to pus.

A state of passive congestion, even such as often remains after active symptoms have subsided, may be sufficient to hinder the production of new formations. We have a proof of this in the indolent ulcer which will not cicatrize. The blood, slowly moving through the distended and, as it were, paralyzed vessels, does not afford the proper material or stimulus for the progress of development. But if we remove the pressure of the blood by elevating the limb, support the relaxed vessels by firm bandages, and stimulate the part by some local irritant, we may, perhaps, succeed in exciting a healthy action.

But suppose all the essential conditions to be fulfilled ; the form which the new organization is to assume will then be determined principally by the character of the tissues around it. The natural tendency of lymph is to assume the fibro-cellular structure. This is the tissue which makes up the principal part of false membranes, of adhesions, of permanent thickenings and indurations. It is found as an effect of inflammation in parts where naturally it does not exist, as in the brain and the testicle, within the joints, and in the thickening of mucous membranes. So in the healing of wounds, no matter in what tissue, all parts exhibit the fibro-cellular formation. The cicatrix, the new structure filling the gap which was left by the injury, consists usually of this *materia.*

But the form which organized lymph is to assume is also much influenced by the structure of the part into which it is effused. Thus, ligamentous parts are commonly repaired by ligament, and bones by osseous material. This is doubtless owing to the original nature of the lymph exuded, each part in this respect exercising an elective affinity similar to that which it exerts in selecting from the blood

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materials suitable to maintain its own composition and structure in the ordinary process of nutrition. It is found also that, as time goes on, the new formation is assimilated more and more closely to the parts around. Thus, scars come to resemble the natural skin, and false membranes become very nearly approximated to the structures in which they are produced. In all this we see that the process of repair or reproduction of parts resembles that by which they were first developed. For the orginal state of all the organs was that of a nucleated blastema. The cartilage, muscles, etc., were at first formed from embryo cells. The osseous substance was first deposited upon cartilage, as, in organized lymph, it is upon fibrous tissue.

The fibro-cellular tissue, as it becomes organized, may constitute adhesions, uniting together free surfaces, so as to prevent their playing to and fro upon each other. The opposite surfaces of serous membranes are often glued to each other in this manner. Layers of varying thickness, and consisting of entirely new formation, may frequently be stripped off. In other places, the visceral and parietal layers have been brought in contact, while each was covered with plastic lymph, and in consequence have become firmly united.

Lymph is sometimes effused beneath the surfaces of membranes. In this situation, as it becomes organized, it causes induration and thickening. Where this occurs in the synovial membranes of joints, it produces stiffness with impeded motion. In a similar manner originate the indurations which sometimes appear beneath the integuments, in the capsule of joints, etc. A good example is furnished by the indurated chancre.

Membranes and tissues formed from inflammatory lymph show a singular tendency to contract. The scars resulting from burns are especially prone to it, and horrible deformities are frequently the result. So powerful are these contractions occurring after pleurisy, as to flatten and depress the walls of the chest. To the same cause may be attributed the contractions of the liver after cirrhosis.

Upon fibro-cellular tissue as a basis may be built up the various structures of the body, the product of inflammation gradually becoming assimilated to the normal characters of the part in which it is deposited. As the lymph becomes organized, bloodvessels and nerve-fibrils extend themselves from the adjoining parts into the new formation. For the production of these changes, it is necessary that all inflammatory action should be subdued, and that the conditions of ordinary healthy nutrition should be restored.

But instead of developing itself into the formation of new structure, lymph may degenerate and have to be cast out of the system as

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waste material. It may be of the corpuscular or aplastic species which will not coagulate. Examples of this kind of lymph may be found in the vesicles of herpes and eczema, and in the fluid of a blister drawn upon feeble or cachectic persons. The cells found in exudations of this kind resemble the corpuscles of chyle or the white corpuscles of the blood. These cells may, under favorable circumstances, develop themselves into granulation-cells. In this case, they elongate and become attenuated, until each by itself, or two or more uniting at the end, they form perfect filaments. More commonly, however, they degenerate into pus-corpuscles, granule, cells and masses, forming much of that *débris* which imparts a turbid appearance to such effusions.

In ordinary inflammations, both forms of lymph are found blended together in varying proportions. Even in an ordinary blister, the lymph effused is seldom wholly fibrinous. Indeed, a person used to the microscope could form a very correct opinion as to the health and constitutional vigor of a person from an inspection of this fluid, and observing the number and kind of corpuscles contained.

It is an interesting question, and one of no slight practical importance, what are the conditions on which depend the production of these different forms of lymph—what, in short, causes inflammation in one case to assume a constructive, in another a destructive or suppurative form?

These conditions may be referred, according to Mr. Paget, principally to three heads:

1. The state of the blood.
2. The degree of inflammation.
3. The seat of that inflammation.

First. The materials effused are derived from the blood, and must partake essentially of its properties. Blood, rich in albumen and fibrine, will furnish an exudation rich in animal principles and capable of a high grade of organization, while that which is thin and watery will furnish an effusion that is poor and fit only to degenerate and be expelled from the economy. It is probable, also, that the condition of the nervous influence, and of the vital powers generally, may have considerable effect on the products of inflammation. Considerations of this kind will help to explain a thing which sometimes appears very strange, that is, the different results of the same injury upon different persons. Rokitansky has shown that the "characters of inflammatory deposits correspond very closely with those of the coagula found in the heart." So that from the coagula-

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tion of the contents of a blister, we may know what kind of a clot would be found in the body after death.

An influence on the character of lymph is doubtless exerted by the part from which and that upon which it was effused. We have already seen that those parts have an important agency in determining the form which lymph shall ultimately assume after it is organized. It is but reasonable to suppose that they should have some share in determining its primitive composition and qualities. Accordingly, we find that in spontaneous inflammations of the skin, the lymph is usually corpuscular, as in eczema, erysipelas, etc.; in serous membranes, the lymph is commonly fibrinous, and tends to the formation of adhesions and false membranes ; in the mucus membranes, the tendency is to suppuration. We may observe a marked example of the influence of the surrounding tissues in pleuro-pneumonia. Here the lymph effused into the pleura may be organizing into false membranes at the very moment that the lymph which escaped into the lung is undergoing suppuration. The influence of the surrounding parts is not, however, all-powerful, else we should have, after an amputation, as many forms and issues of inflammation as there are tissues involved ; whereas the action is the same throughout ; they all granulate or suppurate together.

Finally, the quality and destiny of lymph depend much on the degree of inflammation producing it. Where this is but moderate, the exudation may be mixed with the secretions of the part, which in such case it often resembles, as the mucus of catarrh, which may vary but little from that which ordinarily lubricates the respiratory passages. So in the inflammation of any part, the lymph first formed is probably much the same as the materials separated from the blood in the process of normal nutrition ; and the higher the diseased action runs and the longer it continues, the more will the lymph deteriorate by departing from the character of the ordinary materials of nutrition.

Reference has already been made to coagulable lymph or fibrine as one of the products of inflammation.

This effusion of coagulable lymph is so important a process, both for good and for evil, that a few lines must be devoted to its special consideration.

When coagulable lymph is effused between membranes that are normally in contact (or nearly so) with one another, it often causes them to cohere.

In this way, we often have adhesions of the adjacent surfaces of serous membranes, such as the pleuræ, the pericardium, and the peri-

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toneum, which materially interfere with the natural free motion of the parts, and occasion various persistent morbid symptoms. In inflammation of the iris, the pupil may be rendered irregular or immovable, or may even be closed up by the effusion of coagulable lymph.

In endocarditis, or inflammation of the lining membrane of the heart, coagulable lymph may be deposited in wart-like masses on the valves, and may thus occasion some of the worst forms of cardiac disease.

On the other hand, in many cases, the effusion of coagulable lymph has a reparative and conservative influence.

It is by the organization of this fluid that the lips of recent wounds are glued together, and that parts recently severed from the body may be sometimes replaced and still live.

The success of the Taliacotian operation, by which a new nose is engrafted in the position of that which had been lost—of the operation of injecting a stimulating fluid into cystic tumors, etc., with the view of setting up adhesive inflammation—and of various other surgical operations, essentially depends upon the property of organization possessed by this fluid. It is thus, too, that ulcers are gradually filled up till the breach of texture is repaired.

The inflammatory diseases of the most important organs are described under their specific names, and as a general rule, the termination *itis* is employed to indicate an inflammation.

Thus, pleuritis signifies inflammation of the pleura; peritonitis, inflammation of the peritoneum; iritis, inflammation of the iris, etc. Inflammation of the lungs, however, is usually known as pneumonia, instead of pneumonitis.

TREATMENT.

The treatment to be pursued in cases of acute inflammation is of two kinds, local and general.

Local treatment consists of light rubbing, to excite a more rapid circulation in the bloodvessels immediately contiguous to affected parts; applications of hot fomentations, by which the cuticle is softened and the bloodvessels enlarged or expanded; and applications of cold water, by which the first shock produces contraction of the pores as well as of the bloodvessels, and later effects cause a reaction and acceleration of the flow of the blood.

Of these, rubbing is by far the safest and most effective, unless there be abrasion or other irritation of the surface by which contact is rendered painful or unpleasant.

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In that case, the *magnetic hand* should be held as closely as possible to the most inflamed part without actually touching it; or a very thin muslin or linen fabric should be wetted in warm alcohol and water, and placed upon the surface, and the hand laid lightly over this, or held so near it as to equalize the disordered circulation as rapidly as possible. This we consider the best local treatment.

Next to this is the application of cool, fresh green leaves, that have been slightly softened by rolling or bruising them in the hands. The leaves of the cabbage, dock, or plantago (sometimes called plantain), being mild and soothing, are especially adapted for allaying inflammation.

If these can not be obtained, use, *very cautiously*, applications of cold water, or, more freely, hot fomentations, either of which tend to carry off the superfluous heat. Other simple methods of treatment may suggest themselves as circumstances vary the case to be treated.

Counter-irritation is often resorted to, by means of blisters, sinapisms, setons, and other tortures; but these we decidedly object to, in whatever form.

For general treatment, the old way was to reduce inflammation, first of all by bleeding.

This of course reduces the strength of the patient by subtracting from the vital forces, and is in every way objectionable.

The most important object to be accomplished is to remove the exciting cause of the trouble, whenever this is possible.

The patient should be at once placed on a strictly antiphlogistic regimen (which implies a total abstinence from solid or animal food and stimulating drinks), and careful attention should be paid to ventilation, temperature, etc.

The allopathic medicines or direct remedies chiefly employed are purgatives, preparations of mercury, tartar emetic, and opium, all of which should be thoroughly eschewed.

The strength should be kept up by plenty of light, nutritious food, the blood cooled by an abundance of fruit, as well as by avoiding all violent exercise or overheating.

General magnetic treatment should be resorted to, a thorough rubbing from head to feet, and a wet bandage applied about the loins covered by plenty of dry cloths to prevent a chill. In the chapter devoted to drink and its effects, we have given especial methods of treatment for inflammation of the kidneys, bladder, and all the organs of secretion, and in that devoted to the lungs and their uses, we have described pneumonia, and the best methods for alleviating it.

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Peritonitis is treated in its proper place, as are also many other purely inflammatory diseases which are liable to occur.

Disease, as its literal construction implies, is a want of ease, or absence of the condition of health in which all the faculties and organs of the body and mind work together harmoniously, and without sensible disturbance.

In a strictly scientific sense, there may be disease without pain, but hardly without functional disturbance or incapacity of some kind.

It is therefore only necessary to include, in the definition of disease, the diminution or loss of functional power, whether attended by suffering or not, and the scientific and practical ideas of the word will very nearly correspond.

Every person interested in either the science or the art of medicine, in fact, every thinking person, who observes the varied and wonderful action of his own physical frame, must admit that slight structural and functional deviations from the state of health are often unnoticed ; but it is only because they *are* slight, and because the functions to which they extend are not habitually in use to their full power.

A great deal of unnecessary obscurity is found among all writers in discussing the abstract ideas of health and disease. Disease having been placed in opposition to health, and connected with all the most intangible subtleties of the most abstruse metaphysical philosophy, by regarding it (disease) as dependent upon the idea of life and the vital force.

Many authorities have thus generalized disease into a separate active principle (entity), opposed to, and everywhere seeking to destroy, the principle of health.

Paracelsus (Aureolus Philippus Theophrastus Bombastus von Hohenheim, a famous alchemist, born in Switzerland, in 1493), in his picturesque and at the same time whimsical manner, endowed the vital principle with a kind of personality, and spoke of disease as due to the whims and caprices of a displeased and resentful spirit named Archæus,* an idea which was still further developed by Van Helmont.

A common division of diseases makes them functional or organic ; but even this is a merely provisional and conventional arrangement, as the functions and the structure of all organs are so intimately interblended and so closely allied, in fact and in nature, that it is quite

* A term used by ancient chemists to denote the active principle of the material world, or the power or spirit that presides over the animal economy.

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impossible to distinguish one from the other. But nosology (from the Greek word *νόσος*, meaning disease) is that branch of the science of medicine which treats of the distribution and arrangement of diseases into classes, orders, etc.; and upon the authority of Dr. William Farr, of England, F.R.S., we have four primary classes of disease. Class first includes zymotic diseases (from the Greek *ζύμη*, a ferment); that is, all diseases that are either epidemic, endemic, or contagious. Class second embraces constitutional diseases; these are diathetic and tubercular. Class third consists of local diseases, and treats of all the separate organs and systems that go to make up the human form; beginning with the brain, or diseases of the nervous system; then the heart, or diseases of the circulatory system; next, the lungs, or diseases of the respiratory system, followed by the stomach, or diseases of the digestive system; then the kidneys, or diseases of the secretive system; next, diseases of the generative system; then, bone and muscle diseases; and in conclusion, skin diseases. Class fourth comprises developmental diseases, namely, of children, of women, of old people, and of nutrition.

We have referred to many of these diseases earlier in the book; but it is with class third, or local diseases, that we have most to do, because these are most general, and can be often well and successfully treated without a physician.

We would therefore call your attention now to a brief special section or lecture devoted to the brain: its powers and functions, its tributaries and accessories; how it should be used, and how saved from abuse, how preserved in a state of health, and how treated if disease attacks it.

JAMES JOHNSON, M.D.,
In earth-life Physician to the late King William IV.

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THIRTY-FIFTH SECTION.

THE BRAIN AND ITS FUNCTIONS; OR, DISEASES OF THE NERVOUS SYSTEM.

CONTRIBUTED AND INDORSED BY ROBERT BENTLEY TODD.

Maladies of the brain and nervous system most complicated and difficult to treat —The great reservoir of nervous and magnetic fluid—Cranial and spinal nerves—Nerves of sensation and motion—The brain composed of three parts —The average weight—Foreboding indications—Fatal American habit—Kindly monitions—Stomach and brain, intimate sympathy—Catarrh—Pernicious habit of blowing the nose—Magnetism pre-eminent—Apoplexy, danger of—Heed the warnings—Epilepsy, cure for—Magnetism the best cure yet discovered—Requisites of a good magnetic physician.

THE most frequent and by far the most difficult to treat, of all the diseases that affect the human body, are those relating wholly or principally to the brain and its attendant organs.

The brain is the great reservoir of nervous fluid, which by the nerves is distributed to all parts of the body, as blood is carried from the heart by the arteries. But the nervous system, unlike the circulatory system, has no set of organs corresponding to the veins to carry back for purification and redistribution the vital fluid which it has sent forth. Therefore the brain must act as a continual manufacturing agency, as well as a distributing power, by appropriating the blood with which it is supplied, and creating, as it were, its own fund of material for feeding the hungry nerves so steadily and constantly draining it.

We will treat, first, of the physical organs of the nervous system,

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and then of the mental troubles that occur from any abnormal action of the brain.

First to be considered, therefore, is that the nervous system consists of the *brain*, *spinal cord*, and *nerves*.

The nerves are divided for convenience of description into the cranial nerves, or nerves of the head, and spinal nerves, or nerves directly connected with the spinal column. Functionally or physiologically we make still another division, which gives us nerves of *sensation*, nerves of *motion*, and compound nerves, which combine within a single covering minute fibres of both kinds, sensation and motion.

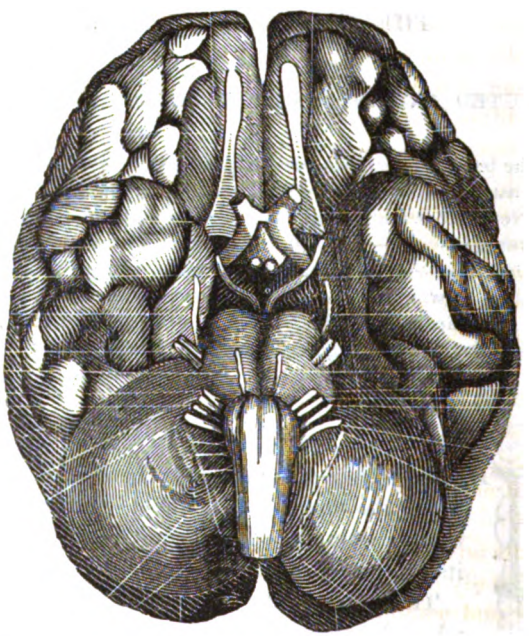


FIG. 111.—SECTION OF THE CEREBELLUM AND BASE OF THE CEREBRUM.

It is not essential to our present purpose to give the Greek and Latin derivations of the multitudinous names by which all the different organs in the human body have been designated. It is sufficient to say that the brain, though usually considered a single body or substance, is composed of three parts, known as the *cerebrum*, the *cerebellum*, and the *medulla oblongata*.

These have each a membranous covering of their own, and are all enveloped and protected by the membranes of the brain, the

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whole together forming what is called the *encephalon*, meaning within the head.

So strong is the sympathetic action and relation between different portions of the brain that it is often almost impossible to tell which portion is affected; and so, as our description is very general, we must make our treatment general also.

The average weight of the human brain is about four pounds, varying in the healthy male from forty-six to fifty-three ounces; and in the female ordinarily ranging from forty-one to forty-seven or forty-eight ounces, and there have been instances where they have been much heavier.

Cuvier, the naturalist, whom the poet Whittier calls "the gentle Cuvier," had a brain so large that it attracted the attention of scientific men, and it was found after his death to weigh, in a perfectly healthy condition, sixty-four ounces.

The surface of the brain, with its numerous elevations and depressions, measures, according to Baillarger, six hundred and seventy inches, in round numbers.

But it is with *diseases* of the brain more than with its *construction* that we have now to deal.

And here we would remark that in at least ninety-nine cases out of every hundred, when the head aches, it is but the inarticulate voice of exhausted nature, crying out, "I am weary, I am abused, I am overworked, I am depleted. Give me rest."

To rise early and lie down late seems to be one of the American ideas of prudence and usefulness. But it is prudence at the expense of brain and nerve, and usefulness for a few years, cutting short the many.

The wants and needs of the brain should be duly considered, and the work of daily life apportioned as nearly as possible to what the brain is able and willing to perform.

No person should work, read, write, study, or even think, earnestly and consecutively, when they have headache, unless they desire to commit suicide in the most painful and unsatisfactory manner.

Pains above the eyes and through the temples are *indications of mental exhaustion*, of having been engaged too long in one direction, and can often be relieved by change of labor, without absolute rest or inaction.

Such pains should always be regarded as *kindly* and timely *warnings*, to be heeded at once, and as faithfully as possible.

The most universal and troublesome pains in the head are known by the general term of *sick-headache*, which is usually occasioned by

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trouble in the *stomach*, and will be treated under the head of digestive organs; and *neuralgia*, which, though the word means nerve-ache, is really occasioned by trouble in the blood, and will be treated under the head of circulatory organs. (See Blood and its Diseases, by Dr. Mott.)

But there are many troubles incident to the physical organs of the head alone.

All diseases of the eye are painful and delicate in the extreme. Cold water should never be applied to eyes that are in any way diseased, but tepid, warm, or hot water should be used freely, every hour, in cases of inflammation or acute disease, and as often as twice a day in all chronic difficulties.

A good way of applying warm water is to take a large bowl or basin nearly filled with water at the proper temperature, close the eyes, immerse the face in the water, and then open and close the eyes



FIG. 112.—THE EYE.

several times while in the water. This will thoroughly rinse the inflamed secretions from the eyes, and will not be so painful or unpleasant as would at first be imagined.

The proper way to apply local magnetic treatment to the eyes is for the magnetizer to stand behind the patient, whose head rests easily on the chair-back, and with the fingers touching lightly the outer corners of the eyes, they should be pushed forward softly toward the nose.

After these passes have continued for a few minutes, the hands should be held over the eyes, touching them lightly but firmly, until perspiration is excited on the lids.

Then a slight bathing in warm water and a long period of rest should follow before the eyes are used again.

One frequent trouble in the head is inflammation of the mucous membrane, known by the name of *catarrh*.

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This is superinduced, aggravated, we might almost say caused at times, by the too frequent and violent performance of the operation known as blowing the nose. Probably not one person in a hundred ever thought of this, but it is true no less.

The slight unpleasant tickling sensation that occurs anywhere along the air-passage from the throat to the nose can be entirely removed by *throwing the head far back*, and holding it for a few seconds, perhaps a minute, to change the currents which the secretions form, and stop the rush of blood to the head, which often causes a slight congestion of the smaller bloodvessels, and a sense of fullness, uneasiness, or irritation, when there is really nothing to remove in an external sense.

But the treatment for catarrh is simple. Apply *hot* water, as *hot* as can possibly be borne, to the *forehead* and nose, for ten or fifteen minutes in the *morning*, holding the head back several times, so that the throat will be fully cleared and cleansed. Drink hot or cold water freely, and if there be a magnetizer at hand, have the head, throat, neck, and chest thoroughly rubbed, the back slapped lightly and briskly, and circulation aided in every practical way every morning.

Cool medicated *inhalations* would also be useful in healing and strengthening the mucous membranes; but we shall devote further consideration to that subject in another chapter. (See Consumption.)

As we shall have frequent occasion to speak of magnetism in the coming pages of this work, it may be well to state here that we consider magnetism the *best cure yet discovered for all troubles and diseases of the brain.*

A good magnetic physician should have a large, well-developed brain; strong constitution; healthy, vigorous physique; quick, ready perceptive faculties; strong, firm muscles; active, sensitive nerves; large benevolence; and above all, a generous desire to do good, even at the sacrifice of personal ease and comfort.

In almost every family will be found one or more who, with a little practice, can develop the power of relieving pain, if not of actually curing disease, by the application of their hands to that portion of the body where the pain or disease is located.

Magnetism is in itself such a *subtle* and unexplainable agent, it moves in such *silent, mysterious, intangible*, and yet *powerful* currents, that it is hard to give general rules for its application; a little experience and a few trials being better than pages of theory or books of speculation.

But to return to the brain and its treatment.

The mental diseases that are now most prevalent, and that, sad to

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relate, are every year becoming more prevalent, are *apoplexy, paralysis, epilepsy, chorea, hysteria, mania, etc.*

Many of these are caused by over-action of the brain and lack of proper circulation.

Apoplexy is caused by an aggravated form of what is known as a rush of blood to the head. It is a suffusion of blood, either upon the brain, which causes *cerebral* apoplexy, or upon the spinal cord and lungs, which produces *pulmonary* apoplexy.

In either case, the symptoms are very similar. There is loss of all power, caused by paralysis of the nerves of sensation and motion; the blood does not circulate, and something resembling a fainting-fit is the result. This is usually preceded by *vertigo, headache, loss of vision*, or sometimes double vision, and partial and entire loss of memory. When these warnings occur, all books, business, and writing materials should be laid aside; exercise in the open air strictly attended to; good magnetic treatment sought immediately, and every thing done to *equalize the circulation and strengthen the power of the will* over the functions of body and brain. There is a common belief that a person never has more than three attacks of apoplexy; but observation and experience have taught that this is not true. There is a weakening of the arteries of the brain, in their distention, so that very frequently they are ruptured at a third shock, after having passed safely through the first and second; but people have been known to have temporary apoplexy in successive strokes or fits, for years, and apparently to recover entirely every time.

But life grows more than ordinarily precarious with such people, and they should never forget that they are liable at any hour to be called upon, without warning, to lay aside the grosser material frame and enter upon a higher sphere of action.

Apoplexy may be caused by dressing the neck too closely, thus impeding the return of blood through the large veins to the heart; or pregnancy in women may induce the same or similar symptoms.

But whatever be the predisposing cause, *the treatment should be vigorous and patiently followed.* Evacuation of the bowels and bladder, increased rapidity of circulation of the blood, brisk rubbing, and bathing to open the pores of the skin, and entire rest of the mental faculties, are to be insisted upon immediately.

Tumors within the skull produce symptoms of apoplexy, but usually accompanied by severe and distressing pains. These can only be treated successfully by magnetism.

Paralysis is caused by nervous depletion. A shock, a fall, a sud-

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den blow, bad news or very good news, may act as causes, or any kind of strain or over-exertion.

Excessive exercise of the sexual organs is one prolific root of paralysis; but sexual starvation is nearly as bad. The fact is, nature calls for a temperate and careful exercise of all her functions, and she will not yield her best blessings of health and happiness for any less consideration.

Over-eating often causes illnesses of various kinds; yet one would scarcely feel justified in advising a person to abstain from all food on that account. A general care of the health, keeping the system as vigorous as possible, and plenty of sleep, will do more to prevent paralysis than any kind of medical treatment.

Epilepsy is a form of brain disease, often hereditary and usually incurable. But if a magnetic physician or manipulator once obtains control over a person subject to epilepsy, and establishes a bond of sympathy and confidence, a sure and permanent cure is the result; and magnetic treatment is the only safe and reliable agency that has ever reached a case of true epilepsy and effected a cure.

Hysteria is a disease properly confined to the female sex, and proceeding from a diseased or abnormal condition of the womb (or the ovaries), as its name indicates.

The great panacea for this disease is absolute rest, and an entire change of the magnetic relations.

There is a magnetic outgrowth, called love, which will some time be recognized as the great remedial agent for all nervous troubles; but at present it is not formulated, the books do not recognize it, and men and women live and die and never know the possibilities of their own natures in this respect.

THE HYGIENIC INSTITUTE that is at once a HOME and a hospital, an asylum in the truest sense of the word, providing rest, peace, and a harmonious even if an entirely isolated life, is at present the best remedy we can suggest for hysterical patients.

Plenty of fresh air and exercise, abundant though not excessive bathing, pleasant occupation, and, if possible, interesting society, are the safest medicaments. Even magnetic treatment should be used with the utmost caution, as hysteria is almost always accompanied by *morbid imagination* and a *simulation of diseases that do not really exist.*

The physician should take as little notice as possible of the symptoms as described by the patient, should not try the effect either of reasoning or ridiculing, but merely take all means to improve the general health and tranquillize the nerves.

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The throat is usually affected, and the eyes are, or are imagined to be, swollen and protruded. Every case of hysteria has separate and distinct peculiarities that make individual treatment necessary, and it is impossible to give general directions for all.

Chorea, commonly known as *St. Vitus's Dance*, is a nervous affection more common among children than grown people, and usually more prevalent with female than male children, on account of greater nervous delicacy and susceptibility. The treatment should be healthy magnetism, loose, comfortable clothing, abundant exercise, by which the muscles may be wearied before the vital force is exhausted, well-ventilated sleeping-rooms, and plenty of sleep, with abundant, plain food, no stimulants, and no drugs of any sort.



FIG. 113.—EXERCISE FOR HEALTH.

Children affected in this way should *not be allowed to study*, as they will learn rapidly enough without special application ; and health should be the first consideration, as a foundation for education or usefulness of any sort.

The worst and most aggravated form of mental or nervous disease is yet to be considered.

It is mania. This is often transmitted hereditarily, and frequently produced by physical causes.

Any disturbance of the sexual organs will cause some form of mania.

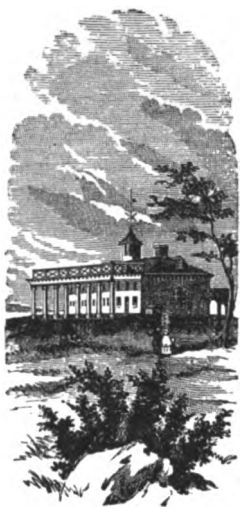
The effect of sexual excesses and of sexual starvation are almost identical, and it is left for the culture and judgment of every human being carefully to avoid either extreme, and so keep a sound mind in a vigorous, healthy body.

The excitement and violence of maniacal patients are frequently

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due to brain-fever, and the physician or nurse can not be too careful in deciding upon the treatment to be pursued.

But in all cases of irritation of the nervous system, however caused, there is a constant demand for sympathetic assistance, calm and repose, alike moral and physical. These can only be cautiously and conscientiously supplied in a true hygienic home. For a fuller treatment of the subject of mania, we should want a description of the age, sex, and general condition of the patient afflicted. (See further conditions, pp. 127–8.)



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DEPARTMENT

OF

PRIMITIVE OR ABORIGINAL

MAGNETISM,



EXPLANATORY OF ITS DEVELOPMENT AND PRACTICAL APPLICATION

IN THE

New School of Healing.

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* * * So when we came to be freed from the appetites and passions and prejudices of material life, we could see how much the white man and the red man could benefit each other. And that is why almost every medium has some Indian influence about him. We understood the *fact* that, if a healthy person came in contact with a weary or diseased one, a feeling of rest and health would come more or less rapidly and directly to the weaker party. We did not (*then*) understand the law by which this fact was governed. *You are learning the law!*" (POCAHONTAS, in a communication made December, 1870.)

'Full well do I remember the day when we gathered about you in close and loving circles, your darling children and ——— forming the first circle; then the medical band, who, so rich in scientific research and worldly knowledge, were yet poor in their understanding of magnetic conditions and relations, and so were presided over by Powhatan—specimen of nature's noblest work is he—and his graceful, queenly daughter, whose soul is filled with love to all." (JOB CUSHING STONE.)

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THIRTY-SIXTH SECTION.

CHIEF BIG-HEART'S EXPOSITION OF THE INDIAN METHOD OF CURING DISEASES BY MAGNETISM.

BRAVE Stone say will Big-Heart tell 'em tribes *how* the cure-'em Indians, who come from happy hunting-grounds, control the mediums to make the sick (meaning disease) all go out from the bodies of their patients. It would be like asking the lightning *how* it shiver the tree or kill the deer. *Power* is the desire and the pride of the red man. To be *strong* to kill his enemies, is the great thing he lives for, and that he trains his pappooses for. So that he does all that he does in the right way to help him be right for that. That makes him *not* much wise in the many fine things that make pale-face heart glad, but only much strong for to beat what he thinks his foe.

He *no* be slave to gay wigwams, to strange garments of many fancies for his body, to strange mixtures of many kinds for his stomach. He live for *power*, and, like all who live in the world, he gains just what he lives for. But he does *not* always be wise to know what be truly his foe. So he use his power to kill men and women and helpless pappoose.

Then the Great Spirit say, "As you give so you shall receive." And our race go out from the hunting-grounds of our fathers by the hands of the slayers. But the *power* we have lived for, we still *have* for our own. And we learn to be wise to use it to cast out such foes as it be kind and right to kill. Such as creep in by you doing things which you should not do if you would be strong and well; by breathing bad air, by eating bad food, by drinking bad drinks, by wearing bad clothes.

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We look on from our wise place out of the body, and we see how the pale-face slay, *not* with the tomahawk and arrow, but with the poison he draw out from the mineral and the vegetable, calling it medicine. He see how all make a big fight against one big foe, which they call *Disease*, and yet fail to slay him; then his big pride be aroused to use his big power to show he can do bigger things than all them, and slay the big foe *Disease* by a blow from his unseen hand.

His power be like the power of the lightning, it pass through and through solid substance, but you can not see it. There be much solid substance that you call *non-conductor*, through which the lightning can *not* pass. So there be much through which the power

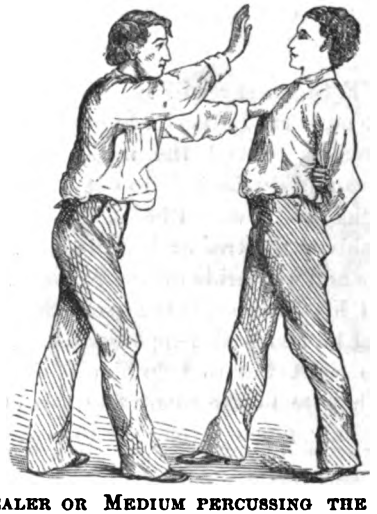


FIG. 114.—THE HEALER OR MEDIUM PERCUSSING THE PATIENT, TO DRIVE OUT DYSPEPSIA AND LIVER COMPLAINT.

can not pass, being non-conductors of healing electricity. So we have to use that which will conduct our healing power to so beat, and excite, and purify the other, that we can pass the vitality through it, and then we can cast out the big foe Disease.

The human beings that are conductors of this power we call mediums or healers, whose minds can understand what we say to them, and whose bodies will be moved as we move upon them.

DYSPEPSIA AND LIVER COMPLAINT.

So when we find a body that have the big foe Dyspepsia in it, we see if it be a non-*conductor* of our power. If it be not, and we can

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make the mind understand us, then every morning when the stomach be empty, we say to the man or the woman, "Be passive while we move your hands to mould gently, over and over, *liver*, and *stomach*, and *intestines*."

Then we send our great magnetic power all through each pore, and fibre, and artery, and vein, and drive out all the poisonous, worn-out, decomposed, unwholesome things you have put in there, and fill all the spaces with our living vitality. Then we quicken all the instincts of the nature to ask for such food as shall strengthen and build up the body, and not feed the foe.

If the sick one be a non-conductor, then we must move upon some medium to manipulate, and knead, and then throw out from the stomach what does not belong there, and supply through them the vitalized strength. And we must do this many, many times,



FIG. 115.—MANIPULATING TO CURE CONSUMPTION.

until the system outgrow its unnatural twist in the wrong way, and until we have made such good conductors of the body that we can go through and through it without any obstruction.

Then we can drive the foe with swift feet before us until he be slain in the way.

CURING DROPSY BY MAGNETISM.

If we find the bad foe *Dropsy*, we strike little blows with the hands we can move, from the head all down to the feet—little, quick, pattering blows, over and over, and over again, till we give new life and activity to all the good particles of blood, and put out through the pores all the watery particles that no belong there, and supply from higher life that which the blood lacks to make it red and true. Day after day, and moon upon moon, striking the many, many blows down the spine first, out through the arms to the hands,

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all over the chest and bowels—plenty blows over the kidneys, across the loins, down the legs, and out at the soles of the feet.

If there be the fierce foe CONSUMPTION, we make strike big, strong blows across the shoulders and below the shoulder-blades, light blows all over the stomach ; then we make the brisk rubs all down to the feet ; then we hold the healing hand over the left side below the shoulder-blade, until much sweat come. Then we make the little blows until all the air-cells are made free ; then we fill them full of vitalized breath ; and so we do many and many times, until the foe be all dead, and until all things move rightly again.



FIG. 116.—CURING LIVER COMPLAINT.

CATARRH.

If we have the unwelcome foe CATARRH to slay, which all the wise medicine-men shake the head at, and the unwise feed with much bad dirt called snuff, we throw big power upon the conducting hand, and with the flat hand slap the base-brain hard, just above the back of the neck, striking many quick, sharp blows. Then double up fist, strike hard above the nose many, many times. Then we put warm hands one on the forehead, one back of the neck, and hold tight till sweat comes there too, to bring out the impure particles through the pores, and send all the fluids through their proper channels, and make the blood quick and active where it was most killed.

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LIVER COMPLAINT.

If it be the LIVER COMPLAINT, we double up fist, pound slow, heavy, long time under right shoulder-blade, and up and down the right side. If it hurt, we no stop, but pound more and more, until the soreness be all gone, then sweat all there, in the same way, and make swift rub all over the body, to throw off the disease that be drove out.

If there be CONSTIPATION for us to kill dead, we place the warm palms just below the short ribs, and move them slowly, gently, with wave-like motion, all down the trunk of the body ; firmly moulding and squeezing in the hand all round, and until the bowels be moist, and limp, and vitalized, so that all things be moved round and round, and quick action fully restored.

SPINAL DISEASE.

But if it be SPINAL foe, then we take the hand in the medium's right hand, and move the flat of the left hand firmly and slowly all down the backbone, over and over, many, many times, till sweat come out freely, and pain be gone.

KIDNEY DISEASES.

If it be disease of the KIDNEYS, then we strike smart light blows across the loins, from the small of the back just above the hips ; rubbing, crimping, and warming with the hands; following the pathway of the secretions down inside the hips, across the abdomen, strengthening and vitalizing by the palms of the magnetic hands.

If there be much trouble with the HEART, we not make great pounds, because we must not make it beat too quick hard ; but we bring the healer's two hands together to establish an electric circuit, and place both hands across the stomach over the heart, holding them often and long, till the electricity penetrates all the little blood-globules, and they push their way with new force out through the veins, and back through the arteries, so lightly and swiftly and cheerfully that the heavy beat, beat, and the faint, sickening, flutter, flutter, come no more, and that bad foe be slain.

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SICK-HEADACHE.

If there be that uncertain, most troublesome foe, sick-headache, first we give the liver a big wake-up, by much firm pounds with flat hands; then we quiet nerves by rubs all down the spine; then we equalize the forces by smart slaps on the feet-bottoms and hand-hollows; then we make one of the healer's hands so cold, so cold by an electric, unexplained power, and we place that upon the brain to cool all the nerve-fires burning there; then we make the other hand much warm, and place that upon the pit of the stomach, to resolve and scatter away the cold phlegm that accumulates there; and when we hold them so, at last we makes the big sleep come, and that foe be conquered unawares.



FIG. 117.—PERCUSSING FOR KIDNEY DISEASES.

RHEUMATISM, NEURALGIA, AND GOUT.

If there be the tormenting RHEUMATISM, NEURALGIA, GOUT, then we double up fist *stout*, begin at the top and pound quick and hard all along the muscles, to the feet, following each leading nerve and sinew, wherever it go, and beating it much till big drops of perspiration come all over, then gently and slowly draw the finger-tips over the same from the head to the foot, till all the bad that be pounded out be waved away and the fine chilly quivers of electric life follow the finger-ends all over the body.

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EPILEPSY OR FALLING-FITS.

If there be foe *Fits* coming, then when they lie down to sleep and when they wake to get up, we take the flat hand and strike the smart blow quick all over the surface everywhere, till the blood be bright red under all the skin, leaving no place white; then there can be not enough left stagnant still to cause the convulsive effort to move along that you call spasms, or convulsions, or fits, that sometimes pitch the spirit out from its clogged-up wigwam.



FIG. 118.—Illustrating the true process of percussion of all the muscles from the back of the head down the entire body, to cure Headache, Neuralgia, Rheumatism, Fits, etc.

PILES AND CONSTIPATION.

When we want to slay foe PILES, we take fist and strike little quick percussive knocks all along the small of the back, to bring quick movement of the blood there, to scatter, scatter away all the old congested blood, to drive out into its proper channels all the heat and bad that be settled in the little lumps that be so hard to make stay killed. Then we give big much rub all down the hips to the feet till the blood move free and quick, and that foe be gone dead too.

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SPASMODIC CROUP.

If we have that hold-fast, kill-quick foe called CROUP, then we gets up big power; we slap quick, quick, with much force, all over the chest, all over the shoulders, rubbing quick, quick, to force out of the surface the mucus that be forming into hard substance in the air-passages; never relaxing the effort one minute till the big drops of sweat come, till the breath come free and clear, till the sweet sleep show that that foe be slain.



FIG. 119.—PERCUSSING AND MANIPULATING FOR CROUP OR ASTHMA.

NERVOUS AND SPASMODIC ASTHMA.

So with *asthma*, or what you call phthisic; only we can not kill it all at once like that, but we many times give quick, smart slaps over chest and shoulders, to bring vigorous blood-action there, to force out all accumulating mucus; then we place the mouth over the most troubled spots, and *breathe long warm breaths*, filling all the air-cells with a magnetic vitalized wind that shall penetrate all through and through weak clogged places, and set the machinery all running smoothly and easy again, and then that foe be beaten too. And this be why we do so much pounds, so much slaps, so much strike. When the blood be moving easy and free through all the veins, through all the arteries, and there be no dam-up to it; when

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the nerve-*fluids* by following their fine tube-roads all over the body, and there be no dam-up to them; when the waste liquids and substances move through their canals, and no dam-up to them, then there be no lurking foe to slay. So when we find the foes, we see there be dam-ups, and we pound, and pound, and rub, and rub, sending in much *electricity*, much *magnetism*, to push out all the dam-ups, to send all the forces through all the little stream-beds where they should glide easily, and get all the machinery of the wise-made body into smooth motion, and then there be not any but *friends* in all the human body.

And we know this true, from our wise look-place in the happy hunting-ground, that we must keep acting with this power till all the dam-ups be moved out, till much strength be given, till new growth of *live flesh* and *blood*, *fibre* and *bone* be grown, if we would make the long-time sick ones well, the long-time weak ones strong. And we know this be true from our wise look-out place, that in this way we *can* make the long-time sick ones well, the long-time weak ones strong. And we can *keep* them well, and glad, and full of power, through this great help which the Great Spirit sends the weak through the hands of the strong; giving every one power to help many other ones, and no one power over all the other ones, that there may be little rivets of magnetic law fastening all the big family of the Great Spirit-Father and the kind Nature-Mother so tight together that each will reach out arms of kindness to all others, and so be made glad himself when he gets wise in these happy hunting-ground lands. Now all good friends call loud to us when the disease foe come, and we will slay them quick and good for you.

Big-Heart have done!



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THE INDIAN METHOD OF EQUALIZING THE CIRCULATION AND CURING ACUTE COLDS, OR FEVERS FROM COLDS, AND SUDDEN CLOSURE OF THE PORES, AS PRACTICED IN THE DAYS OF POWHATAN.

COMMUNICATED BY POCAHONTAS.

My father promises now that, through me, he will give you as plainly as possible a description in words of the old magnetic treatment as it was practiced among the children of Nature five hundred years ago.

You will readily understand that diseases were far less numerous and complicated, there and then, than now among your civilizees. But it did sometimes happen that undue exposure or sudden chill brought on a contraction of the pores of the skin, stopped the constant invisible perspiration, and, neglected, fever was the consequence.

Then the medicine-man was summoned, a clear day was selected, the patient was taken out from the sheltering wigwam, pine-needles were gathered from the forest, and spread thick and soft on the ground, a buffalo-skin was laid over them; and there in the *sunshine* the sick one was laid, while the powwow rubbed him from head to foot, sometimes using the dew for ointment, sometimes a species of oil found among certain kinds of rocks, and called TONTOWONTA, or life-giver.

Usually the medicine-man had with him a female assistant, and after the patient had been anointed and rubbed lightly by the powwow, the squaw completed the work by thoroughly rubbing, pounding, and kneading the sufferer until the perspiration followed every movement of the hand; then a dip in the river, followed by more rubbing, a wrap in a warm, dry bear-skin, and it seldom happened that a second treatment was needed.

When the medicine-man himself was taken sick, as he often would be after treating severe cases, or treating more than one patient per day, no person was allowed to touch him; they seemed to have an instinctive knowledge that he *gave* more than he *received* of magnetic strength, and so, while doing every thing for his comfort,

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only his tame wolf was allowed to lie at his feet, or his faithful dog to lick his face. And when he was carried to the river to bathe, four or six stalwart braves lifted him in his stout soft blanket, bore him to the running stream, walked in and dipped him three times, blanket and all, then wrapped him in dry skins and took him back to his charmed home.

Ah! we treated our medicine-men better than the pale-face does his.

ANOTHER MODE OF PRACTICE AMONG THE INDIANS TO EQUALIZE THE FORCES AND OPEN THE PORES OF THE SKIN, WAS GIVEN BY THE CELEBRATED QUAKER, WILLIAM PENN, TO DR. BAYNARD.

"I once saw an instance of it, with divers more in company. For, being upon a discovery of the back part of the country, I called upon an Indian of note, whose name was Tenoughan, the captain-general of the clans of Indians of those parts. I found him ill of fever, his head and limbs much affected with pain, and at the same time his wife preparing a bagnio for him. The bagnio resembled a large oven, into which he crept by a door on one side, while she put several red-hot stones in a small door on the other side thereof, and then fastened the doors as closely from the air as she could.

"Now, while he was sweating in this bagnio, his wife (for they disdain no service) was, with an ax, cutting her husband a passage into the river (being the winter of '83, the great frost, and the ice very thick), in order to the immersing himself, after he should come out of the bath.

"In less than half an hour he was in so great a sweat that, when he came out, he was as wet as if he had come out of a river, and the reek or steam of his body so thick that it was hard to discern any body's face that stood near him. In this condition, stark naked, he ran into the river, which was about twenty paces off, and ducked himself twice or thrice therein, and so returned (passing only through his bagnio to mitigate the immediate stroke of the cold) to his own house, perhaps twenty paces further, and wrapping himself in his woolen mantle, lay down at length near a long (but gentle) fire, in the middle of his wigwam or house, turning himself several times till he was dry, and then he rose and fell to getting us our dinner, seeming to be as easy, and well in health, as at any other time." (*Baynard*, pp. 103, 4.)

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CURE FOR BRAIN DISEASES BY WARM SHOWER-BATHING.

The Indian method of treating diseases of the brain is much in accordance with that of Dr. J. R. Newton and other skillful magnetic healers. They (the Indians) use hot water, with percussion down the spine, and particularly to the feet and *soles* of the feet, for the purpose of equalizing the circulation or drawing the preponderance of congestion or nervous excitement from the head, and distributing it in all parts of the body.

Says Dr. Newton: "In my healing I have discovered a cure for all diseases of the brain, and it should be known to every physician



FIG. 120.—SHOWERING THE HEAD FOR INFLAMMATION OF THE BRAIN.

and every man. If a physician is called in 'brain-fever,' and most of other brain diseases, they put cold water or even ice on the head, which is a gross mistake.

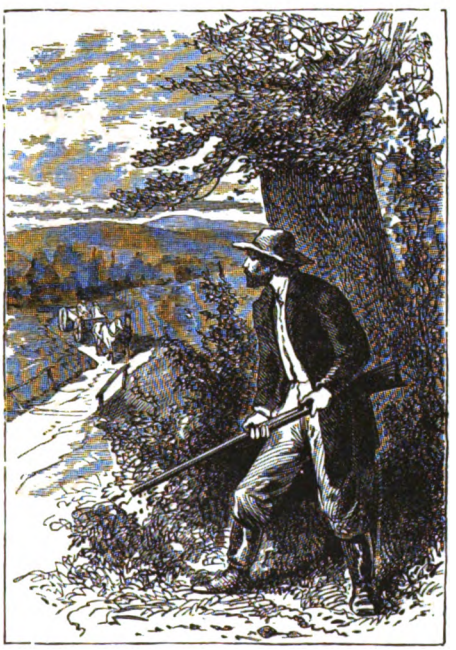
"All diseases of the brain, water on the brain, dementia, delirium tremens, congestion, insanity, paralysis of the brain, and even scrofula, can in most cases, be cured by pouring hot water on the cerebellum, or base-brain. It should be, in extreme cases, one hundred and twenty-two degrees, and poured on from a pitcher, or, what

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is better, a watering-pot with spout, as represented in the cut, in a small stream, several pailfuls at a time, holding the head over a tub, or, what is still better, sitting in a tub, causing the water to run over the forehead.

"I have taken cases of delirium tremens, and in fifteen minutes entirely cured them, when it was thought the person could not live. This is important, and should be promulgated.

"Now, this is a matter of knowledge, not simply of experiment. I have never known any thing but benefit to result from it."



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THIRTY-SEVENTH SECTION.

CHIEF SILVER-ARROW'S EXPLANATION OF THE OFFICE OF THE INDIAN IN THE SCIENCE OF HEALING.

Sagamore Silver-Arrow have got leave of the pale-face chief Abernethy to tell all the peoples of earth's great hunting-ground what for the red men be always making big talks, always giving big shakes, big pounds, big breathes, when medicine-men come from happy hunting-ground to make the feel-bad peoples feel-good peoples.

All the things that be in the first hunting-ground fill each its own place, to make all the other things that be, all good. If you take out one of the things that be in the air that you breathe to make you live, the other things that are left will not be all good, and it will put out the light, the fire, the life. All together, it be all good ; part out, then no life in it.

So with the water, so with the soil, so with the sunshine, so with *every thing*. The Great Spirit put in nothing but what must be in to make it all good. Then when he make pale-face, red skin, yellow skin, and black skin, he make each one because all the others not all good without him. Red man not understand Great Spirit when pale-face seek his hunting-ground. Pale-face not know he have need of red man too. So they each one hate the other, *kill* the other ; and pale-face say red man shall have no place in the earth hunting-ground, and the Great Spirit say pale-face will have the feel-bad if he not have the part the red skin supply. So what he not accept of him before he go dead, he must receive of him after he go dead. Indian be broad between ears, big under eyes ; have much magnetism, big much strength. He spread out broad, close to the Earth-Mother. She whisper to him, he hear. She tell him the secret of root, of herb, of bark, of many more of her servants. He live close to her breast,

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draw big much sustenance. What she tell him to do, he do it. So he be mighty strong.

Squaw no have the feel-bad for pappoose before he be pappoose, and so make big feel-bad come, make die come, because *she* live close to Earth-Mother; what Earth-Mother tell her, that she do.

Pale-face make one great mistake. He think great Spirit-Father have no love for good Earth-Mother. So he think the farther he get from Earth-Mother, the nearer he get to great Spirit-Father. So he not listen to Earth-Mother, but push her way off. So he get so far off quick that the Earth-Mother let go, and he go dead.

Then the great Spirit-Father see he come to him too fast, and he send Indian to give pale-face his big bottom strength; to tell him what Earth-Mother want he should go do to keep much strong; to fasten him more close to Earth-Mother, so that she not let go too quick. Pale-face live in top-brain, do many fine things; learn many high things. Indian want part of what pale-face got. Indian live in bottom-brain, do many strong things; learn many sharp things. Pale-face need part of what we got. Great Spirit say, Go mix 'em. So we put on gay blankets of happy hunting-ground; put on feathers; put on beads; put on hoops of silver; put on much paint. Then when pale-face put hands together *right*, form electric trail, so we can come on it, then we act *us* with pale-face body; make him whoop, make him jump, make him pound out the feel-bad. Make the big Indian strength come; make pale-face hear Earth-Mother's talks, and do what she pushes him to do. Then they get mixed, and Indian get the know-it of the pale-face top-brain, and pale-face get the do-it of Indian bottom-brain. So knowledge and power hold on again, and pale-face stay in first hunting-ground and do his work. Indian come from second hunting-ground and help him do what Indian could not do himself, and so Great Spirit let him go dead.

Indian likes to do that way, for he have the think-feel-bad because he not do good things for pale-face brother, when he come over the big waters. Because he give him the tomahawk instead of bread, and poisoned arrows instead of meat; and when he sees how much good pale-face brother would have done him, and how much good he would have done pale-face brother, he have the think-feel-bad. Then when he sees how Great Spirit not let him keep his hunting-ground because he did that way, but let pale-face have it, then he have more think-feel-bad. Then when he sees how the pale-face fix up the soil over the flesh and bones of his peoples, and raises his eats out of them, and how the very flesh and bones of the pale-face are built up

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out of his flesh and bones, then he have big much think-feel-bad. So he likes to get into the bodies that some belong to him that way, and make pale-face mind him some, and so he be chief again.

But Great Spirit say he must do much good, and get much know-it, and then all the think-feel-bad will go away; so when he comes, he gives the pale-face his great strength, and helps him to take hold of the Earth-Mother's hands, so pale-face can live longer in the first hunting-ground, and do big works, and not have the feel-bad. So when the high pale-face chiefs of the happy hunting-ground think to do some new great good for the peoples of the first hunting-ground, they lay the foundation-stones—like the granite rock—of *Indian*. They call them that have got most know-it together, and the best do-it, and tell them they shall be chiefs again, and rule the pale-face for their good. Then we be much glad, and what the pale-face chiefs tells us we do it. So the Great Spirit move wise pale-face spirit, wise pale-face spirit move Indian spirit, Indian spirit move medium, medium move the feel-bad, and so the feel-bad peoples become feel-good peoples.

Pale-face spirit chiefs Johnson, Harvey, Cooper, Brodie, Hahnemann, Mott, and *Abernethy*—chairman of the *seven* they call him—have formed a mighty league to drive off the feel-bad from all the peoples.

They have many more to do big works with them, but they be the *executive* committee.

That's the way they tell me to say it. So they hunt all round the happy hunting-ground for Indian foundation-rocks to build up their new Gospel-house of strength and feel-good, strong. So they find Powhatan, who have many think-feel-bads to rub out; and Tecumseh—just the same; and Miantonomah, and Black Eagle, and Red Jacket, and Big-Heart, and *Silver-Arrow*—that's me—for the seven corresponding bottom-brains. Many more counsel with us, and are seen in our band; but we are the same long word used before.

Then we have as many squaws of both colors, to give the attractions to us that we need. We formed a mighty league to bring to the earth hunting-ground a mighty power to cast out the *feel-bad*. Then we must find a corresponding seven medium bodies that we can work through. They may be many more, too, but seven acting chiefs. We be fitting up many, many, making them whoop, making them dance, making them beat out the feel-bad, and the ones we can do most good with, the ones that hear best what the Great Spirit says. What the white chiefs say, what the red chiefs say, what the

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Earth-Mother says, they shall be the chosen seven to represent the royal league, to be the long word, "Executive Committee."

Big Chief Stone, who hears best what Chief Abernethy says, has these many twelve moons, these one fourth of a hundred twelve moons, been building a place for such a council-fire as this we be preparing for the first hunting-ground. He have the great wigwam (the Institute), the pure air, the fine see-out (panoramic view), the good water, our face-paintings, the big bath-rooms, the green hunting-ground, the strong will-power, to bring all things needed. Chief Abernethy move the Indian seven to build their council-fire in Chief Stone's big wigwam. Fill it full of their mighty magnetism, bring the mediums they control into sympathy with each other, and guide them to the great council-fire, unite all their forces, get so they fully understand all we want to say to them, get strong to do all we want to do through them, get wise to teach all the know-it we have for them.

Chief Abernethy make big book (The New Gospel of Health), to tell all the peoples how to get rid of their feel-bad. Chief Stone provide the way, and the seven that be the royal league will do the work.

Now Sagamore Silver-Arrow say to all the people who have the feel-bad, Come to the big council-fire! If your brain have the feel-bad bad, *come quick*, before them that no got the know-it shut you tight in the mad-pen, where your feel-bad will get more and more feel-bad from all the rest who have got the brain feel-bad. For they all toss it back and forth, and catch it bigger and bigger, and get no better very fast.

Come quick to the big council-fire! If the top-brain be too much top, the Indian forces will give big power to the bottom-brain, and hold it down square, so that it feel good again. Or if the bottom-brain burn up the top-brain, then the pale-face seven will build it up again, and the straight-head mediums will make the cool reason come in again. They will find the good thing to do for the part of the brain that did not do enough, and big rest for the part that do too much, and so make all feel good again.

If your heart have the feel-bad, come quick to the big council-fire; for the seven will have some one who will see straight where the poisoned arrow of grief have pierced it, who will have just the know-it to take it gently away, and fill all the thought feel-bad with laughs and joyfulness, and then the heart will not get the hard beats, will not get the fine pains, will not get the inflamed membrane, but

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will send the red blood beating through all the little streamways, and so that feel-bad will go away too.

If you have got the backbone-feel-bad, come quick to the big council-fire, and the strong backbone mediums and spirits will fill the marrow of every joint with new electric force, with new magnetic life. They will send the big strength from the happy hunting-ground out through the little knot of nervous fibre that clusters in every joint, and make you bound like the deer when pricked by the Indian's arrow ; and when you stand up straight like the Indian, that feel-bad will be all gone the same. If you have got the feel-bad where the eats and drinks go, come quick to the council-fire ! Or them that have not the know-it will go put the poisons in among the eats and drinks, and the blood will take it to the lungs, and the liver, and the kidneys, and out into all parts of the body, and you will be poisoned all over.

Come quick to the council-fire, and the chiefs will get such eats and drinks as will not give the feel-bad, and will give you strength to use up the eats and drinks to make bone, and blood, and muscle, and the rest, and to move through all the winding ways of the intestines, and the sewers, such parts as you have no more use for, without letting them stay so long that Earth-Mother must build a fever-fire to burn up the refuse.

League chiefs will see straight what you must *not* eat, what you must *not* drink—will find for you all the good kinds that will make the liver active and the stomach strong, and the bowels faithful.

If the squaws have much big feel-bad in the pappoose-place, because they not do right what Earth-Mother tell them, come quick to the league council-fire. We will get hold *strong* of some medium squaw, who shall have much know-it, who shall see what you have done too much, what you have not done enough. She shall be filled full of Indian's big strength, shall build up pappoose-place all new and good, so no feel-bad come every moon, so head no turn round, heart no flutter, no big tired through shoulders, and all the rest that goes with it.

Brave, have you had feel-bad through loins, through kidneys? Come quick to the chiefs' council-fire ! Before you take the big poisons that destroy all the life, all the power that braves be proud of. We will pound out the bad that wrong do-its have got there ; we will send the electric life to make the forces fill all the places like they ought to—and not all get in one place ; we will tell you what to do, and what *not* to do to keep even straight ; we will stop that big

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pounding in the ears, that big pounding at the heart, that shaking all over, and make you feel-good all right again.

So if you have now got the lungs feel-bad—we will give you air to breathe that is full of the cure.*

Chief Stone have got the do-it things, and while we give so much of our vital power that you can make good blood from all the eats and drinks to keep the lungs good, you can breathe the cure-it air from Chief Stone's fixed things, and so that feel-bad will have no place to be. So we will find just the way to drive out all the feel-bad. We will call to all the parts of all the Great Spirit makes and draw from them just what each of the feel-bad peoples need, and make them all good new again.



FIG. 121.—FISHING FOR HEALTH.

We have made mighty toil to form big council-fire. Great Spirit smile on it, and now we say, Come, all ye feel-bad peoples! We will go hunt; we will go fish; we will go run, and jump, and shoot arrow; we will make fruits grow, make grains grow, make flowers grow. We will make nice sing, nice paint, nice shining things. We will make big books, big machines, big blankets. We will do all the things that make us happy, that not make feel-bad come. We will open the inside eyes, that you may see us of the second hunting-ground. We will open the inside ears, that you may hear us make big talks; and

* Referring to the inhalation of medicated vapors as practiced in the treatment of the Institution.

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sharpen the inside feels, that you may know when we put on the magnetic fingers to make you much strong. We will do our part



FIG. 122.—HUNTING FOR HEALTH.

mighty well. Come, all ye feel-bad peoples to Chief Stone's big council-fire, and do your part well, and all the feel-bad shall go away !

Silver-Arrow have done.



MAGNETIC EXERCISE.

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ELECTRO-VITAL AND MAGNETIC REMEDIES.

USED IN TREATMENT BY THE INSTITUTION.

Dr. Stone's Tonic Inhaling Vapor.



The elements that compose this form of vapor are a certain specific for diphtheria, malignant sore-throat, quinsy sore-throat, chronic catarrh, and that periodical catarrh known as hay-asthma; and for aiding ulcerated caverns of the lungs to heal in chronic tubercular consumption, its equal is not yet found.

Whenever the lungs, the bronchial tubes and organs of respiration have been attacked with inflammation, colds, catarrhs, or influenza, they invariably become debilitated; this is especially the case after long-continued catarrhs, and invariably is a sequent of pneumonia. Hence, after the inflammation has been subdued by using the Soothing Balm or Anodyne Vapors, a course of Tonic and Balsamic Vapor is absolutely necessary to restore tone to the delicate tissues of the air-cells, and the lining membranes of the bronchial mucous surfaces and glands.

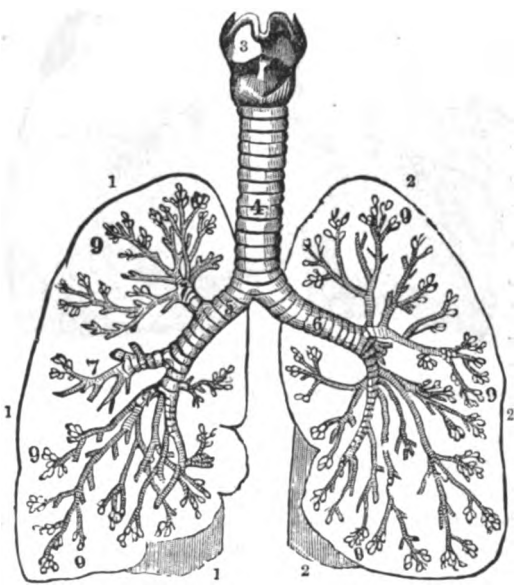
This tonic vapor is admirably calculated to overcome this otherwise dangerous condition of the lungs. It energizes every part, penetrates ulcerated cavities, stimulating them to a healthy condition for nature to heal. For bronchitis, laryngitis, and trachitis or in-

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flammation of the windpipe, and nervous asthma, it is a never-failing cure, if used in season.

DIRECTIONS FOR USE.—Pour upon the sponge in the *glass bottle* from one to two tea-spoonfuls (sufficient for each day). Placing the glass tube in the mouth, draw through the tube a slow, full breath; after having filled the lungs, remove it from the mouth till expiration has taken place. Allow half a minute or more to elapse before the lungs are filled again, which must be done in the same manner. As a general rule, the lungs should be filled from *twenty* to *forty* times, four times a day, at intervals of three or four hours.

DR. STONE'S EXPECTORANT INHALING VAPOR.



This cut illustrates how readily the air-passages are entered by inhaling the remedy.

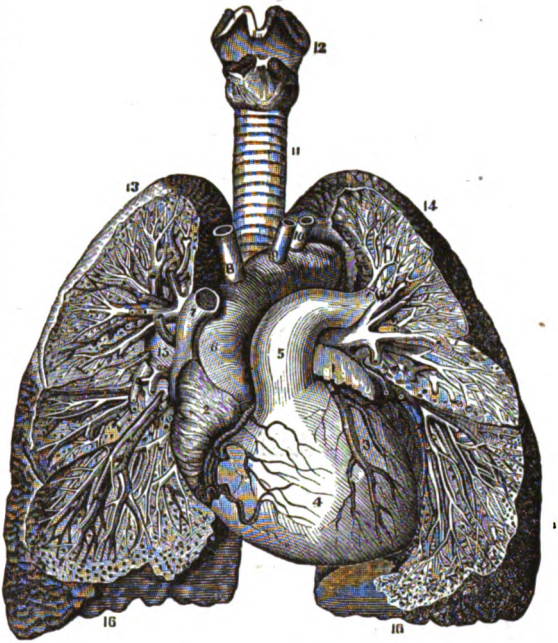
WHEN the lungs and bronchial tubes seem to be choked up and confined, and the patient is troubled with difficulty of breathing, then the Expectorant Vapor *alone*, for the time being, is to be made use of, for the purpose of dissolving the tough, mucous secretion which lodges upon the lining membranes of the air-passages or in the tubes, and, as it were, closes them up from its viscidity or toughness.

DIRECTIONS FOR USE.—Pour upon the sponge in the *glass bottle* from one to two tea-spoonfuls (sufficient for each day). Placing the glass tube in the mouth, draw through the tube a slow, full breath; after having filled the lungs, remove it from the mouth till expiration has taken place. Allow half a minute or more to elapse before the lungs are filled again, which must be done in the same manner. As a general rule, the lungs should be filled from *twenty* to *forty* times, four times a day, at intervals of three or four hours.

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THE VITALIZING BLOOD INHALING VAPORS.

THE wonderful developments of chemistry and modern science afford ready facilities for so concentrating and etherealizing all vegetable remedies as to enable them to be breathed or inhaled, and thereby made to enter the blood through the medium of the lungs, saving the stomach from being nauseated, irritated, or inflamed, which is too often the case where drugs are poured, as it were, indiscriminately into the stomach.



This cut illustrates how readily the medicine will enter the blood when inhaled, and be thrown by the heart to all parts of the system.

The stomach is the laboratory for manufacturing the pabulum of life, and this pabulum can *only* be elaborated from healthy foods, aliments that contain in themselves the inherent primary elements organically adapted to that ultimate purpose.

Medicines, drugs, are *not* foods; they do not contain the elementary requisites of the vital pabulum, the blood; hence it legitimately and practically follows that to mix medicines with foods in the stomach perverts the healthy gastric secretions, or arrests the flow of this very *essential* digestive *solvent*, and the process of digestion, chyme, and chyle-making, and sanguification, is of necessity perverted into a morbid or abnormal process.

Organic tissues *can not* be made from noxious drugs mingled with food when in the vital process of digestion; neither can the body or organic structures be built up. But the medicinal properties of very many medicines may be, and often are, found highly beneficial in aiding to overcome an *abnormal* or *perverted* function of the body. The liver, whose function is to secrete out of the blood the *bile*, which is no other than effete or broken-down blood-globules, may be torpid and inactive, and need the stimulating action of some cholagogue. This may be inhaled, and pass directly into the blood without the liability of deranging digestion and perverting a healthy appetite. So also can the spiritual property of *any* laxative medicine be inhaled directly into the blood and at *once* enabled to be secreted by the colonic glands of the large intestines;

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the normal function of the bowels at once established, and the blood purified or unloaded of much effete matter—many morbid principles which before only served to produce headache, cerebral congestion, pneumonia, pleurisy, neuralgia, or rheumatism, or heart disease; for all these fatal diseases arise from poisons in the blood.

Then let the blood be vitalized and purified in a natural manner, in accordance with the organic laws. Do not poison the food and pervert a healthy process of digestion and blood-making by drugging the stomach. Inhale, as by natural breathing, the very pleasant and agreeable vitalizing blood vapors of Dr. Stone, which are prepared on scientific philosophical principles, and "throw physic to the dogs."

☞ DIRECTIONS for inhaling and using accompany each bottle.

DR. STONE'S BALM, OR SOOTHING, INHALING VAPOR.



THIS Vapor is specially given to mitigate and cure cough, to soothe the irritable state of the lungs and the surfaces of the bronchia, larynx, and trachea. The preparation combines the ethereal magnetic ultimates or extracts of such anodynes as are best calculated to soothe morbid irritation, and allay exalted sensibility of diseased nerves and mucous surfaces when exposed to the air; hence, whenever the harsh or cold state of the atmosphere produces irritability and excites coughing or spasmodic breathing, the BALM VAPOR, *at such times*, must be *at once* inhaled, and *again* and *again* resorted to until the cough has subsided.

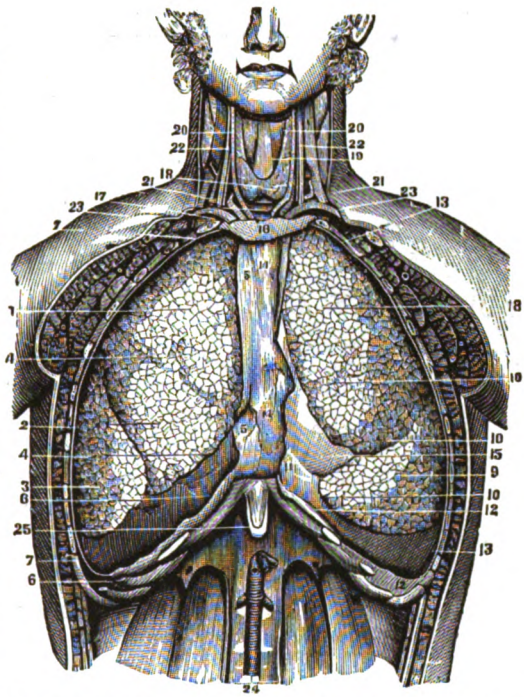
How much more rational the treatment, then, to carry the medicinal agents *at once* to the seat of disease without nauseating the stomach with squills, ipecac, paregoric, opium, and such gross remedies, destroying the appetite and perverting all the nutritive functions!

So, in like manner, may ASTRINGENTS be inhaled where the secretions in the bronchia are so profuse as to quite block up the air-passages. The victim of pulmonary maladies will take courage and hope that his case will be discriminated, and the vapors will be adapted to meet all the emergencies of the case, however distant he may be from the Institution.

☞ Special directions accompany each bottle.

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THE ANTI-SPASMODIC OR ASTHMATIC VAPORS.

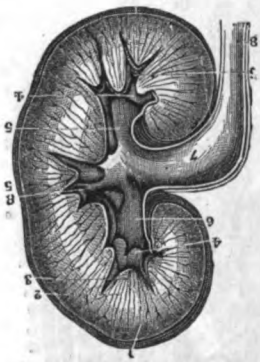


This cut illustrates the *only* true philosophy of inhaling or breathing the remedies in the treatment of Pulmonary Affections.

These vapors are especially given to cure spasmodic and nervous asthma, and that difficulty of breathing denoted by great irritability in the nerves of the lungs and the nerves distributed to the bronchial mucous surfaces. It is well known that asthma is a spasm of the muscles of the bronchia. Some morbid condition of the digestive organs, the liver, the diaphragm, or the blood exists in all such cases, causing great irrritation in the nerves leading to the windpipe, the respiratory organs. The most inveterate case of asthma can be relieved by inhaling these Anti-Spasmodic Vapors. The author has himself, as he has before mentioned, twice been subjected to the most severe attacks of Spasmodic Asthma. So intense was his suffering, for a little time, that he nearly suffocated for want of air; but he was almost instantly relieved after inhaling the Vapors. He has given them in hundreds of instances in his practice, with the same instantaneous effect of relieving the phenomena.

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THE KIDNEY SANATIVE OR DIURETIC INHALING VAPORS, FOR KIDNEY DISEASES.



SECTION OF A KIDNEY IN A STATE OF HEALTH.

For curing Bright's Disease ***or Albuminuria,*** *Diabetes, Inflammation,* ***Ulceration,*** *and Chronic Weakness of the* ***Kidneys;*** *also Calculary Affections of every name and nature.*

ALL vegetable remedies, the functions of whose properties are the kidneys, whether diuretic, tonic, or alterative, are ethereal-ized and administered by inhaling, and made to reach their destined organ as readily as when put into the stomach, thereby saving the nauseating disturbances and impaired appetite for food.

DIRECTIONS FOR USING ACCOMPANY EACH BOTTLE.

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DR. STONE'S

MAGNETIC CHEST EMBROCATION.

THIS Embrocation affords almost magical relief for pains of the chest, pleurisy, neuralgia, rheumatism, and for the many anomalous nervous pains and aches which invalids and consumptives are so liable to be affected with.



CURING CONSUMPTION AND CHEST-PAINS.

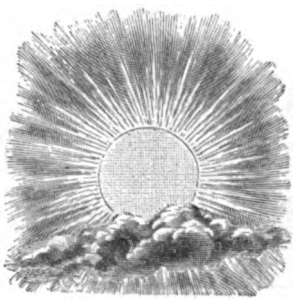
It is equally well adapted to cure all pains of the spine, the back, the loins, and for removing stiffness of joints, contracted muscles, sciatica, hip-joint and spinal affections. Its superior property consists in inviting the blood with combined humors to the surface—not repelling *from*, as many other applications do; hence no danger attends its free use.

For nervous headache, it affords speedy relief and unbounded satisfaction.

Full directions accompany each bottle.

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DR. STONE'S LIVER PILL.



The liver being a large organ—the largest gland in the human body — is naturally predisposed to sluggish and languid action. Its function, however, is great, that of secreting the *bile* out of the blood; and when healthily, normally performed, the amount in the twenty-four hours is from eight ounces to two pounds. But the liver is liable to sudden congestion, to great interruption from the frequent electric changes of the atmosphere, especially in damp and chilly weather. In that case, the *bile* lags behind, poisoning the blood, giving rise to headaches and bilious fevers or derangements.

While we can impart alterative and vitalizing remedies by inhalation to reach this organ, yet in all such severe cases, we deem it advisable to aid in overcoming such great congestion by administering the Magnetic Liver Pill, which acts like a charm to awaken the dormant function and open the constipated bowels.

Directions.—One pill to be taken at bed-time, and repeated every night until healthy *bile-evacuations* take place. In obstinate cases, one taken an hour after dinner also may be advisable, in conjunction with the night pill.

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DR. STONE'S

ELECTRO-VITAL STOMACHIC TONIC BITTERS.



But few people, who live and eat, ever think of the importance of the digestive *viscera* to the cure of disease. In every case of disease, let it be dyspepsia, nervous debility, or general physical prostration, the successful results produced by our efforts at cure depend upon how far, how wisely, or how foolishly these organs are watched over by the victim himself. To an unhealthy state of the digestive viscera we can trace, by distinct and unmistakable symptoms, many diseases; though they may not be manifested to our senses in the stomach, yet they derange all the other vital organs and the whole constitution. Hence, the cause of tubercular consumption of the Lungs, or marasmus—a general wasting of the tissues—and consumption of the chyle, the vital juices of the body, and blood itself! The victim is not nourished, because of a deficient vital action of the stomach, liver, pancreas, and duodenum. To the same cause may be traced an obscure inefficiency of mind, inability for making an effort, feebleness and confusion of ideas, want of memory, want of confidence, easily disposed to fright, to startle at the least sudden noise, given to forebodings, and frightful disturbance of the heart, and palpitation.

This class of invalids complain that they awake in the morning, not only unrefreshed by sleep, but seemingly more tired than when they went to bed. Often, an aching lameness of the whole body, and bones, even, as though they had been pounded. There is an unaccountable despondency and carelessness about the future, accompanied by a foreboding that something or other unfortunate is going to happen. They have no power to prevent this. Their unwilling limbs are dragged languidly to the daily task; labor becomes a burden; what may be done, is done imperfectly or confusedly; the figures get confused as the merchant adds up the ledger; the clerk knows that he has some important duty to perform, but can not call to mind what it is; the school-miss pines away, becomes sad and gloomy, and her lessons become a bitter, cruel task. To the matron, even the light labors of daily housekeeping are a heavy burden; food becomes repulsive; if sleep is sought, it is broken by painful dreams, or frights, or wakefulness. If there is an hereditary tendency to consumption,

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scrofula, or insanity, now is the time when it will be developed, unless the existing cause is rapidly cured. This condition of the stomach and digestive functions can not long maintain, before another chain of morbid sympathies will be developed: obstinate rheumatism, affecting the joints, deep-seated muscles of the chest, and often the heart itself. Neuralgia, with her many torturing pains of the temple, face, jaws, eyes, and ears, sets up her commanding authority. And soon glandular swellings, dropsy, and kidney diseases follow in the train, as will be most sensibly manifested by organic acids and calculary brick-dust deposits in the urine.

Whatever value the invalid may attach to the evidence of the dependence of disease on the digestive organs, it is very clear to the scientific, judicious physician that he must look to them for relief from these diseases. So long as the heart, lungs, kidneys, and other important organs are affected by a disordered state of the blood, then these disorders can only be cured by securing the proper active working condition of the stomach. *Understand* that labor, time, and money will be wasted in clearing away abnormal or diseased structure, if new structure does not take its place. To this end the only path is to insure the assimilation of food, for it is wasted toil to try to enter locked doors; that is, to restore other organs until the stomach—the great laboratory of the pabulum of life—is made healthy. Will the patient reader consider this great truth, namely, that no chain is stronger than its weakest link; and the interruption of the function at one point is the interruption of the whole?

After more than thirty years of hard study in my profession, of scientific research, and the chemical analysis of the blood, the brain, the secretions of the liver, the pancreas, and the kidneys, and the glandular system of the body, I have developed a perfect and entirely new system of remedies, which act in harmony with the electro-vital forces of the brain and nervous system. In all disorders of the stomach, of impaired nutrition, the harmony between the vital and chemical action of making the food into chyme, digestion, and chylification—chyle-making, or the entire process of making food into chyle and blood—is destroyed; the life or nerve-forces have become negative, and a purely chemical action gains the ascendency. Hence the decomposition, or fermentation of the food in the stomach, which gives rise to a generation of gases, belching, acidity, headache, heart-burn, palpitation, depression of spirits, despondency, and a long chain of morbid ills.

The direct effect of these remedies is to arouse and restore vital force, and give tone to the glands and mucous coat of the stomach, and thereby establish the harmony and restore the normal function. But as valuable and restorative as are these new remedies, they would be inefficient without due regard to the diet and ingesta and regimen of the patient.

Let the patient understand that these new remedies are to fulfill one great, important function in the animal economy, namely, to arouse the vital and nerve-forces, and restore the lost harmony, while food and aliment are to nourish and give the resources for new material, new blood, and new tissue to build up new structure. How important, then, for a judicious system of dietary to be pointed out to secure these great results! A system of dietary and rigid hygiene are always written or printed out for each special case. Upon no other condition can correct treatment be based or a cure expected.

DOSE.—One small tea-spoonful just before each meal.

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DR. STONE'S MAGNETIC PLASTER.



THE science of medicine having made the most rapid strides, has developed but recently the *fact* that the most wonderful cures have been effected by the agencies of both magnetism and electricity, in restoring very many chronic cases of paralysis and chronic rheumatism, where the victims had been helpless for years.

Both electricity and magnetism are differently directed and adapted to cure such chronic maladies in various ways. The magnetic properties of gums and resins, when etherealized and concentrated, give the most decided relief in the form of plaster; stimulating the pores to open their closed surfaces, causing a free evacuation of the pent-up poisons in the blood; the nerves which were diseased and made painful by such poisons pressing upon them are relieved; at the same time, the soothing anodyne effect of the magnetism combined in the plaster penetrates, carrying its benign effects not only to the nerves, but into the blood, circulating all through the system.

By this mode of operation, then, a magnetic plaster applied to the *loins*, over the *kidneys*, to a *lame back*, or the *chest*, or a diseased *joint*, not only cures the local affection, but, by the process of absorption of the magnetism, as above explained, the blood throughout the whole system becomes vitalized, and the brain even is again surcharged with healthy magnetism in an unlooked-for manner.

This plaster affords, also, wonderful support to weak muscles; the weak backs of females, so very prevalent in civilized or artificial life, finds wonderful relief in its use. It is adhesive, cleanly, easy to manage, and the strength of one remains good from three to five weeks before renewal is required.

How cheeringly progressive, then, is the science of medicine, substituting everywhere a most agreeable and improved class of medical agencies for the painful, distressing, and devitalizing process of blistering, burning, and cupping of the old-school system of other days! The true science of healing is to *relieve*, not *cause*, pain—to *build* up, *not* tear down.

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DR. STONE'S

LIQUID CATARRH REMEDY.

A NEVER-FAILING REMEDY.



THERE is no disease so common in this country as catarrh. It is a disease affecting the lining membrane of the nose, extending to the throat. Its symptoms are unnatural discharges from the nose, sometimes falling into the throat, and are thrown off by coughing or hawking. As the disease progresses, the discharges become thicker, offensive, and disagreeable, causing a bad breath. The sense of smell is frequently destroyed or lessened, and the voice becomes unnatural, with a frequent desire to clear the throat.

This chronic congestion, or inflammation, or morbid condition, sooner or later extends downward through the larynx, the whole length of the trachea or windpipe, affecting more or less all *its* branches, the minute bronchial tubes, when *permanent* bronchial consumption has now begun. And such are the causes of consumption in *nine* cases out of every *ten*. *That is, let it be distinctly understood, it commences with a cold or catarrh in the head;* if left uncured, terminates with death or destruction in the lungs.

Catarrh means a defluxion, or increased secretion of mucus from the membranes of the nose, fauces, and bronchiæ, and is the result of cold or congestion *in* or affecting the membranes and glands to produce the *phenomena*. It is either acute or chronic. Its commencement is generally acute; that is, the effects above named are profuse, attended with more or less uneasiness in the forehead and pain in the frontal sinus. If not cured in this stage, it soon terminates in the *chronic*, when the acute pains subside, the secretions continue profuse, but of a much thicker character, often blocking up the nostrils or the posterior nares, and covering the fauces with a gluey substance, especially in the morning, that is very hard to dislodge, and often very disagreable to the

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taste. This foul, morbid secretion in turn deadens the organic structure of the parts beneath and immediately surrounding, devitalizing the nerve-centres, so that diphtheria and ulcerated throat is very frequently the result; for when any foul secretion lies long on a diseased surface exposed to the air, and especially so directly so as the matter about the nostrils and throat, that foul matter still more decomposes into that which becomes deadly and destructive to all organic life. The masses of people, unread in the chemistry of organic life, little think of this great and momentous fact, namely, a speck of foul matter, not cognizable to the human eye, placed in contact with the absorbents, becomes taken into the general circulation, a ferment takes place in the blood, and hence arise diphtheria and numerous maladies of a most fatal character, to which people daily are falling victims, and they *wonder at the cause*, or *whence it came*. Hence, in this view, "To know thyself!" is an important command.

But what are the causes? Morbid or poisonous principles in the blood, want of vitality, want of magnetism, want of requisite materials or principles in the blood, which are in turn results of bad diet, errors of eating, derangement of *other* glandular functions, as the *liver, skin, kidneys*, and glands of the *colon* or large *intestine;* hence, in turn, constipation and retention of the excretions, which are deadly in their effects, poisoning the whole *alimentary* track upward to the head and brain itself, with retention of mephitic gases. A legion of causes are understood and expressed in unphysiological, unhygienic modes of living; or again, in other words, false, artificial modes of life.

The LIQUID CATARRH REMEDY which I offer to the public, is a *pleasant* and agreeable liquid resembling *milk*, and is used by *insufflation*, or by *snuffing* it up the nostrils the same as water. It causes no *pain* or even *sneezing*. The beneficial effects of this Remedy are experienced at once. The *thick* and *adhesive* discharges from the nose and throat are *lessened* in *quantity*, and all *offensive* odors of the *breath* are immediately destroyed. The *hawking* and *expectoration* from the throat, in the morning, are done away with. The voice becomes *natural* and the head clear. In ordinary cases, when the disease is not of long standing, *one* bottle, and sometimes *less*, is sufficient to effect a cure; but, when firmly seated, two or three are sometimes required.

Be it distinctly understood, that the Liquid Catarrh Remedy only reaches the surface of the nostrils, fauces, or throat, and the tonsillary glands—parts above the top of the *windpipe*. Now, where the affection has passed the glottis, into the trachea or windpipe, as in the chronic stage above named, no *liquid* can enter. Then the TONIC INHALING VAPORS, before named, with inhaler, must accompany the *Liquid Catarrh Remedy*, and, in constitutional blood affections or diseases, VITAL CORRECTIVE REMEDIES, or VAPORS, must be used to cleanse the fountain.

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———"He studied from the life.
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