HOW TO LIVE A CENTURY

AND

GROW OLD GRACEFULLY.

C

By J. M. PEEBLES, M. D.,

AUTHOR OF "TRAVELS AROUND THE WORLD;" "INGERSOLISM OR CHRISTIANITY, WHICH?" "SCIENCE VS. DARWINISM;" "IMMORTALITY,
OR OUR HOMES AND OUR EMPLOYMENTS HEREAFTER,"
AND SEVERAL OTHER WORKS.

NEW YORK:
M. L. HOLBROOK & CO.

[&]quot;For ye are the the temple of the living God."-II. Cor. vi, 15.

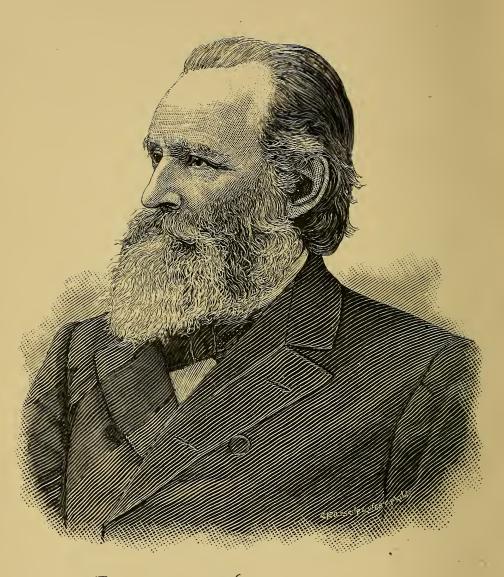
[&]quot;Know ye not that your body is the temple of the Holy Ghost?"—I. Cor. vi., 19.

[&]quot;If any man defile the temple of God, him shall God destroy."—I. Cor. iii. 17.

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1884.





Truly thine, J.M. Peebles, M.D.

TO MY MOTHER,

WHO, IN HER 87TH YEAR, RISES EARLY IN THE MORNING;
LIFTS HER WINDOWS, AIRS HER BED, AND TAKES CARE
OF HER ROOM;

KNITS AND SEWS AND MENDS;
BAKES THE BREAD FOR THE FAMILY; WORKS FROM CHOICE
MORE OR LESS IN THE KITCHEN, AND IS IN EVERY
RESPECT A SPLENDID SAMPLE OF
INDUSTRY, INTEGRITY AND GOODNESS;
NEIGHBOR, NURSE AND MOTHER;
A NOBLE NEW ENGLAND WOMAN.



PREFACE.

Human life being both the gift of God and a blessing, it is a duty to preserve it as long as possible. No truly good person, however aged, ever yet outlived his or her usefulness. In all enlightened lands old age is considered honorable; the hoary head is a crown of glory.

In preparing the following pages, while avoiding technicalities and Greek and Latin phrases, I have aimed to be practical, rigidly practical, rather than original or elegant; aimed to bring to mind and clearly present the vital importance of air, food, clothing, drink, sunshine and sleep in such varied ways as to inspire the reader with a proper and persistent use of them that the number of years upon earth may be many—even a hundred!

The style is paragraphic and suggestive rather than argumentative. In the preparation I am indebted to Dr. De Lacy, Dr. M. L. Holbrook, Dr. Hall and others.

My only purpose as an author is to instruct and benefit my fellowmen. Laws are immutable, and all laws have their refilex action. There is nothing more certain than that in helping and blessing others we are blessed. Therefore if I can pluck a thorn from a mortal's pathway and plant a rose there; if upon the tear-wet cheek I can plant a rainbow of hope; if by tongue or pen or practice I can prevent, or in any way relieve, human suffering, and lighten the burden of sorrow, thus aiding my fellowmen to reach a peaceful and happy old age, then am I satisfied.

J. M. PEEBLES, M. D.

HAMMONTON,
ATLANTIC Co., N. J.

CONTENTS.

P	AGE.
The Five Forces	9
Old Trees	9
Longevity of Birds and Animals	11
I Repeat the Inquiry, Why?	12
Long-lived Persons, and Why?	16
Pure Air and Deep Breathing necessary to Long Life	21
How to Sleep in order to Live a Century	29
What Shall We Eat to Live a Century?	37
What Shall We Drink to Live a Century?	50
What Clothing should be Worn to Live a Century	57
Are Medicines Necessary to Prolong Life a Century?	61
How to Treat Babies and Children that they may grow up and Live to	
see a Century	75
Summarized Rules of Health enabling one to Live a Century	81





HOW TO LIVE A CENTURY.

THE FIVE FORCES.

Past the sixties, away along towards the seventies, and yet hale, healthy and vigorous! Why should I not live a century?

The five generally recognized forces are, the mechanical, which fashioned the earth into an oblate spheroid; the chemical, which, uniting oxygen and hydrogen, constitutes water; the vital, which constructs the organisms of plants and the lower orders of existence; the psychical, which gives instinct and animal locomotion, and the spiritual, which involves and evolves thought, desires and aspirations for immortality. But connected in a degree with all force is the divine force, the divine life—God! And if these five forces are kept in due balance; if supply regularly takes the place of waste in the human system, why should we not live a hundred years?

OLD TREES.

When traveling in India I was frequently shown trees over 1,000 years old. The cubbeer-burr, near

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Baraach, has 350 main trunks and 3,000 small ones. It is believed to be 3,000 years old.

Near the base of Chapultepec are the stone baths of Montezuma's time, shaded by waving cypresses supposed to be over 1,000 years old.

The yew trees of England attain a great age. Those at Fountain Abbey are over 1,200 years old; there is one at Crowhurst 1,500, and one at Braburn the age of which is stated to be from 1,500 to 2,000 years.

The oak, though slow of growth yet towering in height, reaches a great age. De Canolle states that there are oaks in France 1,500 years old. The Wallace Oak, near Paisley, Scotland, still strong and stalwart, has seen full 700 years.

It has been stated, upon what has been considered good authority, that the apple-tree was in existence in 1820, from which Newton saw the apple fall in 1665.

There are two flourishing orange trees in Rome, planted by St. Dominick and Thomas Aquinos; the one 500, the other nearly 600 years of age.

When visiting Jerusalem and other portions of Palestine a few years since, I saw many ancient cedars and evergreens. The scraggy olive trees in the Garden of Gethsemane are considered to be over 1,000 years old. The terebinth trees of the Bible, now very scarce in Syria, lived full 2,000 years.

Those who have counted the rings of the California big-trees pronounce some of them as old or older than the Christian era.

LONGEVITY OF BIRDS AND ANIMALS.

It is generally conceded that parrots in India and Central and South America range from 100, 300, and even to 500 years.

Several authorities affirm that swans frequently reach 200 years.

The historian Tacitus tells us that in his time eagles lived to be 500 years old; and only a few years since an eagle living in confinement, died at Vienna 104.

The distinguished Hufeland gives us the following: "A gentleman at London a few years ago received from the Cape of Good Hope one (a falcon) that had been caught with a golden collar, on which was inscribed in English, 'His Majesty K. James of England. An. 1610.' It had therefore been at liberty 182 years from the time of its escape. How old was it when it escaped? It was of the largest species of these birds, and possessed still no little strength and spirit; but it was remarked that its eyes were blind and dim, and that the feathers of its neck had become white."

If a lion, as stated by Dr. Lacy Evans, lived 70 years in the Tower, it may be inferred that if

allowed to roam the forest it would live a century.

Camels frequently attain to the age of 50, 75 and 100 years. Watching and studying the characteristics of these patient, yet stupidly stolid, beasts of burden in Asia Minor and Egypt, I have wondered at their endurance.

The elephants of Ceylon attain to a very great age. It is said that they grow for 30 or 40 years, and live 200, 300 or even 500 years.

The elephant called Hannibal, connected with a traveling circus here in America, and dying in 1859, was externely old; some say 700 years.

After Alexander the Great had vanquished Porus, King of India, he took a large elephant which had fought valiantly in the battle for the king, and called him Ajax, dedicating him to the sun, and setting him free with the following inscription: "Alexander, the son of Jupiter, hath dedicated Ajax to the sun." This elephant was found 350 years afterwards with the inscription.

A noted Englishman, Sir R. Phillips, gives the minute history of a tortoise that lived 220 years.

Why should not man, crowned with reason, live as long as the tortoise and the elephant, governed only by instinct?

I REPEAT THE INQUIRY, WHY?

It is estimated that one half of the human race

die before reaching 10 years of age! How few live to see a century! And why not, since God's laws are just and wise, and since life is natural and good health a luxury? Is it possible to live a century or more? If so, what course of life must be pursued to attain such a ripe and well-rounded old age?

Considering the sickness, the early deaths and the crowded cemeteries that dot the country and half girdle some of the great cities, these are momentous questions.

> "Friend after friend departs; Who has not lost a friend?"

Life is a blessing; and by life is not meant mere animal existence. The oyster exists, and so do the cattle that graze upon a thousand hills; but human beings live, and by life is meant living in the complete enjoyment of health—physical, mental and moral—a happy, harmonious and full-orbed manhood.

Existence in pain, or existence devoid of the full and free exercise of all our physical powers and mental faculties would scarcely be desirable; but to live a hundred years in this progressive period of the world's history, in the possession of good sound health, is a consummation devoutly to be desired. A serene and sunny old age, like a well-laden orchard in autumn time, is as beautiful as desirable.

Though there are inherited tendencies, yet sickness and physical disease came not from Adam's sin or Napoleon's ambition, but from personal transgression of law. It is cause and effect—it is obey and live; it is sin and die!

There are many centenarians alive at the present time. I am personally acquainted with several. There is a Shaker sister living in one of the Believer's families, at Mount Lebanon, New York, who has attained 105 years. Buffon says: "The man who does not die with disease reaches everywhere the age of 90 or 100 years," and Dr. Morton, in his "Anatomical Lectures" declares that "The human body as a machine is perfect; it bears no marks tending to decay, and is calculated to go on a hundred years, or we might say forever, did we not know to the contrary by experience."

Intelligence, calmness and a good temper are as necessary to a long life as health is to happiness. Abnormal tendencies or any disease contracted by the violations of physical law, may, by care, energy and the proper medical remedies, not only be modified, but completely eradicated. Louis Carnaro, a prominent Venetian, broken down in health at 35, so recovered it by reforming his habits and simplifying his mode of living as to reach 107 years.

Human life has been compared to a journey, to a battle and to a pathway of progress, along which

are sunshine and shadow, smiles and tears. It has also been compared to a fire, and a flame requiring constantly more or less fuel. The body is the natural furnace; and when the food is well masticated and properly digested, the blood, with its life-giving elements: carbon, nitrogen and oxygen utilized through respiration—all combined—constitute just the fuel required. The carbonaceous components of the body are consumed—burned up, much as is the candle, or the oil in the evening lamp. The heat, the brightness of the flame, and the length of time that it will continue to burn, depend almost entirely upon the nature and quality of the fuel, so the length of human lives depends very largely upon the purity of the air breathed, the quality of the food eaten and the liquids drank. It is in our own power to lengthen our lives or to commit, as many do, gradual suicide.

Reasoning from the possible, and from the law of analogy, human beings ought, upon an average, to live a full hundred years; the law seeming to be that life, expressed in figures, should be five times the length of the period of growth.

Change is a law of the universe; and waste or decay, growth or assimilation, are the two opposing forces operating in every living organism. The chemical forces disintegrate or destroy; the vital forces and principles increase and build up. When

blood corpuscles, molecules and out-worn particles die, new and more refined atoms, elements and substances should take their places in this magnificent structure, the human body, of which the thinking conscious Spirit is the builder.

LONG-LIVED PERSONS, AND WHY?

It is almost axiomatic to say that he lives longest who lives best and accomplishes the most.

"Upon reviewing nearly two thousand well-authenticated cases of persons who lived more than a century," says Dr. Evans, "we generally find some peculiarity of diet or habits to account for their longevity; we find some were living in the most abject poverty, begging their bread." Some lived entirely upon fruits and vegetables; some led active lives, others sedentary and retired lives; some worked with their brains, others with their hands.

Some ate but one meal a day, and that principally of grains and fruits, while others ate animal food to some extent. Yet we find one or two prominent causes accounting for the majority of cases of long-evity, and these: moderation in the quantity of food and equanimity of temper.

Consider the following cases selected from Dr. Evans:

Thomas Parr, of Shropshire, England, died in 1635, aged 152 years. At the age of 88 he married,

appearing to be no more than 40. He lived very abstemiously; but upon being brought to London by the Earl of Arundel to see King Charles II., and being fed rich foods, as well as given costly wines, with the excitement of the city, he soon died. Upon a post mortem examination by Dr. Harvey the body was found to be in a most perfect state. The cartileges were not even ossified, as is the case in most old people, and the only cause to which death could be attributed was a mere plethora brought on by luxurious living in London. He was married a second time at the age of 121, and could perform the work of an ordinary laborer and run in foot races when 145 years old.

Judith Bannister, of Cowes, Isle of Wight, died in 1754, aged 108. She lived the last 60 years of her life upon biscuit, milk and apples.

John Michaelstone, a grandson of Thomas Parr, died in 1763, aged 127 years. He attained this great age through extreme temperance.

Elizabeth Macpherson, living in the county of Caithness, Scotland, died 1765, aged 117. Her chief diet for many years was bread, buttermilk and greens. She retained all of her senses till within three months of her death.

Francis Confit, of Burythorpe, Yorkshire, England, lived to be 150 years old. He was pleasant in disposition, temperate in his living, which, together

with occasionally eating a raw egg, enabled him to attain such an extraordinary age.

Philip Loutier, originally from France, died in London at 105. He ate but two meals a day, mostly vegetables, and drank nothing but water.

Joseph Elkins, of Coombe, Berkshire, England, a day laborer, died in 1780, aged 103. He was never ill a day in his life, and for years previous to his death he subsisted entirely upon bread, milk and vegetables.

John Wilson, of Sussex, England, died in 1782, aged 116. For the last 45 years of his life his suppers were made mostly of roasted turnips. He was of temperate and sober habits, rising early in the morning.

R. Bouman, of Irthrington, near Carlisle, England, lived to see 118 years. He never used tea or coffee; his principle diet was bread, potatoes, hasty pudding, broth and, occasionally, a little flesh meat; his drink was equal parts of milk and water.

Ephraim Pratt, born in Sudbury, Mass., died in 1803, aged 116. The Rev. Dr. Dwight stated at the funeral that throughout his life he had been very temperate, both in diet and habits. He took very little animal food, milk being his common article of diet.

Henry Jenkins, of Ellerton, Yorkshire, England, lived to the age of 169. The registers of the Chan-

cery and other Courts prove that he gave evidence and had an oath administered to him 140 years before his death. Sir Tancred Robinson, who knew him well, states that "in the last century of his life he was a fisherman." When 90 years of age a child was born to him, and when 160 he walked to London to have an audience with Charles II. His diet was coarse and plain, and he made it a point to rise before the sun each morning.

John Weeks, of New London, Conn., died at the age of 114. When he was 106 he married a girl of 16, at which time his gray hairs had fallen off and were renewed by "a dark head of hair," and several new teeth also made their appearance. He was a hard toiler, regular in his habits, and lived largely upon Indian corn bread and baked beans.

Plutarch states that the ancient Britons "only began to grow old at 120 years." And Boadicea, Queen of the ancient Britons, "in a speech to her army, when about to engage the degenerate Romans, said: 'The great advantage we have over them is, that they cannot, like us, bear hunger, thirst, heat or cold; they must have fine bread, wines and warm houses; to us every herb and root are food, every juice is an oil, and every stream of water our wine.' Their arms, legs and thighs were naked, and their food consisted almost exclusively of acorns, berries and wild fruits."

It will be observed that in all these cases of great longevity that we have mentioned, the individuals lived orderly and abstemiously, rigidly avoiding late hours, excitements, tobacco and alcoholic stimulants. That some few people have lived a century who used stimulants is admitted; but they lived the century in spite of them rather than because of them.

The admirers of or toilers in certain crafts, trades and professions have contended that this or that calling was the most conducive to health and long life. That there is something in the occupation is not to be denied; but more in the atmosphere breathed, the foods eaten and the amount and kind of exercise. There is no healthier occupation than out-door farm life. Nearly all men who lived to a very old age were fond of communing with nature. Some were practical botanists and mineralogists. Gardeners are generally very long-lived. Hippocrates and Hahnemann, celebrated physicians, lived to a very great age. Popes and especially poets die This was the case with the English poets, young. Keats, Shelley and Byron, and even Shakespeare lived but 52 years; and yet if quality is of more account than quantity they lived to be aged.

The distinguished mathematician, Sylvester, has claimed that men of his own craft were famous for longevity, and cited in proof, Leibnitz, who lived to be 70; Eurler, 76; Lagrange, 77; Laplace, 78; Plato, 82; Newton, 85; Archimides, 75; Pythagoras, 90; but Laplace, Leibnitz, Plato and Pythagoras were more than mere mathematicians, they were philosophers.

PURE AIR AND DEEP BREATHING NECESSARY TO LONG LIFE.

Dr. Tanner lived 40 days without food. This was a genuine fast, and very suggestive to physiologists. Griscom, of Chicago, fasted 45 days. Men can dispense with clothing, sunshine, water and food for some time, but not a day nor an hour without air.

The first thing we take into our systems at birth is air, and it is the last that leaves us at death. The vital, life-giving principle of the atmosphere is oxygen; and in the estimated 600,000,000 of delicate lung-cells the air imparts or gives up its oxygen to the blood, and receives in turn carbonic acid gas and moisture foul with the debris and the old, waste matter of the body.

Oxygen and ozone are food for men and animals, and carbonic acid, ammonia and nitrogen are food for plants and flowers. It is healthy to have plants in sleeping rooms.

This carbonic acid thrown off at every breath is heavier than the air, hence it sinks, and may be found near the surface of the floors in our dwellings, in cesspools, cellars, valleys and deep caverns. A chemist can fill a glass jar with this gas, and then pour it into another jar almost as readily as he would pour water.

Nature sometimes has to experiment for us. When in Naples, accompanied by Mr. Guppy and others, I visited that very curious cave called the Grotto del Cane. Men can walk safely into it; but dogs when they enter soon fall down and die, unless quickly removed. Some might at first infer that there was some substance in this cave poisonous to dogs, but not men. To disprove this, however, a man has only to lie down or bring his mouth within a foot of the floor to feel the signs of approaching suffocation.

At a young men's prayer meeting in London, where the janitor had kept the room shut all the week, several became seriously ill. They filled the room to its utmost capacity. After a time the lights burned dimly and the fire went out. One of the young men tried to kindle it, but failed. The meeting lagged. All felt stupid. One young man fell upon the floor in a fit. Two were taken quite sick, and others were indisposed; and all for the reason that they had exhausted the oxygen to the extent that it would not sustain the fire nor the lungs.

Carbonic acid is the result of combustion in some

form. A single sperm candle will give off eight cubic feet of carbonic acid during a night; an ordinary lamp throws off as much of it as a man; a chandelier with several brilliant burners destroys as much oxygen in a room and gives off as much carbonic acid and spent force as three men. Therefore never keep a lamp or light of any kind burnin the sick-room, or in your sleeping room at night.

Halls and churches should be better ventilated, and theaters, where hundreds and sometimes thousands crowd in—the gas-burners destroying the oxygen, the exhalations from the skin and the breath of the tobacco-mongers render the air absolutely poisonous. It is not fit to breathe. Multitudes are thus injured, receiving into their constitions the seeds of death.

The common candle that burns brightly at nine o'clock in the evening burns dimly along between one, two and three o'clock the same night. The oxygen has been consumed; it will not support the flame. The majority of the sick die between the hours of twelve at night and four o'clock in the morning. Give the sick and the dying, as well as the living, air—pure air!

Remember that the exhausted impure air in your sitting-room is near the floor, and the warm and and purer air above your heads, near the ceiling; therefore, to secure circulation and pure air, venti-

late at the bottom by the mop-board. This will permit the carbonic acid and the various exhalations to escape. Rooms high and capacious are conducive to health; the heated air is near the ceiling. Low beds, however fashionable, are an abomination. More people die of airtight apartments than cheap, unchinked log cabins in new countries.

In building a mansion or fitting up a common house for the family, put down one or more open fireplaces as among the chief blessings. Make it generous and old-fashioned for the burning of wood. How healthy and how social, too, for the family group to sit around it in the long winter evenings! If open wood fires are impossible, then use open coal grates.

The old-fashioned fireplace, with crevices under the door and along the base-boards was healthy, because the gaseous impurities, oxides, decaying vegetable exhalations and carbonic acid would pass off or be consumed with the fuel of the fireplace. Lowering the windows at the top to purify the air of a room is an exhibition of ignorance. It might let out some of the warm and purer air—that and nothing more!

Each individual requires full 2,000 gallons of pure air per day, weighing 25 pounds—requires three times as much by weight as he does of food and water combined.

The purest air, richest in oxygen and ozone, is found in forests and sun-kissed fields, and among the pines by the seaside, and up the sides of towering mountains.

During the Indian mutiny, 146 English prisoners were shut in an almost airtight room, called afterwards "The Black Hole of Calcutta." Into this room, scarcely large enough to hold them, the air could enter only by two small windows, and at the end of eight hours only 23 of the unfortunates were alive.

After the battle of Austerlitz 300 Russian prisoners were confined in a very badly ventilated underground room, where, within a few hours 260 of them smothered and perished.

During my voyage from Madras, India, where I had spent weeks visiting the leper hospitals, to Natal, South Africa, we were overtaken by a most terrific storm, and our stupid, half-intoxicated captain shut down the hatchways, and, further, fastened the cabin doors. He came near suffocating and murdering the whole of us.

The larger is not necessarily the stronger man. Measurements for armies and for the power of endurance show that the men best fitted for either are 5 feet 8 inches in height; weigh from 160 to 165 pounds; lift about 500 pounds, and breathe on the spirometer 340 to 360 cubic inches. The breath-

ing should be intercostal; the inspirations deep and full.

Each year we perform 7,000,000, acts of breathing, inhaling over 1,000,000 cubic feet of air, and purifying over 3,500 tons of blood. This breathing should be deep and the air exhilarating—all afire with oxygen and ozone! This ozone, so much spoken of, is a more condensed and active form of oxygen. It abounds upon high mountains, and may be generated by suspending a roll of phosphorous by a wire in a jar of water.

Smoking lamplights and stoves should be excluded from sick-rooms; and, further, the light not only consumes the oxygen that the patient needs, but it produces a tremulous motion in the atmosphere, preventing that quiet sleep and rest so indispensable to nervous and sensitive people.

Sleeping apartments should always be upon the south side of a residence. They need the sun. Pots of flowers and rose bushes under bedroom windows are as interesting as healthful. The beautiful pepper-tree of Athens, the eucalyptus of Australia, and the trailing evergreens of our own country, as well as hop-vines, sage beds and the various aromatic mints ward off malaria, develop ozone in the atmosphere, and conduce to health in our homes.

The reason that Indians and the Arabs of the

desert seldom or never have headaches, dyspepsia, rheumatism or consumption is because they live mostly in the open air, and engage in a great deal of physical exercise. Out-door exercise is healthful because people generally breathe deeper then, and, breathing deeper, they take more oxygen into their lungs, and as the oxygenated air breathed purifies the blood, the more deep out-door breathing the purer and more vigorous the blood. "The blood," says the Bible, "is the life."

Most of the cheap talk about the dangers of the night air is as erroneous as absurd. Windows partly open or ajar should be the rule during the entire 24 hours; and this at all seasons. The night air is especially beneficial in cities and populous towns, because more free from dust, from smoke, and from street excrementitious exhalations.

Hunters, herders on the plains and soldiers upon battle-fields, though sleeping in open tents or upon beds of green boughs, seldom take cold. If living in a malarial district, shut the windows at sundown and build a little fire in the fire-place.

In coming out of a warm church or a crowded lecture-room, put a handkerchief or muffler over the mouth and breathe through the nostrils. Such breathing tempers and modifies the atmosphere.

Snoring is a disagreeable and unnecessary vice. It may be avoided by breathing through the nos-

trils and keeping the mouth shut. Many people would do well to keep their mouths shut more than they do. Great talkers are rarely deep thinkers.

It was long ago proven by the shepherds of Syria that large numbers of domestic animals did not thrive well when living and sleeping together; and it is both indelicate and unhealthy for several persons to sleep in the same room. The evils of re-breathing the same air cannot be too severely condemned, and for the reason that we take back into our bodies that which has just been exhaled.

Cold air may be just as impure as warm air. Some one-idea people insist in sleeping in a cold room, just as though there was some virtue in a room intensely cold. A sleeping-room should be of an agreeable temperature, large and well aired.

Attorneys pent up in small, ill-ventilated offices, where country clients spit tobacco-juice, clerks, merchants and ministers of the gospel—all who necessarily follow sedentary habits of life, should go off frequently among the mountains, climbing to their very summits. They should exercise in the gymnasium, ride spirited steeds, take early morning walks and drink in the rising sunbeams.

If feeble and nervous, keep away from the humid Savannas of the South; if inclined to consumption, better, in most cases, go to Newfoundland than to New Orleans. The cooler and clearer the out-door air is the better it is, generally speaking, for breathing, because more condensed—packed, as it were, more solid. In two cubic inches of air, equally pure, one at the equator and the other at the poles, the one at the poles has a much larger amount of oxygen—the great life-giver and purifier of the blood.

HOW TO SLEEP IN ORDER TO LIVE A CENTURY.

The tremulous needle, poised upon a pivot, points to the North. The earth is a magnet, and so is the human body. Those who have read Reichenbach's "Researches in Magnetism" will not doubt this. If these are facts, people should sleep with their heads to the North, especially those living in England. The magnetic needle, however, does not point north in all countries. Sailors know this by the variations of the needle, and scientists frequently speak of its "declination." "Over the whole of Asia," says R. A. Proctor, in his "Science for Leisure Hours," "the needle points almost due north; while in the north of Greenland and of Baffin's Bay the magnetic needle points due west." So Greenlanders should sleep with their heads to the West; while Americans and Asiatics of the Orient should sleep with heads due North—sleep in harmony with the moving of the magnetic currents. "But," says some stern, flint-headed peasant, "I can sleep any way; I feel no difference." Quite likely; neither did the ox feel the difference when the fly lit upon his horn, because the horn was hard and dry and flinty. Very sensitive persons at once feel the difference.

God made the night for sleep, and the light of day for educational and industrial pursuits; and to transpose this divine order of things by sitting up until midnight and sleeping the next day by sunshine not only borders upon laziness, but sinfulness. Sin is a transgression of the law, and pain is the penalty.

Individuals of regular habits, engaged in hard, honest labor, with noble aims and a clear conscience, will generally find little trouble in sleeping, and that, too, in the early part of the night.

Fashionable city life is too viciously managed to give sufficient sleep; and many women in country villages, because of late social parties, enormous details of dress, and trashy novel reading by hot stoves, find it difficult to sleep; but Italian women manufacturing maccaroni all day in the sunshine, and German women working in the field have no trouble in sleeping.

Nothing so tends to insanity, and nothing so deranges and harms the brain-cells as lack of sleep. In 1879 six students in a German university resolved to go without sleep a week. Not one of them succeeded; but two of them died of brain disease, and three others were obliged to leave the institution on account of brain trouble. Night marches of an army in a hot climate, as in India, had to be abandoned, because it was found the men broke down for lack of sleep.

Study nature. In the gray of early evening sporting insects, lowing herds and the forest birds retire away for rest and sleep. If owls and bats are exceptions, it is because they *are* owls and bats—vilest of birds!

If the birds of the air and the flocks of the fields, obeying their God-given instincts, go to sleep when God lets down the dusky curtains of night, should not rational human beings, gifted with reason, do the same?

To prowl about in the darkness of late unseemly hours, or to sit up and read novels, substituting oil for the sun, is to violate God's natural laws.

I say to my friends and patients, "Get up; get up at five o'clock in the morning;" and I set them the example! If they want more sleep, I say, "Take it; take all you want! Take eight hours; take nine hours; take ten hours, if you choose; but take them in the early hours of night rather than by daylight. Don't insult nature!

If you get angry, take a bath and go to bed and sleep; if the world abuses you, take extra sleep; if

you are dyspeptic and discontented, take a long sound sleep and, waking, you will find that all the world is smiling.

Few persons making pretensions to cleanliness will sleep in a garment worn during the day; and, certainly, all undergarments, whether worn by night or by day, should be thoroughly aired before being worn again. It is a rule among the Brahmins of India to shake every garment before adjusting it upon the body. A sleeping garment should have neither pin nor button about it.

"There should be no carpet on the floor of a sleeping-room," says Dr. Hall, "except a single strip by the side of the bed, to prevent a sudden shock by the warm foot coming in contact with a cold floor. Carpets collect dust and dirt and filth and dampness, and are the invention of laziness to save labor and hide uncleanness."

Sleeping-rooms should never be papered, and certainly not with a green-colored paper; neither should fever patients be kept in rooms where the prevailing color is red or crimson. Red is a nerve excitant, while blue is quieting and calming.

Old people, especially if bald-headed, should sleep in nightcaps. The Asiatics and others who go bare-headed do not become bald-headed.

People should not go to bed expecting that they will drop off to sleep if hungry. The flocks graze

in the fields until their appetites are satisfied, and then lie down to sleep. The babe takes its fill from the mother's breast and sweetly falls asleep. If you have a gnawing hunger in the evening, partake of a light dish, such as crackers or stale bread and milk before retiring.

Women should not make up their beds in the morning, but open them, shake up the mattresses, throw the feather beds out of one window, raise all of the other windows to let in the air and the sunshine, and then finish the work of the room in the afternoon. The sick should have their beds changed each day.

Do not go to sleep lying upon the back. Whoever saw the weary herds or proud horses fall asleep upon their backs, with their feet up in the air gyrating around loosely? They naturally drop to sleeplying upon the side or stomach. I observed during my journeyings in Asia and Africa that the natives nearly always slept upon the stomach. Go to sleep, then, lying upon the right side, for the reason that while the right lung has three lobes, the left has but two, and the lower portion of the heart being more upon the left side it has greater freedom of action than it could possibly have if the weight of the right lung were pressing upon it.

Considering the tendencies to catarrh and consumption in this climate, breathing through the nostrils, whether asleep or awake, is absolutely necessary, and for the reason that those little delicate hairs along the nasal passages serve as strainers to catch the dust and floating air-particles. I have seen Indian mothers in the Far West go along by the te-pees, where their pappooses were being rocked by the cradling winds, and press their lips together in order to fix upon them the habit of sleeping with closed mouths. If more mouths were kept closed there would be less babbling and better health in the world.

Many sleeping-apartments in hotels never see nor feel the sun's healing rays. They are damp and cheerless, and sleeping in them is next to committing suicide. Bed clothes and comfortables should be thoroughly sunned each day. Rooms warmed by furnaces are unfit for sleeping apartments, as the air becomes in part decomposed—burnt air—and unfit for inspiration. Those occupying such rooms complain of "closeness" and "dullness of spirits," and they sometimes feel and gasp for more air, something as does a fish for water when thrown out of its native element.

Young children require far more sleep than adults do; hence they should retire early and never be awakened in the morning. Nature will do that when she has her fill. To rudely shorten childhood's sleep is to shorten life. Students require all the sleep the system will take. Brain-workers require more sleep than do day laborers upon farms. In deep sleep the soul repairs and builds up the impaired portions of the organism. Napoleon required, it is said, but five hours sleep out of the 24; others require seven and eight; but whether more or less, it is "tired Nature's sweet restorer."

Let there be no bed-curtains around the bed in in which you sleep; and it is never safe to have a sleeping-room over a cellar because the ascending atmosphere and gaseous auras, freighted with dampness, miasmatic vapors and parasites, and very often decaying vegetable substances will impregnate the room with unhealthy and poisonous emanations.

A cellar opening inside a dwelling should be kept scrupulously clean, and should be thoroughly disinfected twice a year with chloride of lime, carbolic acid, burning sulphur and other disinfectants. An opening into the chimney for ventilation should be provided to carry off the cellar air, which would otherwise penetrate the rooms above.

Sleep produced by opium, morphine, chloral, cordials or narcotics of any kind is neither natural or beneficial. They deaden and stupefy, but do not rest or invigorate the system.

If a person be weighed at bedtime and again upon rising, it will be found that there has been a loss in weight of half a pound or more, which amount has passed off in perspiration, sensible or insensible, and been distributed through the bed-clothing and the room. Therefore I repeat, ventilate and sun your sleeping-rooms.

Each individual, even to the child, should have his or her own sleeping-room. Among the highly cultured classes in France and Germany even husbands and wives sleep separately, and the baby while quite young has its crib between the parents' beds; but very early the child is put into a room and bed by itself. It is wisdom to so do. The piling of two or three into the same bed, pig-like, is unnatural and unhealthy.

If the young sleep in the same room with the aged it should be for medicinal or life-giving purposes only. In youth, what the world vaguely calls the "animal spirits"—really vital nerve-force—is abundant. This vital force is a fine sublimated substance, and when influenced by love and projected by the will it flows from the strong to the feeble; from the young to the aged. The child that sleeps with the grandmother grows pale and feeble; but she gains to the extent that the little one loses. The young wife soon gets to look as withered as the wrinkled old man that she marries. There are few more painful sights than to see an old man who ought to be thinking of death and eternity, readjust

his glasses, dye his hair, color his beard, gormandize on oysters and then go off and marry a young girl. She marries for a home; but such homes all too often prove to be earthly hells!

WHAT SHALL WE EAT TO LIVE A CENTURY?

Wheat, old as the civilized races, is the best of all cereals. It was the common food of the ancient Egyptians. The wheat harvest is spoken of in the patriarchal age, and Joseph dreamed of the sheaves of wheat. The primitive Greeks took with them on their war marches knapsacks filled with dry wheat; and in Cæsar's time Roman philosphers wrote and poets sung the praises of wheat. So far as any one kind of food is concerned, wheat is the best, and may be put down as the prince of cereals.

The great men of history whose living, burning words startled the world were not born in the warm banana-lands of the South, but in the cooler wheat zone, or the great wheat belt, lying between 35 and 55 degrees north latitude.

Man can live upon wheat or wheat and milk alone; but he could not live any great length of time upon bread made of superfine flour. To sustain life the whole kernel must be utilized. Chemically considered, wheat is composed of oxygen, hydrogen, carbon, nitrogen, phosphorus, magnesia, sulphur, lime, potash, silica, soda, chlorine—

in brief, all, or nearly all, of the ingredients and elements requisite for the support of human life, and yet I am of the opinion that the human system demands variety of food.

Milk is a most excellent article of diet. Indian meal mush and milk, oatmeal and milk, rice and milk, boiled wheat and milk, unleavened bread and milk have in them all the necessary elements of nutrition; hence, from childhood to old age one never tires of them. If, owing to some abnormal condition of the stomach, milk does not digest, add thereto a little lime water.

The hot water cure in some European cities is giving way, in part, to the hot milk cure. The temperature should be as high as can be sipped with a teaspoon. While the heat is beneficial, especially if a little capsicum be added, the milk itself is nourishing.

The cod liver oil craze is rapidly subsiding. The most eminent physicians of Germany prefer fresh olive oil. In consumption, either olive oil or nice sweet cream is preferable to cod liver oil. A little olive oil mixed with oatmeal porridge constitutes a most excellent food.

Liebig pronounces oatmeal, so much used by Scotchmen, nearly as nutritious as the best English beef. Prof. Forbes, of Edinburgh, during a period of 80 years measured the height and breadth, and noticed the health of the students in the University. He found the Belgians, who were great meat eaters, at the bottom of the list; a little above them the French; very much higher the English, and the highest of all stood the Highland Scotch, who all through life are fed once, and generally twice, a day upon oatmeal porridge.

The oldest and probably the best oatmeal manufactory in this country is the one located at Akron, Ohio. These manufacturing works send out supplies in all directions, and for this excellent oatmeal I am happy to say there is an ever increasing demand.

Breakfast should be made largely of oatmeal, well-baked bread made from the whole wheaten grain, carefully ground, berries, fruits, fresh eggs broken into hot water, and a cup of good sweet milk. Neither meat, butter or grease of any kind is necessary.

"When Senator Palmer, of Michigan, goes to New York, and stops at the Fifth Avenue Hotel," says the *New York Times*, "he always carries a loaf of Graham bread in his satchel. Before going to his meals he cuts a couple of slices from the loaf and puts them in his pocket. At the table he pulls the bread out and has always something before him he can eat. In his house at Detroit he has a mill constructed on purpose to prepare his flour, and at home he will never eat bread made from flour ground at any other mill."

"I cannot eat coarse brown bread," says one, "it irritates my sensitive stomach."

No one has asked you to eat "coarse bread," at least, I have not; but I do ask and urge you to eat the wheat in its fullness, except the very thin, flinty, irritating outer covering, which the steel mill grinding discards, and yet retains the nutritious parts, the five layers of cells and all the valuable mineral matter.

"I am a farmer, and cannot work on oatmeal, rice, mush, milk and potatoes; on bread, vegetables, fruit and berries," says some honest tiller of the soil. How do you know; did you ever try it? I have seen the porters of Smyrna, in Asia Minor, bearing burdens of six, seven and eight hundred pounds, and that all day; and yet their food was a few handfuls of grapes and figs, or dry bread, a bunch of dates and some olives.

I have seen the Spaniards and half-castes of Mexico, Yucatan and Central America toiling in the mines, or by the olive-press and the wine-press by day, and dancing at night to the music of the guitar, and yet they subsist upon melons, fruits, bananas and bread dipped in olive oil and seasoned with capsicum.

I have seen Chinamen in Canton and other parts

of the Empire bear upon their shoulders the sedan chair, 16 hours a day, or work in the fields the same length of time, and eat nothing but rice and a few vegetables.

All historians know that the old Roman armies, who built the roads and acqueducts, practiced in gymnasiums and marched under heavy baggage and armor, conquering the world, lived largely upon fruits, dry wheat, and barley bread dipped in sour wine.

But are not flesh meats and fatty foods necessary to keep up the animal heat, especially in cold climates? The herb-eating animals and the fleet reindeer found in the Arctic regions are a sufficient answer to that inquiry. Besides, for great muscular strength the rhinoceros exceeds all animals known upon earth, and yet it lives entirely upon vegetable food. Droves of tigers will fly with terror from before it, knowing its power.

"Carbon is heat," says an eminent physiologist. And yet skim cheese, pearl barley, rye meal, seconds flour, beans, peas, rice, Indian meal, oatmeal, and sugar all contain more carbon than does beef; and, further, not only does the finely-flavored cheese made in Cheddar, England, but even skimmilk cheese contains more muscle-making food than beef.

Animal food is more heating and stimulating than

nourishing. Lions, tigers, hyenas, cats, crows and buzzards are excessively fond of it. The Thayers, Pooles, Maces, Hyers, Sayers, Heenans and Sullivans, who follow fisticuffing and practice the "manly art" of pounding the heads of their fellowmen, eat not only meats, but raw meats, to give them courage and animal strength. But Pythagoras, Plato, Plutarch, Diogenes, St. Chryostom, the noblest of the Roman philosophers, the wisest of the new Platonists, and other royal-souled men of the past, were vegetarians. And in more modern times such distinguished men as John Wesley, Benjamin Franklin, Emanuel Swedenborg, John Howard, Sir Richard Philips, Shelley, Wordsworth, de Lamartine and others abstained for a time, or wholly, from animal food, and, as several of them have intimated, greatly to their advantage.

Closely connected with meat and beef eating is the unwise, not to say villianous, practice of feeding the sick upon beef-tea. Physicians ought to know better than to recommend it. Prof. G. F. Masterman proves in its "chemical analysis that it is very analogous to urine, except that it contains less uric acid and urea." Dr. Holbrook, editor of "The Herald of Health," contends that "No matter how carefully made it contains only from one and a half to two and a quarter per cent. of solid matter, which is made up mainly of urea, kreatine, kreatine.

ine, isaline and decomposed hæmatin—all of which is to be found in urine."

While beef-tea is somewhat stimulating, it is not as nutritious as milk, wheat-meal or barley gruel, rightly prepared. In Bright's disease beef-tea is especially injurious. Dr. Neale declares that in diarrhea, dysentery and typhoid fever it is really a poison. In Central as in South America urine is a common vehicle for medicine, and I have seen Chinese and Malay doctors administer it as such. There is high medical authority for saying that beef tea and urine when drank produce similar effects upon the human system.

Americans eat too fast and too much. The very best food if taken in too great quantites, and bolted down in a flood of tea or coffee, will, instead of being digested, decompose, ferment and rot into acidity, causing a burning or scalding sensation in the throat and stomach.

Dr. Beaumont, looking into the gunshot wound in the side of the Canadian soldier, Alexis St. Martin, and studying the process of digestion, saw that when food was cut into small pieces upon the plate, chewed finely, and thoroughly intermixed with the saliva it soon dissolved and was easily digested.

Condiments, greasy gravies and undigested food sour and literally rot in the stomach, producing heaviness, soreness, headache, bad breath—in a word, dyspepsia. In that form of dyspepsia where there is anæmia and a laxness of the fibers of the body, I have found the following, with certain rules of diet, a very satisfactory formula. Take of

Pure Sulphate of Quinine, 48 grains.
Concentrated Infusion of Calumba, 6 ozs.
Simple Syrup, 5 ozs.
Dilute Phosphoric Acid, 1 oz. *Mix*.

Of this mixture take two teaspoonfuls in water three times a day, increasing it to three teaspoonfuls after the first week.

If there is an aversion to quinine, use this mixture instead. Take of

Concentrated Infusion of Calumba, 11 ozs. Aromatic Spirit of Ammonia, 1 oz. Bicarbonate of Soda, 1 drachm. *Mix*. Dose, the same as the quinine mixture.

When there is nervous depression, irritability and restlessness from any cause, take frequent warm baths and use the following preparation. It may be considered a specific. Take of

Bromide of Potassium, 5 drachms 1 scruple. Spirit of Ammonia, 5 1-2 drachms.

Tincture of Calumba, 3 ozs.

Pure Water, 1 oz. Mix.

Take one teaspoonful twice a day in a wineglassful of water, increasing the dose gradually.

Ohio women weigh on an average nine pounds

more than those of Boston. The diet of the East and the West is very different.

I eat little or no animal food, because in the healthiest cattle and sheep there is more or less waste matter, or effete, dead substance in the muscles and blood, not removed by the circulation, and I insist that this effete matter and broken-down tissue in the flesh and blood and livers of slain beasts are not fit to eat. Fruit and vegetable eaters get their nourishment in all its purity from the original source, and convert it themselves, for the first time, into flesh and blood, while flesh-eaters re-chew and re-digest that which has once been chewed, swallowed, digested and made into animal flesh. Eating dead animals in health and drinking warm bullock's blood in cases of consumption are not commendable practices. And yet venison, wild fowl and fish are preferable to imperfect, withered vegetables, sour baker's bread and soggy potatoes fried in lard—a common dish at hotels.

"But," says some one, "I eat just what I like—just what tastes good." Exactly; and so do the pigs! Sensible people, gifted with reason and a fair degree of common sense, eat that which is nourishing and healthy. Tastes and appetites must be trained and drilled and brought into subjection to the judgment and the true science of life.

In 1871 I accompanied Frederick W. Evans, a

prominent American Shaker, to London. The Elder is a rigid vegetarian, having tasted of neither fish, fowl or animal food of any kind for full 50 years. While in London we were invited to breakfast with a member of Parliament; there were present Hepworth Dixon and other literary gentlemen, and several members of Parliament. Being asked into the breakfast-room, Elder Frederick deliberately stepped to his satchel and taking therefrom a large slice of coarse Graham bread laid it by his plate. The breakfast was inviting and costly; but Elder Frederick stoutly refused coffee, tea, buttered toast, beefsteak, fish, chops, butter—everything but a cup of milk and the bread that he had brought all the way from America! That was courage; that was living up to principle.

One of the guests inquired of the Elder why he brought with him his bread. "Because," said he, "I wanted bread fit to eat. This fermented bread upon your table, made of superfine flour, is not fit to eat." Then followed a sharp, scathing rebuke upon gluttony and gormandizing, upon hygiene and diet, ending with these words: "As an Englishman I am ashamed of you; you ought to repent, every one of you; behave yourselves better and become Christians!"

General Grant is reported to have said recently: "The greatest bore of my life is, that everybody

wants me to eat, and they don't think they show any hospitality unless an hour and a half is spent at the table."

Fickle fashion slays multitudes each year. Never use hair dyes. The basis of blondine, powders and paints is sugar of lead—a poison—often causing nervousness, paralysis, sore eyes, softening of the brain and neuralgia. Long trains, high-heeled shoes and bangs are abominations. Why cover the forehead with hair and expose the arms? The low caste Hindoos and the Indian squaws of the West have banged their hair for centuries. And why wear long trailing trains? Stepping upon one in the street and hearing it rip is to me music. "Ladies" should not use morphine to produce sleep, belladonna to make the eyes bright, nor arsenic to make the skin clear.

There are American women, governed more by love of approbation than principle, who will say, "Stay to tea; do stay!" and then they will sit around the table and gossip—gossip long hours away when they had better be asleep or at work, or learning how to cook potatoes. Few women do this bit of kitchen work even decently. Potatoes should be boiled with their skins on in pure water, which, when they are done, should be drained off and the pot left uncovered. It should then stand over the fire until the potatoes are dry, when, if

preferred, they may be baked, and I may say a nice baked potato is to be preferred to a boiled one.

The choicest, richest portions of the potato, the apple, the pear and all kinds of fruit lie close to the skin; therefore, pare thinly and eat slowly and sparingly. Yes, sparingly of such kinds of foods as make muscle, sinew, bone, nerve, nerve-cells and brain force.

Shall we laugh and talk while we eat? No; let the ducks and geese do that. It becomes them. The rhyme runs thus:

> "Let the wild duck quack as he eats, And the grasshopper sing."

The Hindoo sages of a remote antiquity considered eating a kind of sacrament, to be engaged in abstemiously and silently. The ancient Pythagoreans ate in profound silence; Shakers never speak at the table, unless in receiving or passing a plate or dish. Clear-headed and thoughtful people, knowing the needs and wastes of the system, eat to replace these wastes—eat grains and fruits; eat milk, rice, eggs, barley, beans and berries that blush in fields and ripen in gardens; eat such foods as contain nitrogen for the muscles, iron for the blood, lime for the bones, silica for the nails and phosporus for the brain.

The English are fond of bacon and are largely given to beef eating; they like their roasts very

rare, and, accordingly, are inclined to be aggressive and dictatorial, boasting of deadly battles and great victories won by sea and by land.

The Buddhists of Ceylon and Siam subsist mostly upon rice and cocoanuts, and are naturally peaceful. Our American Shakers are nearly all vegetarians, and they are the longest-lived people upon the face of the earth. Statistics and the white modest tombstones in their cemeteries prove this.

Giessen's tame bear was very gentle and kind when fed upon bread and fruits; but being fed a few weeks upon raw meat he would become rough and bloodthirsty. Both animals and men grow to be like what they are fed on. The wild, graceful deer of the north lands, without meats, fats or oils, cannot only withstand the cold, but can out-run the leopards and lions of the hot, tropical South.

The human system is an extensive organic chemical laboratory, in which are manufactured molecules, epithelium, mucus, muscles, nerves, saliva, gastric juice, chyme, chyle, blood, lymph, tears, hair, nails, cuticle, cartilege, bone and brain-cells. And this wonderful human system, under the guiding influence of the intelligent mind, builds up a better structure, a cleaner, more etherial and more enduring body from the elements constituting the grains, vegetables and fruits than from mutton, beef and bacon. While I do not say that every

person, considering life-long habits, temperament and organization, should abstain at once from all meat eating, I do say that less and less animal food is consumed each year, and that in the approaching year 2,000 the man who indulges in eating the flesh of dead animals will be looked upon as a kind of cannibal.

WHAT SHALL WE DRINK TO LIVE A CENTURY?

Three-fourths of the earth's surface is covered with water Wearly 90 per cent. of the human body is water. At bears up our ships as they plough the ocean, and drives our dashing railway cars in the form of steam. It was Goes one great instrument in building the world; transforming the rocks and mud and sand, and transmuting the plants into coal! Descending in gentle showers, it clothes the hills and valleys in green; gives moisture and sustenance to the buds and blossoms of the trees; it softens and lubricates our food and then, in the form of a watery fluid, carries the nourishing atoms and elements to every part of the body, that the thinking, conscious soul—a real, substantial entity -may superintend the building and repairing of its own material dwelling.

While water exists in three states: the solid, as in ice; the liquid and the gaseous, rainwater falling upon the mountains, far up above the smoke

and the dust of the streets, is the purest form of water found in nature. This may very properly be called distilled water—distilled in the skies, and is a most potent solvent. The way, then, to obtain the purest water, mechanically, is to distil it; that is, to boil it and then collect the water produced by the condensation of the steam.

The idea held by some of the oriental nations, that dew-water collected from the hill-tops and mountains and used as a drink would tend to prolong life, was a very rational one, and for the reason that it was, or is, absorbed directly into the blood with all its solvent properties, which properties prevent the deposition of salts and the process of ossification in the various structures and organs, as well as favor the elimination of poisons through the perspiration, the urine and the fæces.

Though too poor to own a \$500 piano, you are not too poor to own a bath-tub, and you should not be too slovenly or lazy to use it. To bathe does not simply mean to soak one's self in water. A quick hand or sponge bath is the thing. Then a good, coarse towel and a self massage.

The skin, remember, aborbs as well as secretes. Take a portion of a chicken's intestine, fill it with milk and tie both ends securely; immerse it in water, and in a short time the milk will pass out of the intestine into the water, and a portion of the

water without will pass inwardly, mingling with the milk. The sick may be fed and nourished to some extent through the skin.

Returning from consular service in Trebizonde, Asiatic Turkey, by way of Constantinople, Smyrna, Sicily and Italy I visited exhumed Pompeii, and carefully examined those half-ruined temples, lavapaved streets, stone ovens and great stone bathing-houses. Those stalwart Pompeiians took their cold baths in the morning, their sun-baths at noontime and their soothing tepid baths in the evening.

The ancient Romans far excelled us in their free public bathing-houses. In her palmy days Rome—the city of Rome—had 16 public baths. How many have New York, Philadelphia and Boston each? These public baths were kept up for 500 years. The water supply was brought through aqueducts. In Diocletian's time 18,000 persons could bathe at the same time; and connected with these baths were in-door gymnasiums, libraries, lecture halls and rooms for annointing. Bathing for health was a national habit among the Romans.

Will some of our selfish, money-grubbing, postponed possibilities of men, called millionaires, read these telling words of Senaca? "In Rome a person was held to be poor and sordid whose bath did not shine with a profusion of the most precious materials, the marbles of Egypt inlaid with those of Numidia; unless the walls were laboriously stuccoed in imitation of painting; unless the basins were covered with Thasian stone, and the water conveyed through silver pipes. The baths had a profusion of statues, a number of columns supporting nothing, placed as ornaments merely on account of the expense; the water murmuring down steps, and the floor of precious stones."

For removing congestion, equalizing the circulation of the blood and quieting the nervous system, the bath followed by vigorous friction has no equal. Try it.

Pure soft water, drank freely at bed-time, palliates and often cures constipation. On the other hand, water containing large quantities of carbonate and sulphate of lime is unhealthy.

The undue accretion of mineral matter in or about any organ, or the accumulation of earthy phosphates in the system, often noticeable in the urine, tends to diseases and the shortening of human life. Among the solvents for removing these difficulties are the mineral acids: sulphuric, nitric, hydrochlorine and, especially, phosphoric acid. Some physicians consider the latter a specific.

Milk, when cows are rightly fed and cared for, is a most admirable drink; and so is buttermilk, a form of milk deprived of its oily substance, and though ordinarily given to swine and fowls, it is

decidedly beneficial to many invalids, and should be more extensively utilized in the family.

Impure water, containing not only lime and various sedimentary substances, but sometimes spores, microscopic parasites and germs of disease, should be boiled. This is customary with many hygienists in both England and Germany, the process destroying the germs, and at the same time depositing the lime upon the kettle. Clear crystal water from springs does not contain spores or germs, neither does water distilled high up in the vapory heavens.

Alcohol and intoxicating liquors of all kinds should not be touched as beverages. They do not quench thirst; they are not food; they do not make muscle, sinew, bone, blood, nerve nor brain-cells. And, further, nearly all liquors are adulterated: wines containing logwood; beer, strychnine, prussic acid and carbonate of magnesia.

Dr. Carl Braun states that a wine merchant once sent Lord Palmerston a case of wine, with the assurance that it was good for the gout; but the steward soon afterwards returned it, with the explanation that his lordship had tried it and preferred the gout!

And what of tea? It is a temporary stimulant, and the rest which it gives in fatigue is apparent rather than real. It does not contain nutrition,

blood-making particles nor any of the elements of true strength. It is injurious to the nervous system; it causes indigestion and palpitation of the heart. "The essential principle of tea," says the American Journal of Chemistry, "is theine, and in its properties is closely allied to strychnine and Tea is an astringent, giving to the morphine. stomach a shriveled, leathery texture, preventing the free escape of the gastric juices, and often causing a sallow appearance of the skin. Green tea is altogether more injurious than black. When in China, I saw the Chinese color their teas and prepare them for market, and, further, I saw Chinese boys standing upon broad polished stones, overspread with teas, and rolling them with their bare, dirty feet! Tea-drinkers should remember that there have been 52,000,000 pounds of tea imported into New York since the law requiring inspection went into effect a year ago. In that time 650,000 pounds of adulterated tea have been condemned. These have been mostly green teas, and, as a result, their importation has fallen off over 6,000,000 pounds from the previous year. People are just beginning to understand that teas are frequently adulterated and dirty. Neither tea nor coffee as a daily beverage is necessary or healthful.

No drinks should be taken into the stomach above the average temperature of the blood. Hot tea and coffee produce just as debilitating effects upon the stomach as hot baths do upon the body.

Should we drink while eating? "No," exclaims Dio Lewis, and also scores of his imitators, "not a drop," adding, "whoever saw a horse take a mouthful of hay and then a swallow of water?" No one, of course. Neither did anyone see a horse go to the fire to warm himself, nor start off for a blacksmith shop when he required shoeing! It is neither healthy or wise to drink very cold water, or very freely of liquids of any kind at meal times, as they dilute the gastric juice and so hinder digestion. But the sipping of quite warm water, with a little milk in it and a trifle of sugar, while eating is not injurious and may be, for some temperaments, really beneficial, because it helps to moisten and lubricate the food while in the process of uniting with the saliva, 94 per cent. of which is water.

A teacupful of hot water drank 15 minutes before each meal is beneficial in some forms of dyspepsia.

Nothing will quench thirst but water.

The natural and proper drink, then, for man is water—soft spring water, filtered water, distilled water!

WHAT CLOTHING SHOULD BE WORN TO LIVE A CENTURY.

There are races and tribes in Africa and in the South Sea Islands that go entirely destitute of all clothing. I have seen them, male and female, old and young, unclad, toiling in their miserably-tilled fields; and near sundown I have also seen them all bathing together, sportive and seemingly as innocent, too, as children. It is difficult to make them comprehend the delicacy or beauty of clothing. There is really no necessity for it under those equatorial skies, where summers are eternal. Many of these people, though the climate is malarial, live, because of frequent sand-baths and perpetual sunbaths, to be very aged. Fruits and rice constitute their food.

The primary object of clothing is protection against the injurious variations of heat and cold. Protection and utility, then, being the purpose, the material, the texture and the color of the garments worn should be carefully studied.

So far as protection against cold, against chilling dampness and the absorption of perspiration are concerned, wool stands first. For warding off cold winds and pelting storms, however, india-rubber takes the preference. For summer time linen and

cotton, being good conductors of heat, are cooler; but owing to the frequent changes of climate they are not so healthful. Accordingly, flannel, soft and thin for summer time, thick and heavy for winter, should be worn all the year round.

Clothing upon the human body is often very badly distributed. There is too little about the lower extremities.

"If one-quarter of the heavy woolen overcoat or shawl were taken from the trunk, and wrapped about the legs, it would prove a great gain. When we men ride in the cars, or in a sleigh, where do we suffer? About the legs and feet! When women suffer from the cold, where is it?

"The legs and feet are down near the floor, where the cold currents of air move. The air is so cold near the floor that all prudent mothers say: 'Don't lie upon the floor, my child; you'll take cold.' And they are quite right; for the air near the floor is very much colder than it is up about our heads. And it is in that cold stratum of air that our feet and legs are constantly. A few Yankees put them on the mantel-shelf, but the majority keep their feet on the floor."

Color, like sound and odor, electricity and gravitation, is a substance. Everything that is, is substance; that is to say, it is something or nothing, and if nothing, it is not worth talking about.

Only substance, or substances, can produce effects. Colors produce marked effects. Purely white or light-colored garments are healthiest for summer because they transmit, or rather permit, the sunbeams to reach the body. They are healthiest, in fact, at all times. Pythagoras and his disciples dressed in white robes. In many of the Asiatic cities the people dress almost exclusively in white.

Black is unhealthy, uncomely, and unfit even for funerals. Being dressed in black, so far as the actinic power of sunlight is concerned, is about equivalent to being in a cave. It is not so much the heat as it is the light of the sun that the body requires.

The English scientist, William Crookes, invented the radiometer, an instrument that rotates under the influence of the sun's rays, and the more intense the light the more rapid the motion. This shows the force there is connected with light; and this force coming in contact with the body, directly or through light clothes, is literally a tonic.

One can walk nearly as far again, and with much less fatigue, upon a sunshiny day, dressed in white than in black. Take two pieces of cloth of the same size and texture, one white and the other black, spread them over the grass and fasten them down; lift them at the end of a month and mark the contrast! Under the white cloth the grass will

look green, fresh and growing; under the black cloth it will be yellow and sickly, if not dead. If black kills the grass will it promote health in human beings?

Black or dark clothes should not be worn in sick rooms. It is not generally known "that a man wearing dark clothes is more liable to infection from contagious disease than he who wears light-colored garments, because particles which emanate from diseased or decaying bodies are much more readily absorbed by dark than by light fabrics. This is easy of proof. Expose a light and dark coat to the fumes of tobacco for five minutes, and it will be found that the dark one smells stronger than the other of tobacco smoke, and it will retain the odor longer."

Tight dressing upon the body, limbs or feet is deleterious to health. While Chinese women bind and pinch their feet; while Malay women pierce both nose and ears for rings, and while many American women foolishly compress their waists, young men, shame be to them, are guilty of wearing tight trousers—trousers that possibly "press 275 pounds to the square inch upon the veins and arteries in the calves of the legs." This pressure prevents the circulation of the blood, produces disease and premature decline of manhood.

ARE MEDICINES NECESSARY TO PROLONG LIFE A CENTURY?

If there were no pre-natal weaknesses, no transmitted blood poisons nor hereditary tendencies; if there were no sudden climatic changes; if there were no violations of the physical, mental and moral laws of God, medicines would be quite unnecessary. But as rational, practical men, we must take human beings precisely as we find them; and we find many of them wretchedly begotten, badly cared for in infancy, unwisely trained in childhood, wickedly tempted in youth, and in manhood frequently exposed to winds, pelting storms and the low malarial lands of the Western prairies. Thus conditioned, human ills: aches and pains and diseases are absolutely unavoidable, and, accordingly, remedies—medicinal remedies—carefully selected and wisely administered are positive necessities.

Medicines are not necessarily poisons. Water, as well as hydrastis, or phosphoric acid, may be administered medicinally.

Often the best answer a physician can give a patient who, with a gloomy look and a dolorous tone, asks, "What shall I do? is "Go to work;

think less of yourself and more of others." Idlers are generally peevish, fretful and nervous.

Persons with weak eyes should not read or write when the stomach is empty. Literary men should have early breakfasts.

Half a teaspoonful of capsicum taken in a little milk immediately after eating, is infinitely better for the human stomach than "tonic drops," or any patent "bitters" ever swallowed.

Deep-seated consumption, with scrofulous diathesis, is incurable; but a cough is no proof of consumption. There are many different kinds of cough. "Sometimes the exciting cause of a cough lies not in the lungs and respiratory organs, but in the stomach, liver or intestines. In other cases there seems to be no real cause; it is purely nervous or hysterical."

A very common cough is the dry cough without expectoration; there is a short, hacking cough resulting from slight irritation, and the violent, spasmodic and convulsive cough caused by irritation or inflammation in the bronchial tubes; hoarse wheezing and shrill coughs indicate irritation of the windpipe. The hollow cough owes it's peculiar sound to resonance in the enlarged tubes or the cavities in the lungs, Each cough requires a different treatment, which must be varied according to its cause.

For an ordinary cough the following is a superior mixture:

Muriate of Ammonia, 1 oz. Pulverized Liquorice, 1 oz. White Sugar, 4 ozs. Boiling Water, 8 oz.

Mix and stir until it dissolves. Dose: a teaspoonful several times a day.

This is also excellent:

Coxe's Hive Syrup, 2 oz.
Wine of Ipecac, 2 oz.
Oil of Wintergreen, 1 drachm. Mix.

Dose: a teaspoonful at a time,

Here is a mixture which I have found very efficacious in one of the most common coughs. Take of

Fluid Extract of Jamaica Dogwood, 1-2 oz. Diluted Sulphuric Acid, 80 minims. Spirit of Chloroform, 2 drachms. Hydrocyanic Acid, 16 minims. Tincture of Sanguinaria, 1 oz.

Simple Syrup, a sufficient quantity to make a 4-ounce mixture. Keep well corked, and take a teaspoonful several times a day.

Disease is both a condition and an entity. As a condition it may be considered on the one hand as obstruction, inharmony between the vital and chemical forces, disturbed action of the nervo-vital principle, tending to structural disorganization. On the other hand, disease is an entity related to

germs, bacteria, fungi, mould, miasma, sporules, entozoa, baccillus, with all kinds of poisonous exhalations from dark cellars, cisterns, cesspools, ponds, marshes, filthy streets, ill-ventilated rooms and dismal swamps.

These germs, bacteria and microscopic spores floating in the air, especially bad air, lodge upon the mucus linings of the nasal organs or find their way into the blood by the law of endosmose and exosmose, producing blood-poison, inflammation and death. If these floating bacteria lodge upon the mucus lining of the nasal organs they there rest, and if the vitality of the system is low they literally there hatch, producing living parasites, and these cause irritation and inflammation, as in catarrh, hay fever, bronchial difficulties and, in the end, consumption.

Prof. Huxley says that "bacteria are just as much plants as mushrooms or cabbages." The yeast plant belongs to this class. They are the essential agents in all fermentations, decompositions and putrefactions. The black vomit of Vera Cruz is caused by these fungi and spores. The cholera is produced by another, and diphtheria by still another. Some of these parasites are vegetable; others, as trichinæ, are allied to insects and animals. These breed in, live upon and, ultimately, so disease the human body as to produce death.

But very few local physicians have as yet made the "germ theory" of disease a study, and the few who have do not know how to effectually disinfect the human body and destroy these parasites. The human system may be "just as well disinfected," says Prof. William Paine, "as a cellar or an old ship."

Through the patient microscopic investigation and the laborious experiments of such men as Rendus, Bazin, Schmidts, Kobner, Vogel, Cohn, Burdon-Sanderson, Pasteur, Dr. Robert Koch and others, it has been demonstrated that infectious and contagious diseases are produced by parasitic fungi and bacteria germs. Only last year Prof. Koch. in Cairo, at the head of the German commission. discovered the cholera parasite in the intestines. He has also discovered and studied the nature of the parasite which produces consumption, a disease that destroys one-sixth of all who die between the ages of 18 and 45 years. These germs, or living parasites, cause chills and fever, typhus fever, remittent fever, yellow fever, erysipelas, scarlitina, rheumatism, dropsy, cholera, catarrh, bronchitis. pneumonia and consumption.

To meet these difficulties physicians are turning their attention to iodine, tar, sulphurous acid, carbolic acid, phenic acid, and similar disinfectants.

Doctors blunder pitiably at times by not going to

the causes of disease. "Salt rheum is not a disease of the hand; an ulcer is not a disease of the ankle; catarrh is not a disease of the nose. The poor nose is not sick!" The body is diseased, and the disease shows itself in the hand, the ankle, the nose, the throat or some other organ.

A dashing boy steps upon a nail and has the lock jaw. The cause is in the heel, the effect in the jaws. When the cause is removed the effect will cease. Local pains and chronic troubles depend almost entirely upon general disease. This must needs be, as the blood rushes rapidly through the heart to every part of the body. Blood poison and malaria should be more carefully studied by the medical fraternity.

Catarrh is easily cured by inhalation and constitutional treatment.

Cultured and thoroughly trained physicians of the different schools rely less and less each year upon powerful medicines, and more upon the hydropathic treatment, the Swedish movement, disinfecting baths, the electric battery and the recuperative powers of nature.

Medical practitioners should not administer poisons that tend to destroy the organized tissues, depress the vital force, or in any way deprive it of the power to respond to the will; neither should they administer potent medicines to the sick which,

if taken by the healthy, would make them sick. This, I am sorry to say, is too frequently the case.

Shun quacks as you would the smallpox. Let advertised nostrums and "patent medicines" entirely alone. The idea that some "secret" nostrum will cure a dozen different diseases is absolutely disgusting. Reliable and trustworthy physicians keep no secret remedies from their fellows, nor from humanity. If a new discovery is made in medicine, or if a very efficacious compound is manufactured, it does or may become at once the common property of all worthy physicians. Such are the ethics of the profession, as well as the highest and noblest philanthropy.

Nature is the great healer, and such medicines and remedies as assist her are blessings. Dr. Common Sense is a very eminent medical gentleman. In all acute attacks he should be the first physician called. I make no difference between men and women as physicians; they stand as equals before God, and should so stand in the estimation of humanity.

Specialists have their legitimate fields, and will have until one man, or some one class of men, become infinite in wisdom, knowing all things. Therefore, if you have a serious difficulty of the eyes, go to some skillful occulist. Distinguished surgeons are specialists. Surgery is a science.

Keep away from Indian doctors and pretentious charlatans!

In complex chronic diseases employ educated and experienced physicians. I specify no one particular school of medicine, for I am not a bigot, running in a narrow rut. Bigotry and ignorance are twin brothers. Commencing the study of medicine when a young man, I began at the foundation, allopathy. In this school I attended my first lectures, and did the usual routine work of dissecting. It interested me to enthusiasm. Anatomy, physiology, chemistry and hygiene are the same in all schools. Then why this bitterness? Why these envies? The celebrated Prof. Dalton well said: "jealousies in the medical profession became children, not men."

Educated and honorable men are always the most catholic, charitable and magnanimous. The world is wide, the universe is infinite, and wisdom was not born, neither will it die with any one school of medical practice.

This is an age of progress. Discovery follows discovery in quick succession. Physicians should be persistent students, and their remedies abreast of the age.

The old method of treating disease—well, say a cough—was this: "An expectorant is given, and the cough is somewhat relieved; but the expector-

ant has produced nausea, and the appetite is gone; to restore appetite and improve the tone of the stomach, mineral acids are prescribed; the appetite gets somewhat better, but the acid has irritated the mucous membrane of the bowels and has produced diarrhea, to check which astringents must be given; these, in turn, produce an aggravation of the cough, and so the round has to be recommenced." This may pass for regular scientific treatment, but I have not the least hesitancy in pronouncing it pitiable quackery.

Take the case of General George Washington, as reported in brief by his physicians. "He was taken in the night of the 30th of December with a sore throat. The 'bleeder' being sent for, he took from him 14 ounces of blood." In the morning the family physician came and "proceeded to bleed him copiously, twice within a few hours, and again the same evening, giving him thereafter a dose of calomel." This was followed by another dose in the morning. Another physician arrived the next day, and after counseling together they took from him 32 ounces more of blood, and, to use the words of the report, there was "no alleviation of the disease." Then vapors of vinegar and water were inhaled. Ten grains more of calomel were administered, "followed by doses of emetic tartar." "Blisters were applied to his extremities and a cataplasm of bran and vinegar to his throat, to which a blister had been previously applied. Growing weaker, and after several attempts to speak, he expired at 11 o'clock in the evening." Now then, take a well, healthy man, put him to bed and treat him in that manner, and how long would he live?

Byron went to Greece to liberate the country and, possibly, receive a crown. Exposed to malaria, he was taken ill, when Drs. Bruno and Millingen were sent for. They proposed to bleed him, but he refused. At length, on April 16th, 1824, he very reluctantly consented. The London Lancet says, "Casting at the two doctors the fiercest glance of vexation, and throwing out his arm, he said in his angriest tone: 'There! You are, I see, a damned set of butchers! Take away as much blood as you like, and have done with it.' They took 20 ounces! The next day they repeated the bleeding twice, and put blisters above the knee, because he objected to have his feet exposed for the blistering process."

On the 18th, leaning on his servant Titas' arm, he took an anodyne draught. "A little later he took another draught of a similar kind, and at six o'clock he uttered his last intelligible sentence: 'Now I shall go to sleep.' He slept for 24 hours, and at 6:15 o'clock on the evening of April 19th surprised the watchers by opening his eyes and instantly

shutting them. He died at that instant." Bleeding, blistering, purging and strong narcotic medicines constituted heroic treatment in Lord Byron's time. He submitted to it and died easy!

President Garfield, shot down by the assassin, Guiteau, would, in all probability, have lived if he had had the plain surroundings and skillful surgical treatment of a common soldier. French and German medical professors criticised Dr. Bliss and the treatment most scathingly. He was treated too much, and by too many doctors. The location of the ball was not discovered till the autopsy. They probed a pus channel instead of the track of the bullet. The treatment was such a piece of blundering all through that progressive medical journals denounced it, and the Cincinnati Commercial said: "It is a ghastly thing to think of the solemn committee of physicians filling the President's room while his wound was dressed, and the 'flexible tube' was poked into the yielding flesh of the sick man, three inches at first, and finally 14 inches, in a direction opposite from that taken by the ball."

Lord Beaconfield died while the allopaths and homecepaths were quarreling over his sick body.

And what the lesson from Beaconsfield, Garfield, Byron, Washington and thousands of others? Just this: physicians must be students and progressive. There must be in them the "gift to heal;" there

must be insight and intuition; there must be persistent study and calm judgment, and, added to these, there should be travel and ripe experience to constitute the successful physician.

Several years ago I chanced to cross the ocean from Liverpool to New York in the same steamer with the gifted and world-renowned Dr. J. Marion Sims. His deportment and magnanimous mention of other schools of medicine than his own quite carried me captive. Here is his famous formula called the "alterative compound," excellent for the blood, and pronounced by some a specific for syphilis in its secondary and tertiary stages. Take of

Fluid Extract of Smilax Sarsaparilla (Bamboo Brier),

- " " Stillingia Sylvatica,
- " " Lappa Minor,
- " " Phytolacca Decandra, ää 2 ozs.

Tincture Xanthoxylum Carolinianum, 1 oz. *

The ideal, "The coming physician," as Prof. Reubens terms him, will heal both mind and body. There is much in the mind-cure theory. There are many cases on record where imagination or fear has killed. If the mind can kill, can it not also cure? The inmost spirit cannot sicken, cannot die. The mind controls the body, and it can be educated to the point of controlling, and often

^{*}Manfactured by Parke, Davis & Co., Detroit, Mich.

curing sickness. The oyster mends its own shell; the tree heals itself when wounded by the woodman's axe. Many diseases are purely imaginary; others are real, requiring medicines.

Dr. Livingstone, a man doubly armed with faith and medical science, took his Bible in one hand, his medicines in the other, and penetrated the depths of Africa as traveler, doctor and missionary, doing good.

As a physician with three diplomas, representing two different schools of medicine, and a certificate from the Philadelphia Hospital; as a physician registered in Atlantic Co., New Jersey, and the city of Philadelphia; as a physician who has traveled twice around the world and two-thirds of the way a third time, studying diseases and their treatment in some of the medical hospitals of Asia as well as Europe, I can, with all due deference to the different medical fraternities and colleges, afford to be independent, and, being thus independent, I can not only well afford to endorse and appropriate the best and most recently discovered remedies known to the profession, or formulated in Materia Medica, but I can admit, as I cheerfully do, the successful medical treatment and uses of hydropathy: the hot air bath, the medicated steam bath, the disinfecting bath, the shower bath, the sun bath, vital magnetism (of which Dr. Babbitt, of Cincinnati, Ohio,

is an adept), the electric battery, the will-power, massage and the prayer-and-faith-cure, one or more or all of which are assistants, and, in some cases, indispensable to the restoration of health.

The 75,000 physicians of America, administering drugs to the amount of \$125,000,000 yearly, should, while avoiding Latin phrases and medical technicalities as much as possible, teach hygiene in the families where they practice, and instruct the people how to live so as to keep well and live a century.

In some parts of China the mandarins pay their doctors for keeping them and their families well; but if they become sick these doctors lose their salaries. How would this plan work in the United States?

In the golden age, in the good time coming, of which dreamers have dreamed and poets sung, the preacher and the doctor will be merged into one profession. Mind and body mutually affect each other. Jesus healed both. See His command to the disciples: "And Jesus sent them to preach the kingdom of God, and heal the sick."—Luke ix. 2.

"The man who dares to think, to live, True to his soul's divinest light, Shall to the world an impulse give For truth and right. The brave in heart, the true in mind,
Will dare to see the truth aright,
While coward souls, perverse and blind,
Will shun the light.

But though all eyes on earth were closed,
Still would the sun as brightly shine,
And truth, by all the world opposed,
Is still divine.

That which men abuse to-day,
Men of the future will adore,
And truth, which error seeks to slay,
Lives evermore.

The Cross may meet his noblest deeds,
The faggot blaze at every word,
Yet through the angry strife of creeds,
Christ will be heard."

HOW TO TREAT BABIES AND CHILDREN THAT THEY MAY GROW UP AND LIVE TO SEE A CENTURY.

The oak that defied the storms of centuries originated from a good, plump, sound acorn. Parents who propose to multiply and replenish the earth should be sound in body and mind. Children have the right, the inalienable right, to a healthy and harmonious parentage. When born and bathed they should not be pressed, squeezed and

wrapped up in broad bandages. Doing it is a piece of stupidity, often resulting in deformities.

Let the little new comer cry; it is natural, it strengthens the lungs and develops the muscles of the thorax. If grown-up children want to cry, it is their privilege, only they should go alone by themselves and enjoy it.

Don't forget to frequently give the infant a warm bath. And, mark it well, don't allow everybody who rushes in to see the baby, kiss it. There is altogether too much kissing in the world. Remember that this gushing, spasmodic kissing often proves to be a murderous practice, especially when erysipelas, scarlitina and diptheria are prevalent. These diseases, as well as many others, are contagious. Kissing bears much the same relation to diptheria, the cancerous stomach and the scrofulous lip that promiscuous hand-shaking does to the itch. It was not Judas alone who betrayed by a kiss. Hundreds of children are indirectly kissed into their graves every year.

And then every one does not have sound teeth, a clean mouth or a sweet breath. The New Zealanders manifest their affection by rubbing their noses together—a much healthier practice than kissing.

Keep the baby upon its back much of the time for the first few months; its limbs are too frail to bear any weight. Give it a little pure water occasionally; milk will no more satisfy the thirst of an infant than of an adult. Don't stuff the little creature with soothing syrups, nor fill its stomach with castor oil and catnip tea. It is just as natural for children to live as it is for lambs.

Every mother should, if possible, nurse her own child, and she should be proud to do so. It is one of nature's most wholesome laws. Children should never be committed to the care of wet nurses, unless under very exceptional circumstances, because of the annoyance, because of the expense and, above all, because of the risk to the child of imbibing diseases or tendencies to disease. Better, by far, feed the tender, sensitive babe by artificial means.

Next to breast milk cow's milk is the best for the infant—cow's milk rightly prepared. It should not be cooked or boiled, because boiled milk produces constipation. It should be fed on one cow's milk because of its uniform quality; and milk from country farms is better than that from city-fed cows. Condensed milk is utterly unfit for children, inasmuch as its composition is seriously changed by the process of condensation, and, besides, the sweetening is cane sugar, and very liable to fermentation.

A most excellent food for a babe is this: Fresh

cow's milk, adding thereto one-third water, a small quantity of thoroughly ground, unbolted wheat flour, a little sugar and a very little carbonate of soda. This is easily digested and nourishing.

Children should be taught to eat regularly. They should not over-load their stomachs nor ruin their digestion with pastry, cakes and colored candies. These produce dyspepsia; and a mother who does not know better than to indulge her children in eating such trash is abolutely unfit to be a mother. Children as candidates for manhood and womanhood, for eternity, are to be taught and drilled into obedience. They must know the meaning of discipline. Their abnormal appetites must be curbed and checked; their tastes in regard to foods are to be trained and their tempers subdued. There must be a governing head in every household. If parents do not govern their children, their children govern them, and then chaos reigns! Order and obedience are indispensable to the young.

Do not permit your children's tonsils be cut out; they are of use to them, and you might about as well cut off their ears to cure ear-ache! Neither the tonsils nor the uvula should be removed. Firstclass physicians and surgeons do not advise it.

Those are weak-minded mothers who dress up their little girls for balls and evening parties, permitting them to be out until 10 and even 12 o'clock at night—and why? "Oh," says the silly mother, "to prepare them for society." Nonsense; better prepare them for the washtub! Yes; infinitely better prepare them for industry, economy, neatness and usefulness in the world. Fashionable society is, all too often, a showy bubble or a heartless, soulless formality. Society that is not sensible, sincere and practical is a curse.

Train children to be neat, orderly and obedient. Homes devoid of love and noisy from disobedient children are little better than prison-houses of despair. Anything in a household but a coarse, tyrannical man; anything but a woman who, instead of making home a sunny Eden, transforms it into a fault-finding, complaining, whining gallery of gloom!

Unchecked indulgence makes not only sickly, fretful and disagreeable children, but umannerly and selfish ones. Such children will take the most comfortable chairs; leave the doors ajar after them; slam them when they do close them; order special dainties prepared for their meals; demand at the table whatever suits their fancy; rush away from it without asking to be excused, and talk when they should keep their mouths closed. The great and good of earth think much and talk little; while uncultured people and unruly, ill-governed children giggle and gabble perpetually.

Harmless sports and amusements at proper times and places are to be encouraged. Unbend the bow occasionally. Bring the blood to the surface. "Rejoice and be exceeding glad," was a part of the Sermon on the Mount.

Muscle-culture, brain-culture and good morals—all should go hand in hand. Coarse, vulgar manners are always out of place. It can scarcely be expected that the ill-mannered, boorish boy will grow up to be a gentleman; while it may be expected that many of our young-America-meer-schaum-sucking boys and older lads will end their days in charity hospitals, poorhouses and prisons.

Infants are emblems of innocence, and little children may be compared to vines and olive branches growing up in our homes. The angels love these buds—these little ones whose feet make music around our firesides. "Of such," said Jesus, "is the kingdom of heaven." Oh, parents, I pray you to guard them well and wisely, and see that

"They at least are safe from falling
On the battlefield of life,
Overcome, as thousands have been,
By temptation, care and strife;
And have died with hands close gathered
In the tender clasp of ours;
God be thanked that we could fold them
Pure as snow and ful of flowers!"

Right conception, right gestation, right care in infancy, right training in childhood, right and rigid guidance in youth, a *guidance* tempered with sympathy, kindness and justice—all lead on to a healthy, full-orbed manhood and a rounded century of useful years.

SUMMARIZED RULES OF HEALTH ENABLING ONE TO LIVE A CENTURY.

Breathe pure air by day and by night.

Be in the light and sunshine as much as possible.

Be in bed by nine o'clock in winter time, and by eight o'clock in the summer time.

Be conscientious, truthful and honest in all your dealings, that, as God said to the Israelites, "your days may be long in the land."

Lie down and sleep or rest an hour each day in a comfortable warm room after dinner.

Dress loosely, not binding or compressing any part of the body with corsets, belts, neckties or tight shoes. Cannons and corsets are the slayers of men and women, and so the sexes remain about equal in numbers.

Suspend the garments from the shoulders, and avoid black as much as possible—the nearer white the better. Prof. Hamilton thus denounces black broadcloth in a lecture upon hygiene: "Americans

have adopted as a national costume, a thin, tight-fitting black suit of broadcloth. To foreigners we seem always to be in mourning; we tavel in black. The priest, the lawyer, the doctor, the literary man, the mechanic, and even the day-laborer, choose always the same black broadcloth—a style that never ought to have been adopted out of the drawing-room or the pulpit, because it is a feeble and expensive fabric, and because it is at the North no protection against the cold, nor is it any more suitable at the South. It is too thin to be warm in winter, and too black to be cool in summer; but especially do we object to it, because the wearer is always soiling it by exposure."

Wear a hat light in weight and loosely fitting upon the head. Many of the orientals wear neither hat nor head-dress, and their hair is beautiful.

Large, easy-setting shoes are as comfortable as healthful; wear such. Sandals are preferable in warm weather to shoes of any kind. No great man ever had a small foot, nor a great woman a small hand. Broad nostrils indicate strong lungs and long life, and a peaked, turned-up nose tells of a bad temper and a Paul Pry disposition.

Keep the feet warm and dry. If you perspire too freely, change the undergarments and the hose morning and evening, and use quinine and dilute phosphoric acid: two or three grains of quinine and from five to ten drops of the acid in a wineglassful of water.

Wear woolen stockings, especially in winter time. Children are healthier for going bare-footed when the ground is warm; it draws the blood to the feet and relieves the brain.

Alcoholic liquors, tobacco, coffee, tea, chloral, morphine—all artificial stimulants and narcotics are to be shunned; if not at first injurious, seemingly, they will prove so in the end.

Avoid sausage, mince pie, head cheese, spicy gravies and pork, salt or fresh, fat or lean. Lard nor anything else that comes from swine is fit to eat. The distinguished actor, Kean, "is said to have suited the kind of meat which he ate to the part which he was going to play, and selected mutton for lovers, beef for murderers and pork for tyrants!"

Look at the hog, asleep in the filth of his own making! Scent the odor of the sty; observe the tetter and scurf and mange of his skin; listen to his coarse, swinish grunt; see him fill himself upon some filthy, dead carcase; straighten out his fore leg and examine the open sore or issue a few inches above the foot. This is the outlet of a sewer, a scrofulous sewer, discharging daily a putrid, poisonous mucus. Study the glands, soft, fatty and cheesy, verging upon tuberculous degeneration.

and then, through a microscope, look at the tapeworm sacs and the terrible trichinæ often found in swine's flesh, and if from no higher motive than common decency quit eating hogs!

God be thanked for Moses' testimony against feeding upon the unclean brute. The distinguished Methodist commentator, Dr. Adam Clarke, when asked to give thanks at a dinner where pork was conspicuous, used these word: "Lord, bless this bread, these vegetables and this fruit; and if Thou canst bless under the gospel what Thou didst curse under the law, bless this swine's flesh."

Do not say, "The hog will be clean if he has an out-door chance." It is false. Who has not seen hogs wallowing in the foulest mire in a fresh, fragrant clover pasture? They will leave beds of clean straw to revel in dirty, stagnant mud-holes; and if one of their companions dies in the field they wait till putrefaction takes place, and then devour its rotting carcase!

The hog is a scavenger, and no true Jew, practical scientist or trained physician feasts upon its flesh. Frenchmen may eat snails; Africans may relish lizards; Patagonians may devour serpents; the black tribes of Australia may eat lice, which I have seen them do, and Americans may eat hogs if they choose; but I prefer milk and rice and eggs, fruits and home-made bread.

Fried food is difficult of digestion; potatoes fried in lard are unfit to eat. Cheese is constipating; butter, a rather harmless grease compared with lard, makes one bilious.

Pickles contain little or no nourishment; neither does black pepper, horseradish or mustard. The latter will draw a blister upon the surface of the skin; and yet many people put this sinapisn—mustard poultice—spread upon cold bacon right down into their stomachs, and then complain of irritation, indigestion and dyspepsia! And, by the way, I can invariably cure dyspepsia, mucous or nervous, by the administration of appropriate remedies, providing patients will observe rational, hygienic rules of living.

Sugar is an excellent article of diet, especially for children. The taste for it is natural. It does not destroy the teeth. The finest teeth that I ever saw was some 30 years ago, in the South among the negroes, who are very fond of sugar, and during the sugaring season almost live upon it. Those prone to biliousness, a vague term, I confess, for different affections of the liver, should use sweets more sparingly. In those forms of dyspepsia where grease or greasy foods cause distress, some physicians recommend acids and sour cider. I pursue a different treatment, including dieting, bathing and massage.

Boys should let their beards grow. "The moment a boy begins to shave," says Dr. Holbrook, "he begins to look old. Shaving makes the hair of the The beard is a valuable protection to face coarse. the throat and lungs, and many persons have cured long-standing throat diseases by allowing the beard to grow. Shaving injures the skin of the face and takes off its healthy hue, and this is worse if the razor is dull. Shaving consumes much time and causes considerable annoyance. A handsome beard is a real ornament of which no man ought to be ashamed. Whenever inconveniently long let the beard be shapened but not shaved off. means, then, cultivate your beard. It will be quite a saving to you in time and money, if you live to be a old man, never to shave."

The windows of a sleeping-room should be kept open during all bright, sunny days, and shut down at sundown in early spring and the damp November evenings, a fire being built in the fireplace.

Sleep in your room alone.

Prof. Watson, writing in the medical Laws of Life, says: "More quarrels arise between brothers, between sisters, between hired girls, between school-girls, between husbands and wives, owing to electrical changes through which their nervous systems go by lodging together night after night, under the same bedclothes, than by almost any

other disturbing cause. There is nothing that will so derange the system of a person who is nervous and effeminate 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. This is the law; and in married life it is defied almost universally."

Wash the feet each night if inclined to perspiration, before retiring, and also the lower parts of the body. Let this be remembered by both males and females. Sitz baths, containing a little borax or salt at times, are excellent both for health and cleanliness of person. It is astonishing how many fashionable and otherwise respectable people are neither clean nor sweet in their persons. The health and strength of the urinary and interelational organs require, especially in warm weather, frequent bathing and sponging. The importance of this should be taught the young, particularly before changing into maturity. Disagreeable odors from the armpits may be removed by a sponge and warm soft water containing a little ammonia.

Unsavory odors from the feet and pimples upon

the face are indications of disease, and require constitutional treatment.

Personally, I admire a dark complexion, and have no dislike of freckles. Those who have may remove them by annointing the skin with the following mixture. Take of

Sulpho-carbolate of Zinc, 2 parts.
Glycerine, 25 parts.
Rose Water, 25 parts.
Spirits, 5 parts. Mix.

After annointing the skin twice a day with this, letting it remain on half an hour or more, wash off in cold soft water.

Others prefer this for the removal of freckles and tan. Take of

Simple Tincture of Benzoin, 1 oz. Lavender Water, 1 pint. Pure Carbolic Acid, 2 grains. Mix.

Wash the face two or three times a day, letting it remain thereon.

Morbid excitement, intense nervous activity, and especially all sexual indulgence, for indulgence's sake, cause languor, lassitude, moodiness, sensitiveness, irritability and general debility, pointing with bony finger to death and the grave. Wasted sex-power in the young, and even in marital life, is a fruitful cause of disease and physical degeneration.

The divine purpose of these interrelational or-

gans, aside from the daily demands of nature, is procreation, and all else, though denominated pleasure, conceals the hidden serpent that stings.

Passional indulgence during the period of gestation is, to the true ideal life, unnatural and monstrous. The flocks and herds that graze upon the hills do not indulge in the practice; such continence in animals, though called instinct, is admirable. And, further, during these precious months for the moulding of an immortal being, passional indulgence not only impresses mental idiosyncracies, and sometimes produces, as physicians well know, physical deformities, but it imparts tendencies to solitary vice and sexual weaknesses, and so the young suffer for the sins of their ancestors.

This subject demands plain talk. No philanthropist or trained physician has a particle of sympathy with this prudish, mawkish false modesty that the shallow-pated strive to throw around the uses and abuses of the generative organs. God made them; and what God has seen fit to create it is our privilege and duty to study and, so far we can, to comprehend. To the pure all things, rightly understood and rightly used, are pure.

In the estimation of all sensible and religious people the organs of the body, the temple of the spirit, are sacred. Those who for mere effect are too painfully nice and too exquisitely modest to gaze upon the naked figures in a sculptor's studio, or to investigate the laws of sexual life, that they may know themselves, are generally at heart grossly depraved, being secretly guilty of what the apostle Paul termed "the unfruitful works of darkness"

"Many a man and woman," says Dr. E. P. Miller, "would shun the society of a profligate, and shrink from one who would sell her virtue for gain as from a viper or a scorpion; yet they themselves, under cover of the marriage rite, are just as guilty in the sight of God with regard to the sacred laws of their bodies as those whom they condemn."

Those who have the least purity and virtue often assume the most; they do so to hide their own personal corruption.

It is necessarily embarrassing, of course, to those who have transmitted strong passional tendencies to their children to correct them for sexual sinning. "Like father, like son," is too often true; and if others attempt to correct this class of lads, or reprove them in private, they are liable to be misunderstood and their motives impugned; for many of these forward young lads, as secretive as they are unclean, will, when taught the necessity of personal purity, the original purpose of circumcision, the dangers of phimosis, the indecency of low, vulgar allusions, the baseness of loose, vile

conversation and the depletion caused by unnatural magnetic manipulation, misinterpret, falsify and even accuse their well-intentioned instructors of the very vices of which they themselves are guilty. Such proved to be the case a few years ago in the Brooklyn High School, causing, at first, scandal and blame to fall upon the teacher.

Prof. Morton, in his lectures upon "The Social Evil and Kindred Vices," says: "Nine-tenths of the young men between 14 and 20 practicing the secret vice, will either stoutly deny it or transfer the blame to other parties to screen themselves." Such is poor, depraved human nature!

And yet, man is divine; the best have their failings; the worst have their good traits. The philanthropist, the physician, will not shrink from uttering the most searching words of warning and counsel to the young, that they may see growing up a generation of earnest, sober-minded, cleanly and manly young men, and a similar class of young women.

Cæsar's wife "must be above suspicion;" that is, above the distrust of Cæsar and the peers of Cæsar; not of the gossipy, sensual-minded who, sailing upon the sea of calumny, and feasting upon its mud think worst of that which is best.

Few fathers deliberately teach their sons the true purposes of the sexual organization, and still fewer mothers teach their daughters to know themselves. The laws of sexual physiology, of temperamental blendings, of procreation and mental impressions during gestation are little studied in the family circle, and the result is, that a majority of marriages are matters of fancy or passion, conception is an accident and the infant an unwelcome guest.

On the 13th of September, 1883, a single cow, of the "improved short horn breed," was sold near Utica, N. Y., for \$40,600, and 15 calves and cows of the choicest breeds sold for \$260,000. What would be the result if the same attention and study were devoted to the development of a better breed of men?

In the past, golden with precious memories, the ideal man was honest, laborious and practical. He was proud of his honor; office sought him. He was benevolent in feeling, pleasant in the family and regal in deportment. The ideal woman was industrious, frugal and sweet tempered. She was also neat, confiding and self-sacrificing, literally a helpmeet, making home a very garden of sunshine!

But, alas! Those times are fast fading behind the horizon of the past. The ideal man, now-adays, is the one who makes money, who frequents club-rooms, dresses in fine broadcloth and goes ayachting—"a society man!" The ideal woman is sweet, gentle, sickly and waxy. She dresses in fashion, reads novels, visits the sea shore and burdens herself with costly precious stones, thus exhibiting her vanity, and exciting the envy of those who are silly enough to wish they had them!

But what has this to do with living a century? Why, just this: Lives so external and abnormal, lives devoted to feasting, fashion, greed and showy worldliness, like frail, flickering lamp lights, soon expire.

Compare them with our historian, George Bancroft, now in his eighty-sixth year, and yet doing the work each day of a man in life's prime. Knowing him personally, I have this to say of him: he is abstemious in eating; he retires early, and rises early in the morning; he does his literary work in the first part of the day; he is very industrious; he has been particular about his baths. "His bed is a narrow, single one in a bed-room and library combined." "I believe," says he, "the secret of good health is in taking care of one's self. I go to bed early, rise early and do my work in the fore part of the day."

Many of the renowned men of the world did their most important work when between 70 and 100 years of age.

At 73 Blucher turned the tide at Waterloo.

In his eight-first year Dr. J. Williamson Nevin retains the powers of his vigorous intellect.

At 71 Bismark is without a peer in the great complex circle of international diplomacy.

In his eighty-first year Gladstone continues to "manage a kingdom whose geography knows no setting sun."

At 87 King William rides horse-back, goes a-hunting, and proudly sways the scepter over one of the world's greatest empires with an "arm unpalsied by age."

It was only recently that Lucretia Mott, in her eighty-eighth year, passed to the better land of immortality. The year previous to her death she delivered one of the ablest speeches of her life in in Philadelphia. Her mind was clear, her voice firm and her logic inexorable. She manifested few of the gathering infirmities age. For nearly three generations this woman won the warmest love and praise; she was mild, forgiving and pleasant. She truly "grew old gracefully," retaining a most beautiful expression upon her face till the last.

The Friends, often called Quakers, a quiet, temperate, plain-dressing, industrious and thrifty people, are noted for their long lives.

Europeans are longer lived than Asiatics. The Welsh are the longest lived people in Europe; the Scotch are next, and the Irish are the shortest lived of all. The Jews in ancient times were much longer lived than the Gentiles or Pagan nations. Christians to-day are longer lived than free-thinking, scoffing atheists. Faith in God and immortality are conducive to peace of mind and long life.

While it is well known that there is a perpetual struggle going on in the system between accumulation and elimination, Dr. De Lacy Evans contends that the more immediate causes producing old age physically, are fibrinous and gelatinous substances, imperfect circulation and slow, steady depositions of calcareous matter throughout the system. These depositions and accumulations lessen the caliber of the blood-vessels, block the arteries, weaken the valves, contract and impair, if not ossify, the walls of the heart.

Some foods contain too much calcareous substance for health; but fruits, fish, venison and wild game contain only a very trifle of these calcareous salts and earthy particles, and are, therefore, healthy for the aged. Fruits and distilled water are specifics for ossific depositions.

A French physician observes "That man begins in a gelatinous and ends in an osseous (or bony) condition. . . In the human body water forms 70 per cent. of its aggregate weight; in fact there is not a single tissue which does not contain water as a necessary ingredient. Now water

holds certain salts in solution, which become more or less deposited, notwithstanding the large proportion eliminated through the secretions. Nevertheless it is only a matter of time before these minute particles deposited by the blood have a marked effect in causing the stiffness and aridity of advancing life. The reason why in early life the deposits of earthy salts are so infinitesimal is simply because they have not had time to accumulate. is the old kitchen boiler which is found full of incrustations, not the new one, time not having been sufficient for their deposit. M. Le Cann proved by analysis that human blood contains compounds of lime, magnesia and iron, averaging 2.1 in every 1,000 parts. This clearly demonstrates that in the blood itself are contained the earth salts, which gradually become deposited in the system.

"Blood being made from the assimilation of food, it is, therefore, to food itself we must primarily look for the origin of these earthy deposits. Besides providing the requisite elements of nutrition, food contains calcareous salts, which, upon being deposited in the arteries, veins and capillaries, become the approximate cause of ossification and old age.

"The action of distilled water as a beverage is briefly as follows: First, its absorption into the blood is rapid; second, it keeps soluble those salts already existing in the blood, thereby precluding their undue deposit; third, it facilitates in a marked degree their elimination by means of excretion. After middle life a daily use of distilled water is highly beneficial to those desirous of retarding old age, and it is also a useful adjunct for averting stone in the bladder and kidneys."

Distilled water, diluted phosphoric acid, glycerine and some of the aromatics constitute a most delicious drink—a very nectar. And this nectar, drank freely, tends to remove calcareous deposits, thus prolonging human life.

The soul, or conscious innermost spirit, being a potentialized portion of God, never grows old, but the body does. The soul, living in, looking out through and building up, fashions its dwelling-place, the body. This is especially true of the face. Physiologists understand this, and read character accordingly.

All individuals, to a certain extent, are artists, painting their habits, thoughts and general conduct upon their countenances. Jealousy, envy, selfishness, dissatisfaction, an irritable disposition, all print crow-foot indentations in the corners of the eyes, darken the shadows, deepen the wrinkles, and draw down and sharpen the features of the face.

Candor, integrity and cheerfulness exert a re-

verse influence. True cheerfulness promotes digestion, quickens the circulation of the blood, covers the face with radiant sunbeams and greatly aids one in growing old gracefully.

Thanks be to God, there are good and true souls in the world who live in perpetual sunshine, and live in it because they carry it with them. It streams up out of their noble hearts like jets of light; joy flashes from their eyes; tenderness drops from their tongues, and smiles wreathe their foreheads. They should be called what they literally are—angels of gladness.

Pessimism, or perpetual fault-finding and complaining, not only gnaws the heart's center, not only corrodes and wastes the life-forces, but it often ultimates in a sad unbalancing of the nervous system, narrowing and shortening one's days; while, on the contrary, optimism, or faith in an overruling Providence that "makes for righteousness;" faith in the Divine principles of Christianity; faith in the innate worth of humanity, and faith that all things will, in some mysterious way, be overruled for good, aid—these all aid—in lengthening out the life to a century.

Struggle, then, for the prize. Study to understand and strive to obey the laws of nature, for they are the laws of God—the laws of God with penalties. Resolve—will—to keep healthy. Make

the soul positive to the body. Remember that health is the normal state of man. Cultivate the will-power. Cherish hope. Be full of faith.

Exercise charity towards all. Control your passions; govern your appetites. Develop and manifest a sweet and peaceful spirit. Carefully observe the rules of health relative to pure air, drink, food, sleep and clothing, and with a fair constitution to start with on the journey of life, you may easily live a full century; and in the evening-time of life's rugged journey, standing and waiting by death's peaceful river, you can say with one of our finest poets:

"Up and away like the dew of the morning, That soars from the earth to its home in the sun; So let me steal away gently and lovingly, Only remembered by what I have done.

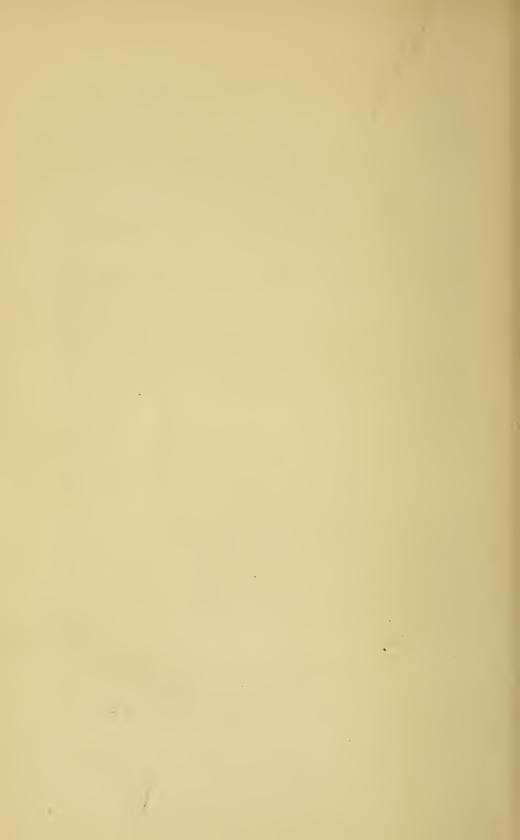
I need not be missed if another succeed me,

To reap down those fields which in spring I have sown;

He who ploughed and who sowed is not missed by the

reaper;

He is only remembered by what he has done."



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