10 CENTS A COPY. PUBLISHED MONTHLY. $1.00 A YEAR.
Entered at the Post Office in Battle Creek, Mich., as Second-class Matter.

# GOOD HEALTH

**December, 1903.**



MENS·SANA·IN·CORPORE·SANO·

VOL. XXXVIII. *Edited by J. H. KELLOGG, M. D.* NO. 12

**Fresh-Air Treatment**


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# Announcement

WE have prepared for the readers of GOOD HEALTH for 1904 a feast of good things quite surpassing the best which has heretofore been offered during the long lifetime of this journal. For nearly forty years this magazine has been standing for principles of hygienic reform. Once unpopular, many of these principles have now come to be so popular that in some instances they might almost be said to be fads.

Mighty strides have been made within the past few years in the development of great principles of correct physical living. The natural life, the natural order in diet, dress, and all that pertains to daily habits is recognized as the ideal standard.

DR. J. H. KELLOGG, EDITOR

GOOD HEALTH represents this phase of modern progress as does no other journal. During the year 1904 this journal will deal with all the various phases of the great health movement, which is to-day receiving more attention from intelligent men and women who are alive to the needs of the world than any other phase of human progress.

In addition to the discussion of general topics, each number during the year will deal in an interesting, comprehensive way with some special and important question. The following program, dealing with the leading features of the health-culture idea, will be faithfully carried out.

A glance at the following outline will give something of an idea of the thoroughgoing way in which the health-culture idea will be dealt with in this journal during the coming year.

GOOD HEALTH FOR JANUARY: The simple life, as illustrated in the lives of eminent men and in the customs and history of great nations. Interesting and instructive lessons will be drawn from the example of such men as Pythagoras, Socrates, Seneca, John the Baptist, the Christ, Tolstoi, Priessnitz, Gladstone, William Cullen Bryant, the participants of the Brook Farm Experiment, and various ancient and modern nations, especially the Persians, the early Greeks, the Hindoos, North American Indians, Japanese peasants, the peasantry of Hungary and Ireland.

FEBRUARY: A temperance number, in which all the phases of the tem-

perance question will be discussed. The influence of alcohol upon the brain and nerves and digestion. The hereditary effect of alcohol. Influence of tea and coffee. Tobacco habit. Opium, cocain, and other drug habits.

MARCH: The hygiene of the home. Sanitary housekeeping. Sanitation of the kitchen, the cellar, the laundry, the sleeping room. Death's lurking places in the home.

APRIL: Mother's number. The care of children. Hints to young mothers. Health culture in the home. Home gymnastics. How to feed a baby.

MAY: The out-of-door life. Health and beauty. Nature's cosmetics. How to have a healthy skin. The morning bath. Wholesome sports. Out-of-door recreation. Nature study in the fields.

JUNE: The vegetarian idea: its history, and development in modern times. Was the primitive man a vegetarian? Does vegetarianism pay? Vegetarianism and longevity. Diseases of animals. Relation of cancer to meat eating. Some famous vegetarians.

JULY: Vacation days. How to recreate rapidly. The most profitable health resorts. Phototherapy. Sunbathing.

AUGUST: Dress reform. The modern dress reform movement. The beginning. The development of the modern hygienic dress. The best models. Evils of the conventional dress.

SEPTEMBER: Dietetics. Health foods. The Battle Creek system of diet. The raw food diet. Fruit and nut dietary. The beefsteak fad. The beef tea delusion. Horace Fletcher's experiments and discoveries. The wonderful discoveries of Pawlow. How much to eat in one day. The example of Cornaro. Fasting as a remedy for disease.

OCTOBER: School hygiene. What is best worth knowing? Evils of school life. Needed reforms. Care of the eyes. How a school teacher may preserve her health. School gymnastics. The swimming school. Out-of-door schools.

NOVEMBER: Hygiene for old people. How to grow old gracefully. Causes of old age. How to live one hundred years. Old-age diseases and how to prevent them. How to grow hair on bald heads. A cure for wrinkles. How to preserve the sight. Exercise for old muscles.

DECEMBER — THE MIDWINTER NUMBER: Christmas and New Years' dinners. How to keep warm in cold weather. Cold weather hygiene. Out-of-door life in winter. Winter health resorts for feeble invalids. A winter sunbath indoors.

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QUESTION BOX: Each number will contain answers to scores of practical questions asked by correspondents. Every subscriber has the privilege of asking as many questions as he likes, to be answered through the journal by the editor.

EDITORIAL DEPARTMENT: Each number will contain several pages of editorial comments upon live health topics. The editor will be able to give more of his time to the conduct of the journal during the coming year than for several years back.

CONTRIBUTORS: Mrs. E. E. Kellogg, who has for more than twenty years contributed regularly to GOOD HEALTH, will give a large part of her time to the journal, and will contribute numerous original articles on child culture, healthful home making, cookery, and other topics which are her specialties. Many old and new contributors will aid in carrying out the above program, so that subscribers may expect GOOD HEALTH for 1904 to be the very best volume which has ever been issued.

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# GOOD HEALTH

*A Journal of Hygiene*

VOL. XXXVIII DECEMBER, 1903 No. 12

## FRESH-AIR TREATMENT

BY J. H. KELLOGG, M. D.

AT this season, with the crisp, cold air out of doors and the prospects of zero weather, many begin to hover about the stove or the register, clothing themselves as warmly as possible and spending their time in the warmth of indoors with the intent of protecting themselves from "taking cold." The result is that they become tender and sensitive and are almost certain to get colds. The rational plan would be to endeavor to harden oneself, as the cold weather advances, by becoming accustomed to out-of-door air. Everyone except the feeblest invalid can accustom himself to daily exposure to the air with great profit.

There is wonderful value in fresh, cold, out-of-door air, particularly when accompanied by sunlight. Light and air are nature's most powerful tonics. There is marvelous power in sunlight. This is especially noticeable in vegetation. A scrawny plant, struggling for existence in a dark corner of the house, and having only two or three little green leaves on it, when taken out of doors into the light and air, becomes wonderfully transformed in a few days. It puts forth buds and leaves, and the blossoms soon follow.

The same thing is true of human beings. They, as well as plants, are vital organisms, and, like plants, also require sunlight and air. It has been found by observation of hospital patients that those on the shady side of the ward do not progress so well as those on the sunny side. During the Civil War it was demonstrated that patients treated in hospital tents did better than those treated in houses. It is also well known that typhoid fever patients and smallpox patients improve more rapidly when living in tents than when treated in the best hospitals.

Thousands of people are losing health and growing thin and sickly because they live indoors. Cold, fresh air has special value because it stimulates the organs and all the functions of the body; it quickens the heart to the greatest activity, and increases the number of red corpuscles in the blood. Cold air also contains more oxygen to the cubic inch than does warm air. The volume of air is reduced one-five-hundredth part for each degree of reduction in temperature. Consider the difference between a hot summer day with a temperature of 100° and a winter day at 30°. Even a moderately cold winter day marks a difference of 70.° So the air has been reduced one-seventh of its volume, and in six breaths of cold air one gets as much oxygen as he would in seven breaths of warm air. Hence the body takes in one-seventh more oxygen in cold weather than in warm weather. This increased amount

of oxygen taken into the body is a matter of great consequence. This is why one feels better in cold than in warm air. A brisk walk on a cold, crisp winter morning creates a splendid appetite for breakfast, for the same reason that the fire burns brighter on a cold winter night. When the fire burns with a particularly bright glow, people are wont to say, "Winter is coming; see how bright the fire burns!" This is due to the increased amount of oxygen in the air. The fire burns brighter and faster because it has one-seventh more fuel supplied.

So it is with the body,— the vital fires burn brighter in cold weather. The whole tide of life moves with greater activity. The process of digestion is quickened because the process of oxidation is increased. The liver requires oxygen for making bile and performing all its varied functions, and the oxygen we breathe in cold air, improves the function of the liver, so it can do one-seventh more work than before. The muscles, also, depend for their activity upon oxygen. In an excess of carbonic acid gas the muscles are asphyxiated, and so one feels depressed in warm weather. A person does not get out of breath so easily in cold air as in warm. The woodchopper can swing his ax with more energy on a cold day. Cold air aids in the elimination of the poisonous matters which are all the time forming within the body. When oxygen is not plentiful enough to make the vital fires burn sufficiently to consume the fuel and waste of the body, then much of the waste material is left behind in the form of imperfectly burned substances, which may be called cinders of the body. Uric acid is cinders.

As the result of sedentary habits, there is not sufficient oxygen taken into the lungs. The lungs do not expand as they ought to, so enough air is not taken in. Then the overheated air is diluted, and one must breathe seven times to get as much oxygen as he would get in breathing six times out of doors, and so, breathing only imperfectly and slowly, because he is not active, the amount of oxygen taken into the body is insufficient. One exercising vigorously in the cold air out of doors breathes more rapidly, obtains a larger supply of oxygen, and the rubbish of the body — the uric-acid cinders — is burned up, and the whole system is kept clear.

This is why cold air is so beneficial to nervous people. The oxygen in the air burns up the poisons which irritate the nerves, and the person is relieved.

When one is tired, he gets rest quicker by breathing fresh, cold air; because weariness and exhaustion are due simply to an accumulation of poisons and other waste matters generated by work and retained in the body, and these are burned up by the oxygen taken in through cold air.

The cold-air cure is coming to be recognized as the most effective for invalids. At Davos, up among the Alps Mountains, there is an establishment for cold-air treatment. Each patient is expected to take a treatment three times daily consisting in lying outdoors from half an hour to an hour, according to his strength. Every one is compelled to take the treatment during the night, also, for the windows are never allowed to be closed in that establishment, and yet the winters are severe. But with plenty of warm coverings, and a hood over the head and ears, the patients can bid defiance to Jack Frost while they inhale the life-giving oxygen of the cold, fresh air. This institution is becoming world-famous for the cure of

consumption. Twenty years ago this disease was considered incurable, but it is now regarded as one of the most curable of chronic diseases when taken in the early stage. Fully one half of the patients suffering with tuberculosis, when placed in out-of-door hospitals, make a satisfactory recovery. It is reasonable, therefore, to suppose that if fresh air will cure the disease, it is likewise a preventive of it.

Many people delude themselves into the belief that an accumulation of garments will prevent their taking cold. We remember one gentleman who came to a sanitarium for treatment. He had the appearance of being a large, portly man, but when his case came to be investigated in the examining office, it was discovered that he was not above ordinary proportions, but that he had a great deal of clothing on his body. He wore, outside of his clothing, a woolen blanket folded into four thicknesses; then he had on a thick coat, pantaloons, vest, and a knit jacket, and under these, two thick, woolen undershirts; and underneath all these, he had a sheepskin with the wool on, and the wool was next to his body! He was disappointed, when he came to the sanitarium, because his treatments were not all warm baths. He had been in the habit of cooking himself until he was parboiled, and had lost his power to resist cold. In order to train his body to better resistance, he was induced to dispense with one extra garment and then another, but it was difficult to get the woolen blanket and the sheepskin. The efforts of the young man who was nursing him proved futile for a long time, as the patient was sure he would take cold without these protections. The nurse finally captured the blanket, but the sheepskin the young man thought he could not get off. However, he persevered, and one morning he came to the physician's office with sparkling eyes, and almost shouted out, "I've got his pelt off at last." By careful training the gentleman's skin became active and strong enough to react, and he finally went home cured of his trouble. Artificial clothing is necessary, but any more than is needed is objectionable.

Out-of-door exercise and fresh air are most effectual means, not only of creating an appetite, but of encouraging assimilation. Food may be taken into the stomach without being taken into the blood; and after it gets into the blood, it may be circulated and yet not be utilized by assimilation. Many people say, "I have a good appetite; I eat heartily, but I don't gain in flesh." This is because the food is not well assimilated. Assimilation is the process by which food materials are transformed into living, active, thinking, moving substance. Cold air, sunshine, and exercise are among the most effective means of stimulating this process of assimilation. Appetite is simply a demand for new material. It says, "The body has suffered loss, and that loss must be replaced."

It is important, too, that one have plenty of fresh, cool air at night when sleeping. If one sleeps in a warm room, he will wake in the morning unrefreshed and feeling miserable. If afraid of taking cold, raise the window and lie so that the air will blow on the face, protecting the back of the head and the ears, if necessary.

We have heard of a man who has a box one end of which extends out through the window where a pane of glass has been removed. Over the outer end of the box is tacked some cheesecloth, so that the air will be filtered as it comes in through the end of the box. He takes pains to keep warmly

covered and to protect his ears with a cap. By this ingenious method of sleeping outdoors while still in the house, he has cured himself of consumption. His apparatus was made more effective by connecting the box with the chimney, so as to provide a current of air. He always sleeps in a draft, and in consequence of this arrangement he does not take cold.

THE SANITARIUM LAWN, CHRISTMAS MORNING.

## DECEMBER

THE music of the brook is hushed,
Its restless motion stilled;
The leaves are faded, fallen, crushed,
The air with frost is filled;
The leafless trees look strange and lone,
And wildly toss their arms and moan.

The blackbird's notes of sturdy cheer
From out the treetops ring;
To drape the earth the clouds draw near,
A fleecy garment bring,
And wrapped in folds of purest white,
We bid the dear old year "Good night."

— *Good Housekeeping.*

# DRESS AND DEFORMITY

BY MRS. E. E. KELLOGG

THE trouble soonest to meet our first parents, following the fall, was in respect to dress, and dress has in one way or another been a worriment and hamper to the majority of their descendants ever since. With some it is the *lack*, with others the *love* of apparel which stands in the way of their making the most of life. A still greater number are hindered from attaining that wholeness and perfectness which is their natural dower through the wearing of garments misfitting and misshapen. A curious anomaly of this fact is that these same garments are supposed to be "just the fit," the "exact shape," and so they doubtless are as relates to the ideas of conventional attire.

The study of rational dress must begin with a study of the human body itself, with the purpose to fit this body just as the Creator made it. Ordinarily the effort is made to fit the figure into some style of garment which accords with the prevailing mode, rather than to shape the dress to the body.

Beauty and symmetry characterize all the works of the Creator, but the human body in its perfection is the most infinitely beautiful of all divine creations. A study of its structure reveals exquisite form even in its minutest fiber and cells. Its strong framework of two hundred pieces of differing sizes and shapes is so carefully joined as to form a complete whole. Overlaid and rounded out with elastic muscles, then covered with the fair, satiny skin, it is indeed a piece of workmanship to excite our admiration. But even more wondrous are the various organs and intricate processes within this exterior which heat, replenish, purify, and regulate the movements of the marvelous whole, concerning which the psalmist truly says, "I am fearfully and wonderfully made." And, indeed, we could scarce expect it to be otherwise, for was it not fashioned by the Divine Artist in his own image?

That we are made "in His likeness" is the greatest of reasons why it is every woman's duty to care for her body in the very best manner, that she may the better fulfill the purpose of her Maker and the more fittingly represent him before the world. She is under obligation to the Creator to preserve her body as nearly as possible in conformity with the original pattern, and has no right to distort or deform it in any way. If, as is the case with most of us, she has the inheritance of physical weakness and imperfections, it is her privilege to cultivate the body, to improve it, to seek to secure for it sound health, correct poise, and such other modifications as will enable it to approach more nearly the beauty of that One in whose similitude it is made. It is her right to promote her bodily faculties by every proper means, to develop them in harmony with God's wise and beneficent laws. To seek to change the body in ways that will injure its physical integrity, or pervert the original ideal, or hamper its usefulness, is surely nothing short of sacrilege.

It seems almost beyond reason that any could be found who would seek thus to impair this wonderful piece of Divine workmanship. But the world over, there appears a propensity common to the race to seek to alter or disguise the natural forms of the body in

one way or another. The savage thrusts a bone or a piece of wood through her under lip, hanging thereto a huge disc, and imagines her beauty as much enhanced as does her civilized sister who bores a hole in the lobe of the ear, to hold a ring weighted with diamonds. The aristocratic Chinese mother crushes her little daughter's feet into a formless mass which she terms "golden waterlilies." Mothers of this enlightened twentieth century cramp the waist of a growing daughter into stiffness and stays, doing away with all flexibility and grace of movement, compressing and distorting the organs within the framework of the body, producing curves in the front of the trunk, which should be straight, with flatness at the back, where Nature intended curves, and considers that she is securing for her a "beautiful figure."

THE VENUS DE MILO.

The waist of a young woman put into corsets at the age of fourteen or sixteen may cease thereafter to increase in size, but since the period of growth and development covers six to eight years longer, it will be apparent that abnormal conditions must result. The rest of the body will continue to grow. If an arm or other portion of the body is so bandaged or confined that there is no room for development, its muscles cannot be properly matured; hence deformity is occasioned, for that which is not true *form*, correct *form*, in accord with the Creator's plan, is *de*formity. We would mourn the misfortune of a hunch back; why not lament the deformity of a wasp waist. Is the one a greater remove from the normal figure than the other?

That beautiful statue, the Venus de Milo, is as nearly a representation of the perfect form as anything that can be found in these days. The proportions of the statue are such as belong to the natural, normal body. The waist measure is 47.6 per cent of the height. Reckoning upon this basis, we find that for a woman sixty-four inches in height (five feet, four inches, the average height of the majority) the waist measure should be about thirty inches, varying somewhat, of course, as regards plumpness and size with different individuals. The out-of-proportion waist measurements of from eighteen to twenty-three inches are far more common than the normal dimensions of the beautiful Venus.

Distorted ideals have been for so long before the eye that the human form as God fashioned it appears wholly *out* of fashion to the minds of a great majority. As if assuming that the Creator had made a mistake, those who design the prevailing modes, and those who follow the mandates of fashion have leagued together to correct Nature and give "form" to the human figure. We are shocked when we read of the

efforts which people in other lands put forth to modify the head and feet, which, shaped according to Nature's plan, are considered "out of style" with them.

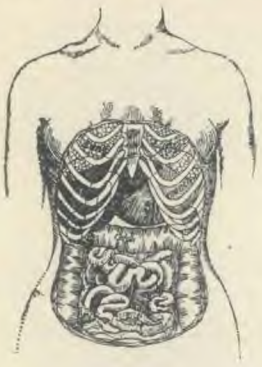
But, in reality, they do the body less harm than is occasioned by any means which compresses or restricts its important central portion, wherein are all the vital organs. Nature has packed the cavities of the body full, and there is no way of changing the shape of the figure to make the waist tapering and smaller than it naturally is without displacing some vital organs. There are no vacant spaces inside the body; when the walls of this middle portion are compressed, the organs which naturally occupy the space are pushed below or above, pressed and crowded one upon another, so that the entire viscera is put out of harmony, and when disorder thus obtains, pain and disease naturally follow.

A Fashion-deformed Woman.

The blood, that living stream continually flowing to and fro through the body, taking nourishment to each organ and washing away the impurities and waste, must itself be purified while passing through the lungs. Air cells of the finest and most delicate tissue make up the structure of the lungs. Without the fullest and freest expansion of each of these million or more air cells, it is impossible that oxygen enough come in contact with the blood to cleanse it thoroughly. Whatever impurities are retained, are carried back again into the circulation, creating soon an accumulation of waste and poison to render the tissues unhealthy and the body diseased. Compression upon the bones and muscles which form the chest and trunk walls over the lungs, hinders the expansion of these delicate cells. Even so slight a pressure as that due to the weight of a gentleman's clothing, when heavily dressed for winter, is said to diminish respiration about one-fourth. It is not difficult to imagine what will be likely to be the result of the wearing of any tight or but partially flexible article upon this portion of the body.

The process of breathing is accomplished by muscular action. In normal respiration, the movement is an expansion of the trunk in the region of the waist. With women who habitually wear waist-constricting garments, the principal movement is at the top of the chest, an abnormal breathing process, but one which has become so common through the waist constriction which generations of civilized women have been practicing, that some physiologists have supposed this mode of respiration to be the natural one for women, and have in their text-books so stated,— that costal respiration is normal for women, and free chest respiration the natural way for men to breathe. More thor-

ough investigation has, however, proved this to be a fallacy. There is no sex in respiration. In women whose clothing has never been such as to interfere with normal respiratory movements, the type of breathing has been found to be precisely the same as in men. That such a majority of women do breathe with only the upper part of the chest is evidence of a deformity which it should be their earnest desire to correct as speedily as possible.



THE INTERNAL ORGANS IN NORMAL POSITION.

The corset is the article of apparel most commonly under condemnation as the means of injury to the body, and it is fully deserving of all that is said against it, but it is in nowise the only offender. As much harm comes from tight belts and tight waist and skirt bands, particularly if the bands be attached to the heavy skirts at present so universally worn, as from the corset. Many who imagine they have made a praiseworthy reform because they have discarded the corset, are damaging their bodies by the constriction of the waist by bands of some sort. Nothing tight, stiff, firm, unyielding, whether wide enough to confine the whole middle part of the body or so narrow as to cover but an inch of its circumference, can be worn with impunity about that yielding portion of the trunk which should expand its entire length with every breath. It is difficult for women to convince themselves that their clothing is tight. Is one expostulated with, she at once draws in her figure, gathers a fold of garments in her hand, and says in a much injured tone, "*My* clothing tight? Just see how loose it is!"

There is one test: Remove the clothing and measure the body in its fullest possible expansion, then measure the bands, the waists, or other garments commonly worn, and compare. If the clothing is of the proper looseness, there will be no difference in the measurements. Such a test will generally make it evident that bands and belts of sufficient looseness rightly to serve the body, that is, to permit full play of the breathing muscles, will be of little service in keeping the clothing in place. Made loose enough for proper breathing, the band will slip down upon or over the hips. A band must of necessity be tight if it is to be depended upon to keep the skirts in place, that is, tighter than it ought to be, for, like most other things, there are degrees of tightness. Even a slight pressure about the body, long continued, does harm in the weakening and wasting of the muscles and tissue. Rational clothing dispenses entirely with not only corsets, but bands, and provides single garments for the entire body, suspended from the shoulders, or separate garments buttoned together closely.

THE INTERNAL ORGANS DISPLACED BY WAIST CONSTRICTION.

That woman can persuade herself that the conventional dress is desirable and comfortable, as often asserted, is due to the force of habit. Were she to

study the body and to know it well, she must see that her powers are lessened, her privileges diminished, her health undermined, and even life shortened when the body is so clothed as to restrict any function.

To commit suicide is generally looked upon as an unlawful proceeding. Pray, what is the moral difference, whether one's natural term of life be shortened with a tight rope around the neck or a constriction around the waist? The one may occupy less time in execution, but is not the principle the same?

## MAKING A DRUNKARD

THE Lord does not arbitrarily make either drunkards or invalids; nor does he permit the devil to exercise such unlimited power. Modern medical science recognizes that it requires seed-sowing to produce either a dyspeptic or a drunkard. The fact that multitudes are born with strong predisposition in either direction does not alter the principle, for they only represent an extended harvest resulting from the sowing of their ancestors. The most emphatic statements of the leading men in the medical profession only serve to confirm the inspired declaration which was put on record long centuries ago: "The curse causeless shall not come."

The same energy which is spent in restoring one invalid to health, if utilized in a thoroughgoing health educational work, would save a hundred people from becoming sick. Similarly, the work required to reclaim a drunkard, if used in instruction, pointing out clearly and definitely the successive steps in the evolution of a drunkard, would result in preserving thousands from a drunkard's career. Shall we therefore cease to treat disease intelligently or labor to save the drunkard? By no means. "These ought ye to have done, and not to leave the other undone." But it is not enough merely to portray to the young the terrible evils of intemperance, or paint in all its frightful truthfulness the picture of a drunkard's fate. A child cannot be saved from diphtheria simply by teaching him the nature of its painful symptoms; he must be taught how to cultivate such a degree of health as shall lift him above the disease line. Likewise a young boy must be taught how to sow for temperance instead of deliberately sowing for intemperance; for the saloon, instead of being the first step in the drunkard's career, is often the devil's hospital where he sends those who already have a thirst created within them.

When the child is daily taught to eat mustard plasters in the form of condiments and highly-spiced foods, he is physiologically having a thirst created within him which the town pump knows not how to quench. Tea, instead of being "the cup that cheers but does not inebriate," is precisely the opposite. The free dispensaries of our large cities are crowded with women who are victims of tea intoxication, just as the hospitals are being filled with men suffering from the effects of drink. The mother who has to be "kept up" by the magic influence of her daily cup of tea, will discover to her sorrow that her boy, with his less sensitive nerves, will require one of these days something a little more stimulating to arouse his nerves than her cup of tea.— *David Paulson, M. D., in the Union Signal.*

# HEALTH AND WEALTH

BY

## Benjamin B. Keech

I have a wealthy neighbor who
Is rich in land and gold:
His grand and costly houses do
Some priceless treasures hold;
Yet he would trade them all if he
Could only proudly share
The many things contentment brings,—
Surcease from pain and care.
He's quite unhappy, for his wealth
Has never brought the blessing health.

I have a healthy neighbor who
Has muscles sound and strong:
His head is clear, his heart is true:
A thankful, happy song
Wells up within his breast, because
He lives in harmony
With Nature's laws; there are no flaws
That greed has wrought, you see.
He is quite happy, for his wealth
Is summed up in the blessing health.

# THE CONTAGIOUSNESS OF HEALTH

BY J. H. KELLOGG, M. D.

A CERTAIN lecturer once said that if he had been present when the world was made he would have offered the suggestion of "making health contagious instead of disease." But he was laboring under a very foolish and mistaken idea, for in reality health is contagious. We catch health easily, but it is hard work to catch disease. For instance, if a man wishes to get smallpox, he must go and hunt up some one who has the disease in order to secure it. If he desires typhoid fever he will have to swallow typhoid fever germs and weaken his system in other ways in order to be susceptible to it. The man who gets tuberculosis must prepare for it year after year before he can get it, and is likely to catch consumption. That is the reason why boys and girls are not likely to have this disease. It takes years to wear away enough of the natural strength of the constitution so that the germs can thrive and grow in the body. The same is also true of dyspepsia; think how hard a man has to work in eating unwholesome things in order to make a real monumental dyspeptic; it takes no small amount of trial and trouble to make a gigantic dyspeptic.

So, while we catch disease with difficulty, we catch health easily; the wind is full of it; the sky is covered with it, and the glorious sunshine falling strikes health into our bodies. But unfortunately while we sing about letting the "sunshine in" we do not do it. We shut it out of our homes and away from our bodies. Some people are so afraid of air, fearing that if it should strike them they would get pneumonia; but one cannot get pneumonia without pneumonia germs, and in order for them to thrive in the body, it must first have been made susceptible to them.

We must be engaged with the thought of cultivating health sufficiently that we may live above the germ line. What the chronic invalid needs is to get above disease and live above it.

## BE STRONG!

Be strong!
We are not born to play, to dream, to drift;
We have hard work to do, and loads to lift.
Shun not the struggle — face it; 'tis God's gift.

Be strong!
Say not the days are evil. Who's to blame?
And fold the hands and acquiesce — O shame!
Stand up, speak out and bravely, in God's name.

Be strong!
It matters not how deep intrenched the wrong;
How hard the battle goes, the day how long;
Faint not — fight on. To-morrow comes the song.

— *M. D. Babcock.*

# EXERCISES FOR THE TRUNK

BY TELL BERGGREN

THE importance of exercising the muscles of the trunk cannot be too strongly emphasized in this magazine. Our main object in writing this article is to describe those trunk exercises which have proved especially valuable in obtaining an ideal development. A normal tone of the muscles of the trunk is absolutely necessary in order to secure proper position and action of the vital organs. The importance of this must not be underestimated.

The following quotation will help to illustrate this point more clearly: "The vigorous development of the muscles of the trunk is of even greater importance than the development of the arm and leg muscles. The development of the muscles of the chest is essential to the healthy action of the lungs. Development of the abdominal muscles is necessary to maintain the abdominal organs in their position and to assist in breathing. Strong back muscles are especially necessary to maintain a healthy poise of the body, which is essential to the healthy lung action, and to the healthy action of all the organs of the chest and abdomen. The neglect to develop the muscles of the back leads to weakness of the respiratory and abdominal muscles and to various bodily deformities, *external and internal*, such as flat and hollow chest, round shoulders, spinal curvatures and twistings, and displacements of the various internal organs."

This healthy condition of the muscles of the trunk and of the *internal* organs is secured by patient, systematic work and care, every day in the month, every month in the year. Carefully planned exercises are required by all, regardless of age. While the playful habits of the child may, to some extent, supply the need of systematic training, yet it is true that all children and youth are greatly benefited by such exercises. Nor does the need decrease with age. The vigorous man, whom all love and venerate, noble and grand in his fullness of years, is the man who has led an active life physically, and who holds himself, wholly, a representative of his Maker.

During a recent visit to one of the



1. 2. 3.

largest and best gymnastic schools in the East, especially to investigate the effect upon the students of the Swedish system taught there, its value was very forcibly impressed upon us. We watched first a class performance by the juniors, who had had only a few weeks' training. Numerous deformities, such as stooping shoulders, collapsed chests, sway backs, etc., were apparent. The next hour another exhibition was given by the seniors. Although in the past, hundreds of times, we had seen marvelous changes from systematic exercise, especially while studying in Stockholm, Sweden, yet the contrast excited our deepest wonder and admiration. It was marvelous to see these young people nearly all perfect. There was not a deformed pupil in the class. They seemed perfectly developed: chests raised, steps elastic; looking, indeed, like the temples of God, the masterpiece of his creation.

Why not wake up to the necessity of systematic exercise in our schools? Why let the young people of this great nation be allowed to neglect themselves to such terrible extent when only a year of systematic training would correct it all? Very many dangerous diseases would be prevented, and future generations blessed.

"How strange it is," says a noted author, "that while civilized man has improved the character of his dwelling, his temporary home, he should have made apparently almost no progress at all — has even retrograded — in relation to the building of his bodily structure."

**Trunk Twistings and Bendings.**

Take a large stride standing position. The wand is held on the shoulder, left (or right) arm sideways. If using an iron wand, it will be easier to let the forearm and hand rest over the bar, as in Fig. 1. This grip will make the movements steadier.

Take position of Fig. 1, wand on the shoulders, left arm sideways. Twist the body to the right till it comes in position of Fig. 2. Now twist to the left as far as possible without bending the knees or changing the position of the feet (Fig. 3). This twisting can be continued alternately to the left and right, swinging slowly, as a pendulum, from 10 to 100 times. Then change the position of the wand to the right side by bending the left and stretching the right arm, and repeat the twistings the same way.

4. 5. 6. 7.

Take the position of Fig. 1, left arm stretched. Bend the body alternately from left to right, 4 to 12 times. Then change the position of the wand, bending the left and stretching the right arm. Repeat the bendings.

Take the position of Fig. 1, left arm stretched. Turn to the right till the body comes to the position of Fig. 2. Bend to the right (Fig. 4). Return to position of Fig. 2, and then bend to left (Fig. 5). Bend 4 to 12 times each way; turn forward; change the position of the wand, right arm stretched as in previous exercises; turn to the left and repeat the bendings the same way.

Take the position of Fig. 1, left arm stretched. Turn to the left till the body comes to the position of Fig. 3. Now bend alternately to right and left, as in previous exercise (Figs. 6 and 7), 4 to 12 times each way. Change wand to the other side and repeat the bendings the same way.

Take the position of Fig. 1, left arm stretched. Turn to the left and bend to the right till the body comes in the position of Fig. 6. Now turn to the right, at the same time bend to the left, making the body twist in the shortest possible way from position of Fig. 6 to position of Fig. 5. Continue this twisting exercise, swinging as a pendulum from 5 to 50 times. Change wand to the other side and repeat the twisting and bending the same way.

Take the position of Fig. 1, left arm stretched. Turn to the right and bend to the right till the body comes in the position of Fig. 4. Now turn to the left and at the same time bend to the left, making the body twist in the shortest possible way from position of Fig. 4 to position of Fig. 7. Continue this twisting exercise, swinging as a pendulum from 5 to 50 times. Change wand to the other side and repeat the twisting and bending in the same way.

By bringing into vigorous play the *transversalis* muscles of the abdomen, the above exercises will greatly strengthen these muscles — "Nature's corset." The viscera will become better supported, and the capacity of the chest will be increased. The raising of the chest will also draw the viscera upward, create a negative pressure, and thus hasten the emptying of the contents of the vena cava and thoracic duct. The blood test shows an increase of five million red corpuscles per cubic centimeter. These oxygen-carriers are forced out from their hiding places in the portal circulation into the general circulation after five minutes of vigorous trunk exercise.

Each bending and twisting acts upon the stomach, liver, and intestines. The muscles of the stomach and liver are stimulated and made to contract and relax. Each contraction forces some of the blood out of the muscular walls; each relaxation draws or allows a fresh supply to come in. The same is true of the liver and the glands in the stomach and intestines. These exercises stimulate them to greater activity. The absorption of the food is hastened, and the entire digestive process is made better.

It is not advisable, however, to take all of these exercises at one time. They can be taken in groups with other exercises, especially leg and arm movements, so as to assure an all-round development and perfect circulation.

When taking any exercise, special attention should be paid to deep breathing. The chest should not only be raised, but should be widened laterally and from front to back. This is of great importance.

Deep and full breathing is most ex-

cellent as an exercise for the muscles of the abdomen, besides having a stimulating influence on the circulation, promoting oxygenation of the blood to a remarkable degree. These special movements should therefore be alternated with running, jumping, swimming, and other vigorous exercises.

By bringing a larger number of the muscles of the body into play, naturally an increased demand for oxygen will be secured. The blood will become purer and the general health and strength of the body will be greatly increased; the appetite and digestion will improve, the vital tide rise higher.

## LIFE'S SUNSHINE

LET in a little sunshine
Each day on some dark life;
The world's in need of lights; let thine
Gleam brightly through the strife!

A gentle word is better
Ofttimes than gift of gold;
A smile may break the fetter
That long some heart did hold.

Few rarer gifts are ours
Than handclasps warmly given;
And kind deeds are the flowers
That make of earth a Heaven.

So let each passing day
Record some kind deed done;
Go smiling, giving, all thy way;
Be of thy world the sun.

— *Leigh Mitchell Hodges.*

## THE CHILDREN AND THE HOLIDAYS

BY MRS. E. E. KELLOGG

THE winter holidays are customarily looked upon as a festal season peculiarly belonging to childhood. No dearer privilege is ours than to give joy and happiness to the little ones, and it is well if these holidays shall be the purest, brightest days of their year. But encourage no surfeiting, either of sweets and dainties, or of toys or parties. Holiday excesses have become so common that certain digestive disorders are known as "Christmas ills" and looked upon as an inevitable sequence of the season. The profusion of gifts showered upon little people are likewise often a disturber of their mental digestion. So many new things are distracting; the child knows not which to enjoy first, so he greedily attempts to play with them all, and soon tires of every one.

Great discretion is needed in the selection of holiday presents for children. Such toys as will promote self-activity, such gifts as will aid in the healthful education of thought, are best. Flimsy toys encourage habits of reckless extravagance and destructibility. Those which are strong, durable, and simple in construction are to be sought. Very dainty and handsome articles, while they appeal to the eye as especially attractive, are likely to prove a source of regret because "too nice to play with." Such toys as permit of the exercise of the child's own creative power are especially desirable. In fine, the key-thought in selecting a gift for the child should be not alone what the thing in itself *is*, but what the child can *do* with it, remembering, also, that one well-chosen, substantial article will give far more genuine enjoyment than a dozen poorer ones.



THE WEB (See page 597).

In Readiness for a Picnic Lunch.

The spirit of elaboration and display which characterizes so much of our modern American life is nowhere more out of place than in connection with the "good times" which seem the natural dower of childhood. The fresh, unspoiled natures of childhood respond readily and heartily to simple diversion and pastimes. To give zest to their enjoyment, the pleasures provided should include some that are new or rare, but let them be few in number and simple in character.

An entertainment not burdensome to arrange for, and one which appeals to the childish heart is an "indoor picnic." Two or three communicating rooms, or one especially large one, are desirable to afford sufficient space for play. These should be divested of such furniture as is easily movable and such bric-a-brac as might in any wise be harmed by the activity of the children. If one has access to potted plants, the rooms may be charmingly arranged to simulate a "real" picnic ground. A program of active sports and games may fill the time, which should be chosen from the daylight hours. From two o'clock till six, or from one till five, P. M., are suitable periods for such an occasion.

The lunch, which should be simple, but attractive, may be very prettily arranged on several different small tables,

one for each article to be served. The children, supplied with plate and napkin, pass from one to another of the daintily decorated tables, and are helped at each by some older person in charge. When

THE PICNIC PIE.

the plates are filled, the little ones are grouped about the rooms in regulation picnic style to partake of the simple fare. The following menu may serve as a sample : —

Ribbon Sandwiches

Toasted Fruit Wafers Stuffed Apples

Grapes Oranges

Nut Cake or Health Candy

If for some reason it be desirable to use a hot food, stuffed potatoes may take the place of some other article. These are prepared by baking uniform-sized potatoes until well done, then carefully cutting off the top, removing the inside to be mashed and seasoned and then returned to the shell, and the top replaced. The potato, wrapped in a dainty paper napkin, may be held in the hand and eaten with a fork or a spoon.

If favors are to be given, a nice way is to provide a picnic pie. A large pan (those of white ware are prettiest) is filled with sawdust, and the souvenirs hidden therein. To each souvenir is attached a long ribbon. The pie is covered with fringed tissue paper in which slits are made for the ribbons to pass. When the pie is brought forth, each child is given a ribbon, and at a signal "pulls out his plum."

Another plan for distributing the favors, and one which will prove of great interest to the children, is the arrangement of a spider web. Starting from the same point are a number of cords, one for each child, which if followed will lead to the right parcel. These cords crisscross over various parts of the house, being wound about furniture, over doorways, and through different rooms. Although not knotted or tied, the maze is intricate enough to afford much sport in trying to follow the cords.

If the day be a pleasant one in warm weather, this web may be arranged in the yard and thus afford a pleasant after-dinner out-of-door recreation, to be followed by additional open-air sports, — a fitting terminal for the festal occasion, from which the little guests return to their homes bearing with them, not the ill effects of nerve stimulation and unhealthful indulgence of appetite to make life's to-morrows miserable, but the memory of wholesome enjoyment to lend fragrance all along the pathway of their future.

## THE "THREE P'S"

BY MRS. L. D. AVERY-STUTTLE

THE day before Christmas had been cold and cheerless. Only once had the sun appeared, and then just for a moment, at its setting, like a great searchlight flashing dimly over the smoky city from behind a drapery of black clouds. The giant elm by the front gate tossed its bare branches, and moaned drearily in the pitiless wind. Already the darkness of a bitter night was setting in.

Suddenly a light flashed from one of the windows of the great house, and a sweet girlish face was pressed for an instant against the pane. Then a soft, clear voice rang out cheerily:—

"The Christ is born; sing, angels, sing;
Ring out, ye bells, your tale of joy,
And let the blessed tidings ring.
All hail the newborn infant King,
While heaven and earth their songs employ.

"The Christ is born; sing, sing, O Earth!
He came to bring thee hope and cheer,
Then let the tidings of his birth
Ring through the wretched homes of earth,
And banish sin and pain and fear."

"That sounds very well, Dorothy, child; it makes me forget this horrid headache. Sometimes I wonder if I'll ever see the place where 'the inhabitant shall not say, I am sick.'"

"But you're not going to be sick, Auntie, mine; you're going to be well. I don't believe it's the will of the Lord who made us that any of his children

should suffer. I have learned, Auntie, that suffering is often quite largely the result of ignorance and disobedience to the laws of nature; and now, since I am going to live with you, Aunt Eleanor, I am determined to set about nursing you back to health."

"Very well; but I am afraid you are undertaking a vast deal, though, indeed, your own rosy cheeks are a good testimony in favor of your manner of living. But come, Dorothy, sing me the rest of the song, and to-morrow, Christmas day, maybe if you're very good, you may try your wonderful medicines on your old Auntie; though Dr. Chalmers assured me to-day that I would probably never be entirely free from pain again."

"I have no wonderful medicines at all, Auntie, except the 'three P's.'"

"The 'three P's!' bless us! what can the child mean!"

"Why, those are the words that little Jennie Williams wrote on the blackboard at the hospital one day. Somebody asked her what she meant by the 'three P's,' and she said she only meant PURE AIR, PURE WATER, and PURE FOOD; and truly, Auntie, I believe that these 'three P's,' mixed with genuine common sense, will do more toward restoring my dear Aunt than all the drugs of the apothecary."

Then the sweet voice again took up the unfinished song:—

"The Christ is born: at his command
Disease and pain and sorrow fled.
He touched the sick with healing hand,
And with his Godlike presence grand
Despoiled the dwelling of the dead."

All unconscious of any listener save Aunt Eleanor, Dorothy sang on. But the sweet sounds had reached the ear of another,— a tiny mite of humanity crouching behind a friendly corner of the old veranda for protection from the cruel wind.

Poor little Nan. Half sick and shivering, homeless and alone. As the song continued, timidly the shrinking child crept nearer the window —

"Then let this be your Christmas cheer:
Sing, shepherds, sing; the Christ is here."

Fascinated by the spirit of the song, and possessed with but one idea, Nan tapped gently on the window. Perhaps the Christ would make her well and strong. If he were inside the great house, she must see him. Her mother had told her long ago, before she went away, that Christ would take care of her; but it had been so long since she had heard anything about him!

Again the blue fingers rapped tremulously on the window.

"Why, Aunt Eleanor! dear me! what little brown sparrow have we here?" and the next moment Nan found herself in the warm, cozy sitting room.

"Please, I'm awful cold and hungry, and I wants to see the Christ you sung about; you said as he was here."

"I hope He is,— hope He is! but Dorothy, we can't have the — the child here,— what can be done with her?" said Aunt Eleanor in perplexity; for Nan was looking wildly about her, and sobbing bitterly.

"In the first place, I think I'd better take her down to the kitchen and ask Kate to fix her a nice hot supper, and, Auntie, by your leave, I think here is a fine chance to try the virtues of my 'three P's' — pure food, pure water, and pure air."

With wondering eyes Nan followed her guide. A warm bath, and a clean slip belonging to the little daughter of the cook quite transformed her. What! was that nice bowl of brown bread and milk actually for her? How eagerly

her scrawny fingers clutched the prize!

"This must be Christ's house; and I must find Jim," she exclaimed eagerly.

"Jim? who is Jim? your brother?"

"Nope, just Jim, that's all; he allus gives me part of his dinner when he gets any."

"Well, child, what's his other name? He must have some other name besides Jim."

"O mebby, I dunno, but I guess they hain't no name 'cept Jim; he's lame, Jim is."

And the little waif began an enthusiastic and very realistic description of Jim; for the childish tongue began to grow limber under the softening influence of warmth and light and food and the cheer of kindly faces.

"Where does Jim live?"

"Nowheres,— 'cept sometimes he sleeps in old Mike's cellar. But the rats is so thick, Jim says they is too many fur him," explained Nan, with an air of great importance.

Aunt Eleanor heard the voices in the kitchen, and though she had declared she was uncommonly ill and must not be disturbed, she had a great curiosity to see what her niece was doing with the waif; so, what was that young lady's surprise to see a white-robed figure swiftly cross the dining room and pause in the kitchen doorway, while a rather peevish voice exclaimed: —

"Dorothy! Dorothy Jane!" Aunt Eleanor always called her niece by her full name whenever she was displeased or excited.

"Dorothy Jane!"

"Yes, Auntie!"

"I'm surprised at you, Dorothy! What on earth do you intend to do with that little ragamuffin? Here I am with a raging headache,— and dear me! don't you realize, Dorothy, that we are likely to be run right over by a lot of tramps and robbers, and — and — everything? I declare, it's awful!" sniffed Aunt Eleanor hysterically.

"I don't see anything awful in feeding a hungry little girl," smiled Dorothy.

"I ain't hungry no more, but poor Jim, I s'pose *he* is,— 'cause Jim's allus hungry."

At mention of Jim, Aunt Eleanor's curiosity prevailed, and forgetting her headache and her slippers and gown, she began catechising the child, until she had told everything about Jim that she could tell.

"No, I ain't hungry no more, but I'm sleepy, and my legs and arms aches me so! S'pose the fine lady 'd let me stay till mornin'? I 'd curl right down here on the floor, an' I would n't make no fuss."

The child could not have done better than to appeal to Aunt Eleanor's vanity by calling her a "fine lady,"— and besides, Aunt Eleanor was by no means without a heart. So it was decided that Nan was to stay; and Dorothy and Kate fixed her a cosy bed the like of which she had never seen.

"Well, at least, the child has made me forget my headache, I do believe, Dorothy," her aunt admitted that night as she went to bed. "But I dare say it will come again before long, so if you 'll just fix those sleeping powders the doctor left, maybe — "

"Look here, Auntie; I believe I 'd let that drug alone to-night; try it, anyway, and — wait, Auntie, I'll just raise the window a little — so — there won't be any draft over your bed at all."

"O child! you are going to let in the night air! do you forget my — "

"You 'll be all right, Auntie. I want you to go to sleep whispering the second verse of John's third epistle,— that 's better than any drug."

So in spite of many protestations that she would probably suffer no end of trouble in the night, Aunt Eleanor awoke Christmas morning ready to acknowledge that she had slept very well, and had felt no evil effects from the "night air."

"You see, Auntie, the good effect of only *one* of my 'three P's.'"

"O, that reminds me, Dorothy. I wonder how that — that child is this morning. I've been thinking, Dorothy," continued Aunt Eleanor in a contrite tone, "that maybe we might fix her up something, since it's Christmas, you know."

"It's very kind of you, Auntie; I'll go down and see."

But the child had vanished. Kate could give no account of her, except that she had slipped out while she was busy, and she guessed she had gone for good.

"There, it's just as I told you!" commented Aunt Eleanor crossly. "The child is nothing but a tramp, anyway,— and a thief likely as not."

"I don't believe it, mum," protested Kate. "The child had a good face and— "

But in the midst of the conversation, in walked Nan at the kitchen door, dragging with her a little boy,— lame and ragged, and O, so dirty!

"This is Jim," simply announced Nan, "and he's hungry, Jim is."

"Dear me! do you intend to turn my house into a hospital, Dorothy?" questioned Aunt Eleanor when the strange little pair stood in her august presence. "Whatever shall we do with the — the poor little things?"

"Try the effect of my 'three P's,'" triumphantly suggested Dorothy, who saw plainly that a motherly chord in her aunt's heart had been touched. "I think God has sent you a Christmas present, Auntie."

* * * *

Five years have passed away. Christmas eve has come again. The wind blows drearily through the bare branches of the old elm, as on that Christmas eve five years ago; but within there is an air of happiness and cheer. Dorothy is at the piano, and standing by her side is a tall, manly-looking lad, whom we recognize by his slight lameness to be the Jim of old. A sweet-faced young girl has been reading aloud to Aunt Eleanor.

"Dorothy, dear, do you remember five years ago to-night? Ah, what a good work has been done by the grace of God and your 'three P's.'"

Then out from the old mansion rang four sweet voices; three of them soft and musical, one tremulous and full of feeling:—

"The Christ is born; sing, sing, O Earth!
He came to bring thee hope and cheer;
Then let the tidings of his birth
Ring through the wretched homes of earth,
And banish sin and pain and fear."

**How the Mistletoe Comes to Be.**

The story of how the mistletoe gets on the trees is a most interesting one. Covering the mistletoe twigs are pearly white berries. These come in the winter season, when food is comparatively scarce, and hence some of our birds eat them freely. Now when a robin eats a cherry, he swallows simply the meat, and flips the stone away. The seed of the mistletoe the bird cannot flip. It is sticky and holds to his bill. His only resource is to wipe it off, and he does so, leaving it sticking to the branches of the tree on which he is sitting at the time. The seed sprouts

after a time, and not finding earth, — which indeed its ancestral habit has made it cease wanting — it sinks its roots into the bark of the tree and hunts there for the pipes that carry the sap. Now the sap in the bark is the very richest in the tree, far richer than in the wood, and the mistletoe gets from its hosts the choicest food. With a strange foresight it does not throw its leaves away, as do most parasites, but keeps them to use in winter, when the tree is leafless.— *Prof. S. C. Schmucker, in Ladies' Home Journal.*

## HEALTH IN ACTIVITY

A WRITER in a recent magazine offers the following plea for more freedom of movement for babies. She says: —

"Mothers seem to rest under the universal delusion that their little ones ought to be contented to rest in almost immovable quietness, just as if they were the wax and sawdust dollies of the playthings of a few years back.

"Curiously, not one of these overloving mothers, in the desire to keep the little ones in rigid quietness, has progressed very far from the methods of the Indian mother, who bound her papoose to her back, in a basket, or the Italian mother, who sews her baby into yards of cotton, not to be removed until the rags almost drop off as a result of old age.

"It seems so strange that modern, educated, athletic women fail to appreciate the need the little one feels to exercise its muscles, to kick and roll about, and to wave its tiny hands about in the air.

"Not one of us can appreciate the sufferings the little one endures when, hampered with long skirts, downy covers, and sometimes pinned to the mattress with strong pins, it is left to lie for hours, so hampered and uncomfortable that it cannot move even in its sleep, through the mistaken kindness and solicitude of an over-affectionate, under-educated mother.

"Modern science has taught us much about modified milk and against the overloading of an infant's stomach; and that the danger to the child is greater in overfeeding than in lack of sufficient nourishment; but little or no attention is paid to instructing parents in allowing a child freedom for its muscles, light covering and change of position for a helpless infant, as elements in keeping a child healthy and happy.

"All of us have experienced the horrible, cramped, uncomfortable feeling described by many as a 'foot asleep' or an 'arm asleep,' after remaining for some time in one position; and we all appreciate the aching, tingling, uncomfortable sensation and at the same time realize how hard it is to bear.

"Yet this memory and the keen recollection of our own discomfort and inconvenience seldom suggest to us that baby perhaps lies in speechless agony, aching to be turned over, or even to lie almost naked, perhaps covered only with a little shirt and band, which is quite safe if the temperature of the room is normal, to toss his heels in the air and feel free.

"Unable to talk, and in torture, an infant's pitiful wail is usually ascribed to hunger, and it is plied with food, when rest from confinement, and not either of the two usual complaints,— hunger or a safety pin,— is the cause.

"Sometimes a weeping child may be soothed and comforted by gently rubbing its little body with the hand. The massaging seems to soothe baby's excited nerves and take his attention from the pain or nervousness that has made him miserable.

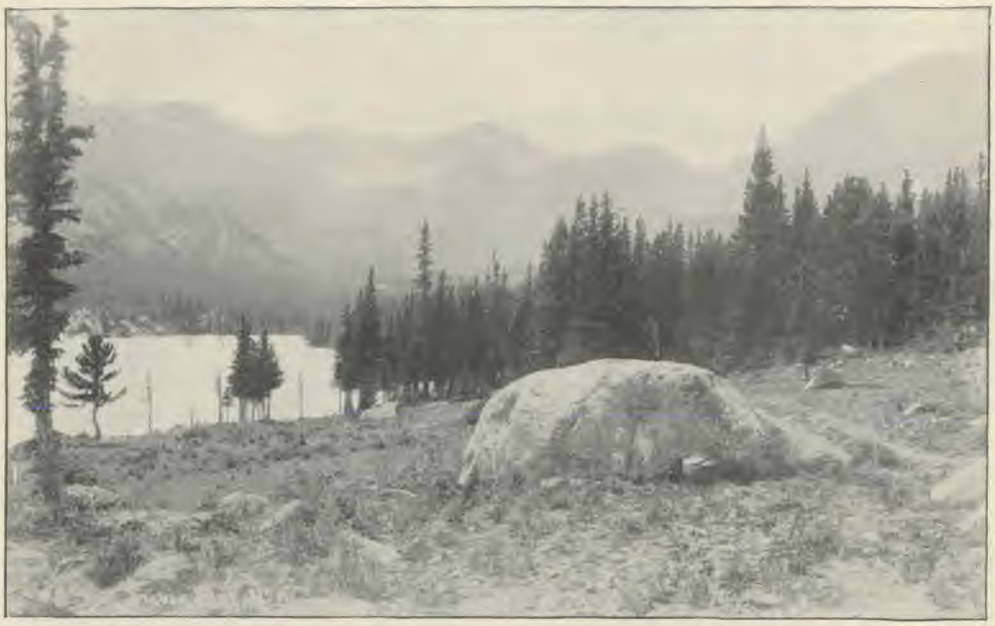
"Grandmothers, the few who survive with the notions of child-rearing which was followed for years, tell us that babies were born, reared, and flourished long before the newfangled methods were discovered; but there are no statistics compiled to show us how many more children would have survived the foolish methods of past generations, nor have we any proof that the present generation does not represent "the survival of the fittest," like the present race of Indians, who are remarkable now as ever for their strong physiques. They are an example of the survival of those who are strongest; for the weak or crippled die, and only the strongest live to prove that Indians are remarkably strong, vigorous, and healthy by constitution.

"Let the baby lie on the bed sometimes naked except for his little shirt, and give him freedom to toss his heels in the air, throw his arms about, and crow and laugh. The exercise loosens up all his muscles, and is of great benefit to him."

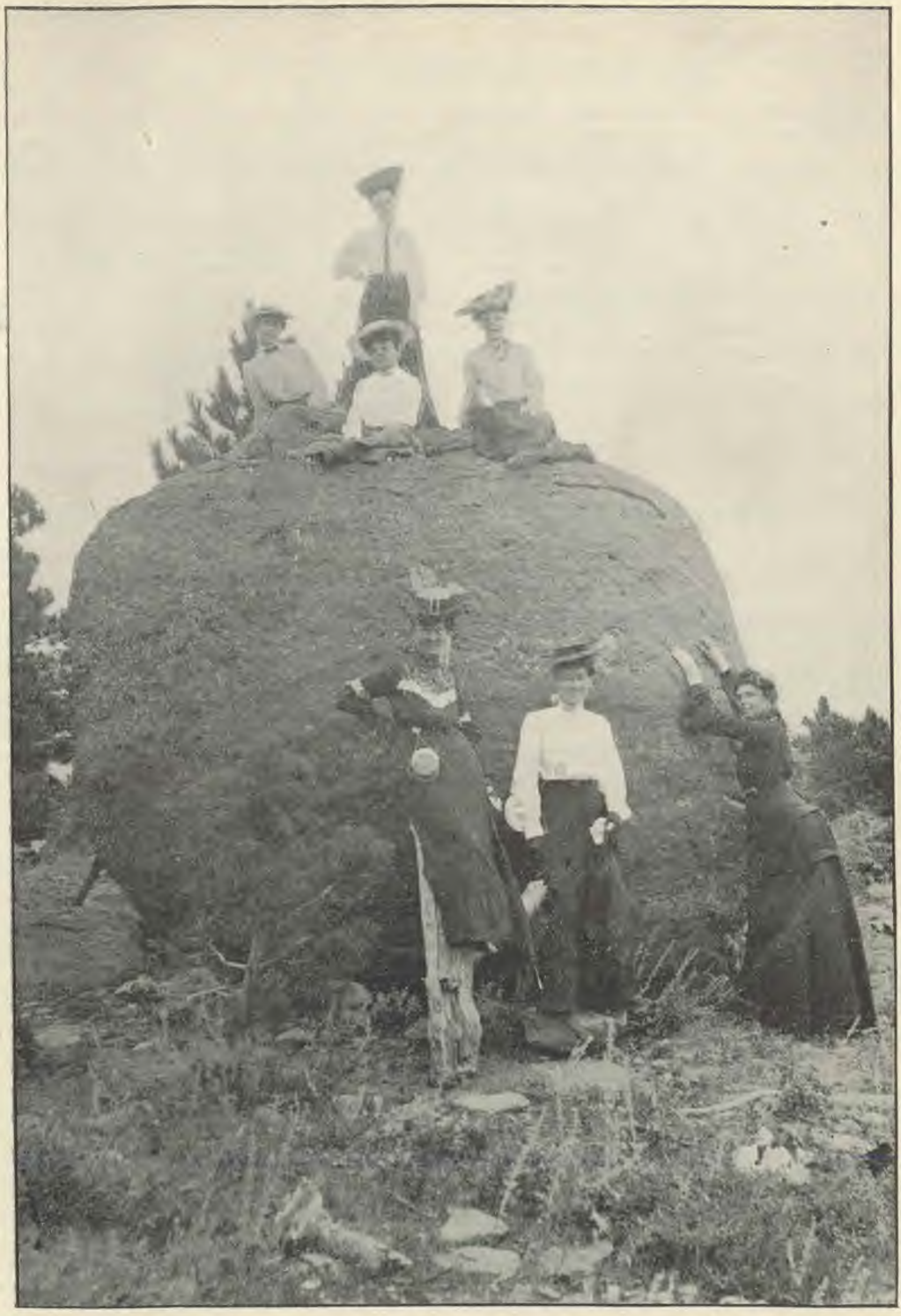
## WINTER HYGIENE IN THE ROCKY MOUNTAINS OF COLORADO

BY KATE LINDSAY, M. D.

HYGIENE, to be of practical benefit to mankind, must be studied scientifically, and the facts thus acquired applied as an art to improve the health and well-being of mankind. How winter hygienic failures can best be remedied



WINTER HYGIENE IN THE MOUNTAINS.



A Winter Picnic. 603

AT THE SPRING.

is a very important question. It is true that many infectious disorders, as colds, influenza, acute bronchitis, pneumonia, whooping cough, diphtheria, pulmonary tuberculosis, as well as the eruptive fevers, are especially prevalent and fatal during the fall and winter months. That the lower temperature range does not account for this marked increase of these disorders is abundantly proved by the fact that persons who spend life indoors, in an overheated, foul atmosphere, are the chief victims, while those engaged in vigorous manual labor in the open air, even in the frigid zones, escape almost entirely. The person who, when winter comes, smothers himself in flannels, wears chest protectors, and lives beside the stove or register in a hermetically sealed room, dreading every whiff of pure air as a dangerous draft, has a cold all winter, complains of weak lungs, and will almost surely contract nasal catarrh, bronchitis, or pulmonary tuberculosis, while the woodman, the sailor, the soldier, the hunter, escapes.

Facts indicate that it is not the cold air, but the foul air in winter, the indoor life, and lack of proper exercise and sunshine which favor the development of the air-born microbes, and by impairing the healthy nutrition of the body, predispose to their infectious disorders. A mouse shut in an air-tight receptacle, will in a short time smother to death in its own foul exhalations from skin and lungs. The man, woman, or child in an almost air-tight room, office, church, or hall is not only sur-

rounded by his own wastes, but also those of his comrades,— practically a filthy air bath, adulterated with pints of the foul fluids and gases given off from every skin and exhaled from every pair of lungs. In these dark, hot rooms, infectious microbes find just the conditions which favor their development,— heat, foul matter and air, and on the impaired mucous surfaces the needed moisture. Out of doors, especially in the country, air taken into the body is pure, as the foul exhalations are borne away by the winds and constant change of place, and the functions of the body are performed vigorously because the blood circulates normally, bringing to each tissue its proper share of oxygen and other food elements, and swiftly carrying off all wastes.

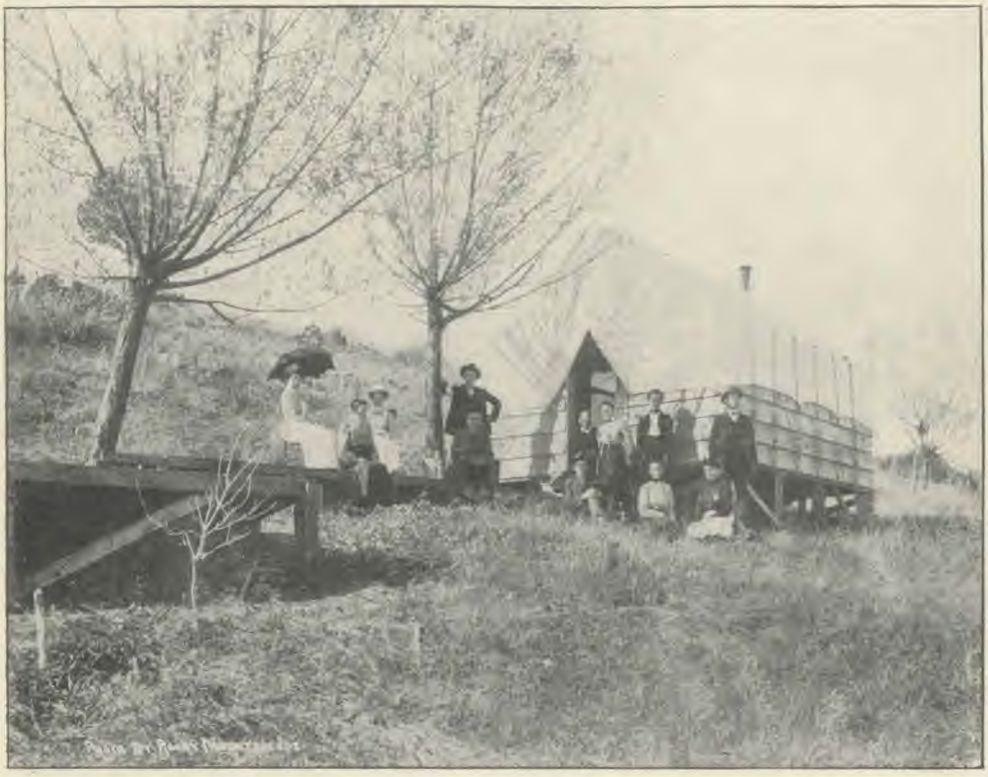
The fact that air is one of the most important food elements is not duly appreciated. One can live forty days or more without solid foods, ten days or more without water, but only four or five minutes completely deprived of air. And it has lately been demonstrated that oxygen is not the only element which air contributes toward human nutrition, but that the formerly supposed inert nitrogen in this gaseous mixture is appropriated by certain plants, as the clover and legume families, and by the assistance of good microbes fertilizes the soil, and feeds the human and lower animal creations with the essential nitrogen elements demanded by all bodily structures. The Creator has made all things for the good of man if he but knew their proper use.

These facts being true, it is proved conclusively that improving the winter hygiene means furnishing the body, both outside and in, with the proper amount of clean air, — both as the breath of life and as an outside application, — out-of-door sunshine and exercise as well as all other proper health conditions. This implies that the best climate for good winter hygiene is the one which admits of the most out-of-door life with vigorous exercise; of open doors and windows with bodily comfort to the patient and the avoidance of chill and dampness.

The writer has spent nearly four years in South Africa, the great English winter resort for invalids, especially those suffering with pulmonary disorders; about two months of a midwinter in the far-famed French Riviera, the popular winter health and pleasure resort of the royalty and nobility of northern Europe and of American millionaires. And then there are Nice, Mentone, and Monte Carlo, towns on the north shores of the Mediterranean, sheltered from the cold north and west winds by the natural fortress of the French Maritime Alps,— land of palms and citron groves; and Asheville, N. C., amid the Appalachians, the Land of the Sky, south of Mason and Dixon's line,— yet in none of these favored sunny climes can so much time be spent out of doors even in winter as in many of the sheltered foothills with southern exposure in Colorado. In South Africa, where the mountain ranges of the east and south seacoasts form a picturesque background, and balmy sea breezes keep the air cool and fresh all the year round, there is a rainfall of fifty to ninety inches in from three to five months. This means days and weeks of indoor life in damp and moldy rooms, and often the air is made foul by the exhalations from the rapidly growing and decaying vegetation. The water supply is inferior, and the water-soaked ground makes outdoor life at times impossible for the invalid.

In the older, better-fitted European

winter resorts, good roads and other modern conveniences make it easier to get out of doors in wet weather. But many days are wet and rainy and even sleety in winter. The mornings often being damp and misty, the patient is kept indoors until late in the day, and on the warm, wet days he misses the bracing air, as well as the sunshine, of a winter day in the mountains.



Camping Out in Winter.

Asheville and the Appalachian winter resorts of the southern States have all on an average two rainy days a week, and misty, dewy, or hoar-frosty mornings in winter, curtailing the already abbreviated day, and keeping the patient indoors much of the time, taking the year round, as well as making it chilly and damp underfoot outside. These resorts are pleasant places, and a residence in them during the cold season affords an opportunity for more out-of-door life than in the more stormy, colder, damper climate of the North.

But many well-selected Rocky Mountain resorts have more warm, sunny days, freedom from dampness and chilliness, combining with the warm sunshine of the South the bracing dry air of a Dakota or a Manitoba winter. The smaller number of rainy, cloudy, or snowy days in this region, the almost entire absence of damp, foggy, cold mornings even in midwinter, furnish plenty of time for out-of-door life. A sunshiny day means warm out of doors in sunshine from the rising to the setting sun. The mercury may sink to zero or below for a few days, but one can sit, without wraps, on the sunny side of a hill, on the rocks, needing only a parasol to shade the eyes from

the intense glare of the sunlight, and there, sheltered from the wind, the sun will keep one warm from the time it rises until it sinks behind the mountains. The soil is porous and soon dries after any rain or snowfall, so there are but few days in the year when mountain climbing and out-of-door exercise are not possible some time during the day. Winter picnics and walking parties may be planned for every month of the winter as well as through the summer months. Here is found the purest and best of soft water, supplied from the mountain streams fed by the snow-banks and glaciers of the higher mountains. Every foothill town and village has communication, by either stage or railway, with the outside world. Food and clothing are yearly coming nearer to Eastern prices. The mildness of the winter makes it possible to live with wide-open doors or windows, or in a tent or cabin, thus securing perfect ventilation, a fire being needed only evenings and mornings a great part of the time. All these advantages combine to make this region a model winter health resort.

This State raises the best of wheat and vegetables and a good supply of small fruits, as well as apples, pears, and other temperate-climate fruits. Good food is easily procured.

An important question often asked is, What class of invalids should come to Colorado? We would answer, Certainly all who are suffering with the malnutrition and debility of indoor life; all cases of obesity and inactivity of the excretory organs from sedentary life; all cases of indigestion and other alimentary disorders; those with a tendency to tuberculosis or who are in the incipient stages of this disorder; as well as those predisposed to *la grippe*, bronchitis, acute or chronic, and all other pulmonary disorders. Such will find here the needed conditions for active, open-air life. Do not wait for the tubercular germs to invade and destroy the structures of the lungs. Come when you can get well, with two useful lungs. Get away to the out-of-door life and pure air of the mountains in time to become entirely well.

The Colorado Sanitarium, situated to the west of the flourishing town of Boulder, on the southeastern slope of the foothills whose sunny slopes and cañons with south exposure stretch for miles northward and westward, affords just the needed facilities for out-of-door life. It is sheltered by the higher range from north and west winds, and affords sunny southeast, southwest, and south easy-grade hills to climb, where the patient may repose on a warm, sheltered rock, taking a sunbath, and view across Boulder Creek the snowy peaks of Flagstaff, Green Mountain, and Bear Mountain towering way above him toward the south,—winter and summer confronting each other with only a few miles between.

This institution, besides having the advantage of a warm, sunny climate, is fitted up with all the hydrotherapeutic appliances for using water, full baths, electric baths, Turkish vapors, electric light, sprays, pours, etc. It has an indoor gymnasium, and an outdoor one with a swimming pool on a little hilltop, where, as the illustration shows, the patients spend many hours daily in the open air even in November, suffering no inconvenience except a sunburn now and then to the uninitiated. The Sanitarium has also appliances for the use of electricity in all its forms — faradic, galvanic, static, etc.; for massage, active and passive movements; and for gymnastic exercises in well-equipped out-of-door and indoor gymnasiums.

It has ladies' and gentlemen's bath and treatment rooms; throat and lung treatment rooms; both ladies' and gentlemen's consulting and special treatment offices; experienced lady and gentlemen physicians; trained nurses, both male and female, and experienced at-

A Hill-top Swimming Pool.

tendants; also a well-equipped operating room and surgical ward; a five-story main building of brick, two three-story brick buildings, and a number of one-room cottages and tents. This entire Sanitarium village is heated with steam and lighted with electricity.

The institution has a ninety-acre park with Ossig's trail undulating up the sunny side of Mt. Sanitas, with a comfortable seat at every angle affording graduated, easy hill climbing, with frequent rests for the feeble; and for the more vigorous, loom up the rugged, rocky peaks of the higher mountains. On Sanitas' sunny slopes and in the valleys at its foot are springs of pure, soft, cold water; never failing, they flow on forever.

The cuisine is of the best, the tables being supplied at all seasons of the year with the choicest of fresh fruits, vegetables, and grains, healthfully prepared. The culinary department and dining room are on the top floor, so the odors of cooking do not permeate the rooms below. The outlook in all directions from the dining room windows commands a view of miles of plains, dotted with lakes, thrifty farms and hamlets, the wide-awake university town of Boulder, and mountain peaks towering skyward,— a feast for the mental as well as the physical man.

Patients suffering from pulmonary tubercular disorders have special provisions for treatment adapted to their cases, such as a sunny, glass-enclosed piazza along the south side of their special building; special throat and lung treatment rooms; and other special appliances and dietary. Those wishing to enjoy the benefit of a climate bright and dry may have either a one-room cottage or a well-fitted-up tent with board floor. This is, no doubt, the ideal place for open-air treatment for the weak lunged, because of the atmospheric purity. One illustration shows a tent home fitted for a coming winter residence of a pulmonary case. Other pictures show a party at the spring, and a winter picnic scene in the mountains, where often sunshade and fan are required. These are not fancy pictures, but a true representation of Colorado mountain scenes.

The writer would say to the anemic, weak-lunged invalid who looks for winter comfort to flannel chest protectors, chamois skin vest, etc., and listing doors and windows, and thinking of registers, steam coils, stoves, gas heaters, to keep warm by: Come out for a winter in the mountains, and the heating apparatus of every living cell, when given the proper fuel and the proper open drafts, will keep the body so warm that the patient will not be dismayed by miners' strikes and impending coal famine.

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All philosophy lies in two words, *sustain* and *abstain*. — *Epictetus.*

# The Hundred Year Club

## QUALIFICATIONS WHICH FAVOR LONG LIFE

DR. JOHN MARSHALL FRENCH, in an interesting study of centenarianism in the *Medical Examiner*, shows by a table of comparison that the United States has ten times as large a proportion of centenarians as England. Bulgaria, however, has twenty-five times as many as the United States. According to the author quoted: —

"Of races, the whites have the least proportion of all, followed by the Mongolians with twice as many, while the Negroes have twenty-four times as many, and the Indians thirty-nine times as many. As to sex, the females have a larger proportion than the males. The natives slightly exceed the foreign born.

"As to physique, very rarely does a person weighing two hundred pounds or over reach the age of one hundred years. As a rule, centenarians are inclined to be thin and spare in build, and this is especially true of males.

"It is interesting to note the conditions under which the lives of centenarians have been passed, and the reasons which are given by themselves and their friends why they have so long outlived their fellows. We shall note, however, that the conditions are diverse and even opposite in different cases, and we cannot always accept the reasons given as the true ones.

"Mrs. Hannah Cox, who died in 1881 in her 106th year, in Holderness, N. H., attributed her long life to regular habits and active labor.

"Mrs. Phoebe Brockway died at Union Springs, N. Y., in 1884, at the alleged age of 112 years and two months. Of her it is written that her life was one of singular hardship and privation, but that, being endowed with an iron constitution, she weathered every storm, and lived to see her descendants of five generations.

"Elihu Stevens, of Kennebec County, Me., who was living a few years ago at the age of 101, gave as the cause of his longevity, the fact that he never smoked tobacco nor drank intoxicating liquors.

"Mrs. Sarah Ide, of Milford, Mass., who died a few years ago in her 102d year, was an omnivorous eater. She had food always by her side in her old age, and ate frequently, but only a little at a time.

"Miss Huldah Arnold, who died in Milford, Mass., in 1894, at the age of 102, claimed to have no idea of any cause, either in her habits or her heredity, for her unusual length of life. She was an early riser, had a good appetite, but ate only two meals a day. Unlike the large majority of very old people, she was never married. She had a good education for her day, and taught school for many years. She did not often employ a doctor, but when she did, was in the habit of taking all the medicine which he left her, 'to save wasting it.'

"Mrs. Catherine Sharp, aged 114, placed great stress upon the fact that

she never worried about anything in her life.

"Mrs. Christiana French, of Chester Township, N. J., 102 years of age, attributed her longevity to the fact that her supper, throughout her whole life, had been the old-fashioned dish of mush and milk. She estimates that she has consumed about five hundred barrels of this food during her lifetime.

"If there is any general agreement in these several cases, it is in emphasizing the importance of an active outdoor life, regular habits, an intelligent interest in the affairs of the world, and abstinence from strong drink and injurious articles of food, as favoring long life. Their verdict was in essential agreement with that of the twenty centenarians, ranging in age from 100 to 131, who, according to a published account, were recently asked to tell how they lived to be one hundred years of age. They all agreed in four things: (1) excesses of all kinds should be avoided; (2) worry should be absolutely banished, and cheerfulness promoted; (3) hard work in the open air is an essential rule; (4) regularity of habit is necessary. Ten, including four of the women, used liquor and tobacco, and approved their moderate use. All save one declared that marriage promotes longevity. Only one was unmarried.

"Of 580 centenarians interviewed by American newspapers during the past two years, practically all have given the same rules for long life, namely these: (1) regular habits; (2) hard work; (3) plenty of exercise; (4) simple food; (5) marriage; (6) the avoidance of worry.

"The reasons given in all or nearly all of these cases relate solely to the manner of living — the environment; whereas, in reality, by far the most important element in centenarianism is heredity. Hammond, in his paper on 'The Prolongation of Human Life,' in the *Popular Science Monthly* for November, 1888, says: 'A strong vital principle, manifested outwardly by a firm build and constant activity, has been the chief cause of the advanced age of these people.' Humphrey, in his work on 'Old Age,' says: 'The first requisite for longevity must clearly be an inherent or inborn quality of endurance, of steady, persistent nutritive force, which includes reparative force and resistance to disturbing agencies, and a good proportion or balance between the several organs. The second requisite is freedom from exposure to the various casualties, indiscretions, and other causes of disease to which illness and early death are so much due.'

"The common observation that 'old age runs in families,' is only another way of saying that it is largely a matter of heredity.

"Hufeland declares that 'to live in the country and in small towns is favorable to longevity; to live in great towns is unfavorable.' This is borne out by modern experience. Dr. Farr, the English Registrar-general, has formulated the law that the death rate of districts increases with the density of their population. If to country residence be added the occupation of a farmer, or, at least, life upon a farm during the formative years of childhood, the result constitutes a large factor in the production of centenarianism and longevity in general. Investigations which have recently been made upon a large scale prove that of all persons living beyond the age of eighty years, only an extremely small proportion were born or spent their childhood in the city, while a large proportion were reared upon the farm. In one case, out of 1,000 octogenarians, 461 had

her scrawny fingers clutched the prize!

"This must be Christ's house; and I must find Jim," she exclaimed eagerly.

"Jim? who is Jim? your brother?"

"Nope, just Jim, that's all; he allus gives me part of his dinner when he gets any."

"Well, child, what's his other name? He must have some other name besides Jim."

"O mebby, I dunno, but I guess they hain't no name 'cept Jim; he's lame, Jim is."

And the little waif began an enthusiastic and very realistic description of Jim; for the childish tongue began to grow limber under the softening influence of warmth and light and food and the cheer of kindly faces.

"Where does Jim live?"

"Nowheres,— 'cept sometimes he sleeps in old Mike's cellar. But the rats is so thick, Jim says they is too many fur him," explained Nan, with an air of great importance.

Aunt Eleanor heard the voices in the kitchen, and though she had declared she was uncommonly ill and must not be disturbed, she had a great curiosity to see what her niece was doing with the waif; so, what was that young lady's surprise to see a white-robed figure swiftly cross the dining room and pause in the kitchen doorway, while a rather peevish voice exclaimed: —

"Dorothy! Dorothy Jane!" Aunt Eleanor always called her niece by her full name whenever she was displeased or excited.

"Dorothy Jane!"

"Yes, Auntie!"

"I'm surprised at you, Dorothy! What on earth do you intend to do with that little ragamuffin? Here I am with a raging headache,— and dear me! don't you realize, Dorothy, that we are likely to be run right over by a lot of tramps and robbers, and — and — everything? I declare, it's awful!" sniffed Aunt Eleanor hysterically.

"I don't see anything awful in feeding a hungry little girl," smiled Dorothy.

"I ain't hungry no more, but poor Jim, I s'pose *he* is,— 'cause Jim's allus hungry."

At mention of Jim, Aunt Eleanor's curiosity prevailed, and forgetting her headache and her slippers and gown, she began catechising the child, until she had told everything about Jim that she could tell.

"No, I ain't hungry no more, but I'm sleepy, and my legs and arms aches me so! S'pose the fine lady 'd let me stay till mornin'? I 'd curl right down here on the floor, an' I would n't make no fuss."

The child could not have done better than to appeal to Aunt Eleanor's vanity by calling her a "fine lady,"— and besides, Aunt Eleanor was by no means without a heart. So it was decided that Nan was to stay; and Dorothy and Kate fixed her a cosy bed the like of which she had never seen.

"Well, at least, the child has made me forget my headache, I do believe, Dorothy," her aunt admitted that night as she went to bed. "But I dare say it will come again before long, so if you 'll just fix those sleeping powders the doctor left, maybe — "

"Look here, Auntie; I believe I 'd let that drug alone to-night; try it, anyway, and — wait, Auntie, I 'll just raise the window a little — so — there won't be any draft over your bed at all."

"O child! you are going to let in the night air! do you forget my — "

"You 'll be all right, Auntie. I want you to go to sleep whispering the second verse of John's third epistle,— that 's better than any drug."

So in spite of many protestations that she would probably suffer no end of trouble in the night, Aunt Eleanor awoke Christmas morning ready to acknowledge that she had slept very well, and had felt no evil effects from the "night air."

"You see, Auntie, the good effect of only *one* of my 'three P's.'"

"O, that reminds me, Dorothy. I wonder how that — that child is this morning. I've been thinking, Dorothy," continued Aunt Eleanor in a contrite tone, "that maybe we might fix her up something, since it's Christmas, you know."

"It's very kind of you, Auntie; I'll go down and see."

But the child had vanished. Kate could give no account of her, except that she had slipped out while she was busy, and she guessed she had gone for good.

"There, it's just as I told you!" commented Aunt Eleanor crossly. "The child is nothing but a tramp, anyway,— and a thief likely as not."

"I don't believe it, mum," protested Kate. "The child had a good face and— "

But in the midst of the conversation, in walked Nan at the kitchen door, dragging with her a little boy,— lame and ragged, and O, so dirty!

"This is Jim," simply announced Nan, "and he's hungry, Jim is."

"Dear me! do you intend to turn my house into a hospital, Dorothy?" questioned Aunt Eleanor when the strange little pair stood in her august presence. "Whatever shall we do with the — the poor little things?"

"Try the effect of my 'three P's,'" triumphantly suggested Dorothy, who saw plainly that a motherly chord in her aunt's heart had been touched. "I think God has sent you a Christmas present, Auntie."

* * * *

Five years have passed away. Christmas eve has come again. The wind blows drearily through the bare branches of the old elm, as on that Christmas eve five years ago; but within there is an air of happiness and cheer. Dorothy is at the piano, and standing by her side is a tall, manly-looking lad, whom we recognize by his slight lameness to be the Jim of old. A sweet-faced young girl has been reading aloud to Aunt Eleanor.

"Dorothy, dear, do you remember five years ago to-night? Ah, what a good work has been done by the grace of God and your 'three P's.'"

Then out from the old mansion rang four sweet voices; three of them soft and musical, one tremulous and full of feeling:—

"The Christ is born; sing, sing, O Earth!
He came to bring thee hope and cheer;
Then let the tidings of his birth
Ring through the wretched homes of earth,
And banish sin and pain and fear."

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**How the Mistletoe Comes to Be.**

The story of how the mistletoe gets on the trees is a most interesting one. Covering the mistletoe twigs are pearly white berries. These come in the winter season, when food is comparatively scarce, and hence some of our birds eat them freely. Now when a robin eats a cherry, he swallows simply the meat, and flips the stone away. The seed of the mistletoe the bird cannot flip. It is sticky and holds to his bill. His only resource is to wipe it off, and he does so, leaving it sticking to the branches of the tree on which he is sitting at the time. The seed sprouts

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A WRITER in a recent magazine offers the following plea for more freedom of movement for babies. She says: —

"Mothers seem to rest under the universal delusion that their little ones ought to be contented to rest in almost immovable quietness, just as if they were the wax and sawdust dollies of the playthings of a few years back.

"Curiously, not one of these overloving mothers, in the desire to keep the little ones in rigid quietness, has progressed very far from the methods of the Indian mother, who bound her papoose to her back, in a basket, or the Italian mother, who sews her baby into yards of cotton, not to be removed until the rags almost drop off as a result of old age.

"It seems so strange that modern, educated, athletic women fail to appreciate the need the little one feels to exercise its muscles, to kick and roll about, and to wave its tiny hands about in the air.

"Not one of us can appreciate the sufferings the little one endures when, hampered with long skirts, downy covers, and sometimes pinned to the mattress with strong pins, it is left to lie for hours, so hampered and uncomfortable that it cannot move even in its sleep, through the mistaken kindness and solicitude of an over-affectionate, under-educated mother.

"Modern science has taught us much about modified milk and against the overloading of an infant's stomach; and that the danger to the child is greater in overfeeding than in lack of sufficient nourishment; but little or no attention is paid to instructing parents in allowing a child freedom for its muscles, light covering and change of position for a helpless infant, as elements in keeping a child healthy and happy.

"All of us have experienced the horrible, cramped, uncomfortable feeling described by many as a 'foot asleep' or an 'arm asleep,' after remaining for some time in one position; and we all appreciate the aching, tingling, uncomfortable sensation and at the same time realize how hard it is to bear.

"Yet this memory and the keen recollection of our own discomfort and inconvenience seldom suggest to us that baby perhaps lies in speechless agony, aching to be turned over, or even to lie almost naked, perhaps covered only with a little shirt and band, which is quite safe if the temperature of the room is normal, to toss his heels in the air and feel free.

"Unable to talk, and in torture, an infant's pitiful wail is usually ascribed to hunger, and it is plied with food, when rest from confinement, and not either of the two usual complaints,— hunger or a safety pin,— is the cause.

"Sometimes a weeping child may be soothed and comforted by gently rubbing its little body with the hand. The massaging seems to soothe baby's excited nerves and take his attention from the pain or nervousness that has made him miserable.

"Grandmothers, the few who survive with the notions of child-rearing which was followed for years, tell us that babies were born, reared, and flourished long before the newfangled methods were discovered; but there are no statistics compiled to show us how many more children would have survived the foolish methods of past generations, nor have we any proof that the present generation does not represent "the survival of the fittest," like the present race of Indians, who are remarkable now as ever for their strong physiques. They are an example of the survival of those who are strongest; for the weak or crippled die, and only the strongest live to prove that Indians are remarkably strong, vigorous, and healthy by constitution.

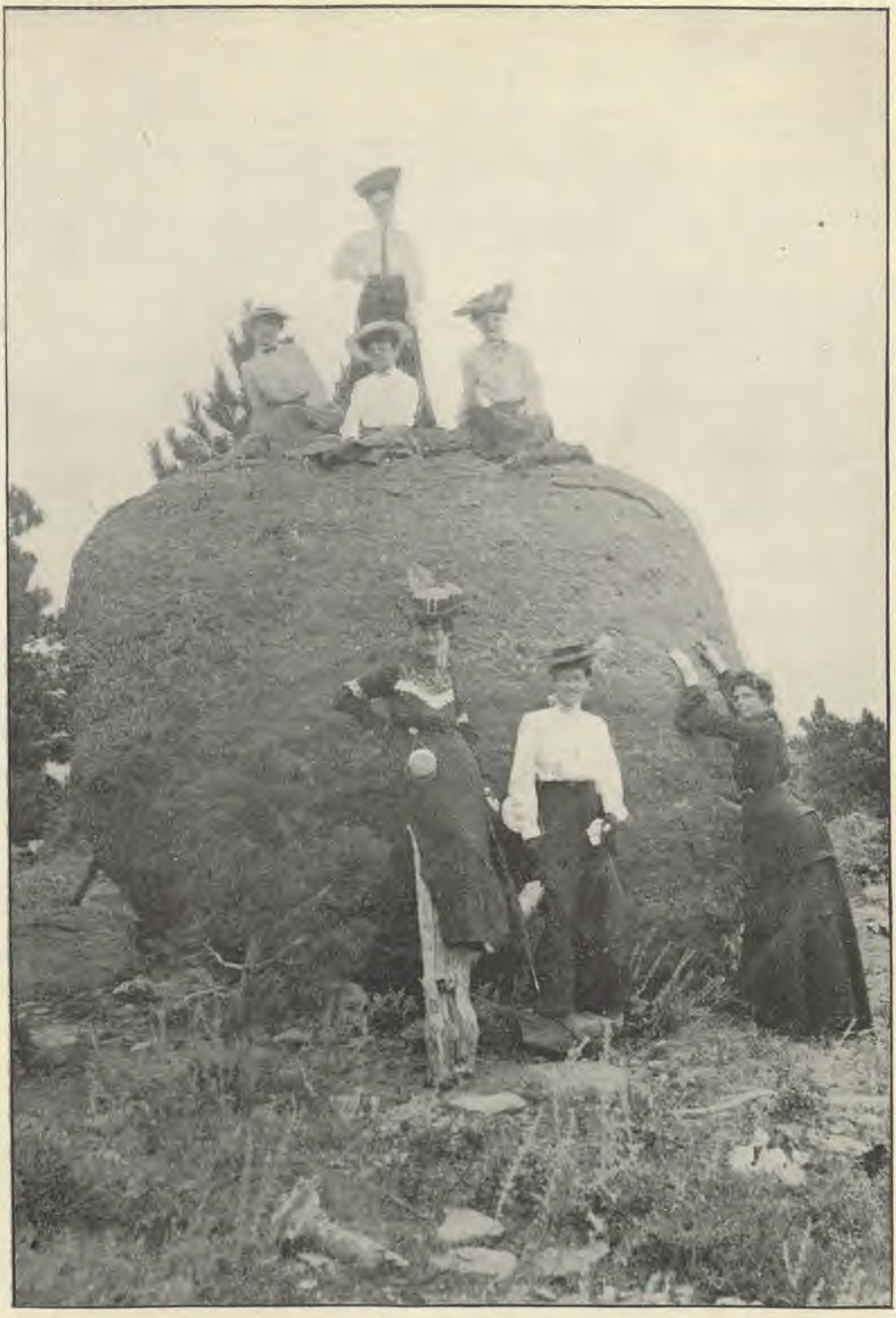
"Let the baby lie on the bed sometimes naked except for his little shirt, and give him freedom to toss his heels in the air, throw his arms about, and crow and laugh. The exercise loosens up all his muscles, and is of great benefit to him."

## WINTER HYGIENE IN THE ROCKY MOUNTAINS OF COLORADO

BY KATE LINDSAY, M. D.

HYGIENE, to be of practical benefit to mankind, must be studied scientifically, and the facts thus acquired applied as an art to improve the health and well-being of mankind. How winter hygienic failures can best be remedied

WINTER HYGIENE IN THE MOUNTAINS.



A Winter Picnic. 603

At the Spring.

is a very important question. It is true that many infectious disorders, as colds, influenza, acute bronchitis, pneumonia, whooping cough, diphtheria, pulmonary tuberculosis, as well as the eruptive fevers, are especially prevalent and fatal during the fall and winter months. That the lower temperature range does not account for this marked increase of these disorders is abundantly proved by the fact that persons who spend life indoors, in an overheated, foul atmosphere, are the chief victims, while those engaged in vigorous manual labor in the open air, even in the frigid zones, escape almost entirely. The person who, when winter comes, smothers himself in flannels, wears chest protectors, and lives beside the stove or register in a hermetically sealed room, dreading every whiff of pure air as a dangerous draft, has a cold all winter, complains of weak lungs, and will almost surely contract nasal catarrh, bronchitis, or pulmonary tuberculosis, while the woodman, the sailor, the soldier, the hunter, escapes.

Facts indicate that it is not the cold air, but the foul air in winter, the indoor life, and lack of proper exercise and sunshine which favor the development of the air-born microbes, and by impairing the healthy nutrition of the body, predispose to their infectious disorders. A mouse shut in an air-tight receptacle, will in a short time smother to death in its own foul exhalations from skin and lungs. The man, woman, or child in an almost air-tight room, office, church, or hall is not only sur-

rounded by his own wastes, but also those of his comrades,— practically a filthy air bath, adulterated with pints of the foul fluids and gases given off from every skin and exhaled from every pair of lungs. In these dark, hot rooms, infectious microbes find just the conditions which favor their development,— heat, foul matter and air, and on the impaired mucous surfaces the needed moisture. Out of doors, especially in the country, air taken into the body is pure, as the foul exhalations are borne away by the winds and constant change of place, and the functions of the body are performed vigorously because the blood circulates normally, bringing to each tissue its proper share of oxygen and other food elements, and swiftly carrying off all wastes.

The fact that air is one of the most important food elements is not duly appreciated. One can live forty days or more without solid foods, ten days or more without water, but only four or five minutes completely deprived of air. And it has lately been demonstrated that oxygen is not the only element which air contributes toward human nutrition, but that the formerly supposed inert nitrogen in this gaseous mixture is appropriated by certain plants, as the clover and legume families, and by the assistance of good microbes fertilizes the soil, and feeds the human and lower animal creations with the essential nitrogen elements demanded by all bodily structures. The Creator has made all things for the good of man if he but knew their proper use.

These facts being true, it is proved conclusively that improving the winter hygiene means furnishing the body, both outside and in, with the proper amount of clean air, — both as the breath of life and as an outside application, — out-of-door sunshine and exercise as well as all other proper health conditions. This implies that the best climate for good winter hygiene is the one which admits of the most out-of-door life with vigorous exercise; of open doors and windows with bodily comfort to the patient and the avoidance of chill and dampness.

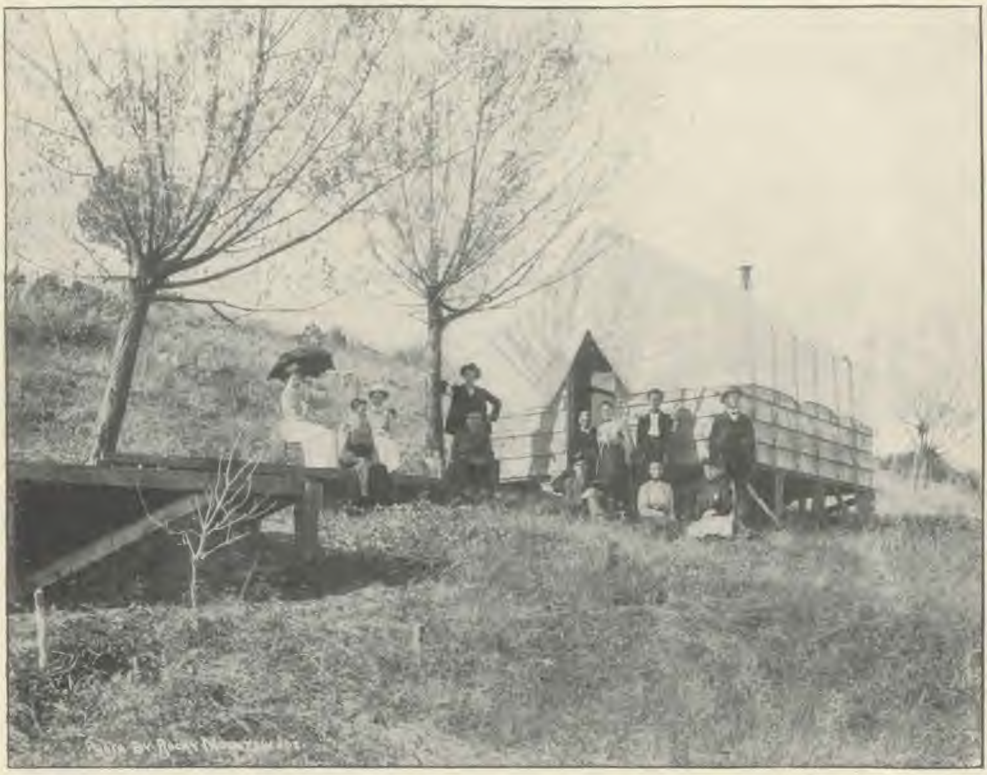
The writer has spent nearly four years in South Africa, the great English winter resort for invalids, especially those suffering with pulmonary disorders; about two months of a midwinter in the far-famed French Riviera, the popular winter health and pleasure resort of the royalty and nobility of northern Europe and of American millionaires. And then there are Nice, Mentone, and Monte Carlo, towns on the north shores of the Mediterranean, sheltered from the cold north and west winds by the natural fortress of the French Maritime Alps,— land of palms and citron groves; and Asheville, N. C., amid the Appalachians, the Land of the Sky, south of Mason and Dixon's line,— yet in none of these favored sunny climes can so much time be spent out of doors even in winter as in many of the sheltered foothills with southern exposure in Colorado. In South Africa, where the mountain ranges of the east and south seacoasts form a picturesque background, and balmy sea breezes keep the air cool and fresh all the year round, there is a rainfall of fifty to ninety inches in from three to five months. This means days and weeks of indoor life in damp and moldy rooms, and often the air is made foul by the exhalations from the rapidly growing and decaying vegetation. The water supply is inferior, and the water-soaked ground makes outdoor life at times impossible for the invalid.

In the older, better-fitted European

winter resorts, good roads and other modern conveniences make it easier to get out of doors in wet weather. But many days are wet and rainy and even sleety in winter. The mornings often being damp and misty, the patient is kept indoors until late in the day, and on the warm, wet days he misses the bracing air, as well as the sunshine, of a winter day in the mountains.

season affords an opportunity for more out-of-door life than in the more stormy, colder, damper climate of the North.

But many well-selected Rocky Mountain resorts have more warm, sunny days, freedom from dampness and chilliness, combining with the warm sunshine of the South the bracing dry air of a Dakota or a Manitoba winter. The smaller number of rainy, cloudy,



Camping Out in Winter.

Asheville and the Appalachian winter resorts of the southern States have all on an average two rainy days a week, and misty, dewy, or hoar-frosty mornings in winter, curtailing the already abbreviated day, and keeping the patient indoors much of the time, taking the year round, as well as making it chilly and damp underfoot outside. These resorts are pleasant places, and a residence in them during the cold

or snowy days in this region, the almost entire absence of damp, foggy, cold mornings even in midwinter, furnish plenty of time for out-of-door life. A sunshiny day means warm out of doors in sunshine from the rising to the setting sun. The mercury may sink to zero or below for a few days, but one can sit, without wraps, on the sunny side of a hill, on the rocks, needing only a parasol to shade the eyes from

the intense glare of the sunlight, and there, sheltered from the wind, the sun will keep one warm from the time it rises until it sinks behind the mountains. The soil is porous and soon dries after any rain or snowfall, so there are but few days in the year when mountain climbing and out-of-door exercise are not possible some time during the day. Winter picnics and walking parties may be planned for every month of the winter as well as through the summer months. Here is found the purest and best of soft water, supplied from the mountain streams fed by the snow-banks and glaciers of the higher mountains. Every foothill town and village has communication, by either stage or railway, with the outside world. Food and clothing are yearly coming nearer to Eastern prices. The mildness of the winter makes it possible to live with wide-open doors or windows, or in a tent or cabin, thus securing perfect ventilation, a fire being needed only evenings and mornings a great part of the time. All these advantages combine to make this region a model winter health resort.

This State raises the best of wheat and vegetables and a good supply of small fruits, as well as apples, pears, and other temperate-climate fruits. Good food is easily procured.

An important question often asked is, What class of invalids should come to Colorado? We would answer, Certainly all who are suffering with the malnutrition and debility of indoor life; all cases of obesity and inactivity of the excretory organs from sedentary life; all cases of indigestion and other alimentary disorders; those with a tendency to tuberculosis or who are in the incipient stages of this disorder; as well as those predisposed to *la grippe*, bronchitis, acute or chronic, and all other pulmonary disorders. Such will find here the needed conditions for active, open-air life. Do not wait for the tubercular germs to invade and destroy the structures of the lungs. Come when you can get well, with two useful lungs. Get away to the out-of-door life and pure air of the mountains in time to become entirely well.

The Colorado Sanitarium, situated to the west of the flourishing town of Boulder, on the southeastern slope of the foothills whose sunny slopes and cañons with south exposure stretch for miles northward and westward, affords just the needed facilities for out-of-door life. It is sheltered by the higher range from north and west winds, and affords sunny southeast, southwest, and south easy-grade hills to climb, where the patient may repose on a warm, sheltered rock, taking a sunbath, and view across Boulder Creek the snowy peaks of Flagstaff, Green Mountain, and Bear Mountain towering way above him toward the south,—winter and summer confronting each other with only a few miles between.

This institution, besides having the advantage of a warm, sunny climate, is fitted up with all the hydrotherapeutic appliances for using water, full baths, electric baths, Turkish vapors, electric light, sprays, pours, etc. It has an indoor gymnasium, and an outdoor one with a swimming pool on a little hilltop, where, as the illustration shows, the patients spend many hours daily in the open air even in November, suffering no inconvenience except a sunburn now and then to the uninitiated. The Sanitarium has also appliances for the use of electricity in all its forms—faradic, galvanic, static, etc.; for massage, active and passive movements; and for gymnastic exercises in well-equipped out-of-door and indoor gymnasiums.

It has ladies' and gentlemen's bath and treatment rooms; throat and lung treatment rooms; both ladies' and gentlemen's consulting and special treatment offices; experienced lady and gentlemen physicians; trained nurses, both male and female, and experienced at-

A Hill-top Swimming Pool.

tendants; also a well-equipped operating room and surgical ward; a five-story main building of brick, two three-story brick buildings, and a number of one-room cottages and tents. This entire Sanitarium village is heated with steam and lighted with electricity.

The institution has a ninety-acre park with Ossig's trail undulating up the sunny side of Mt. Sanitas, with a comfortable seat at every angle affording graduated, easy hill climbing, with frequent rests for the feeble; and for the more vigorous, loom up the rugged, rocky peaks of the higher mountains. On Sanitas' sunny slopes and in the valleys at its foot are springs of pure, soft, cold water; never failing, they flow on forever.

The cuisine is of the best, the tables being supplied at all seasons of the year with the choicest of fresh fruits, vegetables, and grains, healthfully prepared. The culinary department and dining room are on the top floor, so the odors of cooking do not permeate the rooms below. The outlook in all directions from the dining room windows commands a view of miles of plains, dotted with lakes, thrifty farms and hamlets, the wide-awake university town of Boulder, and mountain peaks towering skyward,— a feast for the mental as well as the physical man.

Patients suffering from pulmonary tubercular disorders have special provisions for treatment adapted to their cases, such as a sunny, glass-enclosed piazza along the south side of their special building; special throat and lung treatment rooms; and other special appliances and dietary. Those wishing to enjoy the benefit of a climate bright and dry may have either a one-room cottage or a well-fitted-up tent with board floor. This is, no doubt, the ideal place for open-air treatment for the weak lunged, because of the atmospheric purity. One illustration shows a tent home fitted for a coming winter residence of a pulmonary case. Other pictures show a party at the spring, and a winter picnic scene in the mountains, where often sunshade and fan are required. These are not fancy pictures, but a true representation of Colorado mountain scenes.

The writer would say to the anemic, weak-lunged invalid who looks for winter comfort to flannel chest protectors, chamois skin vest, etc., and listing doors and windows, and thinking of registers, steam coils, stoves, gas heaters, to keep warm by: Come out for a winter in the mountains, and the heating apparatus of every living cell, when given the proper fuel and the proper open drafts, will keep the body so warm that the patient will not be dismayed by miners' strikes and impending coal famine.

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All philosophy lies in two words, *sustain* and *abstain*. — *Epictetus*.

# The Hundred Year Club

## QUALIFICATIONS WHICH FAVOR LONG LIFE

DR. JOHN MARSHALL FRENCH, in an interesting study of centenarianism in the *Medical Examiner*, shows by a table of comparison that the United States has ten times as large a proportion of centenarians as England. Bulgaria, however, has twenty-five times as many as the United States. According to the author quoted: —

"Of races, the whites have the least proportion of all, followed by the Mongolians with twice as many, while the Negroes have twenty-four times as many, and the Indians thirty-nine times as many. As to sex, the females have a larger proportion than the males. The natives slightly exceed the foreign born.

"As to physique, very rarely does a person weighing two hundred pounds or over reach the age of one hundred years. As a rule, centenarians are inclined to be thin and spare in build, and this is especially true of males.

"It is interesting to note the conditions under which the lives of centenarians have been passed, and the reasons which are given by themselves and their friends why they have so long outlived their fellows. We shall note, however, that the conditions are diverse and even opposite in different cases, and we cannot always accept the reasons given as the true ones.

"Mrs. Hannah Cox, who died in 1881 in her 106th year, in Holderness, N. H., attributed her long life to regular habits and active labor.

"Mrs. Phoebe Brockway died at Union Springs, N. Y., in 1884, at the alleged age of 112 years and two months. Of her it is written that her life was one of singular hardship and privation, but that, being endowed with an iron constitution, she weathered every storm, and lived to see her descendants of five generations.

"Elihu Stevens, of Kennebec County, Me., who was living a few years ago at the age of 101, gave as the cause of his longevity, the fact that he never smoked tobacco nor drank intoxicating liquors.

"Mrs. Sarah Ide, of Milford, Mass., who died a few years ago in her 102d year, was an omnivorous eater. She had food always by her side in her old age, and ate frequently, but only a little at a time.

"Miss Huldah Arnold, who died in Milford, Mass., in 1894, at the age of 102, claimed to have no idea of any cause, either in her habits or her heredity, for her unusual length of life. She was an early riser, had a good appetite, but ate only two meals a day. Unlike the large majority of very old people, she was never married. She had a good education for her day, and taught school for many years. She did not often employ a doctor, but when she did, was in the habit of taking all the medicine which he left her, 'to save wasting it.'

"Mrs. Catherine Sharp, aged 114, placed great stress upon the fact that

she never worried about anything in her life.

"Mrs. Christiana French, of Chester Township, N. J., 102 years of age, attributed her longevity to the fact that her supper, throughout her whole life, had been the old-fashioned dish of mush and milk. She estimates that she has consumed about five hundred barrels of this food during her lifetime.

"If there is any general agreement in these several cases, it is in emphasizing the importance of an active outdoor life, regular habits, an intelligent interest in the affairs of the world, and abstinence from strong drink and injurious articles of food, as favoring long life. Their verdict was in essential agreement with that of the twenty centenarians, ranging in age from 100 to 131, who, according to a published account, were recently asked to tell how they lived to be one hundred years of age. They all agreed in four things: (1) excesses of all kinds should be avoided; (2) worry should be absolutely banished, and cheerfulness promoted; (3) hard work in the open air is an essential rule; (4) regularity of habit is necessary. Ten, including four of the women, used liquor and tobacco, and approved their moderate use. All save one declared that marriage promotes longevity. Only one was unmarried.

"Of 580 centenarians interviewed by American newspapers during the past two years, practically all have given the same rules for long life, namely these: (1) regular habits; (2) hard work; (3) plenty of exercise; (4) simple food; (5) marriage; (6) the avoidance of worry.

"The reasons given in all or nearly all of these cases relate solely to the manner of living — the environment; whereas, in reality, by far the most important element in centenarianism is heredity. Hammond, in his paper on 'The Prolongation of Human Life,' in the *Popular Science Monthly* for November, 1888, says: 'A strong vital principle, manifested outwardly by a firm build and constant activity, has been the chief cause of the advanced age of these people.' Humphrey, in his work on 'Old Age,' says: 'The first requisite for longevity must clearly be an inherent or inborn quality of endurance, of steady, persistent nutritive force, which includes reparative force and resistance to disturbing agencies, and a good proportion or balance between the several organs. The second requisite is freedom from exposure to the various casualties, indiscretions, and other causes of disease to which illness and early death are so much due.'

"The common observation that 'old age runs in families,' is only another way of saying that it is largely a matter of heredity.

"Hufeland declares that 'to live in the country and in small towns is favorable to longevity; to live in great towns is unfavorable.' This is borne out by modern experience. Dr. Farr, the English Registrar-general, has formulated the law that the death rate of districts increases with the density of their population. If to country residence be added the occupation of a farmer, or, at least, life upon a farm during the formative years of childhood, the result constitutes a large factor in the production of centenarianism and longevity in general. Investigations which have recently been made upon a large scale prove that of all persons living beyond the age of eighty years, only an extremely small proportion were born or spent their childhood in the city, while a large proportion were reared upon the farm. In one case, out of 1,000 octogenarians, 461 had

been farmers all their lives, and nearly all of them began life on a farm. In another instance, out of many thousands, only one person over eighty years of age had been born and brought up in the city. Many of them had removed to the city later in life, and engaged in business there, but all except one had spent the years of body-building in the country."

**A Descendant of Roger Williams.**

Mrs. Anna Sheldon Andrews, of Stateville, R. I., who died April 17, 1901, at the age of nearly one hundred and one years, was a lineal descendant of Roger Williams. Her family was famed for longevity, her great-grandfather having attained the age of one hundred and one years and seven months. With the exception of failing sight, Mrs. Andrews retained her faculties in a remarkable degree. She kept in close touch with the current events of the day and with the interests of her community.

Mrs. Anna Sheldon Andrews.

She is said to have been a person particularly cheerful and full of kindly sympathy for those about her. She was a good conversationalist, having a fund of reminiscences from which to entertain her friends. She remembered events in the War of 1812, and often spoke of the big gale of September, 1815, when she and others of her family stood for a half day braced against their kitchen door to keep it from blowing open, fearing that should the wind circulate through the house, the whole structure would be demolished, as were others near by.

Having been born on July 8, 1800, which was the last year of the eighteenth century, Mrs. Andrews had lived in three centuries. She was hale and plump, having but few wrinkles, a fresh color, which, together with the fact that her hair retained its natural color remarkably, gave her the appearance of a person not above sixty. She was an excellent horsewoman, having been accustomed to ride much on horseback in her early life. Writing of her mode of life, the year previously to her death, she says: "I was always taught to work, doing my own spinning and weaving. I have woolen blankets now that I wove before I was twenty years old."

She carefully observed the laws of health in regard to frequent bathing and

healthful dress, naively remarking that she "never tried to wear a number three shoe on a number five foot." She was married at twenty, and was the mother of six children, all of whom have grown to maturity.

The accompanying picture, taken on her one hundredth birthday, is an excellent likeness of her as she sat in her chair beside a table containing floral gifts in honor of the occasion.

**A Man Who Never Had a Headache.**

East Dayton, Ohio, has the honor of having been the home of a centenarian, Mr. Philip Keifer, who passed his one hundred and first birthday the fifth of December, 1902. Up to the time he reached the century milestone, he is said to have enjoyed perfect health and to have retained all his faculties. He had never had a sick spell, and never experienced even a touch of headache or rheumatism. At that time he was able to care for himself and to take considerable exercise. His memory was particularly retentive, and he was an interesting conversationalist.

He was born near Middletown, Md., in 1801. His boyhood was spent on the farm, tilling the soil. He attended the country school that was held during the winter months, but from early spring to late autumn the farmer boy along with his daily work of sowing and reaping was sowing for a harvest of health to be gathered in after years. At the age of nineteen he was apprenticed to the carpenter's trade, which vocation he followed for many years. In 1833 he moved to Dayton, which since has been his home. When advancing age made it hazardous for him longer to follow carpentry and building, he still continued the working in wood which had been his pleasure for so long, making stringed musical instruments. He is said to have also made quite a reputation as a maker of violins, having perfected some splendid instruments, some of them being still in existence.

Mr. Keifer lived a quiet life, his even temperament making it possible for him to accept what fell to his lot without anxiety and worry. He never used spirits of any kind as a beverage, and never smoked.

We quote from a letter written by himself the fifteenth of January, 1902, at the age of one hundred and one, in which he expresses his own conviction regarding the secret of his long life: —

"At the more advanced age I made the laws of life and health a study. The secret of a long life is to know how to take care of the vital organs, especially the stomach. As it is the receptacle of food, it requires the greatest care. If the stomach is overloaded, it fails to do its allotted work, and disturbs the harmony of all the others."

STAND upright, speak thy thoughts, declare
The truth thou hast, that all may share;
Be bold, proclaim it everywhere;
They only live who dare.

—*Lewis Morris.*

"To what do you attribute your longevity?" asked the reporter.

"My which?" queried the oldest inhabitant.

"Your longevity," repeated the reporter.

"Never had it. As far as I can remember I ain't never had no sech complaint." — *Puck.*

LET us be content, in work,
To do the thing we can, and not presume
To fret because it's little.

—*E. B. Browning.*

# Nature's Methods in the Sick Room

## THE NEUTRAL BATH FOR INSOMNIA

THIS is simply a full bath at the temperature of 92° to 97°, administered in the usual manner.

Friction should not be administered, unless it be very gentle rubbing when the patient first enters the bath, if he feels a slight inclination to chill. Chill will not occur, however, if the temperature of the bath is properly adjusted to the patient's condition. The average temperature of the bath should be 94° or 95°. When the patient is feverish and the skin hot and flushed, even though there be no rise of temperature, the temperature of the bath may be 92° or 93°. If the patient is thin and bloodless, with small-heat making capacity, the temperature of the bath should be 96° or 97°. All mechanical efforts should be avoided after as well as during this bath, as its purpose is to secure calmative or sedative effects. The duration of the bath when applied for relief of insomnia, should be from fifteen minutes to one hour. When used for the reduction of temperature, however, it may be continued for a much longer time, as three to four hours; and in certain cases of acute mania, obstinate insomnia, or fever, it may be continued for several hours consecutively, at a temperature of 92° or 93°.

The neutral bath diminishes the pulse rate, but does not modify the respiration. Exhalation by the skin is suspended so that water accumulates in the tissues. It is in this way the cutaneous nerves become supersaturated with water, rather than by absorption of water from the bath. At the neutral point, there is then practically no movement of fluids either inward or outward. The urine is greatly increased in quantity, while its acidity is decreased; it may even become alkaline.

The temperature and mode of administration of the neutral bath are such that neither thermic nor circulatory reaction is produced. The bath may consequently be prolonged for an almost indefinite period, without producing exhaustion or any other untoward effects. When the bath is prolonged for a considerable period, the patient should be suspended in a sort of hammock consisting of a sheet let down into the tub and secured to the edges, and should be made comfortable by means of an air pillow. The temperature of the neutral bath may be maintained uniform by placing covers over the tub, and adding jugs or bottles filled with hot water as often as may be necessary; or a portion of the water may be removed from time to time, and replaced with water at a higher temperature. When the temperature of the surrounding atmosphere is such as to prevent cooling, so that the bath is warmed by the heat of the body, it may be necessary to add cooler water occasionally to prevent elevation of temperature, whereby the bath would cease to be neutral in its effects. This bath depends for its good effects entirely upon the careful adjust-

ment of the temperature within the limits named, 92° to 97° F.

In insomnia there is practically no single measure of treatment so valuable as the neutral bath. For this class of patients the bath should be administered at bedtime. The patient often becomes drowsy in the bath, and may fall asleep. He may be allowed to sleep in the bath for several hours if it is found that removal counteracts its hypnotic effect, which is not infrequently the case. The sleeping patient must be carefully watched, however, to see that the head is not submerged.

On removal from the bath, in cases of insomnia, great care should be taken to avoid chilling of the surface by evaporation. The patient should be instantly wrapped in a Turkish sheet and woolen blankets, and should be dried by gentle patting of the sheet or blanket, and without rubbing either with the sheet or with the dry hand, being afterward placed in bed as quickly as possible, and his surroundings made in every way conducive to sleep, so that the good effects of the bath may not be lost by excitation of the nervous system by unfavorable conditions.

It will be interesting to recall the fact that Hippocrates well appreciated the neutral bath as a means of inducing sleep.

**Oil Rubbing.**

This is one of the most ancient procedures used in connection with hydrotherapy. The oil, or unguent, is applied by simple friction movement made in the direction of the blood current in the veins. The best effects are obtained when the application is made after a warm or tepid bath, as the epidermis then more readily absorbs the oil. Care must be taken to avoid the application of too much oil.

Vegetable oils should be employed for the purpose, and care should be taken that the oil is not in the slightest degree rancid, for the poisonous, fatty acids are apparently quite readily absorbed by the skin.

A certain amount of oleaginous substance is secreted by the skin which spreads out on it as a protection. Oil is a non-conductor of heat, and is especially useful in cold weather, because then it is necessary that the heat should be conserved. When a person takes a bath, especially after he has had a shampoo, he loses the oily covering from his skin, and is liable to take cold. That is the reason many people take cold after a bath.

Oil is a natural protective and cleansing agent. It is the natural method of cleansing the skin and keeping it clean. The oil that is formed upon the skin becomes gradually removed; it dries up and becomes little scales and carries off the waste matters attached to it. The same thing takes place in the mouth, only in the mouth it is mucus instead of oil that is secreted, the mucus carrying off the little scales, and keeping the mucous membrane clean. This natural process is very healthful. The same thing happens in the ear: the earwax that forms causes the scales to drop out of the ear. People sometimes twist a coil of hair and crowd it into the ear to cleanse it, but this is liable to damage the ear. The ears do not need to be cleansed in that way; if let alone, they will take care of themselves. And the whole surface of the body would take care of itself if it were not for its unnatural covering of clothing.

Clothing exposes us to great dangers. We wear too many clothes. We dress

too warmly, so the skin relaxes, and loses power to take care of itself, and this is the reason the oil is necessary. The simple removal of a thin layer of oil may be sufficient to cause a man to take cold, so this must be replaced by a special oiling or some other treatment in cold weather.

Patients who react poorly, and who are very susceptible to cold, should be rubbed with oil after each bath. Oil rubbing is especially needed in cases in which the skin is dry, through deficient activity of the oil glands of the skin. Great care, however, should be taken to avoid too vigorous rubbing in the application of the oil, as sweating from too strong reaction is very easily produced, to the disadvantage of the patient. In the treatment of infants and children, a marked and most favorable effect upon nutrition is produced by oil rubbing. Application of oil after cold baths encourages reaction. In most cases of chronic dyspepsia when accompanied by emaciation, in diabetes, and in most cases in which malnutrition with dryness of the skin is a prominent feature, oil rubbing is a valuable therapeutic resource.

**The Spinal Pack.**

The patient being prepared in the sitting position, a towel is wrung out of cold water, folded lengthwise, and applied to the back from the neck to the sacrum. The patient holds the compress in position, one hand at each end, while flannel coverings are applied for protection and to hold the wet compress in place. First a mackintosh or other impervious covering is applied. This should be a little larger each way than the folded towel. Next apply a folded flannel, two thicknesses, and a little larger than the mackintosh. A roller bandage of cheesecloth or muslin is then applied to the chest as directed for the chest pack (see October number, pp. 501 and 502). This is to hold the upper part of the compress in position. The lower part is secured by a towel pinned about the abdomen. In cases in which it is important that the flannel compress should extend to the coccyx, the lower end may be secured by a roller bandage applied about the hips in a manner similar to the application of the bandage to the chest. Special care must be taken to apply the bandage in such a way as to maintain the compress in close contact with the skin, as otherwise chill will be produced, and the patient's condition will be aggravated.

*When to Use the Spinal Pack.*— The spinal pack renders great service in many forms of nervousness, especially in sleeplessness due to fidgets or general restlessness. It is also valuable as a means of relieving many forms of chronic backache and so-called spinal irritation. In cases of spinal neuralgia, fomentations should be applied at bedtime, followed by the spinal pack, to be worn during the night. On removal of the spinal compress in the morning, the whole back should be rubbed with the hands dipped in cold water, or if the back is sensitive, a towel may be wrung out of cold water and applied to the back, friction being made over the towel.

THERE is no beautifier of complexion, or form, or behavior like the wish to scatter joy and not pain around us. — *Emerson.*

"ARE you in pain, my little man?" asked the kind old gentleman.

"No," answered the boy. "The pain's in me."

# Science in the Kitchen

## SANDWICHES

FEW articles of the cuisine are capable of being served in so many and various forms as the time-honored sandwich. Breadstuffs of some kind are the usual foundation for sandwiches, and anything which harmonizes in taste and digestibility with bread may be used as filling. Yeast bread is the more commonly used for the purpose, but wafers, split rolls, and toasted granose biscuit make excellent sandwiches, and are a degree more wholesome than loaf bread in that they contain no yeast, and are harder in texture, so that they necessitate more thorough mastication. There is another advantage in the use of wafers for sandwiches — they do not require to be first buttered before filling. Yeast bread, sliced from the loaf or split as when in the shape of biscuit, is so porous in character that a smearing of the surface with some kind of fatty substance is really needed to protect the crumb from becoming saturated when moist mixtures are used as filling; hence it is customary to butter the slices when making sandwiches. Both dairy and nut butters are used for the purpose, but some care needs to be taken that whatever is used shall harmonize in taste with the filling.

Thin slices are preferable for sandwiches. When the sandwiches have been spread and filled, they may be cut into a variety of pretty shapes.

*Ribbon Sandwiches.*— Prepare a filling with one-half pound of protose, minced fine, three grated yolks of hard-boiled eggs, juice of one lemon and salt to season; or the lemon may be omitted, and the protose and egg mixed with mayonnaise dressing. Cut whole-wheat bread into thin slices and spread lightly with dairy or cocoanut butter. Upon a slice thus prepared spread the protose mixture, and cover with a second slice buttered on both sides. Spread this thickly with grape or cranberry jelly and cover with a third slice. Divide the whole by cutting diagonally into two or four sections. Thinly split, well-toasted granose biscuit may be prepared into most appetizing sandwiches in the same manner.

*Calcutta Sandwiches* (Broady).—Make a filling by mixing together one part

nuttolene, one part nut butter, and four parts protose, salt and lemon juice to taste. Put through a fine sieve. Put this mixture between the first two layers. Between the next two layers spread red raspberry or cherry marmalade mixed with chopped nuts, and on top serve a hard sauce. In the center of each a cherry or small tomato may be inserted. Under each point put a small lettuce leaf. This is a good substitute for a club-house sandwich.

*Olive Sandwiches* (Bucknum).— Spread thin slices of bread with nut butter, and put between two pieces a layer of ripe olives. Cut the sandwiches in fancy shapes, and garnish with the ruffled edge of lettuce.

*Hulless Bean Sandwiches* (Burden). — Left over bean patties may be seasoned to taste with lemon juice and spread between buttered slices of bread for sandwiches. The beans may also be mixed with salad dressing and used for the sandwich filling.

*Potato Sandwiches* (Burden).— Form mashed potatoes into patties the thickness of ordinary crackers. Oil the baking dish and bake until the under crust is brown. While the patties are in the oven, put one cup of cream in a small pan; salt slightly, and when at the boiling point add two hard-boiled egg yolks minced fine; stir in the cream; then moisten a level teaspoonful of cornstarch in cold water and stir rapidly into the cream. Remove the patties from the oven; place in a heated platter, alternately covering with the corresponding patty, putting the brown side up. Garnish with parsley or lettuce leaves, and serve while hot.

*Fruit Sandwiches* (Burden). — Between slices of bread which have been cut about one-fourth inch thick and spread with butter or nut butter put a filling made by chopping very fine, equal parts of steamed figs and nuts, moistened with water and lemon juice to form a paste. Dates, prunes, raisins, or currants may be used in place of figs.

*Sweet Sandwiches.*— Flavor a half cup of almond butter, fresh from the can, with a tablespoonful of rose water. Beat stiff the white of an egg with a tablespoonful of meltose; add this to the almond butter and beat all together. Spread between thin slices of bread, and serve.

*Fig Sandwiches.*— Spread thin slices of bread or toasted whole-wheat wafers with cocoanut or almond butter. Place nicely steamed figs between the slices and serve. E. E. K.

## BREAD

"Thou wert the lifeless seed beneath the mold,
Till dews steeped thee, and the sun's soft rays
Kissed thee, and wooed thee upward to his face,—
The ripened grain. But what shalt thou yet be?
Thou art the fabric of life's temple. Thou
Shalt soon be thinking brain and pulsing nerve."

— *Phila Butler Bowman.*

# Christmas Menu

Chestnut Soup — Bread Sticks

Olives

Nut Cutlets — Roast Protose

Baked Potatoes — Cocoanut Cream Sauce

Escalloped Vegetable Oysters

Squash Souffle — Canned Asparagus in Croustades

Nut and Celery Salad

Wafers

Drop Cakes — Apples with Almonds

Malaga Grapes — Oranges

Health Cocoa

# Recipes

*Chestnut Soup.*— Boil or roast chestnuts sufficient to make one and one-half cupfuls when skinned and rubbed through a fine sieve. Into this stir an equal quantity of strained stewed tomato. Thicken, when boiling, with one tablespoonful of flour rubbed smooth in a little milk. Season with celery salt and a little minced onion, and thin to the desired consistency with hot milk or water as preferred.

*Drop Cakes.*— Prepare a sponge cake after any good recipe and drop the batter from a spoon on buttered paper. Bake until light brown, then trim the ends. Put two of the drop cakes together with some desired filling between them. Cranberry jelly is very pretty for the purpose.

*Nut and Celery Salad.*— Carefully cut enough nuttolene into small cubes to fill a cup; add to this one cupful of minced celery and the same of English walnut meats. The walnuts may be broken somewhat, but should not be minced very fine. Marinate with a mayonnaise dressing, and it is ready to serve.

*Squash Souffle.*— Divide a well-ripened Hubbard squash, remove the seeds, and bake in the shell until thoroughly done and mealy. Scrape the pulp from the shell, mash perfectly or rub through a colander. Then add to each pint of the squash a cupful of cream or nut cream and three well-beaten eggs. Season with salt, and turn into an earthen dish and bake fifteen minutes in a moderate oven.

*Cocoanut Cream Sauce.*— Prepare a stock by cooking together one pound of protose cut into pieces, one can of tomatoes, strained, two bay leaves, a pinch of summer savory and a stalk of celery with one quart of water, for an hour or until reduced one half. Strain, and keep in a cold place. To one cup of this stock add an equal amount of cocoanut cream. Heat to boiling, add salt to season, and thicken with three tablespoonfuls of flour.

*Croustades.*— Cut bread in slices about three inches thick. Cut the slices with an ordinary biscuit cutter into rounds; then remove enough of the crumb in the center to make a rather thin shell of the bread. Dry these bread shells in the oven until slightly crisp. Fill with any creamed mixture to serve. If desired, the croustades may be buttered with cocoanut or peanut butter before using.

*Apples with Almonds.*— Prepare a syrup by boiling together for a moment a cup of sugar and a cup of water. When the syrup boils, add some apples which have been cored, but not divided. These must be turned frequently so that when tender they will be whole and unbroken. Stick the apples all over with blanched and roasted almonds. Serve cold.

# EDITORIAL

## THE DAY AFTER CHRISTMAS

THE only sure way to prevent colds is to live above them. People do not catch cold unless they are living upon a low plane physically, and inviting disease by careless habits. The day after Christmas is a time when people are very likely to take cold. It is the turkey that has been buried in their stomachs getting even with them. When one makes a cemetery of his stomach, he cannot expect his body to be in the best possible condition for defense against disease.

A short time ago a young man who was anticipating the enjoyment of what he thought to be the fat leg of a chicken, found when he got to the middle of it that he had reached the bone, instead of putting his teeth into the tender flesh. He found out that it was a very thin leg with a very thick bone — a tuberculous joint. But he had eaten all the meat off that bone before he made the discovery that it was the flesh of a tuberculous chicken.

Some years ago a gentleman gathered his friends together for a big Christmas dinner, of which a large roast turkey was the principal dish. The father carved the dead turkey into small pieces, and had just begun to pass around the fragments when a small boy sitting at the other end of the table called out, "Say, pa, is that our old sore-headed turkey?" Somehow that spoiled the appetite of the company for turkey. How strange it is that a little thing of that sort will so turn us against eating an animal, when we do not take into account the diseased bones, abscesses of the liver, tuberculous lungs, etc., which afflict a large proportion of these animals. It is astonishing how hardened we become to the swallowing of disease.

When we eat the flesh of a diseased animal, we take in the disease at the same time. If an animal has trichinæ, we take the trichinæ in eating the flesh of the animal. A curious thing came to our attention recently. In operating for cancer, we had occasion to cut a piece from the lip of a gentleman, and the piece of tissue was sent to the pathological laboratory for examination. The physician in charge stated in his report that the cancer had hundreds of trichinæ in it. The trichinæ had nothing to do with the cancer, but were simply an indication of the condition of the rest of the man's body. If a piece had been cut from any other portion of his body, we should probably have found that it contained trichinæ. We enquired concerning this man's history, and found that he had been troubled with muscular rheumatism. This confirms the theory of an eminent German physician, that what is thought to be muscular rheumatism is often due to trichinæ lodged in the muscles.

Twenty-five years ago, Professor Janeway, Demonstrator of Anatomy in the Bellevue Hospital Medical College, New York, stated that one out of every seventeen persons examined there during the previous ten years, had been found to contain trichinæ in their bodies. When these trichinæ once gain lodgment in the tissues, there is no getting rid of them. One afflicted in this way is no longer a single person, but a community; he can always say "we" and "us" thereafter. It is well for one to bear in mind when he is eating pork that he may be swallowing a whole community. At an examination made in Chicago, two per cent of hogs were found to be infected; and Professor Janeway stated that six per cent of human beings were infected. Why

should there be six per cent of men infected and only two per cent of hogs? Is it not because there are more men that eat hogs than hogs that eat men?

## EXERCISE IN CARDIAC DISEASE

CAREFULLY graduated exercise is unquestionably one of the most effective of all means of developing and maintaining cardiac compensation in cases in which this has been lost as the result of organic or valvular disease of the heart. The efficiency of carefully graduated exercise administered in the form of manual Swedish movements in strengthening the heart and overcoming the evils of organic heart disease, has been known to the Swedes for nearly a century. The system of Ling which is there so much in vogue has within recent years extended to numerous other countries, particularly Germany, where it has been made popular by the eminent success obtained by the Schott brothers in dealing with all forms of chronic and acute disease. These movements are especially adapted to a very feeble person. They consist chiefly in carefully graduated flexion and extension movements taken by the aid of a well-instructed assistant. The effect of these movements is to fill the veins and arteries of the extremities, in this way unloading the crippled heart and giving it better opportunity for efficient contraction.

For patients who are able to walk or take moderate exercise these active passive movements are not necessary, as the heart may be readily strengthened by carefully graduated walking exercises, care being taken not to overdo by too violent or prolonged exercise. The walking should be at a very moderate pace, but as fast as possible without producing evident symptoms of shortness of breath, such as rapid or heavy breathing and coughing. When the heart has been so strengthened that more vigorous exercise may be taken with advantage, such exercises as moderate hill climbing, swimming in cold water, or any sort of exercise which exposes the surface of the body to a cold medium, must be avoided as tending to produce retrostasis or congestion of the heart and other viscera. Any exercise which produces rapid breathing or coughing is harmful.

By carefully graduating the exercise, that is, increasing it at a regular rate from day to day, always avoiding overdoing, the heart may gradually be strengthened along with the other muscular structures until in the great majority of cases compensation is restored, and the patient brought to the enjoyment of very comfortable health. When compensation has once been thus completely restored, the patient may, by the exercise of great care, keep himself in this condition for many years; but if the general health becomes depressed, and nervous and muscular tone lowered, cardiac compensation will again fail, which is manifested by swelling of the feet, shortness of the breath, and other well-known symptoms.

## A DINGY BODY

WHEN a prize fighter is supposed to be in a "fit condition" for the contest, his trainer examines his skin, and says to him, "Your skin is as white as a woman's." The skin becomes thus clean and white as the result of the course of training he is put through. He is expected to exercise and to perspire profusely every day. He must walk, run, and exercise in other ways until his muscles are weary and exhausted.

When a man sweats, the waste material of his body is being carried off in perspiration; otherwise it accumulates, as it

does in the sedentary horse. Did you ever ride behind a sedentary horse, and observe, when the horse stopped in the sunshine, that his back was covered with froth? This froth is like paste; it sticks to the currycomb, and must sometimes be washed off the horse. The horse that is taken out of the stable and made to sweat every day, has perspiration that is clear and limpid like water and does not leave a froth on him.

The froth on the horse's back is pitchy and impure; it is the extract of horse which has come out of the blood of the animal and has been condensed and concentrated on his back.

The sedentary man is in a condition similar to that of the sedentary horse. The impurities and waste matters which should be carried out through the breath, the skin, the kidneys, and through the liver, accumulate, and the result is very evident. If the chimney of a house gets stopped up, the smoke fills the rooms; if the house has a furnace in operation and the chimney is stopped up, the rooms will be full of soot and smoke. The same thing is true of the body; it is a furnace and is constantly consuming the material taken in. The food is the fuel of the body, and the smoke of this fuel in the healthy man is carried out through lungs, bowels, kidneys, and skin, and thus the whole body is kept clean and pure. But when insufficient exercise is taken to bring enough oxygen into the body to burn up its waste matters, then the smudge and smoke of these waste matters accumulate in the body and are deposited in the skin. And when a person has a dingy sclerotic — when the white of the eye is dingy — and there is a dingy skin, that means the whole body is dingy; the whole man is dingy; that dirt is more than skin deep. The wastes, or organic dirt, have accumulated within until they have extended all through the body.

One often sees a quarter of an ox hung up in the market when the skin has a yellow appearance. That ox had jaundice before he died. Animals have many of the diseases to which human flesh is heir. When the ox has been shut up in a stall a long time, he becomes sedentary. All hogs are sedentary; that is the reason they become so fat. Farmers shut up their cattle so they will become obese; the waste matters not being carried off from their bodies, adds so many pounds to their weight, and its equivalent in dollars to the farmer's purse. As long as a hog keeps running around, he keeps clean and healthy; but when he is shut up, he becomes sedentary and fat and filthy.

In Strasburg, Germany, the geese for which the town is so renowned, used to be fastened to a plank by driving nails through their feet, then put on shelves to fatten. Their eyelids were sewed together so they would not see things which would cause them to stir about. At present a less cruel method is used. The geese are put in boxes where they will be in entire darkness, and thus be perfectly sedentary. At intervals a woman puts into their mouths, pellets of cornmeal mush made thick, and pushes them down with a stick. After a while these geese become very fat, so that the oil almost drips off their feathers. They become dyspeptic, and their livers are diseased and changed to fat. Then these fat livers are made into a pastry which appears on the bill of fare as *pate de foie gras*.

Suppose you treat yourself in a similar way. Suppose you live in the dark; pull the curtains down and sit in a rocking chair and live a sedentary life, doing nothing but eat, until your skin gets stored with accumulated dirt, and your brain gets poisoned by the poisons which are always accumulating in the body — you will be in a similar condition to these fatted geese. Bouchard says, "The body is a factory of poisons," and if you let these poisons accumulate, the skin becomes tawny and sallow. But when the skin is in a healthy state, it is bright and clear, no matter what the complexion is. I met a colored man the other day,— the

color of his skin was very black, but it was beautiful,— smooth as silk; it was soft and healthy, and I said to myself, "What a beautiful skin this man has!" I thought how much more beautiful it is, though black as night, than the pimply, dirty, diseased, unhealthy Caucasian skins one so often sees.

The condition of the skin is an indicator of the condition of the whole body; one cannot have a clear, firm, ruddy skin without having a healthy body underneath it. This is the reason the condition of the skin is of so much importance; a healthy skin is the indicator of a healthy body,— a healthy man.

## MILK AS A FOOD FOR ADULTS

MILK is not the best food for adults. It is a nutritious food, but it is not suited to everyone. "Milk for babes," says the apostle. "But," you say, "if babes can digest milk, certainly older persons can do so." This is an erroneous idea. The babe's stomach is adapted to the digestion of milk. His stomach is constructed differently from that of the adult. The alimentary canal of an unborn child is a straight tube. As the babe grows, there is a little bulge in the tube. This is going to be a stomach by and by.

When milk enters the stomach of a baby, it goes easily through and down into the intestines, where it can be digested. But the stomach of the adult being of different shape, milk forms there large, tough curds, and they roll and tumble about, unable to get through the pylorus. In these hard curds there are very commonly barnyard germs such as one sees in the bottom of a glass of milk; stable litter, useful as a fertilizer of the soil, but not suited to the human stomach. Every speck has disease in it; and these specks grow and sprout in the stomach like potatoes, multiplying until there are millions of them. This is the reason the baby gets cholera infantum,— because such germs get a foothold in the alimentary canal.

Milk is sterilized to kill the germs. It is important that this should be done whenever milk is used for food.

Another thing to be remembered is that young children have hypopepsia; the stomach does not form very much acid. In consequence of the gastric juice of the child's stomach not being very strongly acid, the curds are softer than in the stomach of the adult. The latter has very acid gastric juice, and this causes his stomach to form large hard curds when milk is taken. These curds are like pieces of leather, and the wonder is that they can be digested at all. But by degrees the hard masses are dissolved in the stomach, until they become liquified, and pass out through the pylorus.

Sometimes, however, the curds do not dissolve. A young man of our acquaintance, accustomed to the use of milk, came home thirsty one night and drank about half a panful. About one o'clock he awoke with a fearful pain in his stomach, and something in his throat that seemed choking him. He succeeded in getting hold of it with his fingers, and pulled out a rope of milk about two yards long. The milk that he had drunk had formed into a large, hard curd in his stomach, and not being able to get out through the pylorus, it was forced back through the gullet in the form of a rope; and it was fortunate that it could not get out that way. If it could not have done so, the man would probably have had gastritis, or inflammation of the stomach, of which he might have died.

Professor Tait, the eminent English surgeon, told of a patient who nearly lost his life from the use of milk. A young man came to him desiring an operation. Upon examination he found a large lump on the right side. He opened the abdomen and found that where the small intestine joins the large one,

the intestine was distended with a great mass that felt like putty. He learned that the boy had been drinking large quantities of milk, and this hard mass had formed. He succeeded, by pressing it very firmly, in finally pushing it all through, relieving the case without an operation on the intestine. But these curds had continued to accumulate until, if he had not had a skilled surgeon, the young man would have lost his life.

There is another reason why a young child can eat milk. He has a special ferment for the conversion of sugar. This is lactase, which converts milk into glucose, ready for absorption into the blood. Milk sugar must first be digested by the lactase. Lactase is present in large quantities in the digestive apparatus of the infant, but the adult has very little of this substance, and the consequence is that he cannot digest milk sugar. This is the reason so many people who take milk suffer from sour stomach. Milk sugar not being digested, causes bloating, and remains in the alimentary canal instead of being promptly absorbed, and so it ferments.

The milk most difficult of digestion is goats' milk. The goat has tremendous digestive power. It eats very coarse vegetables, as twigs, briers, etc. It has a four-stomach-power digestive apparatus, and it can digest anything that can be chewed and swallowed.

Cows' milk is not good for adults, nor the best for infants. It is splendid food for calves, but not for human beings. The reason that cows' milk is good for calves is that the cow has four stomachs and so has the calf, and the food is adapted to a four-stomach digestive apparatus. The milk of the cow forms tough curds in the calf's stomach, this food resembling that which is taken by the calf later on,— so as to accustom it to coarse food when it gets older.

The digestive apparatus of the infant, however, is small and simple; it is not adapted to handling these tough curds; and the same is true of the digestive apparatus of the adult. It is not a complicated apparatus, and so it is adapted only to simple food. The natural food-supply of the infant — mothers' milk — forms very small, soft curds, which are easily broken up and digested. They are entirely different from the curds formed by the milk of the cow.

Every warm-blooded animal supplies a milk of its own for the food-supply of its young, and exactly adapted to its digestive apparatus: the cow, for the calf; the goat, for the kid; the donkey, for its little colt; and the human mother, for the infant. The milk supply which comes nearest in character to that of the human being is that of the donkey. The milk of the donkey is easily digestible, not containing these hard curds, as does the milk of the cow. In Eastern countries the donkey is very much utilized for its milk, and also quite extensively in Germany and various other European countries.

## "The Aristocracy of Health."

Mrs. Henderson, of Washington, wife of Senator Henderson, has written a book entitled "The Aristocracy of Health," which will soon appear from the press. This work promises to be one of the most able presentations of the whole health question which has appeared in modern times.

Mrs. Henderson is a woman of great intellectual and literary ability, and her international reputation will give character and prestige to the advanced views of hygienic reform which she has espoused, and of which her book will be a lucid and interesting exposition.

Mrs. Henderson has announced her intention to organize an international health association, the special purpose of which will be to interest the higher classes in health culture. The foundation of Mrs. Henderson's campaign will be the return-to-nature idea.

# ANSWERS TO CORRESPONDENTS

**Milk Leg.**— Mrs. H. G. B., Kansas, had milk leg about five years ago. It did not burst, but would swell and cause pain if she was much on her feet. Two months ago her left foot began to pain her, and later to swell. The swelling goes down over night. Standing aggravates the pain. Now the right foot is affected even worse than the left. Please advise treatment.

*Ans.*— Rest in bed; rubbing the legs with the hands dipped in cold water twice daily, and the application of the heating pack; bath at night.

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**Swelling of the Feet — Eggs — Baths — Nuts.**— J. D., Iowa: "What causes swelling of the feet and ankles of a man of seventy who has just recovered from *la grippe*? There is some torpidity of the liver and inaction of one kidney. 2. Outline treatment. 3. Are soft-boiled eggs healthful if the hens are fed on grains and clean foods exclusively? 4. Are three baths a week sufficient to keep the skin in a healthy condition? 5. Should nuts be ground fine to be easily digestible? 6. Why should peanuts and chestnuts be cooked before eaten?"

*Ans.*— 1. Probably weakness of the heart; possibly an inflammation of the kidneys or an impoverished state of the blood.

2. The patient should lie in bed until the swelling of the feet disappears, placing an ice-bag over the heart for half an hour three times a day. A cold towel rub two or three times a day would be beneficial.

3. Yes.

4. A cold bath daily is better.

5. Yes.

6. Because they contain raw starch and more or less woody fiber which needs to be broken up by heat.

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**Milk.**— J. F. B., Ohio: "1. Would the drinking or sipping of a pint of hot milk increase the weight of one who is six feet tall and weighs but 137 pounds, yet is in good health? 2. Does milk cause constipation? 3. Is milk beneficial? 4. How should it be taken? 5. Should salt be added?"

*Ans.*— 1. Yes, if repeated two or three times a day, providing the milk is well digested.

2. Yes, in some cases.

3. Milk is not the best food for adults. See article on page 622, this number.

4. Cooked in combination with cereal foods.

5. The addition of salt is not necessary.

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**Insomnia.**— J. K., California, is well and strong, and observes health rules in regard to diet and exercise, yet can sleep but three or four hours nightly. Has been so troubled for a year. He works in the open air. 1. What is the cause? 2. Could it be due to overeating?

*Ans.*— 1. Probably indigestion.

2. Yes.

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**Drowsiness — Poor Circulation — Flatulency — Lumbago.**— J. N., Illinois: "1. What causes an overwhelming drowsiness, tne person falling asleep at his work? 2. What is a remedy for continually cold hands and feet? 3. What will remove a dark red spot that has appeared on the forehead? 4. Does indigestion cause flatulency? 5. What can be done for lumbago and rheumatism?"

*Ans.*— 1. The most probable cause is indigestion. Some more serious affection may be present. A nerve specialist should be consulted.

2. Bathe in cold water with vigorous rubbing, two minutes, morning and night.

3. Bathe in very hot water or in alternate hot and cold water for ten minutes twice a day, alternating every fifteen seconds.

4. Yes.

5. The probable cause is uric acid accumulation. Avoid the use of meat. Take a sweating bath two or three times a week, just before retiring. A fomentation may be applied over the back and over the painful joints two or three times a day. A cloth wrung out of cold water should be applied after the hot application. It should be covered with mackintosh and then with several thicknesses of flannel to secure prompt and permanent warming.

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**Catarrh.**— S. O., Colorado: "1. Outline the course of treatment for a chronic though slight case of catarrh of the nose, the roof of the mouth being affected. 2. What foods and drinks contain the most ingredients productive of uric acid?"

*Ans.*— 1. Inhalations of hot steam for fifteen to twenty minutes three times a day. Use the Sanitary Steam Inhaler. The Pocket Vaporizer is also beneficial.

2. Meats of all kinds, beaf tea, tea and coffee, all kinds of alcoholic liquors.

**Creaking Joints — Corns — Flatfoot — Is Dyspepsia Productive of Spinal Trouble? — Drugs - Deafness.**— O. A. C., Massachusetts: "1. What is the cause of dry and creaking joints? 2. Are corns produced by a disease of the skin? 3. What is the cause of flatfoot? 4. Can it be cured? 5. If so, by what means, besides a mechanical support to the ankle? 6. Will dyspepsia cause disease of the spine? 7. Can tenderness of the spine be cured when it is seated chiefly in the lower end of the spine? 8. Is the action of drugs chemical or stimulating? 9. Do medicines paralyze the nerves, and so dull pain? 10. Is not deafness often due to the fact that in this fast age it is difficult to concentrate the attention sufficiently to allow the brain to receive impressions?"

*Ans.*— 1. Arthritis.

2. No; corns occur only where there is undue pressure or irritation of the skin. A corn is, of course, a diseased condition of the skin.

3. Weakness or relaxation of the ligaments which bind the bones of the foot together and support the arch of the foot.

4. Rarely.

5. A mechanical support of the ankle is of very little value. A steel insole is the best mechanical appliance. A good exercise for the foot in a person who has flatfoot is to stand with the heels together, and then rise upon tiptoe, then separating the heels. Repeat this twenty times, several times daily.

6. Yes, but in the majority of cases in which disease of the spine is supposed to exist, there is only reflex irritation of the spinal nerves.

7. Yes. The application of electricity is valuable in these cases. The electric-light or radiant heat bath is also useful in these cases, as well as fomentations, the heating compress, and massage.

8. There are substances which act upon the skin in a corrosive way, as they might act upon any other organic substance. For the most part, however, drugs do not act upon the body; but when a drug is brought in contact with the body, the body acts upon the drug. The so-called actions of drugs are due to the diverse ways in which the body acts upon drugs of various kinds.

9. Yes, in the case of narcotic drugs.

10. Deafness could hardly be due to such a cause, but feeble memory is.

**Catarrh —Toothpowder.**—B. P., Nebraska: "1. Can 'eating' catarrh of the head be cured? 2. If so, how? 3. Advise a toothpowder."

*Ans.*— 1. Yes.

2. By means of thoroughgoing treatment by a competent specialist in diseases of the nose.

3. There is nothing better than ordinary precipitated chalk (not French chalk).

**Food Combinations— Constipation—Turkish Bath — Prolapsed Stomach.**— T. G. V., Minnesota: "1. Are eggs, fruit, and cereals a good combination? 2. Am troubled with constipation, but the use of anything (either foods or cathartics) to relieve it causes weakness in the limbs, and affects the nerves. Please explain and prescribe. 3. Is the Turkish bath (once a week, if there are no bad effects) injurious for one with a weak stomach? 4. Can prolapsed stomach be cured?"

*Ans.*— 1. Yes, for a person who has good digestion.

2. Probably the diet has not been right. The following articles of food are especially adapted to your case: Granose, granola, granuto, malted nuts, asparagus, green peas, and especially nuts, which should be thoroughly masticated. Cathartics are never to be used. Regulation of the diet and improvement of the general health are usually sufficient. If these general measures fail, the patient should visit the Battle Creek Sanitarium or one of its branches.

3. A short Turkish bath ought not to be injurious.

4. Yes. A prolapsed stomach can be restored to such a degree as to enable it to do its work satisfactorily.

**Pain in the Ankle.**— J. S. T., Missouri: "Am sixty-three years old; habits and diet hygienic; am in fairly good health. For a month have suffered pain just above the left ankle on awaking in the morning. This is followed by numbness. The pain has increased and there is numbness and soreness and shooting pains; no discoloration; slight swelling. Walking does not aggravate it, although it is worse at night. What is the cause and cure?"

*Ans.*— Probably affection of the nerve. Apply a fomentation at night, followed by a heating compress to be worn during the night.

**Food Combinations.**— S. C. W., Ohio: "1. Are fruits and eggs a good combination?

2. If not, why not? 3. What should one with whom butter, eggs, milk, cream, and nuts disagree, eat? How may he obtain the necessary fat? 4. Do fruits and nuts combine well? 5. Why do not fruits and vegetables combine well? 6. Which of the Sanitarium cereals are most laxative? 7. Are bananas more easily digested when baked or fresh? 8. Should the skins of baked apples or potatoes be eaten?"

*Ans.*—1. Yes.

2. Eggs pass quickly out of the stomach; so do fruits.

3. Dextrinized cereals of all sorts; bananas. Malted nuts is an excellent preparation, and is easily converted into fat in the system.

4. Yes, very well indeed.

5. For the reason that vegetables require a long time in the stomach because of the large amount of woody material which they contain; whereas ripe fruits are already completely digested and pass on into the small intestine for absorption.

6. Granose, toasted wheat flakes, corn flakes, granose biscuit, granuto, granola.

7. Bananas improve by cooking, especially those which are obtained in this country, and which are often very stale and tough before they reach the interior markets.

8. No.

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**Cubeb Cigarettes.**—Mrs. C. B. F., Oregon, asks if cubeb cigarettes are injurious, and if so, how.

*Ans.*—Yes. Cubebs are a drug, and there is certainly no reason why they should be used in the form of cigarettes or otherwise. The habitual use of a drug of any kind is damaging.

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**Teeth — Is the Meat of a Vaccinated Calf as Healthful as That of a Non-vaccinated One? — Dry Scalp — Tumor.**—Mrs. I. S., South Dakota: "1. Give treatment for loose teeth and sore jaws. I took a few doses of sulphur and cream of tartar before they began to ache. 2. Was that the cause of the looseness? 3. If a calf is vaccinated for blackleg when it is six months or a year old, is the meat (at two years) as pure as that of one not vaccinated? 4. My scalp is dry, the hair breaking off and turning gray. Suggest a tonic. I weigh eighty-eight pounds; have headache at times, and am weak. 5. My mother (eighty-three years old) has a tumor on her head, the size of a small fist. Give home treatment."

*Ans.*—1. Consult a dentist.

2. Very likely it was.

3. This question cannot be answered without special investigation. As far as we have been aware, this has not been done. On general principles, we should say, No.

4. Expose the head to the rays of the sun as much as possible. Bathe the head daily with cold water, rubbing the scalp until it is red. The daily use of a little resinol soap would also be useful. A cold bath at least twice daily, on rising in the morning and before retiring at night, would be beneficial.

5. There is no home treatment which can be successfully applied to the tumor. A surgical operation is required.

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**Varicocele — Mouth Breathing.**—R. H. W., Missouri: "1. Outline treatment for varicocele. 2. Also for mouth breathing and sucking of thumb in a child of two."

*Ans.*—1. A supporter may be worn. The parts may be bathed with cold water twice daily. An operation is the only radical cure.

2. The child is probably suffering from growths in the back of the nose or from some other form of nasal obstruction. Bathe the thumbs several times a day with a solution of quassia. This is very bitter, and will possibly break the habit. It does not always succeed, however. It is sometimes necessary to enclose the hand with a large bandage.

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**Blackheads — Rumbling Sound in Stomach — Mosquitoes.**—C. C., Minnesota: "1. Do you recommend a suction cup for the removal of blackheads? If so, where may it be obtained? 2. What is the cause of and treatment for a rumbling sound almost continually in the stomach, especially on taking a deep breath? 3. Why do mosquitoes annoy some more than others?"

*Ans.*—1. It is not necessary, although it may be usefully employed. Any surgical-instrument house can furnish a simple apparatus. Sharp & Smith, 92 Wabash Ave., Chicago, Ill., is a reliable firm.

2. Gas and liquid in the stomach.

3. We know of no explanation.

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**Constipation — Lemon Juice.**—C. S., Wisconsin: "1. Which of the Sanitarium foods are best in cases of constipation? 2. Is lemon juice taken in the morning better in water or clear?"

*Ans.*—1. Malt honey, granose, malted nuts, toasted wheat flakes, granuto.

2. Lemon juice should be taken in dilute form by mixing with water.

**Colic.**— P. P. L., Pennsylvania: "1. Why should a child of six weeks have colicky pains one or two hours daily? He is very healthy and is breast fed. His parents are and always have been perfectly well. 2. Is it natural for babies to have the 'colic' for the first three months of their life?"

*Ans.*— 1. Probably there is something wrong with the mother's dietary. There may be some hereditary weakness of the stomach. It is likely the bowels are constipated.

2. No.

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**Exhaustion.**— M. E. C., Wisconsin: "I am run down after a year of hard teaching. There is trembling of the limbs at times. Entertaining callers leaves me exhausted; so does any anxiety. On rising I drink several cupfuls of hot water, then practice gymnastics and deep breathing exercises; take a cold spray bath and rest before breakfast. I drink cool water in the middle of the day and hot water an hour before the second meal. My diet consists of cereals, fruit, milk, cream, celery, cheese, eggs, and nuts. 1. Ought I to use vegetables? 2. Is it a bad plan to season hot foods with butter? 3. If so, how can it be avoided? 4. Are vegetables necessary and a wholesome article of diet?"

*Ans.*— 1. Green peas, Lima beans, and asparagus are wholesome vegetables; also tomatoes when well cooked. Great care must be taken to masticate the food very thoroughly.

2. Most assuredly. On this all physiologists will agree.

3. Employ cream instead, or cocoanut cream.

4. No.

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**Intussusception.**— Mrs. W. A. E., South Carolina: "1. My little girl at birth was healthy, but not having enough natural nourishment, I gave her one feeding of malted milk per day. She was a happy, healthy child from birth. One day, when about six months old, she began to vomit, and to shriek with agony. Then she would drop off into a sleep, to wake again with vomiting and shrieking. After seven hours there was a dark-colored movement; then three hemorrhages from the bowels. She vomited a great deal of bile, and died after forty hours of illness. Temperature was low nearly all the time. The doctors and nurses did not know what to call the attack. Are not these the symptoms of intussusception? 2. What is the cause of it? 3. In what rational way can it be prevented?"

*Ans.*— 1. It is possible that intussusception may have occurred.

2. The most common cause is violent action of the intestinal canal.

3. By wholesome living, daily cold bathing, wearing of the abdominal supporter when the bowels are prolapsed.

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**Weak Ankle — Constipation — Hives — Hay Fever —Chilblains.**— J. B. R., New York, "1. Prescribe treatment for weak ankle: which turns frequently, especially when wearing a low shoe. 2. Also for occasional constipation, lasting several weeks, followed by several weeks of too frequent stools. 3. Also for a form of hives with pimples on the legs and an intense itching condition, generally only in summer or when heat and humidity are great. 4. Also for hay fever. Formerly troublesome only in low altitude in late spring and summer. Now a change to an altitude of 800 or 1,000 feet in summer does not give quite the same relief as formerly. 5. Please give cause of and remedy for chilblains. 6. What is the cause of an occasional cold in the fall and winter, with cough, not catarrhal. The cough is irritating and painful at times. Prescribe treatment."

*Ans.*— 1. The ankle may be strengthened by special exercises, especially toe walking. Bathe the parts in cold water daily, applying a heating compress at night. Do not wear low shoes.

2. Abundance of acid fruit and fruit juices, and the use of laxative foods, such as malt honey, malted nuts, granose, granuto. A cold rubbing sitz bath, lasting not more than two or three minutes, in water at a temperature of 75°, is a good remedy. The moist abdominal bandage may be worn at night. The mackintosh should be omitted. When the bowel movements are too frequent, cleanse the bowel with a hot enema after each movement.

3. Very hot sponge bath with soda water, a tablespoonful to the quart; or when a large portion of the skin is affected, a very hot full bath is indicated. Two or three pounds of washing soda may be added to the water.

4. Hay fever is largely dependent upon the condition of the nervous system. The disease is doubtless increasing because of the general vital decadence among civilized people. Nasal catarrh, another predisposing cause of hay fever, is also becoming more and more common.

5. Chilblains are caused by slightly freezing the parts. The best remedy is the alternate hot and cold foot bath with rubbing, half a minute each.

6. The general vital resistance is lowered. Live out of doors as much as possible. Take a short cold bath morning and night.

# LITERARY NOTES

THAT inimitable booklet, "**Teaching Truth,**" by Dr. Mary Wood-Allen, comes to our table revised and newly printed. Every mother should read this book. It tells in chaste and beautiful language just how to answer the child's questionings regarding life's mysteries, which sooner or later will be pressed upon her. It gives wise counsel, which if followed will perpetuate truth, and preserve purity both in individual and social life.

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Senator Lodge's article in the series on "The Government of the United States," in the November **Scribner's,** "The Senate," gives a full account of the origin, purposes, and methods of this, the most powerful legislative body in the world, and tells of the relation it bears to the Executive and affairs of the general government. No one is better qualified than Senator Lodge to write such a paper, either by literary training or by his intimate knowledge of the subject.

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A white physician in the heart of Alabama's black belt writes under the startling title, "The White Woman and the Negro," a bold and brainy article that is a notable feature of **Good Housekeeping** for November. The writer, Ellen Barret Ligon, is a Mobile doctor, and by long experience in country and town, and by wide personal observation, knows the negro question in all its aspects.

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The November **McClure's,** which appears with a permanent addition of sixteen pages of reading matter, is a striking and memorable number. Undoubtedly the most important magazine article of the month is the first instalment of Ida M. Tarbell's long-announced "History of the Standard Oil Company," which will assuredly be the most widely read serial of the year.

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The **New England Magazine** for November contains a veritable feast of good things. In literary quality this number fully sustains the *New England's* old reputation; while the variety and scope of its contents show the magazine to be in line with the best modern progress.

The leading feature is a literary treat of no small importance. It is a hitherto unpublished poem by John G. Whittier, commemorating the fifty-fifth anniversary of the marriage of his two dear friends, Edward and Elizabeth Gove. The original manuscript is in the possession of Mrs. Anna M. Gove, of Seabrook, N. H., who until now has refused to allow the publication of the poem.

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