OUT-OF-DOOR LIFE NUMBER

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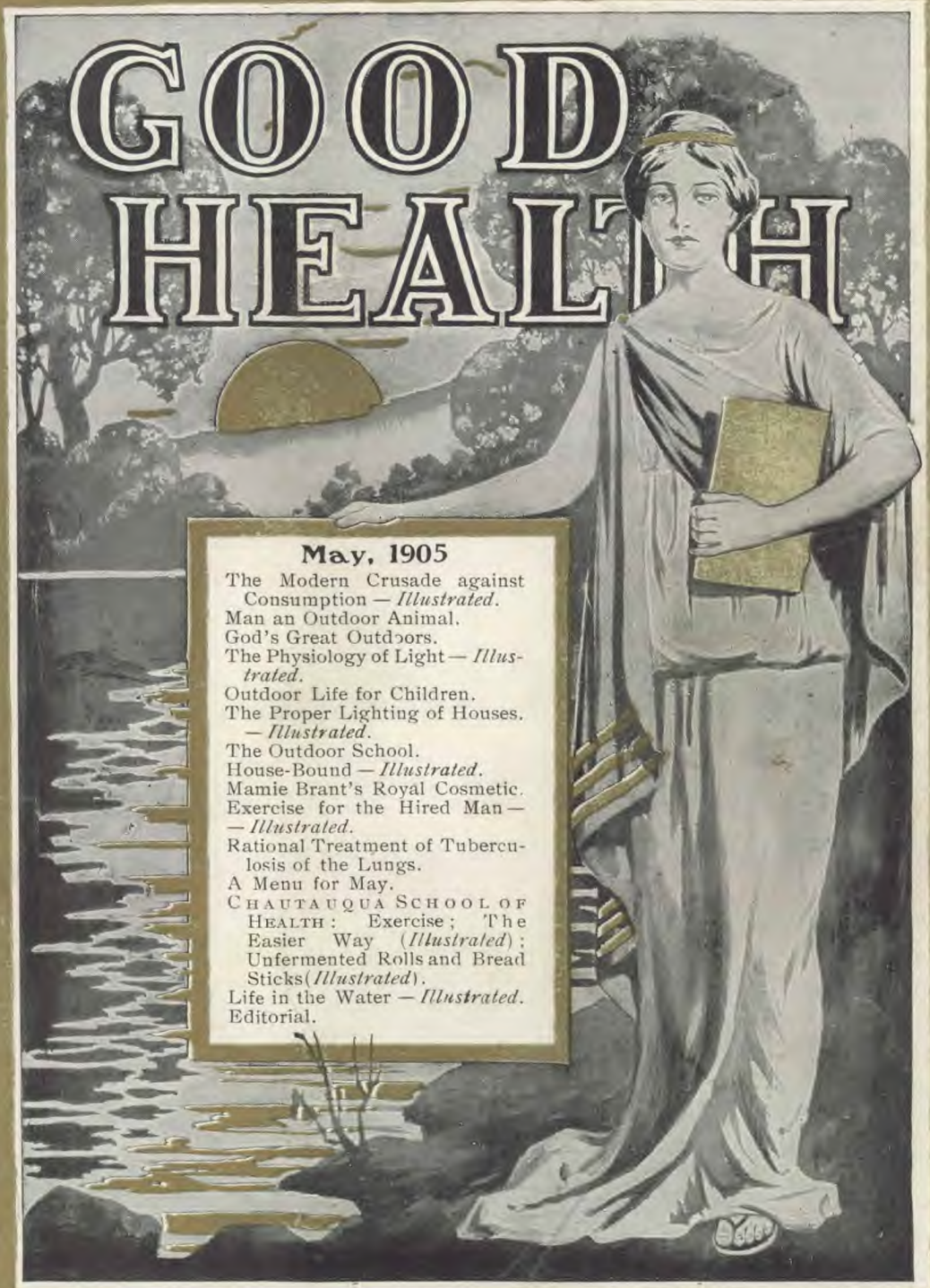
GOOD HEALTH



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THE MODERN CRUSADE AGAINST CONSUMPTION*

BY PROF. IRVING FISHER,

New Haven, Conn

PERSONALLY, I am interested in tuberculosis, as one who has had it and been cured of it. But I am persuaded that the interest in it should not be confined to those who have had it, nor to the medical profession. There should be a general interest in the subject, for several reasons. In the first place, tuberculosis is a general disease. No other disease except pneumonia has any death-rate like it. The mortality from tuberculosis equals that from peritonitis, appendicitis, scarlet fever, typhoid fever, diphtheria, grippe, cancer, and smallpox combined. In this country one person in nine dies of it; and of the deaths which occur between the ages of fifteen and forty-five one-third are due to tuberculosis. In Germany, between the ages of twenty and twenty-five almost half of the deaths are from tuberculosis.

Not only is the prevalence of the disease shown by the number who die of it, but there is evidence that "latent" tuberculosis occurs in still greater frequency among those who never die of it, and who usually never even know that they have it. Nägeli concludes an extended investigation with the statement that practically *every adult has latent tuberculosis*. This means that each of us has encysted in his lungs a certain number of bacilli which might cause the disease, but which usually give no trouble because kept under control by good health or by the firmness of the growth in which they are incased.

Not only is consumption a common disease, but it is an infectious disease, and this is another reason why the public should be interested in it. It used to be thought that consumption was the type of a hereditary disease, and only specified classes of persons could have it. As a matter of fact, any kind of physique may be attacked. Persons with small chests and who inherit small "resisting power" are more apt to succumb to the disease than others, but no one is immune. For instance, a case is reported even in Colorado of a strong man who caught it by occupying a tent with a consumptive who expectorated his infection upon the floor. The disease, however, is communicable in practically only one way — through the expectoration, and this is dangerous only when dry and pulverized. Moist sputum is harmless (unless coughed into the face or inoculated into an open wound or communicated through a kiss on the mouth), but when a mass of sputum, containing millions of bacilli, is deposited in the corridors of the post-

* Reprinted by permission from *The Outlook*. The illustrations accompanying this instalment of Professor Fisher's article are used by permission of *The Brown Book of Boston*.

PLENTY OF FRESH AIR, BEST SECURED BY SLEEPING OUT OF DOORS IN TENTS, IS THE MODERN CURE FOR CONSUMPTION

office or railway station, and, becoming dry, is trodden upon, the dust thus formed distributes these millions of bacilli through the atmosphere, and they are inhaled by all who breathe it. Out of doors the infection soon becomes too dilute to be harmful except to the weakest systems, for a healthy body is a germ-killing apparatus. The disease spreads through infected buildings. Dr. Biggs, in New York, has shown that in particular tenement houses there have been sometimes over a dozen successive cases.

A third reason why every one ought to know something about consumption is that it is so easily preventable. In fact, it is only because of the general ignorance and indifference about it that this fiendish disease is allowed to have its way among us. It is prevented in two ways: first, by destruction of the bacilli, and, secondly, by fortifying the system to resist them. Consumptives should have paper spit-cups, which, with the expectoration, should be burned daily; apartments which have been occupied by consumptives should be reported to the local board of health and properly disinfected. Spitting upon the floor should be prevented. But ordinances against spitting, to be effective and enforced, must first be sustained by an educated public sentiment.

Our most important and immediate resource, however, is in defensive rather than offensive warfare. If we keep "in condition," we can safely resist the attacks, not only of tubercle bacilli, but of other germs as well.

Not only is consumption a preventable disease; it is now known to be a curable disease. But it can be cured only provided it is taken in time, and provided the proper hygiene is adopted. If it is not taken in time, it soon reaches the incurable stage. Consumption is

not a self-limiting disease, but a parasitic disease. It begins at some small point, like a fire in a house, and, like the fire, can be smothered and put out if it does not get too much headway. But when once beyond a certain point it can not be extinguished. Consequently, an early diagnosis is one of the important medical questions of the day, and fortunately the medical profession is gradually waking up to the fact that it has not been diagnosing this disease early enough. It has depended too much on "physical signs," and too little on microscopic examination of the sputum. Free examination of sputum is now provided by most city boards of health, and ought to be availed of by every one who has a persistent cough with yellow sputum.

It should be observed that tuberculosis always has been curable. But until recently the early and curable stage of the disease was not recognized as real consumption, but "only a threatening." In the light of modern knowledge it is practically certain that Napoleon, Goethe, Von Moltke, Cecil Rhodes, Emerson, Tolstoy, Richard Strauss, and a host of other prominent personages were cases of cure. I have a long list of living men and women who were cured years ago, though few of their acquaintance know of it. The agency by which cure was effected was once thought to be solely "good climate." But Brehmer in Germany conceived the idea, which to-day is almost universally accepted, that climate is of secondary importance, and that it is the out-of-door life and other hygienic conditions, rather than climate, which perform the cure. He therefore started a sanatorium, in 1859, having first cured himself of the disease in this way. He put his patients through this treatment and kept them out of doors in the daytime as long as the weather was pleasant. One of his patients, Dr. Dettweiler, afterward started a sanatorium of his own. Our modern sanatorium treatment all comes from him. Dettweiler went further than Brehmer in that he paid no attention to the weather. Patients now even sleep out of doors all the year round.

THE MODERN METHOD IS TO KEEP PATIENTS OUT IN THE AIR FROM EIGHT TO TEN HOURS A DAY

In this country the first physician to take up the Dettweiler method was Dr. E. L. Trudeau. He has gradually developed the Adirondack Cottage Sanitarium, an institution on Dettweiler principles. After Dr. Koch, in 1882, discovered the bacilli nature of the disease, Dr. Trudeau also established a laboratory, which has been the pioneer of American institutions for the scientific study of the disease. He has been ably assisted by Dr. E. R. Baldwin. Dr. Gardiner, of Colorado Springs, was one of the first to have patients sleep out of doors. His results were astonishingly good, and this method is now widely employed. The patient sleeps out even in winter. With few exceptions, the colder the weather, the better the patient likes it, and the greater the benefit he derives. I have myself slept out when the thermometer registered ten degrees below zero, Fahrenheit. Last winter, at the Adirondack Cottage Sanitarium, six patients, including one lady, slept out (with marked benefit) even when the mercury reached thirty below. A woolen headgear with opening for the nose, warm night-clothes, woolen sheets, not many blankets over one, but two or more warm mattresses (cotton, wool, or feathers) underneath, are all that is necessary to make one comfortable and luxurious.

THE PATIENT SLEEPS OUT EVEN IN WINTER. THE COLDER THE WEATHER, THE GREATER THE BENEFIT

Sleeping out of doors has hitherto been more common in California and Colorado than in the East, but Dr. Millet, of Brockton, Mass., has proved in his sanatorium that it is possible in New England, and his example has been widely followed. It may now be pretty confidently asserted that it is feasible and beneficial in all climates and seasons. The patient, instead of catching cold, as the uninitiated always fear, becomes almost absolutely immune to colds. The only ill effects thus far observed seem to be occasional neuralgia and catarrh (both of which are avoidable if the bed is sufficiently protected from wind), and frost-bites of the nose or ears, which likewise may be avoided by proper protection. One determined lady in Colorado, with a

thin, aquiline nose, used to protect that member by a nose-mask, which gave her the appearance of a foot-ball player. Such treatment could, of course, be followed at home, and sometimes is, but until the old prejudices against night air, dampness, and infinitesimal "drafts" are abolished (and in order to help abolish them) we need numerous sanatoria. The first State to establish a State sanatorium was Massachusetts. At Rutland there is a large State institution, and a very successful one. Rhode Island is contemplating one; New York has a half-million-dollar institution under way; New Jersey is reported to have appropriated $300,000 for the same purpose; Delaware, Maryland, Illinois, and Michigan, and a great many individual cities, as New York, Philadelphia, Boston, New Haven, Scranton, Chicago, St. Paul, and Montreal, are making an active crusade against the disease. A great deal of money has already been given by philanthropists to this object. In Philadelphia Mr. Phipps alone has given $1,000,000 for the purpose of eradicating the disease in that city; for the object of this movement is not simply to cure a few consumptives, but ultimately to wipe off the disease from the face of the earth.

The treatment does not consist of fresh air alone, but of four principal "cures;" viz., air cure, food cure, rest cure, and mind cure. The air cure is the most important. One can go without air but a few minutes without dying, whereas one may go without food for a month before death occurs. Moreover, we inhale from the atmosphere daily, or ought to, one and three-fourths pounds of oxygen, which is more than the absorption of food that goes on even in a working man. But in order to absorb enough oxygen to maintain vigorous health, it is necessary to breathe pure air twenty-four hours a day. The ordinary city man breathes impure air more than twenty-three hours out of the twenty-four. This is the great predisposing cause of tuberculosis, and, in fact, for that matter, of every disease. The consumptive sanatorium provides pure air, partly by ventilation, but mainly by the much simpler and more effective method of keeping its patients out of doors eight or ten hours in the daytime, and, if possible, ten hours at night. The devices to secure this result are numerous and interesting. A covered porch protected from the wind on one side, or at most two sides, is the first requisite for day use. A reclining chair, and for winter a fur coat and blankets, with "pontiacs" and moccasins for the legs and feet, complete the outfit. Snugly ensconced in

THE NEW UP-DRAFT SLEEPING TENT DEVISED BY PROFESSOR FISHER

A TYPICAL COLORADO SLEEPING BALCONY FOR PATIENTS

such a cozy corner, the invalid finds himself independent of wind, rain, fog, or snow, and spends his days in resting, talking and playing games with his companions, or in reading or writing. The monotony is broken by occasional drives or walks, and by meals to which he usually comes with a keen appetite. At night he returns perhaps to the same porch for a good sound sleep in Nature's delightful, pure, life-giving "night air." A curtain, which in a storm can be rolled up from the bottom by means of a cord running to the head of the bed, may be placed at the exposed side, but under ordinary circumstances should not be used. In the rainless months of Colorado the invalid may spread his sleeping-bag, camp bed, or cowboy tarpaulin under the stars and go to sleep to the barking of coyotes and awake with the morning twilight and the birds, always with a peculiar sense, like a sublimated sense of taste, of that wonderful air, "strong as wine and pure as water." Thus does he get close to Nature. Or he may sleep in a tent, though too often he shuts his tent up like a room. It is a cardinal error to think that a tent ventilates itself "through the meshes of the canvas." The fact is that canvas is far more impervious to air than almost any other cloth. This is why it makes good sails. An ordinary "A" tent or wall tent with ridge-pole, to be of real use, must be open at both ends and have an open space all around, between the floor and the tent walls. Even then this tent is inferior to the Gardiner tent, with outlets for air in the top and inlets around the edge of its circular floor; for the breath rises, being considerably warmer than the surrounding air, and only needs the slightest encouragement to be carried out at the top and thus prevented from returning to the nose. The tent of Dr. Gardiner was suggested by the Indian tepee. In this way does civilized man confess the necessity of regaining health by recourse to the primitive life of barbarians! The same up-draft principle is employed in the Holmes tent, the Munson army tent, and a tent which I have recently constructed. Not a bad way of sleeping out is to project the head of the bed or cot out of the window. Still another good way is to place the bed directly under a window, wide open at the top, which, however, only secures absolutely pure air if another window on a different side of the room is also open, so that the sleeper lies directly *under* (but not necessarily *in*) a draft.

(To be concluded.)

MAN AN OUTDOOR ANIMAL

BY J. H. KELLOGG, M. D.

IN olden times there were Greeks, Romans, and people of other civilized nations who believed in the so-called Golden Age — a time far back in the history of the race when men were wiser, better, and simpler in their habits of life. To-day there are some who believe that man was once a sort of ape, and lived in the tree-tops; that the wise man of to-day has gradually worked himself up from a low level to a higher one; in fact, that men are simply extra-smart monkeys. There are others who believe that the first man was the finest specimen of manhood that has ever been seen on earth, and that the father of the race had in him all that has since been manifested in the human family.

Without discussing which one of these theories of the early days of the race is the true one, it is interesting to note that they all agree on one point; namely, that man in his earliest history was simple and natural in his ways; that his habits and his habitat were very different from what they are at the present time. All agree that man in the beginning was an outdoor animal; that housebuilding is rather a modern art, and that primitive humanity lived in the sunshine and fresh air.

It is a natural instinct with boys to want to live out of doors. The instinct that leads a boy to wish to get out of doors is of the same sort as that which makes an animal anxious to escape from a cage. Give a boy a chance and he would not stay indoors at all, unless compelled by the cold weather.

Living out of doors unquestionably has enormous advantages. Those who have camped out for any length of time have noticed that during their out-of-door experience, while living in tents, they had a good appetite for plain, simple food, and their sleep was sound and sweet. With the earth for a bed they could lie down, without a pillow, content and satisfied, and sleep soundly, awaking in the morning refreshed and invigorated. On returning to their homes they could not sleep, and tossed about and dreamed of the fields, and the blue, starry skies overhead, wishing themselves back in the tents again.

This is a common experience, and there are good reasons for it. Indoor air lacks the freshness and invigoration of the air out of doors. Subtle influences that we do not fully understand are coming to us continually from the sky, the sunlight, the starlight and the moonlight. The rays from distant suns have a great and good influence upon us.

The newly discovered metal, radium, may be seen to throw off rays. A small piece of it held over the skin for a short time will redden it. When applied to cancer, it causes it to disappear. The most deadly germs are quickly destroyed under the influence of a little piece of radium. From half an hour to an hour of exposure will kill mice and other small animals. The rays thrown off from radium are capable of producing light. If any object is placed over a sensitive plate and the radium is held up for a very short time, a photograph will be produced like that produced by the X-rays. It has been proved that these remarkably powerful rays are contained in the sunlight, starlight, and moonlight. So there are influences out of doors that we do not have indoors, where we are shut away from these cosmic forces, these potent rays that

come to us from the planets and suns.

These rays that travel through space have energy to go on indefinitely unless intercepted by something. The rate of speed at which they travel is known to be at least as rapid as that of light,— 180,000 miles in a second,— which would take them seven times around the world in a second of time. Rays are coming to us in all directions from the celestial bodies that surround the earth on all sides, and they unquestionably have an influence upon us. When we live indoors we shut ourselves away from these life-giving forces.

We might compare the body to a system of water wheels or windmills, for it is played upon and operated by the forces of nature. Light, actinic rays, rays of radium, electrical forces, —all these forces about us in the world of nature are operating upon us constantly. When one lives out of doors he is exposed to those natural agencies which are essential for the maintenance of life. The whole body is under the play of impressions upon the skin, which are transmitted to the nerve centers and telegraphed to the stomach, liver, brain, muscles, etc. Out of doors we are exposed to these powerful forces, which tone up our bodies and keep us "in tune with the Infinite." These are the natural stimuli by means of which the wheels of health are kept running. When they are shut away, we begin to suffer.

We are just as much outdoor animals as the horse or the cow; but we shut ourselves up in dust-filled, unventilated rooms from which all these cosmic forces are excluded. We confine ourselves in places that would kill a South American monkey or a North American Indian in six months, and then we wonder why we cough, have indigestion and rheumatism. The wonder is that we live at all. If it were not that man is the hardiest and most enduring of animals, the most perfect physical organism, with marvelous powers of adjustment, the race would long ago have been obliterated.

God made man to live out under the open sky, with heaven perpetually smiling upon him, and the sunshine and pure air of heaven continually bathing him, and supplying him with life and energy. But man shuts himself up in a hole or cave. He builds handsome houses for himself, but they are none the less caves. The majority of civilized people live in places where there is not as good air as there is circulating in the ordinary mountain cave. The civilized cave, called a house, is barricaded against fresh air. In wintertime every precaution is taken to keep fresh air out; cotton is even tucked into the keyholes; while God's life-giving oxygen is sweeping around outside moaning and sighing to get in.

It is not easy to get out of these artificial ways that men have adopted. It seems as if people are afraid of fresh air. They are so proud of their unnatural pallor that they even powder their faces to make themselves look paler, not recognizing the fact that the natural man has a brown tint to his skin. The condition of which this brown tint is an indication — the activity of the pigment cells of the skin — is necessary for health. It indicates the activity of other cells — blood-making, tissue-forming, nerve- and muscle-forming cells; all these are active when activity of the pigment cells is induced by exposure to the air.

This close, indoor life is one of the worst things to which we subject ourselves. A glass house is the only kind of house in which to live, for that admits the light, to the influence

of which we should be continually exposed in the daytime. White curtains will transmit the light, while dark curtains exclude it. We ought to clothe ourselves in white garments, so that the light can shine into our bodies; for when we wear dark clothes, we barricade ourselves against light.

Light rays possess wonderful power to destroy obnoxious germs. The deadly germs of tuberculosis die when exposed for a few hours to the influence of ordinary diffused daylight; direct sunlight destroys them in a few moments. It is impossible for any deadly germs to survive when exposed for a few moments to the full glare of the sun.

When grosbeaks show a damask rose
Amid the cherry-blossoms white,
And early robins' nests disclose
To loving eyes a joyous sight;

When columbines like living coals
Are gleaming 'gainst the lichened rocks,
And at the foot of mossy boles
Are young anemones in flocks;

When ginger-root beneath twin leaves
Conceals its dusky floral bell,
And showy orchid shyly weaves
In humid nook its fragrant spell;

When dandelion's coin of gold
Anew is minted on the lawn,
And maple trees their fringe unfold,
While warblers storm the groves at dawn;

When these and more greet eye and ear,
Then strike thy task and come away:
It is the joy-month of the year,
And onward sweeps the tide of May.

—*John Burroughs, in the Century.*

GOD'S GREAT OUTDOORS

BY DAVID PAULSON, M. D.,
Supt. Hinsdale Sanitarium, Hinsdale, Ill.

THE poet tells us that the groves were God's first temples. From a health standpoint they were far superior to our magnificent modern edifices where the worshipers constantly come in contact with countless germs lurking in the upholstered seats and the dustladen carpets, and where their minds are stupefied because they are compelled to inhale the poisons continually exhaled from the lungs of others, be they sick or well.

In the United States the city population has gradually increased, until it now outnumbers that of the country; this means that about half of the people of the nation are breathing house climate night and day. This is one cause for the alarming increase of disease.

Tuberculosis is a house plague. The best proof of the correctness of this statement is the fact that when a tubercular patient in the reasonably early stages of the disease moves out of his house, as a snail does out of its shell, and lives in a tent night and day, in a few months' time he generally secures better health than he ever before possessed.

It is not the fresh air in the lungs that cures the patient. It is the pure air which gets into the blood, and this blood then repairs the diseased lungs. And it must be equally clear that this blood has the same chance to cure the dyspeptic stomach, the neurasthenic

NATURE CALLS IN VARIOUS WAYS

nerves, the fatigued brain of the business man, or the debilitated heart. This is precisely the result that we are beginning to see. Prominent nerve specialists have already called attention to the fact that one of the most successful methods of treating nervous prostration is the modern plan for treating the tubercular patient.

Dr. Bishop, of New York, the eminent authority on heart disorders, recently stated that in most cases the heart is really no worse off than is the man. The weak and debilitated heart means in reality a weak and debilitated body, and he suggests that one of the best methods of cure is to treat them along the same lines that prove successful in the cure of the consumptive.

Dr. Northrup, one of the leading specialists in children's diseases in the United States, recently reported remarkable success in the treatment of pneumonia by avoiding, as he calls it, giving the patient second-hand breaths. He opens all the windows and doors to the sick-room, so that the air the patient breathes, is absolutely as pure as it is outdoors.

It is astonishing to note the splendid improvement in the appetite when a tubercular patient is put outdoors. The same would be true of many a wretched dyspeptic who does not have tuberculosis. Likewise, many patients who have to be doped to sleep every night with morphine or other drugs, which stupefy the liver, stomach, and various organs just as much as they do the brain, would soon sleep like healthy children if they were only given a liberal introduction to God's great outdoors.

In Stettin, Germany, nearly one-half of the children die in their first year, while in Japan, where the children are born and reared in houses almost as open as wicker baskets, infant mortality is scarcely known.

Why should we be so careful to get pure food for our stomachs, and yet be so very careless about securing good air for our lungs? If we should see some one contaminate our drinking water one-half as much as the average bedroom air is contaminated, the thought of swallowing that water would nauseate us. But a man of sixty has breathed bedroom climate for about twenty years, and that is the real cause of many of the troubles of which he is now complaining.

We can not all move outdoors, but we can bring a great deal more of the outdoors indoors. To have fresh air in our houses during the winter will require more fuel, but the cost will come back to us in what we will save in funeral expenses. Could the truth be told, we would be amazed at the number of

"I WANT TO BE OUT IN THE GREAT FREE WOOD"

tombstones upon which could truthfully be inscribed, "Died from the plague of house air," "Killed by bedroom climate," "Gradually smothered to death in a tenement flat."

Those who are afraid of taking cold at night if they should open wide their windows, can wrap up their heads just as they do when they go out driving in the daytime. Those who will do this will find, in the majority of instances, instead of waking in the morning with a brown taste in the mouth, a congested feeling in the lungs, and a feeling in the head as if they had recited mental arithmetic all night, that they will wake refreshed, thankful to be alive to enjoy one more day.

"O, to be out in the great, free wood,
Away from the hurry, away from the care,
Where the boughs of the trees weave a giant hood
To cover the world when the world is bare.

"There's a place out there 'neath a spreading tree
That only the squirrels and I have known.
I guess that I'm lazy, but, anyway,
I want to be out in the great, free wood."

THE PHYSIOLOGY OF LIGHT, AND THE EFFECTS OF THE SUN

BY LOIZA ELWELL, M. D.

NATURAL science is interesting, not because it is mysterious, but because it is simple. As we study the laws of nature that have been revealed to us, they seem so simple, yet none the less wonderful, that this question arises in our minds, "Why has not this occurred to us?" Nature has not revealed all her wonders at any one age, but by piecemeal, as it were. The discoveries by Newton, Herschel, Galileo, and others have been keys whereby such men as Edison, Marconi, Röntgen, and others have been enabled to unlock Nature's storehouse of truth. As we read of the new facts which the scientific world is furnishing, it seems that we are but standing on the threshold, and that which has been revealed will hold no comparison to that which remains to be known.

Light is one of Nature's greatest forces, and has been well defined, but perhaps one of the best definitions is that found in the Scriptures, "Whatsoever doth make manifest is light."

Light is a compound substance, and can be separated into its component parts. Admit a ray of light into a darkened room and allow it to fall on a glass prism, and we have the visible solar spectrum. By means of a hand

SUNSHINE AT FIRST HAND

lens the rays of this spectrum can be collected and turned back to the original white ray. It requires from thirty-three thousand to forty thousand of the waves at the red end of the spectrum to make an inch. Of those at the violet end it requires from fifty thousand to sixty thousand. Between these are rays of various lengths. Scientific investigators were not long in finding out that there are many rays at either end of the spectrum that are invisible. If a thermometer be held beyond the infra-red, the mercury rises, due to the invisible heat rays. At the other end of the spectrum, in the infra-violet, we find the actinic or chemical rays. Farther beyond in this unexplored region lies the Röntgen or X-ray.

With our visual sense as a medium, these rays of light make an impression on the brain, and we have perception of objects, colors, etc.

EFFECTS OF THE SUN

Rational therapeutics, or Nature's remedies, which include fresh air, exercise, sunlight, and wholesome food, are now of primary importance in the treatment of disease, instead of being considered, as they once were, a mere means to an end.

Of the above-named agents, light is one of the most important. The sun is the source of all natural light, and furnishes an unlimited supply. Its rays have great strength. They are rich in actinic power, and a source from which all other light is ultimately produced. The light of the sun is within the reach of all physicians and within the means of every patient. We have but to go forth and use it.

Sunshine is as necessary to animal life as it is to plant life. Its effect upon the mental condition is remarkable. Let a sunbeam stray across the path of a fretting babe, and it will at once begin to crow out in delight as it grasps for it.

On cloudy days many people, especially those living in dark tenements in the city, become mentally depressed and gloomy, but when taken outdoors and the warm sunshine is allowed to sink deep into their hearts, and their lungs are filled with the fresh, free air, the

RESUSCITATED SUNLIGHT

sluggish blood takes a fresh start, they forget about their troubles, and gloomy looks are dispelled by cheerful smiles.

Thousands who are suffering from brain-fag as a result of overwork or of social functions, flock to the seashore every summer. Here they bathe in the surf, lie in the sand on the beach, and become tanned, thus receiving untold benefit. They return to their homes, able to meet the responsibilities of their daily life with fresh vigor and energy.

PIGMENTATION AND MOTTLING OF THE SKIN PRODUCED BY PHOTOTHERAPY

Not all of us can go to the seashore, but we need none the less be deprived of the benefits of sunshine and bathing. An outdoor gymnasium can be fitted up and we can have a summer resort in our own backyard. By devoting an hour daily to bathing in the pool, then basking in the sunshine on a sandpile, the skin soon acquires a beautiful bronze, the typical seaside complexion.

The actinic ray which is derived from the sun is a specific in the treatment of lupus vulgaris, eczema, and other skin lesions. By means of an ingenious device introduced by Finsen, the rays can be focused on a lesion. As a result of the irritation produced by this ray, tissue activity is aroused, the blood supply is increased, new food is carried to the parts, and reconstruction is begun and carried on to complete recovery. Nor does its only potency lie in this. It is extremely valuable as a germicide to bacteria on the surface of the body. In some climates, sunshine is not at all times available, but this need not prove a drawback, for the electric arc-light contains the actinic ray, and the results obtained by its use are as satisfactory as those from the sun as the direct source. On cloudy days the patient can be placed on a cot where the arc-light can be focused upon him. (See page 224.) An exposure of a few minutes produces an erythema. By repeating the treatment the skin soon becomes pigmented and bronzed, as much so as if exposed to natural light.

The electric arc-light is beneficial not only in the treatment of lesions of the skin, but in arthritis, neuralgias, and respiratory diseases as well.

Those who have experienced the benefits to be derived from the sunshine, hail with delight the return of summer as a time in which to store up health. The alternation of summer and winter is one of the greatest blessings of the temperate zone. The tonic air of winter consumes the energy which summer affords an opportunity to store again.

OUTDOOR LIFE FOR CHILDREN

BY MARY WOOD-ALLEN, M. D.

OUTDOORS and children belong together, and the children know it. Witness the joyous flutter of the little hands and feet, the shine in the eyes, when the baby sees his cap and cloak which means going "by-by." Note how quickly the irritable child becomes good-natured, and the restless one goes to sleep when taken out of doors. In truth, outdoors seems to be the baby's normal sleeping room, and he never sleeps so sweetly or so soundly as "under the shady greenwood tree." Even the advent of winter does not necessitate a change of habit in this respect, for children have been known to sleep out of doors every day during an entire winter.

Even though the neighbors did accuse the mother of cruelty, the baby never seemed to be aware that he was unkindly used, and throve and grew just as if he had received the most tender treatment.

I used often to see on winter days a baby's cab on a sheltered side porch and knew that warm and rosy under his blankets was sleeping an infant who never had a cold all winter, who was a "comfortable" baby, a joy to the whole household; while in the next dwelling another infant, watched with the utmost care, sheltered, wrapped, protected from drafts, was yet so ungrateful as to reward this solicitude with pallor and emaciation, and who had constant colds, and fretted continually, so that there was no rest for the household day or night.

Happy is the child to whom the outdoor world is free. For such there is little advice to give except to allow them the privilege of using their freedom. But what shall be done for the little ones whose scanty glimpses of the blue sky come through the window of a "flat" and whose lungs never know the exhilaration of pure air. It is indeed a misfortune that any child must of necessity dwell indoors, and the utmost care of the mother should be expended in lessening the dangers of the situation.

If a porch or veranda is available, the infant, in summer, can be kept out of doors in a store-box that is lined and and padded. Here he can sit with his toys, and here he can topple over safely when overcome with sleep. Such a box can be carried from place to place if there is yard room.

An older child can be kept in safety within a portable enclosure which can be fastened — hooked — to a tree or to the side of the house. This enclosure can be made of blunt pickets nailed close together on cross pieces which are placed on the outside of the enclosure, so that the child can not climb up on them.

Within this space the little toddler can wander at will and play as he pleases. In these days of no fences such a plan would be practicable in keeping him in a safe place and preventing his running away. It acts in the capacity of law, which, Hughes says, should define the limits within which there is perfect freedom.

If by any sorry chance there is no porch or yard for the child, the mother must try to bring outdoors in. Twice a day let the windows be opened wide, no matter how cold the weather, nor how much it costs for coal; bundle the child up, and either draw him back and forth in his cab, or let him run around

briskly enough to keep warm. It would be well if the mother, also warmly wrapped, were his active companion in these indoor excursions.

A mother of three small lads and a baby girl found herself transported from the country to a city home with only a tiny back-yard in which to keep her children from the street — that most undesirable of play-grounds.

After some discussion with the father, a plan was evolved which proved practical and satisfactory. Around the fence on all sides a narrow bed was dug, and to each boy and the mother was given a portion of the ground thus prepared in which to raise whatever they chose. The father claimed an interest in each and all, and distributed his services and his counsel as circumstances indicated. Great pride was taken in the idea of making the little space beautiful with morning-glory vines, hollyhocks, poppies, and such homely flowers as could easily be made to grow.

In one corner was deposited a big pile of clean sand, and shovels and pails were furnished to all, even to the toddling baby sister, and here forts were built, wells dug, and much aimless digging done.

On Sabbath afternoon the father would sometimes say, "Now, let us make Jerusalem," or, "Let us take a journey with Paul," and so the children were interested in Biblical history.

A tub of water under the yard hydrant supplied means of keeping "the green things growing," and also furnished a tiny sea for the sailing of small craft, or water for the mixing of mud pies.

Under the back porch the father put up a workbench and supplied an outfit of tools of the simplest kinds, with boards and nails, and here at odd moments he worked with the boys.

One part of the yard was fitted up as a home gymnasium with ladders, horizontal bars, sliding poles, etc., and here the mother would sit as audience, applauding the wonderful feats of her small acrobats, while the baby girl was swayed gently in the home-made swing or slept sweetly in the hammock.

This tiny back-yard was not only a place of amusement for the children, but was a home-center of interest, and a family school wherein eye, hand, brain, heart, — indeed, the whole being received culture and training.

The value of gardens as adjuncts to the school is beginning to be realized, and the idea is enlarging into Home Gardening Associations for the purpose of promoting the improvement of the homes in poorer parts of the cities.

A most successful Children's Farm has been conducted by Mrs. Henry Parsons in the worst slums of the West Side of New York. She took charge of an unimproved park, and for two years has there supervised a garden or farm 114 x 84 ft. in size. Small as it was, she was able to give instructions in gardening to nearly three hundred boys and girls.

The Young Women's West Philadelphia Club has donated the use of two acres of ground for a Children's Garden, which will be conducted under the auspices of the Public Educational Association. The cultivation of this ground will not only give the children pleasure and keep them out of mischief, but it will also cultivate in themselves attention, industry, patience, and persistence. It will give them new interests and a kind of knowledge which heretofore has been monopolized by country children, from whom the plant world has not been hidden, although even they have not been taught to take in it the intelligent interest desirable.

What is being done in cities to teach children to love the cultivation of the soil, and to understand and rejoice in the making of a blade of grass to grow where none grew before, should suggest to parents and teachers in the country places, where land is plenty, how they may employ the means at hand in the development of character in their children.

Country schoolhouses might be made most attractive, instead of being the bare, unsightly objects they too often are, by enlisting the activities of the children in the planting of trees, shrubs, and vines, the cultivation of flowers, and the destruction of weeds. Such occupation has not only a physical, but a moral, value, creating a love of beauty and neatness, arousing a desire to preserve rather than to destroy.

Parks in cities are not only beautiful, but beneficial, yet public play-grounds are really of more practical value.

Do you think children can not be taught to protect the flowers, or that they will inevitably destroy them? This is not the testimony of those who have been in this work. A writer in the New York *School Journal* says: "I see five hundred boys, for at least three months in the school year, play about two beds of flowers, each twelve feet in diameter, and in three years I have never seen a flower broken by one of them. . . . No marauding hand ever touches one of these flowers, nor does any police ever say, 'Get off the grass.' These interested pupils are a police unto themselves, and they are glad to have a teacher on the ground, not to see them if they touch or mar the flower beds, but to see how they will not do such a thing. . . . Your boys, instead of injuring the flowers, will volunteer in turn to keep them up, if no one else is at command who can do it for you. Try them. Only teach them how to do it, and they will take great pleasure in following your teaching, though they may forget half of your arithmetic instruction."

This is certainly a hint to parents who have trouble in keeping their boys in school. Give them an interest in the school and they will not so soon be ready to leave it.

As the summer days draw nigh and we begin to rejoice in blue sky and green fields, our thoughts turn naturally to the children of the cities to whose ears have never come the songs of wild birds, whose eyes are never gladdened by the brightness of wild flowers, who really are acquainted with no wild creatures but themselves, and we long to transport them to the woods, where they may learn some of Nature's secrets and gain some renewal of life from Nature's healing touch.

I once helped bring a company of children from New York City for a two-weeks' stay among the farmers. It was interesting to see how the country people and the city children looked at one another in uncomprehending amazement when they first met. They were strangers, from different worlds, knowing nothing of one another's lives and interests, and therefore somewhat distrustful of one another.

But even more interesting was it when at the end of the two weeks they assembled at the railroad station to part. There were tears and embraces and many loving words. Each child held some gift or treasure acquired during the stay, and clasped with earnest affection the hard hands of their farmer friends.

"I'm coming back," cried one childish voice after another, as the train engulfed the little forms. "I'm coming back to stay all the time."

Cheeks that were thin and pale had grown round and rosy. Coughs had disappeared, limbs had grown strong, weight had increased, and no doubt lives had been lengthened by the pure air and good food.

It seemed cruel to send them back into the stifling streets, the crowded courts, the vile-smelling alleys. Some-day, perhaps, the nation will so value its future citizens that it will secure an opportunity for all to spend some part of their lives out of doors. Meanwhile as we sit on our shaded verandas, look at our beautiful flowers, breathe the pure air of our fields, we might ask ourselves, "What wouldst Thou have me to do?"

THE PROPER LIGHTING OF HOUSES

BY E. E. ADAMS

WINDOWS were originally, as shown by the Anglo-Saxon name, "eagthyrl" (eyehole), mere slits or holes in the walls for the admission of light, and to enable the inmates to see what was going on outside the house. Sometimes oiled paper or canvas, or some other semitransparent substance was stretched across these apertures, to keep out the wind while admitting light. In the days when every man's house was a fortress, the windows were of necessity set far back in the thick walls, something after the manner of a ship's porthole, and strongly barricaded.

In some Eastern countries oiled paper is still used for the purposes for which glass has been substituted in the West. The traveler in Japan may observe across the windows of third-class railway carriages a band of colored paint, the purpose of which is to notify unsophisticated Japs that there is something there besides atmosphere. Before this device was adopted it was necessary for an ambulance to meet each train. The windows in Japanese houses are mere screens of white oiled paper.

Glass was not used for domestic purposes in European countries until the eleventh century. That it was in common use in better-class houses by the end of the fourteenth century, is shown by Chaucer's description of a lady's chamber: —

> "My chambre was
> Full wel depeynted, and with glas
> Wer al the windowes wel y-glased
> Ful clere, and nat a hole y-crased."

By the beginning of the seventeenth century, windows had so increased in size and number that Bacon protested against the lavish use of glass, remarking that "you shall have sometimes your houses so full of glass that one can not tell where to become to be out of the sun or cold." Nevertheless, the increased light and air admitted to the houses by this means could not fail to have a beneficial effect upon the health of the inmates.

In the seventeenth century, sash windows were first used in place of the old-fashioned casement. A large volume of air can be admitted through casement windows, but it is impossible to regulate the supply, since they can not be opened at the top and not at the bottom. Another weak point in the casement window is the difficulty of making it weather-tight, especially the "French" casement, which opens inward. The "English" casement is made to open

outward, so that when closed, the wind will force it together. This, however, makes difficulty in cleaning.

With the sash windows came in the practice of dividing windows into small panes by means of heavy bars,—a practice not to be commended from the sanitary standpoint, though esthetically much may be said in its favor. The light-giving area should be as unimpeded as possible. The lower sash, at least, should not be divided.

ENGLISH CHURCH WINDOW OF THE SEVENTEENTH CENTURY

The "window tax" formerly levied in England, and still enforced in France, has had much to do with the regulation of the number and size of the windows.

The beneficial effects of light, especially of direct sunlight, its aid in the development of the body, and the prevention and cure of disease, make it the personal duty of every one to see that his dwelling is so constructed as to admit as large an amount as possible of this life-giving element. Pestilence walks in darkness. Sunlight is death to disease germs. Where there is darkness there will be dirt, and dirt is a synonym for disease.

The direct solar rays should be introduced wherever possible. All constantly inhabited rooms should be exposed to its influence, that it may chase from every cranny the elements of uncleanness and corruption.

Many housekeepers are antagonistic to the entrance of much light, for the reason that it bleaches colored fabrics. As a general thing, the carpets and curtains which they are so anxious to preserve, are mere dirt traps, loaded with powdered filth. "Household dust," says one, "is the powder of dried mud, containing particles of every description of animal and vegetable matter. The droppings of horses and other animals, the entrails of fish, the outer leaves of cabbages, the bodies of dead cats, and the miscellaneous contents of dust-bins generally,—all contribute their quota to the savory compound; and it is to preserve a harbor for this compound that well-meaning people exclude the sun, so that they may not be guilty of spoiling their carpets."

Since light and air have so much influence on health, the size, position, and aspect of windows of all inhabited rooms are worthy of careful consideration. Although sunlight should be freely admitted, it should not fall too directly upon the eyes, nor upon the objects of vision. On this point an ancient writer says: "Light (God's eldest daughter) is a principal beauty in a building, yet it shines not alike from all parts of the heavens. An east window gives the infant beams of the sun before they are of strength to do harm, and is offensive to none but a sluggard. A south window in summer is a chimney with a fire in it, and stands in need to be screened by a curtain. In a west window, the sun grows low and overfamiliar toward night in summer-time, and with more light than delight."

An east aspect is most suitable for bedrooms. It enables the inmates to see "the rosy steps of morn advancing

in the eastern clime," and admits "the infant beams of the sun" at the only time in the day that the room is likely to be occupied. In Aristotle's "Ideal State," the city itself was to slope toward the east, and catch the winds of the morning.

In every dwelling a bedroom with a more sunny aspect should be provided for use in case of sickness. Sunlight ranks second only to fresh air in importance for the sick. "Instances could be given almost endless," says Florence Nightingale, "where, in dark wards, or in wards with a northern aspect, even when thoroughly warmed, or in wards with borrowed light, even when thoroughly ventilated, the sick could not by any means be made speedily to recover. Put the pale, withering plant and human being into the sun, and, if not too far gone, each will recover health and spirit."

For an invalid's room, a southeast aspect is very pleasant. In the morning the sun shines in, and in the evening the effect of the sunset is seen without the direct rays shining into the room.

A southeast aspect is also suitable for a dining-room. It is pleasantly sunny in the morning, when the family are at breakfast, and there is no inconvenience from the direct rays of the sun shining in during the evening meal, as is the case with a westerly or southwesterly aspect.

The family living rooms in use during the day should be sunny and cheerful. South, southeast, and westerly aspects, with sun-blinds outside to screen off the glare of the midday sun when necessary, are suitable for these rooms.

In all nurseries, especially day nurseries, provision should be made for abundance of sunlight. The windows should be low enough for small children to be able to see out without climbing. If the windows are more than two feet from the ground, a window-seat should be provided, which may also serve as a box for playthings.

A sunless north aspect is suitable only for closets, pantries, cellars, and rooms not in general use. The bath room does not come under this head, for the exposure of the skin of the whole body to the direct solar rays is one of the most important hygienic measures, beneficial for the well, and essential for the sick. In most houses the bath room is the most convenient apartment for this sun bath, which should be immediately followed by a cold water bath of some kind. The advice of a fifteenth century writer concerning the situation for a bath room is good: —

"Toward the sun on drie it must be wrought,
Southwest and south the sonnes ynne be brought,
That alle the day it may be warme and light."

Colored or stained glass windows are most appropriate for bath rooms. They obviate the necessity for curtains, which absorb the damp and intercept the light. In the selection of the colors it is well to bear in mind that red glass filters out the chemical or actinic rays, isolating the calorific or heat rays, which are the source of radiant energy; while blue glass separates the heat rays, and transmits the actinic rays, which may be employed for tonic effects. A good plan is to have the window of ordinary glass and line it with inner panes of cathedral glass, which can be taken out and changed at pleasure.

Window curtains, which, from the standpoint of hygiene, are decidedly objectionable, are no longer inevitable. It is becoming customary to exercise taste and skill on the arrangement and

A SUNNY CORNER IN THE PARLOR OF THE BATTLE CREEK SANITARIUM

decoration of the woodwork around the windows, with the express design of leaving them curtainless. The upper portion of the framework may be so treated as to take off the square effect, and an artistic effect obtained which one would be loth to conceal.

When the outlook is pleasant, plate glass is to be preferred.

If it is desirable to exclude the view, or to prevent others from looking in, fluted, ground, or tinted glass will suffice. Such glass does not diminish, but rather increases, the amount of light transmitted, while at the same time it breaks up and softens the light, and is a protection from the glare of the sun.

Harmonious combinations of color are those which, when blended, make up white light. Colors which are complementary should be used together. Ogden Rood gives the following table as illustrations: —

Combine	Red	with	Green-Blue
"	Orange	"	Cyan-Blue
"	Yellow	"	Ultra-Marine Blue
"	Greenish-Yellow	"	Violet
"	Green	"	Purple

If curtains must be used, they should be of some light-colored and semitransparent material — something that will show the dirt sufficiently to necessitate frequent washing. They should hang straight from a rod or pole, and not be draped or looped so as to provide lodging-places for dust. Heavy curtains not only harbor dust, but retain the smell of food, tobacco smoke, etc.

In rooms in which the window space is insufficient for good lighting, and the window can not be enlarged, the light may be economized by light-reflecting surfaces within the room. A light-colored surface reflects the greater part of the light falling upon it. A dark-colored surface absorbs most of the light, converting it into heat. To econ-

omize light, paint or paper the walls and ceiling with light colors, and the rays which enter, instead of being absorbed, will be reflected from surface to surface, especially if the paint or paper is well varnished. Light-colored furniture will aid in producing this effect. The "show-dirt" tendency of light colors is rather advantageous than otherwise, as it insures cleanliness. Varnished walls and ceilings may easily be kept clean by washing.

When the access of light is barred by an opposite wall, as is often the case in narrow streets, in addition to the light surfaces within the room, the wall should, if possible, be whitewashed or painted. The window should be flush with the outer wall, so as to catch as much light as possible, and should be composed of roughly ground glass, through which the light that does enter is reflected from the innumerable facets produced by grinding.

The Voice of Command.

In these days the great man seldom uses the great manner. Power speaks gently; authority whispers oftener than it vociferates. Dewey's famous "You may fire when ready, Gridley," is the quiet and confident example of the big man in a big undertaking, whether it be war or business.

Twenty years ago the typical railroad president, of the three railroad kings of that time, was bluff, loud, autocratic, propulsive. His words rolled out thunderously. He brooked no argument. Jove could not have been more conclusive. He gave the impression of awe: he made his visitors feel that they were in a wonderful presence. The same railroad system now handles many times more business than it did then; its earnings are ten millions larger; its employees have grown into an army. The new president is altogether a modern executive. While chatting with a visitor he gives orders. There is no elevation in his voice. Humorous sallies are sandwiched in the conversation. It is as pleasant and as comfortable as a friendly talk in a cozy corner. And yet this modern president despatches more business in a day than his predecessor of twenty years ago did in a week.

It is the same to-day with most men of eminence in business and politics. They are of the same brand — quiet, well-poised persons who seem to have acquired with their success the practical philosophy of life and living. They are not in a hurry. They do not fume or bluster. Their words are as cheerful as they are simple. They invite and tell good stories; and their very calm is in part an explanation of their rise to high position.

It is a vast mistake to think that the tendencies are toward noise and haste and nervous waste in the big chairs of modern civilization. The man with the cool head and the gentle tongue is the kind who is wanted in large undertakings. — *Selected.*

A PHYSICIAN found one of his patients sitting in the bath and swallowing a dose of medicine. "What are you doing there, instead of being in bed?" inquired the astonished practitioner, and the patient quickly responded: —

"Well, you told me to take the medicine in water, and that's what I'm doing." — *Gazette.*

"GOD estimates us, not by the position we are in, but by the way in which we fill it."

THE OUTDOOR SCHOOL

BY PROF. E. A. SUTHERLAND

A CHICAGO physician recently occasioned widespread discussion by announcing that one-third of the children in the city schools are afflicted with nervousness in one form or another.

Mrs. Lew Wallace, in her widely read article which appeared in the columns of *The Ladies' Home Journal* a few years ago, under the title, "The Slaughter of the Innocents," awoke a train of thought in the public mind that has since borne fruit.

In our children lies the strength of our country. Our children are dear to us, and their education is a subject which in the history of our country has been the consideration of many of the brightest minds. Certainly no subject was ever of more universal interest. It appeals to every father and mother; it is a subject of consideration for the child born in wealth, and for the child of poverty. But even yet our schools have not reached a state of perfection.

There have been great awakenings on educational subjects at frequent intervals in the world's history, and we are just now experiencing one of these revivals.

"Bring the children out into the air;" "Put a spade and a hoe in the hands of your pupils;" "More *doing* and less mere study of books," — these are some of the calls which we hear everywhere.

It is strange, when one comes to think of it, that poring over books has so long been considered education. It is doubly strange because so many noble advocates of out-of-door education confront us in history.

The first school on earth was in a garden. The first children born on the earth felt no confining schoolroom walls; they suffered from no ill-ventilated rooms, sat on no stiff seats, strove to memorize no text-books.

Both mothers and teachers to-day are instructed to decorate with pictures, leaves, and flowers the rooms in which children spend hours. Why not take your children where the blue sky is the dome of the schoolroom, where the green grass replaces the dusty floor, and where the pictures are real, growing things? Perhaps we should not ask, Why not? Some are already doing this.

One of the best primary and kindergarten teachers of Boston, during the summer months a few years ago, gathered her children together under the spreading boughs of an oak. They had their tables, their paint brushes, their tools, but almost no books. They hunted between school hours for things growing and for things living all around them. That teacher had the glow of health in her cheeks, and every child before her was full of life and vigor. Sunlight, pure air, good thoughts — how natural the growth! The movement has grown from such beginnings. But we can not say that the idea originated with these modern teachers of small children. They have but followed the methods of that Teacher sent from God, whose pupils gathered about him on the lake shore and the mountain side.

Every teacher whose methods are these has caught at least one of the thoughts of God. Froebel faithfully endeavored in his day to make these methods popular.

Recently there has been a strong impetus given to the out-of-door school

idea. It is now the ambition of the progressive teacher to have her pupils plant and cultivate and harvest. Of all forms of education by *doing*, nothing excels the cultivation of the soil.

Our father Adam was not a carpenter, nor a blacksmith, but he was a farmer. And as necessary as are these latter at the present time, it still remains true that there is something about the planting of a seed, cultivating it, watching it grow, keeping out the weeds, and at last picking the fruit, that excels every other form of manual training. There is life and health in such an education.

But is there intellectual training in it, or will the advocates of such a system produce mental dwarfs? Mr. R. H. Cowley, educational superintendent of Ottawa, Canada, answers this query. After years of experience in school gardens, he says, "Where school gardens have been conducted for several years, the pupils are at least thirty per cent superior to others of their age in general education."

Mr. J. Allan Stevens, who had charge of a school garden in St. Louis with two hundred boys during the World's Fair in that city, tells of the regular attendance of his pupils in spite of the attractions of the Fair; of the success of their gardens from the standpoint of produce raised, and, above all, of the moral, intellectual, and physical development which these youth received. St. Louis will repeat the experience for the benefit of other boys.

In a recent issue of the *Chautauqua Assembly Herald* appeared an account of a boys' school on an island off the Massachusetts coast near Boston. The writer says, "There is a large shop and manual-training school. The farm gives a chance to work in the fields. They have many kinds of animals, wild and domestic, and their management takes a great deal of love and attention." The boys study nature at first hand. They have a school paper to which all contribute, and some of the subjects upon which they write are, "How I Mended the Barn," "How I Planted Potatoes."

"The school work is conducted in the most natural way. Geography is not taught by text-books, but by the constructing or finding on their island of typical forms such as river valleys or promontories, by studying the weather, by mapping the island, and thus in every way by getting close to the heart of the world about them."

A man need not be a prophet to see that the school of the future is to be largely an out-of-door school; that the best schools will be in the country instead of in the cities; and that city boys and girls will seek an education in a country school instead of, as has been the case for the past generation or so, the children of the country being driven into the city to complete their education.

The tide is turning. Country life and the outdoor school are assuming their rightful places. Bishop Spalding says, "Go into the city to seek money, or to save souls, but go not there to make thyself a nobler man." In other words, Come out of doors for health and richness of character. The spirit of this has been applied to the school. The school that plants the feet on the sod, feasts the senses upon the abundant life of the country, and brings the child's hands in contact with the soil, is the school of the future. In such schools lies the salvation of the race.

[Our readers' interest in the above article will be enhanced by a knowledge of the fact that the writer has had an extensive practical experience with the out-of-door school, and is at the present time the president of an industrial college near Nashville, Tenn., in which this object is a prominent feature.—ED.]

HOUSE-BOUND

BY MRS. E. E. KELLOGG

ALL things have relative values. The individual lacking a roof tree, houseless, is considered unfortunate in the extreme. Equally to be deplored is the situation of the one whose life must be spent within the confines of a house. The one is bereft of the attributes of a home; the other, of that vivacity and vigor which come through a free out-of-door life, for good health is a condition incompatible with a general quarantine against fresh air and sunshine.

In the effort made, some years ago, to civilize the American Indians, a certain government agent in the Northwest built some comfortable, up-to-date dwellings upon the farms in his jurisdiction, which he succeeded in persuading the Indians to occupy. Not long thereafter circumstances necessitated his leaving his station for a time, but he left congratulating himself upon the progress his wards had made toward civilization. Imagine his surprise upon returning to his charge two years later to find the Indians reinstated in their wigwams, while the houses he had taken so much pains to provide for them were devoted to the storage of their farming implements. Upon inquiry as to the occasion for such change, he was informed that all who slept in the houses became sick, and some of them spit blood. When they returned to their well-aerated wigwams, they regained their health, and naturally they preferred health to houses.

"Too much house" was the Indian chief's naive diagnosis of their difficulty. Too much house may be rightfully credited as the cause of a large share of ills in these days of modern architectural achievements.

It is pretty well understood that air and sunshine are among the most effica-

OUT-OF-DOOR KINDERGARTEN

STREET SCENE IN POOR QUARTER OF VENICE

cious remedial agents in cases of illness. That which is of so much utility in the restoration of health is of no less value for its preservation. The life-giving, life-sustaining properties of sunlight and air evince the Creator's purposeful provision for the health of his creatures. Without these no living thing can thrive and maintain resistance to disease. Why, then, spurn these munificent gifts of Heaven to immure one's self behind air-tight walls of brick and wood and stone with closed doors and shaded windows, keeping out as much as possible of the vivifying elements?

The demands of the present-day

strenuous life and the multiplicity of devices to supply comfort and entertainment indoors, all conduce to the growing inclination to spend the bulk of life shut in from the invigorating, enlivening influences of air and sunshine.

True, there is an increasing tendency to take occasional vacations and recreative holidays. There are those who devote days to outdoor sports, and many who take a limited amount of outdoor exercise; but, like all spasmodic efforts, even though along right directions, the benefits accruing from such occasional jaunts do not equal that of a regular time daily spent in the open. We need to make outdoor life more of a duty; to adjust our interests so that it shall be a part of our every-day program. Let us have out-of-door kindergartens and schools, out-of-door service on the Sabbath, dispense hospitality outdoors, and let a fresh-air life enter into as many as possible of the details of the home living.

Women are perhaps the greater sufferers from too much confinement indoors, particularly housekeepers. The average woman in this country is housebound twenty-two out of the twenty-four hours. The traveler in foreign lands notes with amusement the street life of a considerable portion of the population, no doubt congratulating herself on her own more fortunate lot; and such it may be from the point of material comforts and conveniences, but she may miss the vigor and nerve-tone which outdoor living promotes.

THE HANDY WAITER

She is a wise woman who in all suitable weather does as much as possible of her work outdoors. It is not impracticable, and far more healthful, to do out of doors one's ironing, sewing, mending, washing, preparation of fruits and vegetables, as also numberless other tasks belonging to the housekeeper's daily routine. At first thought it may appear that such an innovation from long-established customs would prove troublesome. On the contrary, if properly planned, such becomes labor-saving as well as health-promoting.

The provision of a suitable place to work is the first requisite,— the side porch or piazza, a shady nook on the lawn, or a corner of the back-yard, as circumstances may favor or demand. There are self-heating irons to be had for the ironing; machines for the washing; and with a light double table on easy-rolling castors, as represented in the accompanying illustration, all manner of utensils and materials may be transported with ease from kitchen to porch and back again. By placing the tableware on the lower shelf, and food on the top, everything necessary for setting the breakfast or dinner table may be taken at one trip to the piazza, and open-air meals prepared with no more inconvenience than if within doors. The table may be cleared and the dishes washed out of doors with the aid of this same handy waiter.

Open-air meals for the family are most desirable. The fresh air sharpens the appetite, and anything tastes better out of doors. A wire-screened porch makes a most admirable place for out-of-door eating. If one is about to build, she will find it well worth the cost to provide such a porch for a summer dining-room, convenient to the kitchen. A similarly protected enclosure likewise makes a most desirable "camping-out place" for sleeping in hot nights. Indeed, one is most fortunate who can

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BREAKFAST TABLE ON THE PIAZZA

command such an insect-proof, fresh-air sleeping apartment for the entire season.

For the entertainment of one's friends, piazza picnics and lawn lunches are far more alluring to the majority of people than staid meals indoors, in good weather.

There are many, of course, who have neither porch nor shade trees to protect from the rays of the sun, but there are many substitutes. One woman stitched together breadths of unbleached muslin, sewed rings to the four corners, and attached these to her clothesline posts, thus making a canopy under which the household enjoyed out-of-door living. Another family of whom we have read, had constructed a light, houselike frame, roofed with canvas, inclosed with netting, and mounted on rollers so that it might follow the sun or shade as desired. If one has the purpose to get the benefit of outdoor living, there are many ways to accomplish it, and wonderful benefits are the result.

MAMIE BRANT'S ROYAL COSMETIC

BY MRS. L. D. AVERY-STUTTLE

IT was late afternoon of one of those perfect spring days when Nature tries all her arts to make us forget that she has ever frowned. The slender willow trees by the river which wound in and out among the hills that surrounded the little village, waved their graceful branches gently in the soft breeze as if anxious to call attention to their beautiful new spring suit. The music of happy insects and happier birds filled the air, and there was a wistful look in the blue eyes of the little seamstress as she looked wearily out at the charming landscape.

But it was only for a moment. Evelyn Gray allowed herself scant time to watch the beauties of nature; and she was ordinarily too weary, by the time the great Artist began his sunset painting, to note the changing colors and gorgeous banners of evening.

Upon Evelyn Gray had fallen the care of an invalid mother and three younger children — and that in her early girlhood. "You'll have to take father's place, Evelyn, dear girl," had been her father's last words, and faithfully had she kept the charge. But to-night she was unusually weary. There were dark shadows under her eyes, and her pinched little face seemed more sallow and thin than ever. The day's sewing had been tiresome, and the blue eyes filled with tears as she glanced for a moment out at the window. She did not notice the brilliant sunset or the winding river or the green trees or mossy banks, — although her eye took in all of these, — but there were three or four young girls of about her own age, with their hands full of early spring flowers, and it was these girls who most attracted her.

A merry laugh floated in at the window, and before Evelyn could check the sigh which trembled on her lips or repress the tear which sprang to her tired eyes, a fresh, merry face peeped in at the half-open door, and a soft voice inquired: —

"Am I intruding? I hope not, for I have so much to say to you, — and I wanted to bring this bouquet of spring beauties to your mother."

"O Mamie Brant! I'm so glad to see you! I didn't notice that you were among the girls who passed a moment ago. Thank you; mama will enjoy the flowers. I'll just drop them into this pitcher and let her arrange them, — I haven't time. I must finish this skirt before I sleep to-night, — madam is in a great hurry for it, — so if you'll pardon me now, I'll baste this seam while — "

"I'm afraid my dear little friend is more industrious than wise," interrupted Miss Brant. There was a genuine note of sympathy in her voice which was not unheeded by Evelyn Gray. "Only a year ago, while I was teaching in New York," continued Miss Brant, "I was in such bad health and worse spirits! I had a constant pain in my side, and I suffered from headache every day — and O dear! my complexion was something dreadful — skin sallow and rough, and — "

"Why Mamie Brant! I can't believe that *you* ever had a sallow, rough complexion! Why your cheeks are like roses! I have often thought I would ask you what cosmetic you use, but I never quite dared."

"Why, bless your dear heart, Evelyn, the only cosmetic I *ever* use, is regular exercise in the pure, fresh air, — and pure water, of course. In fact, this is

just what I ran in to talk over with you."

"But I am so constantly busy with my sewing that I can't find time to spend in taking fresh-air exercise. The truth is," declared Evelyn, with a pathetic little sigh,—"the truth is, I can barely meet expenses, mama's doctor bills and all, if I sit at the machine ten full hours every day; and of course after that I am quite too weary to dress for a walk."

"Yes, I understand. It takes a real effort to get into the habit of exercising regularly, but O, my dear,—it pays, it pays! Now, to-morrow evening, there are five or six young ladies, besides myself, going to meet at my room to discuss ways and means for taking systematic exercise,—and I want you to come, Evelyn, that's why I stopped to see you."

So, the next evening, despite many mental protests, and the fact that a beruffled frock of madam's was waiting for the tired little fingers to put in the finishing stitches, Evelyn Gray found herself seated in her friend's pleasant sitting room, among a half dozen ladies, most of them older than she.

"I think the very last laggard has arrived," began the hostess, Miss Brant. "We have met to lay plans and to discuss means by which we may each obtain the open-air exercise necessary for our physical well-being. We all lead sedentary lives, there being present a stenographer, a bookkeeper, a seamstress, a teacher, a student, and—" with a smile in the direction of one bright little woman—"an aspiring novelist. Now, ladies, let us stick to our subject."

"I think it would be well," began the student, "for our hostess, Miss Mamie Brant, to begin by explaining the method by which she has succeeded in obtaining a complexion like the famous heroine of the Emerald Isle, which was, as her devoted lover declared,—

"'Like a dish of ripe strawberries smathered in crame!'"

"Well, as you know, I have been a teacher for a number of years," began Miss Brant, with a smile that made the strawberries predominate over the "crame," "and it used to seem quite impossible after school hours to take any outdoor exercise, because I always had the next day's lessons to go over, and so many necessary things to attend to. But, as the months went by, I began to feel stupid and dull, my appetite was poor, and my digestion very imperfect. I did not know what to do or what was the trouble with me. About that time a friend gave me a sample copy of a health magazine, in which I read a very impressive article on the importance of exercise in the open air. By the time I had finished reading that magazine I had made up my mind that more depended upon fresh air and out-of-door life than upon all the drugs of the apothecary."

"O, yes; I have always known that I do not get enough fresh air, but my time is so *very* limited," said the bookkeeper, with a discouraged look, "that really I can't afford the leisure."

"But there is one thing we must not forget," remarked Miss Willis, the authoress, archly. "I have noticed that the *busiest* of us somehow spare time to be sick."

"That's true," continued Miss Brant, earnestly. "But I understand just how people feel who imagine they can't spare time for such frivolity, as they deem it. I used to think so, myself, until I became fully convinced that instead of a foolish waste of time, it was a positive necessity; and when, better still, I found that I could make the time thus spent as *profitable financially* as

any of the regular working hours, why, I was simply delighted."

"O, do tell us, Miss Brant," exclaimed a chorus of voices, "how and what did you do to make money from a little simple out-of-door recreation? If we felt that we were only earning a little as well, we would be only too glad to enter into your scheme most heartily."

"I can't blame you, young ladies, for I know that most of us are dependent upon our own resources for our daily bread. To be sure, our dear friend, Miss Willis, whose books are read in two hemispheres, is not so situated; and we rejoice that this is so; but to us who are, this out-of-door-exercise problem becomes a serious question.

"Now, I will tell you what I did. I began to cultivate and raise flowers; and as I became successful at home in our own little garden, we — a few of my pupils and I — donned large sun hats and made flower beds in the playgrounds of the school-yard. Here we made considerable money. We sold seeds, slips, and bulbs to our friends, and besides this, furnished many bouquets gratis to hospitals and asylums."

"Didn't it have a sort of degenerating effect upon the school?" inquired the precise little teacher, who had not spoken before.

"O, by no means," was the earnest reply. "In fact, I found it good discipline. Some of my most troublesome pupils became quiet and tractable, and entered with much better spirit into their studies."

"Well," said Evelyn Gray, "I don't much believe I could do anything with flowers, but I dare say I might raise a few berries or vegetables. Mother used to say I could raise the finest strawberries she ever saw. But I had so much sewing to do that I gave up my gardening entirely — "

"Which was very unwise, my dear friend," smiled Miss Brant.

"I believe you are right; and now, that I think of it, I did sell some of my berries — the earliest ones — at a fancy price. But it's a little late in the season now; but I mean to begin in earnest for another year."

"Perhaps it may seem strange to you, ladies," chimed in the student, "but now I am afraid I could never succeed either at flower culture or at gardening. But I've been thinking maybe I could raise chickens, and sell their eggs. Their feeding and care is all open-air work, and as the price of eggs is generally fair, I think I might make it profitable."

"Very fine idea, indeed!" declared a chorus of voices.

"Well, let's hear from Miss Willis. What do you propose to do to assure to yourself the requisite amount of fresh-air exercise,— of course a writer needs almost more than any other class of people whose occupation is sedentary."

"I will tell you what I have already begun to do," was the reply. "There is a little lame child, not a block from my home, whom I have determined to give a taste of fresh air every day. To this end I have purchased an easy wheel-chair, and you should have seen the delight of the little invalid when I presented it, and gave her her first ride, and — well — I hope Mamie Brant's royal cosmetic will soon begin to tell on my sallow complexion."

* * *

Two years have passed away since the members of the "Fresh-Air Club," as they named themselves, called their first meeting. But you would scarcely know them now. Rosy cheeks and bright eyes are the rule,— not the exception,— and each member is an enthusiast in her particular line.

When they separated to-night, they gave a ringing vote of thanks to Mamie Brant, for inducing them to try her *royal cosmetic*.

EXERCISE FOR THE HIRED MAN

BY H. B. WEINBURGH

THE reader may deem it strange that exercise should be prescribed for the hired man, since it is a known fact that not only must the hired man be a Jack of all trades, but, practically speaking, master of all as well. And since science recognizes no difference in the professional labor which circumstances demand and the more or less refined exercises to which the athlete devotes himself (for both are muscular work), it would appear reasonable to suppose that the hired man should be a perfectly developed man. But is he?

Observation teaches us that he is not. If exercise does what so many give it credit for doing, then why is it that the hired man, who is called to perform all kinds of labor (which is only another name for exercise), is not a healthy and well-developed man? Bring to mind any hired man you have known or may know. Hasn't he round shoulders, a flat chest, and a protruding abdomen? This last condition almost always means a prolapsed stomach. He has simply reconstructed his body: he carries his chest where his abdomen should be, and his shoulders bear the burden of his stomach. Is it any wonder, then, that so many working or hired men are not healthy and well-developed specimens of manhood? Since they do all kinds of muscular work, it is reasonable to believe that in their work there is something which they neglect, and this something can safely be said to be the greatest factor in the attaining and maintaining of perfect health.

Take the flat chest, for instance, which always means undeveloped lungs. These indicate impure blood, which, in turn, is the cause of most organic diseases. Pimples and other skin diseases, sallow complexion, etc., are all due to an impure condition of the blood, and since the lungs are the greatest factor in the purifying of the blood, we should strive to develop them, and thus have at our command the means to eradicate all diseases caused by an impure condition of the blood. Some idea of the great importance of the lungs may be conceived when we remember that a pair of lungs of normal size contains about 725,000,000 air cells, which, if placed side by side, would cover, on a flat surface, a space fifty feet square, and this great area must be supplied with fresh air at almost each inhalation, in order that the blood may obtain its necessary supply of oxygen. Much more might be said concerning the lungs, but it will suffice to remind the reader that the purity of one's blood depends upon the amount of oxygen brought in contact with it, and since the air is not owned by a trust, and the lungs offer such a vast area for bringing the oxygen in contact with the blood, it behooves every one to begin at once the practice of deep breathing, which will not only do away with the diseases before mentioned, but also with the shallow chest and the round shoulders. In Figs. 1 and 2 is shown one of the best exercises for developing the chest and strengthening the lungs.

A protruding abdomen is very com-

FIG. 1

Take position with arms at side of body, raise the arms as in the illustration, going to the front, then high over the head, returning to position first taken by rolling the arms to the rear. The chest must always be held up. Inhale when the arms are raised. Exhale when lowered. The movement should be taken slowly, fifteen to twenty times, and finished with ten rapid movements.

FIG. 2

With arms extended overhead, fingers clasped as in the picture, bend from side to side; inhale going to the right, exhale going to the left, then alternate the breathing. This movement can be taken ten times with the heels together, and ten with the feet apart

This is a very good exercise for the liver and waist muscles.

mon among those whose occupation is sedentary, and also more or less among average hired men. Have you ever stopped to think what this protrusion indicates? — Years ago people considered a large girth a sign of strength, but to-day it is simply a sign of weakness and a prolapsed stomach. This latter is a very inconvenient thing to have, for it means in most instances immobility of the stomach with resulting indigestion and constipation. Still, a large abdomen does not always signify prolapsus. The excess of flesh in the obese is usually in the abdominal region, and causes perhaps as much inconvenience as a prolapsed stomach, but may not be such a great factor in inducing disease. Yet it is much more profitable to be without either, and a few minutes spent morning and evening in the exercises described, will remedy either difficulty. If you are not already handicapped with one or both, you can by beginning at once avoid the oncoming of what will mean much trouble to you. For either of the conditions just mentioned, exercises 3 and 4 taken for a few minutes every morning and evening will in a short time produce marked improvement. If you "have not the time," take it, for it will save you a prolonged vacation in the future under unhappy circumstances.

While the average hired man does a great amount of work of various kinds,

he nevertheless overlooks two of the most important organs in the human body. This can be accounted for only by the incorrect posture that he assumes while performing his work. For example, take the man who sits at his work. His back is arched like a bow, his lungs are contracted and his visceral organs pushed down, forcing the abdomen out. After an hour or more in this position he arises to find himself stiff and scarcely able to straighten up. This is due to the unnatural strain put upon the muscles, which become fatigued. After working for several days in such a position he walks stooped, and all the conditions previously mentioned, appear. A man in this state is always tired. On rising in the morning he is greatly exhausted, which is distinctly in discord with nature's laws; for, after a night's rest we should feel refreshed, and ready to spring out of bed at the first sign of the sun's rising. Like the birds, we should wake with a song. Yet how unlike this are the many thousands of workingmen. Tired, exhausted, with little or no ambition, they go to their work, and the day, as well as the night, is always tedious. A man in this condition knows not the joys of life. To him the world is simply a large working establishment where a

FIG. 3

Take position lying on back fully extended, with arms back of head. Raise one leg at a time, raising each about ten times. Then raise both legs, as shown in the figure, about fifteen times, inhaling when the feet are lowered, exhaling when raised.

Now the feet are kept down and the upper part of the body raised, so that one is in a sitting position. This is just the reverse of the other movement. In place of raising the legs, the body is raised. Inhale as the body is lowered; exhale as it is raised.

Both of these exercises are somewhat difficult, but can be taken very easily if, when raising the legs one holds to something placed at the back of the head, and when raising the upper part of the body, the feet are held under something.

These exercises will in a short time strengthen the muscles of the abdomen reduce adipose tissue, and cure a prolapsed stomach.

One may begin by taking a few movements at a time, gradually increasing until he can take from ten to twenty-five with ease.

FIG. 4

Take reclining position, place hands opposite side of face, about one and a half feet apart, then raise the body to position, as in the figure, pushing as far back as possible while resting on the toes.

Inhale going down, exhale going up. Keep the body straight, and chest up. This can easily be accomplished by holding the head up. Begin with a few movements and increase to ten or twenty.

man must spend ten hours or more a day; then go home to throw himself upon his restless bed, only to awaken and go through the same routine.

Yet much of this feeling, if not all, can be overcome just by exercising those parts which contribute so much toward attaining and maintaining perfect health. A few minutes, morning and evening, will in a short time pay you larger dividends than all your other investments. You may think you are too tired to exercise after a hard day's work, but here let me say that your fatigue is not always due to the work you have done, but to your incorrect way of doing it. You assume an incorrect position, which compels you to use but a certain set of muscles; these, bearing the burden of those not put into use, are soon tired, and the poisonous products arising are the cause of all your so-called weariness. The only way to remedy this is to exercise the other muscles, and thereby carry off the waste products.

Diet is also a great factor to be reckoned with, but since this article is merely to point out to the hired man those exercises that will bring into play the muscles which he uses but very little, I can only hope to cause him to think about his diet, but if I can influence him to spend from fifteen to thirty minutes daily at the described exercises, I shall feel I have fulfilled my duty.

RATIONAL TREATMENT OF TUBERCULOSIS OF THE LUNGS

BY HERBERT OSSIG

HAVING myself suffered from tuberculosis of the lungs, four years ago, and having become comparatively well and strong, I feel justified in basing my advice upon my personal experience.

The most essential points in the successful treatment of this dreadful malady are the following, named in the order of their importance: —

I. Prayer. A thoroughgoing invoice and understanding of one's self, a sincere desire to make peace with God, are absolutely necessary. We are all sinners in the sight of the Creator, and no man can afford to be at death's door without asking pardon for his many transgressions and wrongdoings. If the patient surrenders his heart to God, he can, should his case prove hopeless, go to sleep peacefully and without fear. If his physical condition is such that recovery is yet possible, why then his spiritual nature will be in a proper attitude to influence the body favorably.

II. Once having consecrated himself to God, the patient must ask his Heavenly Father to help him out of this wretched condition, all the while firmly believing that He is both willing and able to do so. Let a man feel that he and his Maker are on good terms, and the battle is half won. Add to this proper physical treatment, and success is sure.

III. Pure outdoor air for twenty-four hours. If a man desiring to generate plenty of steam, would shovel the furnace full of combustible material, set it afire, and then almost shut off the fresh air, his fire would burn very unsatisfactorily and only very little steam would be generated. We all know how to remedy such a failure in getting steam-power; namely, by opening the fresh-air inlet widely. Now, most

people would consider a man who in this enlightened age did not know that oxygen is necessary for combustion, a perfect ignoramus, and yet these very same folks are equally ignorant when this principle is applied to the ever-burning fire within their bodies.

Some years ago the door of a lion's cage in a zoological garden was left unlocked by the keeper. The lion somehow managed to open it and stepped out. He was perfectly at liberty to do whatever might please him. Numerous visitors to the garden, when they noticed the lion outside of his prison, were terror-stricken and fled madly in all directions. But the lion? Did he make use of his splendid opportunity to taste liberty and to get a taste of fresh, warm human flesh? No! It was too good for the king of beasts to be free, to get a delicate morsel. So he stood in front of his cage in utter amazement, not knowing what to do next. Finally he lowered his head, put his tail between his legs, and quietly walked back into his old prison.

This is exactly the attitude of almost all men who learn of the gospel of fresh air. They now know the proper road, yet they are too indifferent, too lazy to follow it. They hear much about the necessity and great value of pure air, but no sooner have they heard the message of salvation than they return to their filthy way of breathing. Even those who preach about fresh air are very negligent in practice. Of all the many health-reformers whom I have met in my life, I know of only a very few with whom I would be willing to share a house or a home. All the rest of them are simply talkers and not doers. Although they are not quite so dirty in their breathing habits as the masses, they breathe foul air a great portion of the twenty-four hours just the same, wondering all the while why they do not have more energy.

Fresh air for twenty-four hours per day is essential for the well-being of every man, but for a consumptive, it is a question of life or death. He must flee a close house or room as his greatest enemy and stay out of doors all of the time, never entering a house except for baths and changing of dress.

It makes no difference whether the patient happens to be in a warm or cold, dry or wet, climate, he should never remain in a house or any close place, but stay where he belongs; namely, in the open air. Of course, the treatment will be modified according to the severity of the weather.

In the summer the sun must be courted as often as it shines. It is most excellent for the invalid to bask naked in the sun. His skin is lifeless and corpselike and I know of no quicker and better way to get blood into it and to tone it up than by daily sun baths. If the sun is a little too hot, put a straw hat on, or fold round the head a towel kept wet and cool by cold water. The length of the sun bath depends entirely upon the heat of the sun and the feebleness of the patient. It may be necessary to remove the patient into the shade after ten minutes. On the other hand, if the sun shines just pleasantly, and if the patient feels comfortable, he may bask in this glorious light for hours. When through, give the patient a short cold application of some sort, as cold mitten friction, or a cold towel rub. Then dress him lightly and let him rest in the shade.

During the dog days, when the heat is very oppressive to everybody, but especially to the consumptive, common-sense methods will help the patient very much. Let him lie upon his bed or cot, entirely nude, protected by a

mosquito net from flies and mosquitoes. There is no reason why the patient should be dressed, but every reason why he should be bare. Wetting the patient with cool water and then fanning him will prevent the depressing effects of heat.

As soon as the sun sets, or better, one hour before sunset, dress him sufficiently to keep him warm during the coming cool night. Do not believe in that ridiculous nursery-tale, that night air is bad. Out-of-door night air is just the thing for the patient and a mighty factor in the upbuilding of his sinking forces; while indoor night air breeds a host of all sorts of diseases, especially of the respiratory organs. The sleeping rooms of the majority of mankind are pestiferous abodes, veritable hotbeds of tuberculosis. No man whose olfactory nerves are normal can stand the stench of the bedroom, and he never is satisfied unless breezes of cool, pure air sweep over his face. Where rain is infrequent in summer, as in California, Arizona, North Africa, and other parts of the earth, the patient should sleep with no cover over him except the sky. There should be rollers on the legs of his bedstead so that it may be rolled into the nearby tent or on the veranda the moment it begins to rain. For this reason, and also for others, a healthy person should always sleep near the patient so that he may assist him at a moment's notice. The patient will enjoy this sleeping out of doors immensely; especially will he like to gaze at the moon and the millions of stars and wonder why in the world he ever was so stupid as to deny himself of such a beautiful aspect each night. He will forget all about his illness, and peace will creep into his troubled mind, and before he knows it, he will be sound asleep and perhaps not wake until morn, when sweet songs will strike his ears. He will at first wonder into what lovely place, with such beautiful music, he has fallen. It seems to him too beautiful to be a place on this earth of ours. But soon he will be awake entirely and see his alarm clocks on the limbs of the trees and wish to join their happy songs, though his vocal cords may already have been destroyed by his disease.

During the winter months the consumptive must stay out of doors day and night the same as in summer; the treatment differing only in his dress and the amount of covering and the application of artificial heat to his extremities, especially the feet.

To show the reader the value of cold air, I will mention my experience with it. Four years ago, in September, 1901, I was greatly emaciated and shivered upon the slightest exposure. I just dreaded the winter. I wanted to run away from the northern climate and go to Guadalajara, Old Mexico. But, fortunately, my attention was called to the superiority of the cold over a warm climate in diseases of the lungs. So I stayed in Colorado and when October, with its frosty nights, came, I improved astonishingly, not only gaining fifteen pounds in one month, but also increasing much in strength. I should, however, add that during the same month, I had commenced to adopt systematic daily exercise and so I must give the glory, not only to cold air, but also to persevering graduated exercise.

In the minds of many, in fact of most people, is the idea rooted that living in the open during the winter is equivalent to suffering and hardship. Do not believe it. Nothing is further from the truth. The fact is, that no matter how feeble and sick the invalid may be, he will always feel more comfortable with

cold winds whistling about him, than in the air-tight and wind-tight cozy parlor. Of course, it is self-evident that we can not put him into a linen suit as though it were summer, leaving him in the cold to shiver. But we must be very careful to dress him in enough winter clothing to keep him comfortably warm. Especial attention must be given to the hands and feet. Do not chill the latter with leather shoes, but put them into roomy felt boots. If this is not sufficient, cover the legs and feet, in addition, with blankets. Should even this fail, do not lose your courage and send him into the house as so often happens, but take a bottle or vessel, or a rubber bag, fill it with boiling water and place the same between the felt boots and blankets. This will speedily warm his feet and send warmth all through his body. As soon as the vessel cools, refill it with boiling water. Better still, and more convenient, is a "carriage heater" containing a special kind of coal, charcoal that keeps glowing for hours. Automobilists, etc., use it with great satisfaction. It can be bought in any great department store. Place one-third of the coal upon ordinary burning coals and heat it until red hot, all black spots having disappeared. Then put these red-hot pieces into the heater and the heater between the felt boots and the blanket.

I can not emphasize too strongly the absolute necessity of this artificial warming of the feet. Many, indeed most of the patients have such insufficient circulation of the blood that they can not warm their feet by any amount of clothing, so that unless they are supplied with heat, as I suggest, they suffer continually from cold extremities, shivering all over and feeling miserable. All the good effects of the pure, cold air are thus lost by a little oversight.

When snow does not fall, the patient may stay in the open altogether, with no covering over him; but when there is snow fall, he should be protected in some way, as by a tent or the roof of a porch. At least one side of the tent must be opened, however, for a closed tent is almost as bad as a room with windows closed.

Wind, or even a storm, should be no excuse for retreating into a house. The patient will soon lose all superstitious fear of so-called "rough weather" and learn to appreciate the value of air in motion. What matters it though a gale be blowing, if the patient is warm all over! All he wants and needs is an abundance of cold air for twenty-four hours per day. He never can get too much of it; the more the better. Giving the patient the benefit of pure air during the day and poisoning him during the night, in that well-known, ill-smelling, sleeping-room atmosphere, is very irrational and greatly delays or even entirely prevents a cure in cases otherwise curable.

(To be concluded.)

"SEIZE on the truth where'er 'tis found,
On Christian or on heathen ground;
Among your friends, among your foes,
The plant's divine where'er it grows."

A TEMPTING BILL OF FARE

BY OLIVE JONES TRACY

Cream Pea Soup — Croutons
Nut-Meat Pie — Jellied Cranberries
Stuffed Squash
Creamed Baked Potatoes — Gravy
Scalloped Egg Plant
Apple and Celery Salad
Steamed Brown Bread Whole-Wheat Bread
Butter
Strawberry Soufflé Orange Nectar
Gluten Fruit Layer Cake

Recipes

Nut-Meat Pie Filling.— One cup each of sliced protose and nuttolene, 1 tablespoonful chopped onion, 1 large bay leaf, ½ cup strained tomatoes, ¼ teaspoonful thyme and sage. Cook onion, tomato, thyme, and sage twenty minutes. Then add the slices of protose and nuttolene. Over all pour 1 cup boiling water, allow it to come to a boil, then add two teaspoonfuls browned flour. Salt to taste. Set from the stove to cool before putting into the crust made as follows: —

Pie Crust.— One cup flour, ¾ cup nut meal, ½ teaspoonful salt, water enough to make a dough of proper consistency. Roll out rather thick, and line dish as for any meat pie. Bake in a moderate oven.

Cream Baked Potatoes.— Pare prime potatoes, wash clean and place in a baking dish. Sprinkle a little salt over them. Pour over them some thin cream, cover the dish and bake. Occasionally turn the potatoes until nearly done, then uncover and bake a deep brown. Serve with a gravy.

Stuffed Squash.— Wash and prepare one quarter of a small Hubbard squash, cut in pieces, and place in a dish with a little water to bake. When baked, remove the squash from the shell, mash, and to it add 1 tablespoonful of nut meal or malted nuts and 2 tablespoonfuls toasted breadcrumbs. Mix well together and place on the shell again and bake until quite brown.

Scalloped Egg Plant.— Pare and cut into cubes one egg plant. Pour over it cold water and boil fifteen minutes. Drain and allow to stand a few minutes. In a baking dish put alternate layers of egg plant and toasted breadcrumbs. Season to taste. Over all pour 1 cup of thin cream and enough milk to moisten well. Place in the oven and bake ½ hour or more, according to the heat of the oven.

Steamed Brown Bread. — Two cups rye meal, 2 cups Indian (corn) meal, 1 cup molasses, 1 cup thin cream or cocoanut cream, 1 teaspoonful salt, 2 eggs beaten separately (yolks and whites). Beat yolks of eggs well, add the cream, molasses, salt, and then stir in the meal. Next fold in the well-beaten whites. Pour into a mold, steam for three hours and bake one hour.

Gluten Layer Cake.— Four eggs, 1 cup sugar, ½ cup 20 % gluten, ½ teaspoonful flavoring extract. Cream yolks and sugar together. Fold in the gluten, using a wire spoon. Lastly, lightly fold in the stiffly beaten whites. Bake in layers.

Filling for Cake.— One dozen chopped English walnuts, ½ cup seeded raisins,

juice of one lemon, ½ cup water, ½ cup sugar. Boil the lemon, sugar, and water, thicken with cornstarch or flour till thick enough to spread. Add lastly the nuts and raisins. When cool spread between the layers of the cake.

Strawberry Soufflé.—Open one can of strawberries. Place over a slow fire until boiling. Thicken with a little cornstarch or flour until thick enough to drop from a spoon. Have the whites of three eggs well beaten. Remove the fruit from the fire and fold the whites into the mixture. Mold and serve cold.

OUT WITH MOTHER AND THE BIRDS

BY MRS. O. M. HAYWARD

CHRISTMAS DAY has always had charms for the young heart; and so has Thanksgiving, and the birthdays, and all the other festival days; but none of them ever brought to my childhood the deep thrill of true, pure joy that came with those spring-time Sabbath afternoons when mother went with us children for a walk.

The grass always seemed so green, and the air so fragrant, and the flowers and leaves so beautiful. Her presence added half. Then we would sit down in some shady nook and she would read to us, and we would watch the cloud pictures, and listen to and interpret the song and chatter of the birds.

Such excursions may cost mother something of exertion and time, but they enrich both lives so much that it is surely worth the while. There is such inexpressible pleasure in introducing the child to some of the beauties and mysteries of the fields, I wonder we do not enjoy more of it. He does not need to be preached to, and he should not be technically instructed until he has first become acquainted with them by *living* and *feeling* with them. But the mother or the teacher can accomplish more if she has in her own mind a definite view of the results to be obtained from these walks.

First, both in point of time and importance, is the awakening and fostering of the child's love and sympathy. It is the daily bread for his soul. The experience of Whittier's "Barefoot Boy,"—

> "When all things I heard or saw,
> Me, their master, waited for,
> I was rich in flowers and trees;
> Humming birds and honey bees;"

or to say with Lucy Lacom,—

"I feel at home with everything
That has its dwelling in the wood;
With flowers that laugh and birds that sing,—
Companions beautiful and good,
Brothers and sisters everywhere;
And over all, our Father's care,"

is worth more than dollars and cents to the individual. The secondary object, one which naturally grows out of the former, is the stimulation of observation and study. This quickens every perception, and leads the child directly into literature and the sciences.

Appropriate songs and stories and poems with suggestive questions during these walks, help to reach both these objects. Of course we would never take a walk and see only birds or flowers or trees; nature is not sliced up

like that; and we must see things in their relation to one another if we would understand them. Neither is it in one walk or two, or even in the walks of one season, that our children will receive all that we desire or have a right to expect; but it is in the years of living with nature that we come to appreciate the fact that we have "brothers and sisters everywhere."

Suppose the children saw some flocks of birds migrating in the fall, and sang with mother, —

> "Where do the birdies go?
> I know, I know,
> Far away from winter's snow
> To the far, warm south they go,
> There to stay till flowers grow,
> That is where they go,"

and all winter waited confidently for their return. They would be ready to hail with delight the first one that returned. Very likely it would be the bluebird. We wonder what all he has seen since he left us, how many people he has sung for, and what he will find to eat now.

But if we watch him we will soon find our last query answered, for we will see him skimming low over the ground, picking up the first beetles, worms, and spiders that venture out. If he finds a very fat, nice bug he takes it to his mate.

There are so many sweet songs and rhymes about this little favorite. The first one I ever learned was, —

> "B stands for bluebird. In early spring
> How sweet his notes through the forest ring."

One of later years was, —

> "I know the song that the bluebird is singing
> Up in the apple tree where he is swinging.
> Brave little fellow, the skies may be dreary,
> Nothing cares he while his heart is so cheery.
> Daffodil, daffodil, say, don't you hear?
> Summer is coming, and spring-time is here."

The birds will not lose much time before planning for their nest, and are more than likely to repair the one used last year.

If the children can watch this process from some obscure place, and keep in touch with the pair all summer, it will be worth far more to them spiritually and technically than many casual observations of birds at large.

One needs to sit down perfectly quiet, out where the birds are, and just patiently wait in order to observe them well. Children love to do this.

I remember one day, late last summer, of a little six-year-old's watching a bluebird over an hour as he moved from one tree to another in the yard, singing his autumn song and then darting down after a pause for some insect which his keen eye had seen from his perch in the tree, but which we, who were nearer, could not see.

The robin or the wren are probably the more easily observed. To really learn to know any one of these, to watch them a season through and then read what others have observed about them, means a richer, happier life; a deeper sense of the fatherhood of God and the brotherhood of man; and greater capacity for appreciating the beautiful in art and music and literature; to say nothing of facts learned which should furnish added illustrations of the great, universal laws of God.

Even the defamed English sparrow is worthy a warm place in our hearts. It is not merely because the Saviour has declared his tender care for him, and the fact that the eyes of the All Father follow each tiny body to its last resting-place, that I love him; but I feel a certain oneness with the sparrow because he is so persecuted, from the fact that he is a vegetarian.

If the "bird stomach man" in Wash-

ington could find a few bugs or worms in a dead sparrow's crop, the world would change its verdict; but because the little fellow is "true to principle" and will not eat his neighbors, even for policy's sake, all the nation madly cries, "Away with it, away with it," and every schoolboy is literally hired to chase it with a gun and bow and arrow and smooth stones from the brook. But "He careth for them," and the vigorous little vegetarians thrive on.

If the summer could bring to each child a few walks in the fields or woods with mother, and one bird's nest to be loved and observed with her, the season would mark a great advance in kindness and gentleness and joyous living.

CRUELTY TO ANIMALS

I WOULD not enter on my list of friends
(Though graced with polished manners and fine sense,
Yet wanting sensibility) the man
Who needlessly sets foot upon a worm.
An inadvertent step may crush the snail
That crawls at evening in the public path.
But he that has humanity, forewarned,
Will tread aside, and let the reptile live.

The creeping vermin, loathsome to the sight,
And charged perhaps with venom, that intrudes,
A visitor unwelcome, into scenes
Sacred to neatness and repose, the alcove,
The chamber, or refectory, may die.
A necessary act incurs no blame.

Not so, when held within their proper bounds,
And guiltless of offense, they range the air,
Or take their pastime in the spacious field.
There they are privileged; and he that hunts
Or harms them there is guilty of a wrong—
Disturbs the economy of Nature's realm,
Who, when she formed, designed them an abode.

The sum is this: If man's convenience, health,
Or safety interfere, his rights and claims
Are paramount, and must extinguish theirs.
Else they are all—the meanest things that are—
As free to live, and to enjoy that life,
As God was free to form them at the first,
Who in His Sovereign wisdom made them all.

Ye, therefore, who love mercy, teach your sons
To love it too. The spring-time of our years
Is soon dishonored and defiled in most,
By budding ills that ask a prudent hand
To check them. But, alas! none sooner shoots,
If unrestrained, into luxuriant growth,
Than cruelty, most devilish of them all.

Mercy, to him that shows it, is the rule
And righteous limitation of its act,
By which Heaven moves in pardoning guilty man;
And he that shows none, being ripe in years,
And conscious of the outrage he commits,
Shall seek it, and not find it, in his turn.

— *William Cowper*

William Cullen Bryant's Habits of Life. *

"I have reached a pretty advanced period of life — seventy-one years and four months — without the usual infirmities of old age, and with my strength, activity, and bodily faculties generally in pretty good preservation. How far this may be the effect of my way of life, adopted long ago, and steadily adhered to, is perhaps uncertain. I rise early — at this time of the year about half-past five; in summer half an hour, or even an hour, earlier. I immediately, with very little encumbrance of clothing, begin a series of exercises, for the most part designed to expand the chest, and at the same time call into action all the muscles and articulations of the body. These are performed with dumb-bells, the very lightest, covered with flannel; with a pole, a horizontal bar, and a light chair swung around my head.

"After a full hour, and sometimes more, passed in this manner, I bathe from head to foot. When at my place in the country, I sometimes shorten my exercise in the chamber, and, going out, occupy myself for half an hour or more in some work that requires brisk exercise. After my bath, if breakfast be not ready, I sit down to my studies until I am called. My breakfast is a simple one — hominy and milk, or in place of hominy, brown bread, or oatmeal, or wheaten grits, and, in season, baked sweet apples. Tea or coffee I never touch at any time. At breakfast, I often take fruit, either in its natural state or freshly stewed. After breakfast I occupy myself for a while with my studies, and then, when in town, I walk down to the office of the *Evening Post*, nearly three miles distant, and after about three hours, return, always walking, whatever be the weather or the state of the streets. In the country I am engaged in my literary tasks, till a feeling of weariness drives me out into the open air, and I go upon my farm or into the garden and prune the trees, or perform some other work about them which they need, and then go back to my books.

"At the meal which is called tea, I take only a little bread and butter with fruit. In town, where I dine later, I make but two meals a day. Fruit makes a considerable part of my diet. My drink is water.

"I never meddle with tobacco, except to quarrel with its use. That I may rise early, I, of course, go to bed early; in town as early as ten; in the country somewhat earlier. For many years I have avoided, in the evening, every kind of literary occupation which tasks the faculties, such as composition, even to the writing of letters, for the reason that it excites the nervous system and prevents sound sleep. I abominate all drugs and narcotics, and have always carefully avoided everything which spurs nature to exertions which it would not otherwise make. Even with my food I do not take the usual condiments, such as pepper and the like."

* A letter to the *New York Herald of Health* written in 1871.

"In 1747, John Wesley wrote to the Bishop of London: 'Thanks be to God! Since I gave up meat and wine I have been delivered from all physical ills.'"

"I am not bound to win, but I am bound to be true. I am not bound to succeed, but I am bound to live up to the light I have. I must stand with anybody that stands right, stand with him while he is right, and part with him when he goes wrong."

Chautauqua School of Health

EXERCISE

BY J. H. KELLOGG, M. D.

It is well-known that exercise, especially very active effort, greatly accelerates the breathing movements, and increases the depth of respiration. At first the breathing is slightly difficult, but after a short time, when the runner has his "second wind," respiration becomes easier, due to the fact that the entire lung surface has been brought into action by the complete distention of every part of the lungs. This fact has in it an important lesson, namely, that in ordinary breathing the entire lungs are not brought into use, and hence are likely to become diseased unless brought into full and active movement by taking daily such exercises as necessitate deep and full respiration. Such exercises should be taken several times a day.

Running or rapid walking in the open air is the best means of securing the necessary lung capacity. If this is not convenient, however, the same results may be secured by exercise taken indoors with doors and windows widely opened so as to secure free ventilation. It is not even necessary to run about the room. One may "run in place," executing the movements of running by throwing the weight first upon one foot and then upon the other, lifting backward the foot which is not in use. Various other exercises may be employed to excite the lungs, but active movements of the legs are, on the whole, of the greatest service. Very rapid running, carried to the extent of extreme breathlessness, is likely to be injurious to persons who have passed the age of twenty-five years. So-called "sprinting" is injurious to the heart, and in time leads to other injuries. The deep breathing induced by running continues for some time afterward. Those who habitually walk or run much or who engage in mountain climbing daily or several times weekly, breathe deeper even in sleep than do persons of sedentary habits, and in consequence introduce into their bodies a larger amount of oxygen, and live on a higher plane, physically, than do others.

Exercise aids digestion by creating an appetite, promoting the secretion of the digestive fluids, and increasing the peristaltic movements of the intestines. When God said to Adam, "In the sweat of thy face shalt thou eat bread," the command was given to the entire race to engage in active muscular labor. Those who seek to avoid sweating, or who neglect to take habitual active exercise, are punished by ill health. The apostle Paul said, "If any will not work, neither let him eat." Nature says the same by removing the desire for food or the power to digest it. The inactive man who is still able to eat and digest, runs great risk from the

accumulation in his body of unnecessary or unused material, which clogs the vital machinery and fills the blood with poisons, whereby its resistance and that of the body are diminished. Nature takes away the appetite and lessens digestive vigor to avoid this danger. When an idle or sedentary man throws away this protection by stimulating the palate by means of condiments and a constantly renewed variety of stimulating foods, he is working at cross purposes with God, and will certainly suffer the penalty of disobedience.

Thus we may see that the wise man uttered a profound physiological truth when he declared, "By much slothfulness the building decayeth." (Eccl. 10:18.) The body is worn by work, but is at the same time renewed, so that work is a means of constant body change or renovation.

The value of a brisk walk on a cold, frosty morning in developing the appetite for breakfast, is well known by every one. Life out of doors may be justly regarded as one of the most important means of promoting health and securing sound digestion and proper assimilation of the food. Exercise also aids digestion by promoting activity of the bowels, whereby the body rids itself of waste matters, lack of attention to which may result in chronic poisoning, a condition from which thousands constantly suffer who might find complete and entire relief by the simple means indicated.

Exercise quickens the stream of life, increases the action of the heart, lungs, stomach, liver, and every vital organ; and by cleansing away the rubbish which accumulates in the tissues as the result of work, prepares the way for new material, and so is one of the greatest of all means of promoting life and health. All examples of extraordinary longevity which have been reported have been of persons who had led active, even laborious, lives, and whose habits in diet and in other respects were simple and regular.

THE EASIER WAY

BY JEAN HARRIS WHITNEY, M. D.

We are average women, you and I, belonging neither to the very small minority of athletic tendencies, nor to the really large number of semi-invalids. We have before us, daily, the problem the solution to which shall determine to which of these classes we shall eventually belong. For to each of us comes our daily work, and the manner of its accomplishment, quite more than the work itself, will make for our upbuilding or our undoing. For the housewife, there are beds to make, rooms to sweep, washing, cooking, and baking to be done. Up and down stairs, in doors and out, she must go, and with all these perhaps a blessed baby or two adding each its burden as well as its joy to the busy life. How shall all these things be made to serve their rightful end of daily growth and development,—that daily growth of power and development of capabilities that are our greatest joys?

We shall first come to our work with preparedness. The strongest, most beautiful body can not do its work with ease if the mind that controls it is in a torment of worry and fret. So to Him who "careth for" us are confided our

worries, and from Him is received the "peace that passeth understanding," that with our "life hidden in Him" we find indeed "rest to our souls."

With mental and spiritual freedom there must come also physical release. Fancy a rugged blacksmith working with his coat on. The muscles of his great, strong arms are given free play — even his shirt sleeves are rolled up; but the slender little woman with undeveloped muscles must do work she is hardly equal to, with a handicap of heavy, dragging skirts, tight bands and other restrictions productive of both mental and physical friction. Except for certain limited uses, friction is something which the mechanic reduces to the minimum, and in these days of the application of scientific knowledge to every-day affairs, we women may well make use of this principle in our day's work.

THE EASIER WAY

You have seen over and over, and so have I, the little woman struggling up stairs with arms full to overflowing, whose desperate endeavors to keep things from sliding were not facilitated by the long skirt which tripped her at every step. A man would be a splendid example either of patience or of utter helplessness who would endure such a thing. He would surely "find a way," and so may we. The pretty, well-fitting house dress — a working house dress — made short enough easily to clear the stairs, means the service of two hands instead of one in many kinds of work. You will hardly believe unless you have tried it yourself what a difference in weight and in the drag on the body there is between the light-weight short skirt supported all about the waist, and the wrapper which trains even a few inches. One saving grace the wrapper has for the woman who has work to do, and one only,— its weight comes largely from the shoulders. But a house dress rightly adjusted has that virtue with all the others besides.

THE COMMON WAY

Then after dress comes a third essential to ease in work — mentioned last because so dependent on the first two — you know instantly that I refer to right carriage of the body. Wrong

THE ORDINARY ATTITUDE

THE EASIER WAY

positions do double duty in making work hard, — one's muscles work at a disadvantage, and one uses so many muscles needlessly — so that the effort leaves one twice tired. The girl with her pile of bedding carries scarcely half the weight of the other, yet she gets to the top of the stairs breathless and exhausted because she has carried the weight of her body in the hardest way, and meantime has given herself least breathing room. Meantime our lady of the water pail, with her lifted chest and straight back, is breathing easily, and has felt no strain anywhere, but, instead, the healthy stretch of vigorous muscles.

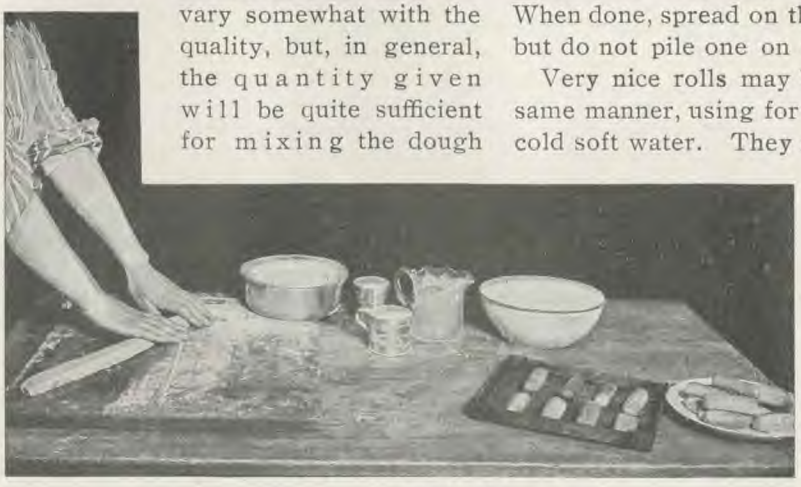
Who ever wants to call the baby a burden? He is a dear little fellow and we all love him, yet the aching back and tired arms protest that he is a burden, after all. What shall we do that the many minutes and sometimes hours in the day that baby must be carried shall not be so exhausting? It is wonderful how much lighter the little man is when we hold the chest up and the body in a strong, erect position, — not in a state of tension, but using only the needed muscles, and those in the most effective way. With the shoulders drooped and the hips sagging forward, there is discouragement in the very attitude, and how quickly this is reflected in the tired face and voice. If you practice carrying the chest high, with the weight of the body on the balls of the feet, there will soon come to you a lightness and strength of poise that will give an elasticity of movement that is a pleasure both to see and to feel, and a buoyancy of spirits that is contagious. An attack of the blues

can not long survive the uplift, both physical and mental, that the changed carriage induces. Is not the transition worth while that shall change one from the drooping recipient of pity to the happy dispenser of sunshine?

UNFERMENTED ROLLS AND BREAD STICKS

THESE are forms of bread made light by the kneading of air into the dough, and, when properly prepared, are a most toothsome and healthful article of diet. For making rolls sift a pint and a half of Graham flour into a bowl, and into it stir a cupful of very cold thin cream or unskimmed milk. Pour the liquid into the flour slowly, a few spoonfuls at a time, mixing each spoonful to a dough with the flour as fast as poured in. When all the liquid has been added, gather the fragments of dough together, knead thoroughly for ten minutes or longer, until perfectly smooth and elastic. The quantity of flour will vary somewhat with the quality, but, in general, the quantity given will be quite sufficient for mixing the dough and dusting the board. When well kneaded, divide into two portions; roll each over and over with the hands until a long roll about one inch in diameter is formed; cut this into two-inch lengths, prick with a fork and place on perforated tins far enough apart so that one will not touch another when baking. Each roll should be as smooth and perfect as possible, and with no dry flour adhering. Bake at once, or let stand on ice for twenty minutes. The rolls should not be allowed to stand after forming, unless on ice. From thirty to forty minutes will be required for baking. When done, spread on the table to cool, but do not pile one on top of another.

INITIAL STEP



FORMING ROLLS

Very nice rolls may be made in the same manner, using for the wetting ice-cold soft water. They require a longer kneading, are more crisp, but less tender than those made with cream.

With some brands of Graham flour the rolls will

be much lighter if one-third white flour be used. Whole-wheat flour may be used in place of Graham, if preferred.

For sticks, prepare and knead the dough the same as for rolls. When ready to form, roll the dough much smaller,— scarcely larger than one's little finger,— and cut into three- or four-inch lengths. Bake the same as rolls, for about twenty minutes. E. E. K.

CHAUTAUQUA SCHOOL OF HEALTH SEARCH QUESTIONS

EXERCISE

1. How does active effort affect respiration?
2. What is the best means to obtain the necessary lung capacity?
3. What form of exercise may be taken as a substitute?
4. What is the effect of habitual walking or running exercises?
5. How does exercise aid digestion?
6. In what other ways is exercise beneficial?

THE EASIER WAY

1. What is the first essential for good work?
2. The second?
3. In the case of the housewife how is this best obtained?
4. What is a third condition requisite to ease and facility in working?

UNFERMENTED ROLLS AND BREAD STICKS

1. What are unfermented rolls and bread sticks?
2. How are the rolls made?
3. How are the sticks prepared?

LIFE IN THE WATER.

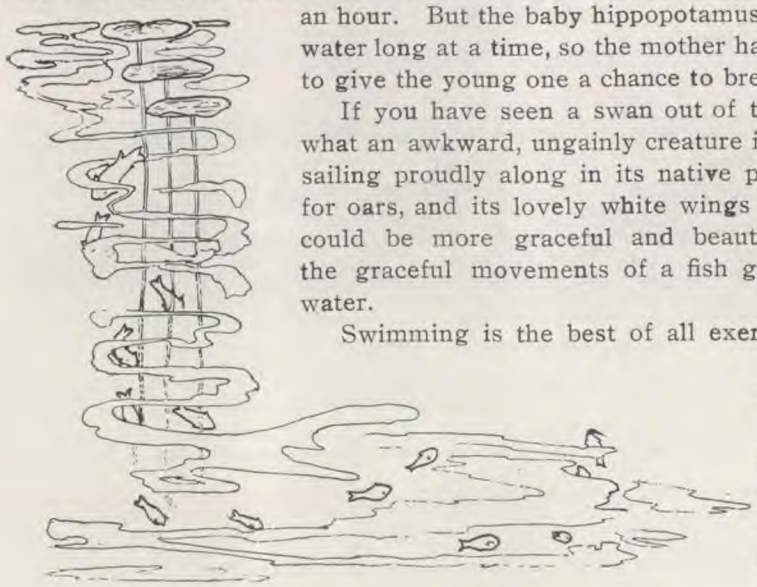
NEARLY all animals can move along in the water just as easily as on the land. If you watch a dog swimming, you will see that he moves his legs just as he does in running. A snake glides through the water in the same way that it glides along the land. Even animals that do not like the water, as cats and squirrels, will swim quite naturally if they are thrown in, or have to take to the water.

A SWIMMING LESSON

Otters spend much time in the water, where they get their living by fishing. Yet the young otters seem to dislike the water as much as kittens do. They have to be coaxed in, and made to swim. A gentleman who watched a mother otter giving the young ones a swimming lesson, says that she carried them in on her back, and then swam away from underneath them, leaving them to sink or swim. Of course, they swam.

COMING UP TO BREATHE

A hippopotamus can live under the water, only coming up to breathe four or five times in an hour. But the baby hippopotamus can not stay under water long at a time, so the mother has to come up often, to give the young one a chance to breathe.



If you have seen a swan out of the water, you know what an awkward, ungainly creature it looks. But see it sailing proudly along in its native place, using its feet for oars, and its lovely white wings for sails, and what could be more graceful and beautiful? Watch, also, the graceful movements of a fish gliding through the water.

Swimming is the best of all exercises. It trains all the muscles of the body into grace and strength. The old Romans were just as anxious that their boys should learn to swim as that they should learn to read.

If you have not yet learned this useful and healthful sport, be sure that you do so as soon as you have an opportunity. It may be the means of saving your own life and that of others. One girl, who is a good swimmer, last year saved the lives of eight people who were obliged to leap into the water from a burning vessel.

The sooner you learn to swim, the easier you will find it. Among the swimmers every morning on Coney Island beach last summer was a baby boy who had not yet learned to walk. When his father put him in the water, he struck out and paddled with his tiny hands and kept himself afloat just as a little animal would.

Frogs make much the same movements in swimming as human beings. If you watch one swimming, you will learn how to use your own legs in the water.

There are two movements for the legs and three for the arms. These movements, and how to use them together, are shown in the pictures at the end. The first thing is to learn how to keep your balance, holding the head well up out of the water. If you need help in this, get some one to hold you up in the water by a strong rope at the end of a stout pole.

It is a good thing to practice first the arm movements and then the leg movements, while supporting the body on a board placed in the water. When you have these well learned, practice the arm and leg movements together.

E. E. A.

MOVEMENTS IN SWIMMING

In winter I get up at night
And dress by yellow candle-light;
In summer, quite the other way,
I have to go to bed by day.
I have to go to bed and see
The birds still hopping on the tree,
Or hear the grown-up people's feet
Still going past me in the street.
And does it not seem hard to you,
That when the sky is clear and blue,
And I should like so much to play
I have to go to bed by day?

— *Robert L. Stevenson.*

. . By the Editor . .

THE VALUE OF SUNBURN AS A REMEDY

SUNBURN, although it seems for a short time to be an inconvenience, is in reality a blessing, for the reason that it draws to the surface of the body and fixes in the skin a large amount of blood by dilating the blood vessels. The average chronic invalid is suffering from too much blood. If he has too much blood in his brain, he suffers from insomnia; if there is too much blood in the lungs, he has chronic bronchitis; if there is too much blood in the region of the heart, he has dilatation of the heart or some other cardiac disease; too much blood in the stomach causes gastric catarrh, or in the intestines, intestinal catarrh; too much blood in the kidneys causes Bright's disease.

A person does not suffer from any serious internal disorder while he has a perfectly healthy skin. A healthy skin is a guarantee of health throughout the body. One who has a diseased stomach will have a sickly skin; and one who has a sickly skin will have a diseased stomach sooner or later. When one member suffers, the whole body suffers. So long as the body as a whole remains in health, it takes care of and keeps in health every part of itself. So long as an institution is sound, it keeps itself in good repair. If, when riding along a railroad, you should find the depots in a tumble-down condition, the track uneven and broken, and the engine breaking down every few miles, you would say that that railroad company must be a very weak concern. When a railroad corporation is intact, it takes care to keep its road, and all its paraphernalia in good order. It is precisely so with the body. The body is a corporation, so to speak,—an organization which takes care of itself, keeping every part in perfect order.

The blood, sometimes called the fluid tissue, is the repairing structure of the body. So long as the blood is pure and healthy, the body will be kept in health, for the blood is the life; it is the blood that heals. This life-giving, healing blood, as it circulates through the body, puts everything to rights, and keeps everything in repair. If anything remains out of order, it is because there is something the matter with the blood. So if we can keep the blood in good condition, and in the right place, every part of the body will be kept in health. If one has any skin disease, or any form of chronic disease, that is evidence that something is wrong with the blood.

When a person gets out in the sun and gets his skin well sunburned, a few days later his skin is darker in color than it was before. That brown color is due to the fact that there is more blood in the skin, and this means that the skin has become more active. This increased activity of the skin indicates increased activity of the entire body. The blood vessels are dilated, and the blood remains in the skin. There will then be less blood in the brain, where there was too much before; or in the liver, which can now do its work better; or in the stomach, which can consequently digest better. A patient at the Sanitarium with congestion or catarrh of the stomach, is sent into the phototherapy department to get his stomach sunburned with the electric light.

When he gets a large sunburn on his stomach, he feels less pain and nausea, gets an appetite, and is better right away. This is the effect of a mustard plaster on all kinds of diseased tissue. But when it is sunburned, the activity of the skin is not lowered, as it is with mustard plasters and such things, but is increased, and the internal congestion is relieved.

It is not the heat that makes sunburn; it is the actinic ray, the chemical ray of the sun. One can stand before a fire a great deal hotter than ordinary sunshine without getting sunburned. The skin needs to be brown in order to be healthy and active. The original man lived out of doors, where he got the benefit of the sunlight acting upon his skin. The man living indoors is pale, for the same reason that flowers grown indoors in the shade are pale. If you want flowers to be bright colored, they must be grown in the sunshine. Plants grown on the shady side of the greenhouse have pale leaves. Put them in the light and the leaves soon become darker green, for the reason that the light is vitalizing, stimulating, and tonic.

The Starvation Cure.

Starvation as a means of cure is by no means a new idea. It is very old. That's because it has some good in it. Most good things are old, and things altogether new are seldom good. Very few original discoveries are made now-a-days.

Priessnitz, the Silesian peasant, recommended fasting; so did Shaw, Schott, and most of the pioneers of the "water cure" movement of the early part of the past century. The writer has met many who were benefited by fasting as long as forty or fifty years ago. Napoleon was accustomed to fast whenever he felt indisposed.

Long fasting is one of the most effective means of securing thoroughgoing constitutional reconstruction. It compels the body to feed upon itself. In the rebuilding, defects may be left out, and healthy conditions may be re-established.

But this result may be secured by other and generally safer means. It is not so much the withholding of food, but of certain elements of food, which secures the benefits of fasting. It is the proteids, from which the system in diseased condition manufactures the poisons, which give rise to autointoxications, such as biliousness, neurasthenia, rheumatism, and gout. When proteids are withheld, the formation of poisons soon ceases of necessity, and thus the disturbed functions return to their normal state, and health is restored.

By a diet of fruit this condition may be secured as readily as, perhaps more readily than, by any other means. The fruit diet is really proteid starvation, as fruits contain practically no proteids.

Certainly a fruit diet is far more agreeable than total abstinence from food. Fruits contain predigested food elements which do not clog the system, and which are valuable in sustaining the strength. Fruit acids are excellent germicides, and hence valuable in cleansing the stomach and bowels, and are diuretic, besides having value as nutriments.

Fasting is a good thing in certain cases; but long fasts are rarely needed, and a fruit diet is preferable in all essential particulars except in certain cases in which fruit acids are irritating, as in gastric ulcer.

The Curability of Tuberculosis.

A splendid work is being carried on at the Rutland Sanatorium for Consumptives; and the still more effective work which is being conducted at the Gaylord Farm Sanatorium for Consumptives near New Haven, and the Riverside Sanatorium, near New York City, together with the results obtained by Trudeau in

the Adirondacks, and by various other specialists who have given particular attention to the treatment of pulmonary tuberculosis by the so-called open-air method, has demonstrated in the most conclusive fashion that this disease may be successfully treated.

A study of the results obtained, however, is in a measure disappointing. The writer recently had an opportunity to visit some of the oldest and best of the Eastern institutions of this kind, and while he found them without exception to be admirably conducted and carrying on a most beneficent work, the statistics were less encouraging than had been expected. For example, in Rhode Island it was found that fully sixty per cent of all applicants were rejected because the disease was considered too far advanced. The forty per cent received included only those in whom the disease was still in the most incipient stages. Of these the majority were improved by treatment, but a cure was claimed for only forty-five per cent, or eighteen per cent of the total number of applicants — a trifle more than one-sixth. The fact that this number were cured is encouraging, however, for it shows that the disease is not necessarily a fatal one, as has been generally held by both the profession and the general public.

The success of these institutions, while not so great as the future will doubtless show when methods have been more thoroughly perfected, is most encouraging, and ought to lead to the establishment of similar institutions not only in every State, but in every thickly settled community. Large establishments are not needed, but instead a great number of small establishments, which, by treating the people near their homes, may serve as a means of educating the public both in regard to the curability of the disease, and methods of prevention. The question of the prevention and cure of tuberculosis is without doubt the most important health question before the public at the present time.

A Sensible Fad.

Fads are not always sensible. Once in a while a good idea comes along which is so attractive that it immediately acquires quite an extensive following; becomes a fad, in other words. A first-class, sensible fad has recently developed in Washington, D. C., which is thus described in a despatch from Washington to the Indianapolis *Star*: —

"Every Kansas Senator and Representative carries a pedometer for the sake of his stomach.

"In order to get the full benefit of the new 'cure,' each of the lawmakers must walk at least thirty-five miles a week — ten miles on Sunday and the other twenty-five during the other six days.

"Senator Long and Fourth Assistant Postmaster-General Bristow are responsible for the new fad. Both had stomach trouble, and they landed together in a sanitarium at Battle Creek, Mich. The doctors there took them in charge, and Senator Long and General Bristow looked like tall bamboo fishing poles after they had been chased about the hills and plains of Battle Creek for a month. While they lost flesh, their stomachs improved, and they even learned to eat five or six kinds of breakfast foods.

"Coming back to Congress and the Postoffice Department, they imparted the secret to their colleagues.

"'Get a pedometer and walk,' was the advice they gave.

"Within two days after their return every pedometer in town had been bought up. Some fancy pedometers were bought. Kansas Congressmen were soon swapping watches for pedometers.

"The statesmen told their wives, and the result is that they are being made to take the cure. They are living on oatless oats and creamed hay for breakfast, and walking without even a thought of congressional duties."

Of course some allowance must be made for the newspaper exaggeration put in for embellishment, but it is really delightful to picture the scores of gray-

haired and portly lawmakers at the nation's Capitol starting out every morning for a health-winning constitutional.

Senator Long has proved himself one of the most enthusiastic disciples of the return-to-nature system practiced at the Battle Creek Sanitarium, and the whole country will reap the benefit of the splendid missionary work which he is doing among his fellow-Senators. Nothing could conduce more to the general welfare of the country than a health revival among our lawmakers. If there is any place in the world where clear-headed, healthy thinking is essential, it is at the great heart of the nation.

Sir Frederick Treves vs. Smoking and Drinking.

Sir Frederick Treves, surgeon to King Edward, and perhaps foremost of living surgeons, at a medical college dinner in Birmingham recently, in addressing the students and graduates of the Queen's College of Medicine, took occasion to condemn the eating of ices, the smoking of tobacco, and the drinking of intoxicating liquors.

Sir Frederick Treves has had the widest opportunities for observation in relation to the evils of the objectionable practices to which he refers, and the warning which he utters ought to be not only listened to, but laid to heart by every intelligent person who is addicted to either of the pernicious practices mentioned.

On the same occasion, Mr. Chamberlain presented himself as an example of good health notwithstanding the fact that he had eaten ice-cream whenever he liked, smoked when he had nothing else to do, and had swallowed whatever alcoholic liquors had been offered to him; but Mr. Chamberlain's example did not prove that ice-cream, tobacco, and alcohol are wholesome things, but rather that he himself is a tough specimen, very hard to kill. One of these days, however, he will collapse suddenly, or find himself the victim of cancer of the throat, a cirrhotic liver, or some other insidious disease which may be already preying upon him and preparing for an outbreak.

It is both unwise and unphilosophical for one to refuse to believe anything to be unwholesome or injurious until he has actually tried it upon himself. Good sense demands that we should profit by the experience of others.

Tobacco.

Since Jean Nicot discovered nicotine, tobacco has had a hard name, but recent chemical investigators tell us the world has been on the wrong track for generations, and that nicotine has nothing to do with the tremors, the nervousness, and the other ills which afflict the habitual smoker. The injurious property is, it seems, carbon monoxide gas, which is the very constituent that is dangerous in common water gas. The smoker should know, then, that in consuming one ounce of tobacco he produces one whole pint of carbon monoxide, which is a very fearsome thing. The cigarette, the object of execration by all good men and women, especially women, produces very little of the monoxide, but if the practice of inhaling is followed, the deadly gas goes straight to the blood in the lungs, turns it pink and poisons it. The cigar is the great producer of the obnoxious gas, and would be more harmful than the pipe were it not for the pipe's incurable filthiness.

Nicotine, according to some investigators, is not present at all in tobacco, but the scientists are agreed that there is something bad about tobacco, whatever its name may be. While the scientists quarrel about the effects of tobacco, the sales are growing at so rapid a rate all over the world that the people seem to be rushing blindly to their own destruction, unmindful and regardless of their own doom. And the hardened smoker believes that this is a case where ignorance is bliss.

. . . Question Box . . .

10,182. Flatfoot.— R. L. S., Pennsylvania: "1. Is there any cure for flatfoot? 2. If so, what? 3. Is there any remedy for bow-leggedness?"

Ans.— 1. Yes, if the defect is taken in hand early enough. The deformity is due to weakness of the muscles and ligaments which support the arch of the foot. These may be strengthened by walking on tiptoe with the heels turned slightly outward.

2. In adults the only remedy is the wearing of a steel insole so shaped as to support the arch of the foot.

3. In infants the defect may be remedied by proper braces. It is also possible to perform a curative operation.

10,183. Falling Hair.— Mrs. J. E. D., Pennsylvania, asks for a remedy for falling of the hair.

Ans.— Falling hair may be due to impairment of the general health or to disease of the scalp. The cause must be removed. Improvement of the digestion and of the general vigor of the body is generally necessary, and is beneficial. If there is dandruff or a parasitic disease of the scalp, this must be corrected by proper remedies. Shampooing the scalp with cold water until the skin is red is a useful remedy. The application of crude petroleum dissolved in alcohol, a dram of the crude petroleum to the ounce of alcohol, well rubbed into the scalp at evening, is a good remedy for the parasitic form of disease.

10,184. Plasmon and Uric Acid.— F. W., Africa: "1. Is plasmon rich in proteid? 2. Does proteid build nerve and brain substance? 3. What quantity of uric acid do the kidneys dispose of daily in the average healthy person?"

Ans.— 1. Yes.

2. Yes.

3. The kidneys remove from the body from two to six grains of uric acid daily. The amount appears to vary considerably in accordance with the kind of food eaten. Meat eaters eliminate very much more uric acid than do those who abstain from meat.

10,185. Rheumatism — Mode of Dressing.— "1. What will cure rheumatism in the shoulder, also in the wrist? 2. Is the dress skirt fastened to the waist according to your method when one wears a shirtwaist?"

Ans.— Rheumatism is a systemic disease. The whole body requires treatment. In cases of chronic rheumatism, electric-light baths, combined with cold towel rubbings, are of great service. Fomentations may be applied to the swollen joints, to be followed by the heating compress, which consists of a towel wrung quite dry out of cold water and wrapped about the affected part, one or two thicknesses, covered with mackintosh, then with warm flannel. Great care must be taken to avoid an excess of proteid in the diet; that is, albuminous food should be taken sparingly. Meats must be discarded altogether. Eggs should be used in limited quantity only. The diet should be limited to fruits, grains, and nuts.

2. The skirt should be fastened to the waist. A very common way is to put buttons on the shirtwaist and button holes in the skirt band. If the waist worn is a thin one, button holes may be made in the shirtwaist which will just correspond and fit over the buttons of the underwaist and the dress skirt buttoned to the underwaist. This is a very convenient way to adjust all wash shirtwaists.

10,186. Copra.— E. K., California: "1. Through what process does dried cocoanut pass to extract from it the oil in condition for use in cooking? 2. Can it be so simplified that this process may be carried on at home? 3. What is the cost of dried cocoanut as it comes from the islands? Where can it be bought to best advantage?"

Ans.—1. The oil is extracted by pressure.

2. Yes. The meat of fresh cocoanuts may be ground in an ordinary food grinder or shredder; then add twice its bulk of hot water; allow to stand for half an hour, then strain through cheesecloth and set the liquid away in a cool place. At the end of half an hour or an hour there will be a thick cream on the surface, which may be skimmed off, and molded very much after the fashion of butter.

3. Dried cocoanut may be obtained from dealers in foreign fruits. It is usually rancid and unfit for use as food. The cost varies, but is moderate, amounting to only a few cents a pound.

10,187. Nervousness—Raw Food Diet—Climate for Rheumatism—Coated Tongue.—A. T. M., New York: "1. Why should one who exercises regularly and lives hygienically, feel nervous and sleepy at times during the day? 2. What will prevent it? 3. What will overcome gas in the stomach and bowels? 4. Do you believe in the raw-food diet? 5. If so, what foods should one begin on? 6. Is a residence near the sea bad for a rheumatic? 7. What can be done for a coated tongue?"

Ans.—1. There may be a hereditary tendency toward nervousness; or the condition may be the result of weakness. The symptoms mentioned are quite characteristic of nervous dyspepsia.

2. The outdoor life, a natural dietary, a general return to nature in habits, and tonic applications of water; also careful cold bathing.

3. Care should be taken to masticate the food well. Avoid the use of coarse vegetables. Don't eat cane-sugar. Keep the bowels regular. Wear the moist abdominal bandage at night.

4. Yes, but only on condition that proper foods are selected. Ripe nuts and fruits are the only foods which can properly be eaten raw.

5. Ripe apples, almonds, pecans, hickory nuts, pine nuts.

6. A damp, cool, foggy climate is especially trying for persons suffering from rheumatism or neuralgia.

7. A coated tongue is evidence of lowered vital resistance. The condition of the blood and general system must be improved.

10,188. Liquozone.—Mrs. E. P., Iowa, asks our opinion of Liquozone.

Ans.—It is our opinion that it is a foolometer. It has been examined by several State chemists and condemned as an imposition upon the public.

10,189. Appendicitis.—E. G. M., Georgia: "1. What is the treatment for appendicitis? 2. Is the knife sometimes necessary?"

Ans.—1. See GOOD HEALTH for January, 1905, p. 10; February, p. 97.

2. Yes.

10,190. Pigeon Breast.—O. M., Michigan, asks for the best treatment for a child of two and one-half years with pigeon breast.

Ans.—The child should have a great deal of outdoor life; should be taught gymnastics in which the arms are especially employed, such as jumping the rope in moderation, climbing the rope, swinging by the hands, playing ball.

10, 191. Kidney Trouble.—L. M. S., New York: "Kindly advise hygienic diet for two boys, aged nine and twelve, with symptoms of kidney trouble. They suffer with backache; the urine has a milky look, and contains sediment."

Ans.—Fruit should be freely used. For ordinary milk, substitute buttermilk. Discard flesh foods entirely. Give water freely, at least two pints daily. Pure apple juice, unfermented, of course, and other fruit juices may be employed freely with advantage. Rice, toasted wheat flakes, potatoes, and all ordinary wholesome foods may be used. Condiments must be specially avoided. Care must be taken in mastication.

10,192. Rhubarb.—N. A. McI., Michigan, asks (1) if the rhubarb stalk is healthful; (2) wherein it differs from the acid of the lemon.

Ans.—1. No.

2. The acid of rhubarb is oxalic acid, and poison, while that of the lemon is citric acid, a food.

10,193. Sneezing — Gaping — Eggs — Grape Juice — Lassitude.—H. H., Texas: "1. Does sneezing indicate that one is taking cold? 2. What causes gaping? 3. How many raw eggs must be consumed daily to furnish the necessary proteid and albumen? 4. Is it possible to put up a grape juice with-

out preservatives? 5. Is there any such grape juice on the market? 6. Can a feeling of lassitude in the spring be avoided?"

Ans.— 1. Sneezing indicates that one has already taken cold.

2. Any excitation of the yawning center. It is commonly due to weariness.

3. Five or six.

4. Yes.

5. The Sanitarium grape juice, supplied by the Battle Creek Sanitarium Food Company, Battle Creek, Mich.

6. Yes; by an abundance of outdoor exercise and daily cold bathing.

10,194. Indigestion.—C. T. H., Texas, desires an outline of diet and treatment for a boy of sixteen who has indigestion.

Ans.— It is impossible to answer this question without further information. There are several different forms of indigestion, each of which requires a special dietary.

10,195. Fruits — Cheese — Sugar — Pine Nuts — Poor Memory — Cold Bath — Grains and Cereals — Oatmeal — Nervousness — Legumes — Electricity.— H. K. K., Pennsylvania: "1. Is there printed a book on fruits with a description of those that should be eaten with certain diseases and which are beneficial with the same; also those that are not good? 2. Should a person eat more than one fruit at a meal or at any time? 3. In the *Farmer's Bulletin*, No. 162, U. S. Department of Agriculture, cheese is considered one of the most wholesome and nutritious foods. It claims that all cheese contains large amounts of protein and fat, not much carbohydrates or ash. It also claims that when English Cheddar cheese is eaten with other foods, such as bread and milk, ninety-three per cent of the protein and ninety-five per cent of the fat was digested, the available energy being ninety-three per cent. Is this so? 4. Is granulated sugar, cane- or beet-sugar? 5. Where can one obtain pine nuts or kernels? 6. Can anything be done to improve a poor memory? 7. Father Kneipp advocates returning to bed after a cold bath. Do you not advocate the towel rub after the same? 8. How are grains and cereals best prepared to be healthful? 9. Can they be prepared at home? 10. In the January ('04) GOOD HEALTH you say that Count Tolstoy eats 'oatmeal for breakfast, which is very simple.' Is not mushy oatmeal objectionable? 11. Is it well to use milk in cooking or preparing vegetables or fruits? 12. Are cold baths, taken regularly, a cure for nervousness? 13. Are legumes classed as vegetables? 14. If so, is it proper to use milk in preparing or cooking them? 15. Is electricity, in conjunction with the employment of GOOD HEALTH principles, helpful in curing disease?"

Ans.—1. No. We have such a book in preparation.

2. Yes. Several fruits may be combined without injury.

3. Cheese contains protein and fats, but there are many who do not agree that cheese is wholesome food, on account of the large number of germs which it contains. The statements made by the U. S. Department of Agriculture concerning the amount of protein and fat which it contains are correct.

4. Granulated sugar may be made of either cane-sugar or beet-sugar.

5. From the Sanitas Nut Food Company, Battle Creek, Mich.

6. Yes, memory gymnastics, or practice, will increase the strength of this faculty.

7. After a cold bath one may promote reaction by exercise, or by returning to bed. Persons who are not very strong may with advantage employ the latter plan. Rubbing also promotes reaction.

8. By thorough cooking, and especially dry cooking.

9. Yes, by toasting bread in the oven until it is dry and brown.

10. Yes.

11. Milk may be used moderately by most persons without apparent injury, but for many dyspeptics it is very objectionable, and can be dispensed with in all cases.

12. Yes. Cold baths are an excellent remedy for nervousness if taken properly. Care must be taken to avoid extremes.

13. No.

14. A little milk or cream may be used without disadvantage by most persons.

15. Yes.

LITERARY NOTES

AMONG the sparse settlements along the bleak coasts of Labrador and Newfoundland, a young Englishman and Oxford man has given the people for thirteen years practically the only medical comforts they have had. By boat in summer and by dog-train through the snows, he reaches every harbor from Newfoundland to Hudson Strait. He is the comfort and hope of the frugal, care-pinched people of the whole long coast. In the April **McClure's** this young doctor has written the story of a winter's experience. He writes a simple, direct account of a freely given, arduous service. It has the tang of the cold North about it, and it is a hopeful picture of a little-known people — the farthest outposts of the northern coasts.

The babies of the land are crying for milk, and most of them are getting — what?

Within ten days I have received one hundred and fifty newspaper clippings. Thirty are about the Pure-Food Bill now before Congress; twenty are miscellaneous, and one hundred — Poisoned Milk! ! !

Milk is the keystone to the arch of the pure-food crusade. It is the life-blood of the nation, and by the sardonic logic of destiny is made the main channel through which the poisoners, for gain, are attacking the vitality of the race. Preposterous that out of one hundred and fifty articles on food-adulteration, one hundred should be on milk-poisoning, that this appalling preponderance of our capital crime should be committed against the babies. I say our, because there is not a mother's son of us who can vote or influence a vote who is guiltless. We are either actually engaged in the business of cheating the babies or betraying them to the cheat.— *From "How the Baby Pays the Tax" in the April* **Woman's Home Companion.**

Seasonable and springlike from cover to cover is the April **Housekeeper.** A striking illustrated feature is a double page of photographs showing typical summer homes of Minnesota. Nearly every field of feminine activity is covered in the regular departments devoted to fancywork, fashions, cookery, dressmaking, care of children, hygiene in the home, floriculture, etc. Published by The Housekeeper Corporation, Minneapolis, Minn. Sixty cents a year.

Frank E. Schoonover, the artist, in the April **Scribner's**, describes in "The Edge of the Wilderness" his midwinter adventures in the wilds of Canada in pursuit of artistic material; how he lived in Indian tepees and sketched the natives as they actually are in their snow-bound camps. The illustrations, drawn under great difficulties, show a phase of wild life that has never hitherto been presented at first hand.

The Spring Number of **Good Housekeeping,** as the April issue is styled, devotes a considerable space to the flower garden, with some beautiful illustrations and a leading article by Hamlin Garland, novelist and horticulturist, upon The Decorative Mission of the Vine.

The April number of **The American Boy,** by reason of its varied and interesting contents, is one of the best yet published. Among the larger articles and stories are "What a Boy Can Do in a Town Lot," and the boys will be surprised to find what a lot of fun they can have even within limited space; "Ivan Ivanovitch," telling how a Russian peasant lad relieved his village from taxes; etc. Ninety illustrations. $1.00 a year. The Sprague Publishing Company, Detroit, Mich.

The Pilgrim for April, from every point of view, seems to be one of the most interesting and timely of the monthlies.

"Obstetrics for Nurses." By Joseph B. DeLee, M. D., Professor of Obstetrics in the Northwestern University Medical College; Obstetrician to Merey, Wesley, Provident, Cook County, and Chicago Lying-in Hospitals. Fully illustrated. 12 mo., of 460 pages. Published, Philadelphia, New York, London, W. B. Saunders & Co., 1904. Price, $2.50, cloth.

In this work the author has succeeded in presenting this subject in an admirably concise manner for the nurse. The illustrations are especially good, many of them having been taken at the bedside of the author's cases. The aim of the book is practical and suggestive rather than technical, and it can be read with much profit, especially by the nurse

NEW BOOKS.

"Hensel, Weil, and Jelliffe on the Urine and Feces." A practical Manual on the Urine and Feces in Diagnosis. By Otto Hensel, Ph. G., M. D., Bacteriologist to the German Hospital, New York; Richard Weil, A. M., M. D., Pathologist to the German Hospital, New York, in collaboration with Smith Ely Jelliffe, M. D., Ph. D., Instructor in Pharmacology and Therapeutics, Columbia University, New York. In one octavo volume of 334 pages, illustrated with 116 engravings and 10 colored plates. Cloth, $2.75, *net*.

Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M. D.

"An Epitome of Medical Diagnosis." By Austin W. Hollis, M. D., Attending Physician to St. Luke's Hospital, etc., New York. 12mo, 319 pages, illustrated. Cloth, $1.00, *net*.

"An Epitome of Diseases of the Eye and Ear." By Arthur N. Alling, M. D., and O. A. Griffin, M. D. Price, $1.00, *net*.

A completely new Practice of Medicine, by Hobart Amory Hare, M. D. Octavo, 1,120 pages, 129 engravings, and 10 plates. Cloth, $5.00, *net*; leather, $6.00, *net*; half morocco, $6.50, *net*.

Lea Brothers & Co., Publishers, 706-8-10 Sansom St., Philadelphia; 111 Fifth Ave., New York.

REVIEWS.

"The Blues (Splanchnic Neurasthenia): Causes and Cure." By Albert Abrams, M. A., M. D. (Heidelberg), F. R. M. S.; Consulting Physician, Denver National Hospital for Consumptives, The Mount Zion and French Hospitals, San Francisco; President of the Emanuel Sisterhood Polyclinic; Formerly Professor of Pathology and Director of Medical Clinic, Cooper Medical College, San Francisco. Illustrated. Published by E. B. Treat & Co., 241–243 West 23d St., New York. Price, $1.25.

It has been some time since a book has come to our table that affords such interest in reviewing as this one. Dr. Abrams writes in a very good style, and with his numerous and well-selected quotations brings this highly interesting and most important subject before the profession in a manner which certainly deserves credit. Whether all his theories will be substantiated, remains to be seen; yet this work will certainly do an inestimable amount of good. He attributes the attacks of depression called the "blues" to a venous stasis in the abdominal viscera, and has called the condition "splanchnic neurasthenia." This form of neurasthenia the author finds very amenable to treatment. In this condition there is a decrease of intra-abdominal tension. The treatment recommended by the author is summed up under the following headings: 1. Massage of abdominal walls. 2. Exercises of various sorts to increase strength of abdominal muscles. 3. Respiratory exercises. 4. Electricity to abdomen. 5. Abdominal supporter. 6. Hydrotherapy.

The work is well worth careful reading and study, and deserves a wide circulation.

"The Self-Cure of Consumption." By Chas. H. Stanley Davis, M. D., Ph. D., Member of Connecticut State Medical Society; Physician to the Curtis Home for Old Ladies and Children. E. B. Treat & Co., New York. 176 pages. Price, 75 cts.

As its name indicates, this little work emphasizes the importance of the vital resistance of the organism in combating tuberculosis as opposed to the specific action of any and all drugs.

Dr. Davis apparently is thoroughly imbued with an earnest belief and enthusiasm in the efficacy of sunshine, exercise, fresh air and water, and rest, and the absolutely essential nature of these remedies in the treatment of tuberculosis. However, he does not oppose the use of all medicines, but says that when used, they should be carefully and scientifically administered by a qualified physician; he unequivocally condemns the use and exploitation of quack nostrums and patent medicines so largely used by the laity.

The primary and vital importance of maintaining the digestive powers in the best possible condition is insisted upon, and in the author's opinion, forced alimentation with nitrogenous food is of paramount importance, more so even than the administration of large amounts of fats. The chapter on diet is one of the longest, and the ideas are in accord with the most advanced views on dietetics.

In the section on Diagnosis, special stress is laid on the importance of repeated and early microscopic examination of the sputum as making possible a positive diagnosis earlier than by any other means. It might seem that the value of accurate physical examination is liable to be underrated.

The author insists on the possibility of curing almost every case if taken in time.

The work is instructive and suggestive and can result only in good, and should have a wide reading, especially by those not acquainted with methods used in sanatoria for the tuberculous.

Possibly a few of the ideas presented may be open to criticism.

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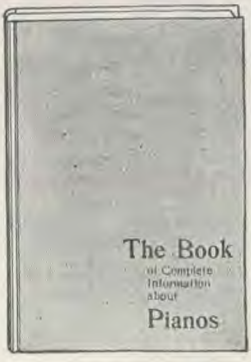

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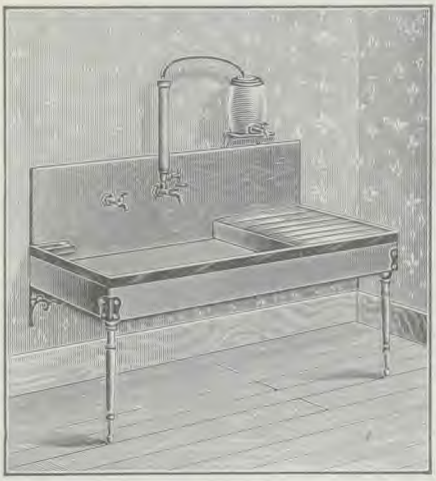

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