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PICKING TEA

Coolies at work on a tea estate, Ceylon

LIFE and HEALTH

"Something better is the law of all true living"

Vol. XXIII Takoma Park Station, Washington, D. C., December, 1908 No. 12

Influence of Mind on Body — Not All-Powerful, but Wonderfully Powerful

Lyman B. Sperry, A. M., M. D.

Nervous System and Mind

IGNORING all cloudy and transcendental philosophies, and all "science falsely so-called," and recognizing the practical fact that we have material bodies, that we live in a material world, that we are in the midst of various powerful physical and mental forces, let us carefully note that each normal human being has two somewhat distinct nervous systems. One of these sets of organs is called the *cerebrospinal nervous system,* because it consists of the brain, the spinal-cord, and the many nerve branches given off from the brain and cord. This *cerebrospinal* nervous system is the source, or at least the chief instrument, of what we call *mind,* —that peculiar something which exhibits consciousness, thought, will, emotion, and conscience. Every human being who has even a moderately good cerebrospinal nervous system, exhibits and experiences the various functions called *mental faculties — mind.*

The other nervous system is variously called the *organic,* the *sympathetic,* or the *vegetative* nervous system. This department, which in this paper I shall preferably call the *sympathetic* nervous system, has many very small brains,— little aggregations of gray nerve-cells, all of them intimately connected, by minute nerve-threads, with one another, and also with each and every vital organ, such as the stomach, liver, pancreas, heart, blood-vessels, lungs, skin, and kidneys.

The primary business of this sympathetic nervous system is to co-ordinate and direct the activities of the unconscious vital organs,— and it should do this work so harmoniously and so quietly that its action shall not disturb the cerebrospinal system enough to distract it, or to produce sensations of pain, discomfort, or depression. Healthy persons, under ordinary circumstances, do not notice the physical workings, or functionings, of the various organs upon which life and health depend; but *abnormal* conditions in the field of the sympathetic system, make themselves *felt.* Carlyle, from the horrible pit of dyspepsia, exclaimed, "Cursed be the day on which I discovered that I had a stomach!"

But the two nervous systems, the *cerebrospinal* and the *sympathetic,* are so closely and so elaborately connected by tell-tale nerves that every important vibration or message, and doubtless even

the most delicate processes in the field of either nervous system, are immediately conveyed, as messages of information and suggestion,— if not, indeed, as positive mandates,— to the other nervous system; and the special work under the direction of each system is so sympathetically dependent upon the other that each set of nerves is constantly trying to adjust itself to the conditions and requirements of the other. Within variable limits it is probably true that each nervous system acts only on hints, information, requests, or orders received from the other; consequently it is impossible to have ideal or reliable mental conditions and processes unless the messages constantly received from the vital organs, via the sympathetic system, are comforting, assuring, or authoritative in character.

Body and Mind

Physiologists and psychologists have long known that it is impossible to have sound minds except in sound bodies. Unhealthful bodies may exhibit *activity* of mind, even to extreme acuteness, shrewdness, or brilliancy; but each *body,* in becoming abnormal, makes it impossible for its associate *mind* clearly to apprehend real wisdom, or habitually to exercise good judgment. Sustained rational conduct rests on physical health. Wisdom is a stranger to the man of chronically tired muscles, irritated nerves, or fevered brain. Good sense resides not permanently in diseased bodies; it comes not to the man of decaying lungs, of poisoned blood, of torpid liver, of diseased kidneys, or of cancerous tissues.

Mind and Body

But, while the influence of the body over the mind is quite generally recognized and admitted, it is not so generally apprehended that all mental conditions — all thoughts, all feelings, all volitions — are promptly communicated, through the sympathetic nervous system, to the stomach, liver, intestines, heart, lungs, skin, kidneys, etc., inevitably producing in those organs definite activities and conditions. *All mental states, to some extent, influence all of the bodily functions.* In many cases the health is determined almost solely by the mental habits. There is a tremendous truth in the inspired declaration, "*As he [man] thinketh in his heart, so is he.*" This statement is true not simply in general or in limited ways, but it is true of every organ the conduct of which helps to determine one's health.

It is the custom not only of civilized man but of the uncivilized also, to locate mental emotion in the heart; this they do because intense feeling (emotion), joyous or grievous, quickly and evidently affects the heart's action. But emotion, whether moderate or intense, is primarily a mental experience. Emotion is a consequence of perception, of thinking, of the mind's *idea* regarding conditions actual or impending, whether the conditions be real or imaginary. *The heart's action is an index of mental states just as surely as it is an expression of its own muscular contractions.* But emotional experiences are reflected not only from the brain to the heart, but to all of the vital organs. Each mental thrill helps to determine the limit and the quality of every physical act,— the health and efficiency of every organ of the body.

All joyous emotions, unless unusually or foolishly *excessive,* help to vitalize and improve the organs and processes of digestion, circulation, respiration, secretion, excretion, and, indeed, all of the various vital processes upon which our physical integrity, health, and efficiency depend. There is a scientific basis for the Scriptural declarations: "A contented mind is a continual feast;" "A merry heart doeth good like a medicine." Speaking to many persons who recover

from illness, we may declare as a scientific fact, "Thy *faith* hath made thee whole."

But while it is certain that all joyous emotions are healthful, it is as certainly true that all grievous emotions depress the action of the heart, reduce the work of the lungs, and seriously interfere with the process of digestion, secretion, excretion, and all related functions. The action of the heart suffers from every form of mental depression, and every other vital function sympathizes with the heart. Health is the reward of normal organic functioning; but normal functioning is largely the result of right mental processes. Therefore the wisdom of the advice, "Keep thy heart with all diligence; for out of it are the issues of life."

Through a study of the facts above stated, and other related facts, we find the following general *law* regarding mental influence in health and in disease: *Every mental experience having Fear as a factor tends to undermine one's health, and bring about positive disease, while every mental experience having Faith as a factor tends to improve and to establish one's health.* This law is universal, constant, and impartial; its workings are seen both in acute and in chronic conditions.

The more common exhibitions of diseasing *fear* are seen in our daily anxieties, disappointments, fretfulness, worry, discontent, discouragement, wounded pride, envy, jealousy, hatred, revenge, troubled conscience, etc. The more common exhibitions of a healthy *faith* are seen in confidence, cheerfulness, good will, contentment, a lively "assurance of things hoped for," a positive expectancy of that which is desired, "a conscience void of offense toward God and man."

Mind Cure not a Panacea

Because many forms of disease are unquestionably caused by mental influence, and because they may also be *cured* by the right kind of mental attitude and activity, it has come about that certain theorists and lovers of the occult declare that *all diseased conditions are produced by the mind,* and that *all cures are mind cures.* Scientific and logical persons can not seriously consider such theories and concepts; they know that life is a real, a practical, and an important affair,— not a field in which one may safely let his imagination superficially toy with important problems.

The following definite statements are essentially and practically true as to *all* mankind: —

1. Many alleged and apparent forms of physical weakness and disease are simply mental delusions,— fabrications of the imagination. One may be very sick simply and only because he thinks he is sick. In such cases, recovery follows the removal of the *cause* of the illness.

2. Many real diseases, primarily produced by mechanical forces, poisons, unhealthful physical agencies, or by bad personal conduct, are seriously aggravated, and recovery from them is prevented, or at least retarded, by the depressing mental concepts and emotions of the sufferer. To the invalid, all mental states and all suggestions characterized by *fear,* in any of its various forms, are more or less dangerous.

3. There are forms and degrees of injury or sickness which, however produced, can not be cured by any kind of material medication, physical agency, or mental influence known to mankind. Every one of us must *sometime* arrive at a condition that is absolutely incurable — a fatal accident or disease; but before that time comes, many of us may be repeatedly cured (more or less perfectly) of various forms of illness,— and cured by various influences, physical or mental,

or perhaps by a combination of both.

4. There are sometimes diseased physical conditions which, if left to themselves, will bring the victim to a speedy death; but which, if properly treated by the proper physical agencies, will promptly disappear. Such results are occasionally secured, even when the mind of the sick one is loaded with fears, even to the point of a settled expectation of speedy death.

5. Notwithstanding the tremendous certainty of our physical existence, the reality of physical laws, and the deadliness of some of them, it is equally certain that the human mind may, and that it often *does,* exercise a most remarkable influence over our physical organs, functions, and conditions. While mind is not all-powerful, it is wonderfully powerful. Many persons who have "suffered many things of many physicians," growing constantly worse instead of better,— even those pronounced incurable by a respectable council of "scientific" physicians,— have through a correct attitude of mind, through exchanging their *fears* for *hope,* their indifference for a *will* to *live,* their discouragement for a *faith* that they are getting well, soon found themselves thoroughly cured. The incoming and the intelligent harboring of a great *faith* has saved them. Many who die under the combined influence of *disease, drugs,* and *fear* might recover from dangerous sickness,— or, better still, might avoid sickness altogether,— if they would substitute for the twin *devils,* Physical Dissipation and Mental Fear, the twin *angels,* Rational Living and a Lively Faith.

Oberlin, Ohio, October, 1908.

Prevention and Cure of Disease by Posture and Correct Breathing

D. H. Kress, M. D.

Superintendent Washington (D. C.) Sanitarium

THE furnace fire burns briskly when the drafts are opened. If either the lower draft, which admits oxygen to the flame, or the damper, which controls the exit of the smoke, is closed, the fire burns more slowly, and combustion is not so complete. To have free combustion, there must be an abundant supply of oxygen, and the gases produced by the fire must have free exit.

The human body may be compared to a furnace. The food is the fuel needed to produce heat and energy; but oxygen is needed to keep alive the vital spark. The more oxygen we admit, the brighter the fires burn, and the more pronounced is the energy experienced. To admit but little oxygen will cause the fires to burn low, and result in the production and retention of unoxidized products. These products clog the living furnace, and are responsible for the lack of energy often experienced. It is not more fuel that is needed when this lack of energy is felt, but more air.

The fires in our stoves would not burn long were there no provision made to carry off the carbonic-acid gas, which is formed as the result of oxidation. This gas extinguishes fire. A candle will not burn in a deep well, because of the presence of this gas. The chimney serves the purpose of carrying off the carbonic-acid gas. The lungs serve not merely as an inlet for oxygen, but also as an outlet for the harmful carbonic-acid gas.

In the lungs the oxygen is absorbed by the blood, and is then conveyed to the remotest parts of the body, and brought in contact with every cell. The gases formed as a result of the oxidation which takes place in the tissues, are brought by the return flow of blood to the lungs, and are exhaled. In this way the vital fires are kept burning, the blood and the tissues of the body are kept clean, and disease is prevented.

Pure air and proper breathing are the only means provided by nature for purifying the blood; and he who is in search of some other remedy to accomplish this result will meet with disappointment. Eating too much and breathing too little is a frequent cause of sickness. Should the stomach be given less to do and the lungs more, mankind would be both healthier and happier.

Consumption, the great white plague of these modern times, is annually carrying off thousands of young men and women in the United States. A noted doctor has said, "Only those who are too lazy to breathe have consumption." Persons who make full use of their lungs seldom have this disease, and those who, having the disease, begin to breathe as they should, frequently recover. It is the upper lobes of the lungs, the parts not usually filled with air, which lose their vitality, and in which the germ of tuberculosis finds an inviting nook for development.

Breathing, like eating, is under the control of each individual. It is left with each to determine how much life-giving air shall be inhaled, and how much of the life-destroying and disease-producing products shall be exhaled. For the sedentary man or woman it is well to take a few breathing exercises the first thing in the morning and the last thing at night. The following suggestions will be found of value in taking these: —

Always breathe slowly and deeply, inspirations being through the nostrils, and expirations either through the nose or mouth. Inhalation may be accompanied by that part of an arm or shoulder exercise which tends to elevate and extend the thorax, such as raising the arms laterally, while exhalation should be accompanied by that part of the exercise which tends to contract the walls of the chest, such as lowering the arms laterally from the shoulders or from over the head. Always fill the lower lungs first by forcing down the diaphragm, then, as the arms are raised, expand the entire chest, allowing the air to get into every nook and corner of the lungs.

Breathing exercises, in which the lungs are compelled to take in more air than is required, soon tire the lungs. Such exercises may even become injurious. Vigorously inflating the lungs may result in the rupture of a blood-vessel, and cause hemorrhage. In their anxiety to develop the lungs, those having a tendency to tuberculosis should be especially careful not to overdo. The better and safer way is to create a natural demand, or thirst, for air by exercise sufficiently vigorous to make expansion of the lungs a necessity and delight.

Useful exercise connected with the ordinary duties of life, if properly taken, is far superior to any of the breathing exercises so highly recommended in the development of lung capacity. Going up-stairs, while keeping the body erect and the shoulders well back, and energizing the legs and trunk, may be made a most excellent exercise to encourage full and deep respiration. A brisk, cheerful walk in the open air, with an erect posture and chest well forward, is exhilarating, and affords one of the best of breathing exercises. An occasional run, hill-climbing, swimming, rowing, etc., are excellent ways of increasing lung capacity, but may be overdone. This danger does not exist in bringing physical culture into the performance of our daily duties. Even those who are compelled to sit in offices will experience

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DRYING COFFEE

Scene on a Mexican coffee plantation

great benefit by keeping the body erect and energized while writing or doing other office work which they must do in a sitting posture. While sitting, full, deep inspirations of air may be taken at each breath. This will aid in keeping the blood pure and the brain clear, so that better mental work may be done.

Occasionally during the day, five minutes may be profitably spent, before an open window, in some exercise that will create a demand for air, and will tend to develop lung capacity.

Deep abdominal breathing develops the abdominal muscles, which form a normal support for the viscera. The intra-abdominal pressure exerted by the well-developed abdominal walls upon the viscera and blood-vessels prevents congestion and disease of these organs. It also exerts a most beneficial influence upon the work done by the liver, stomach, and other abdominal viscera. If the abdominal muscles are well developed, each descent of the diaphragm causes a certain amount of extra pressure, which forces the impure blood out of the viscera and abdominal cavity, toward the heart and lungs, for purification, and each ascent permits a new flow of rich arterial blood, charged with life, to enter these organs. Thus the digestion is improved, and the liver and other organs are capable of doing their best work. Even the most wholesome food may cause indigestion if deep abdominal breathing is ignored.

Singing may be made of great value not only in lung development and in the prevention and cure of disease of the lungs, but in keeping the abdominal and pelvic organs free from congestion and disease, by encouraging a free flow of blood through them. Singing, properly executed, is one of the most important measures for the prevention and cure of congestive diseases of the liver, stomach, lungs, and other organs.

In conclusion: Maintain an erect posture, whether sitting, standing, or walking. In order to breathe properly, it is necessary to keep erect, and thus allow free expansion of the lungs and unrestricted movement of the diaphragm. The erect position, with full breathing, encourages a free circulation of blood through all the abdominal and pelvic organs, increasing the efficiency of their work, and preventing disease.

WASHINGTON SANITARIUM

The Relation of Stimulating Food to Intemperance

Mrs. E. G. White

UNDER the head of stimulants and narcotics is classed a great variety of articles that, used as food and drink, irritate the stomach, poison the blood, and excite the nerves. Their use is a positive evil. Men seek the excitement of stimulants, because, for the time, the results are agreeable. But there is always a reaction. The use of stimulants tends to excess, and is an active agent in promoting physical degeneration and decay.

In this fast age, the less exciting the food, the better. Condiments are injurious in their nature. Mustard, pepper, spices, pickles, and other things of like character, irritate the stomach, and make the blood feverish and impure. The inflamed condition of the drunkard's stomach is often pictured as illustrating the effect of alcoholic liquors. A similarly inflamed condition is produced by the use of irritating condiments. Soon ordinary food does not satisfy the appetite. The system feels a want, a craving, for something more stimulating.

Tea acts as a stimulant, and, to a certain extent, produces intoxication. The action of coffee and some other popular drinks is similar. The first effect is exhilarating. The nerves of the stomach are excited; these convey irritation to the brain, and this in turn is aroused to impart increased action to the heart, and short-lived energy to the entire system. Fatigue is forgotten; the strength seems to be increased. The intellect is aroused, the imagination becomes more vivid.

Because of these results, many suppose that their tea or coffee is doing them great good; but this is a mistake. Tea and coffee do not nourish the system. Their effect is produced before there has been time for digestion and assimilation, and what seems to be strength is only nervous excitement. When the influence of the stimulant is gone, the unnatural force abates, and the result is a corresponding degree of languor and debility.

The continued use of these nerve irritants is followed by headache, wakefulness, palpitation of the heart, indigestion, trembling, and many other evils; for they wear away the life forces. Tired nerves need rest and quiet instead of stimulation and overwork. Nature needs time to recuperate her exhausted energies. When her forces are goaded on by the use of stimulants, more will be accomplished for a time; but, as the system becomes debilitated by their constant use, it gradually becomes more difficult to rouse the energies to the desired point. The demand for stimulants becomes more and more difficult to control, until the will is overborne, and there seems no power to deny the unnatural craving. Stronger and still stronger stimulants are called for, until exhausted nature can no longer respond.

Great efforts are made to put down intemperance; but there is much effort that is not directed to the right point. The advocates of temperance reform should be awake to the evils resulting

from the use of unwholesome food, condiments, tea, and coffee. We bid all temperance workers Godspeed; but we invite them to look more deeply into the cause of the evil they war against, and to be sure that they are consistent in reform.

It must be kept before the people that the right balance of the mental and moral powers depends in a great degree on the right condition of the physical system. All narcotics and unnatural stimulants that enfeeble and degrade the physical nature tend to lower the tone of the intellect and morals. Intemperance lies at the foundation of the moral depravity of the world. It is by the indulgence of perverted appetite, that man loses his power to resist temptation.

Temperance reformers have a work to do in educating the people in these lines. Teach them that health, character, and even life, are endangered by the use of stimulants, which excite the exhausted energies to unnatural, spasmodic action.

In relation to tea, coffee, tobacco, and alcoholic drinks, the only safe course is to touch not, taste not, handle not. The tendency of tea, coffee, and similar drinks is the same as that of alcoholic liquor and tobacco, and in some cases the habit is as difficult to break as it is for the drunkard to give up intoxicants. Those who attempt to leave off these stimulants will for a time feel a loss, and will suffer without them. But by persistence they will overcome the craving, and cease to feel the lack. Nature may require a little time to recover from the abuse she has suffered; but give her a chance, and she will again rally, and perform her work nobly and well.

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CULTIVATING THE WEED

A typical tobacco plantation, province of Havana, Cuba

HEALTH CATECHISM

L. G. Wagner

No. 4 — Water

How much of the body is composed of water?

About three fourths, ranging from ten per cent in the teeth, to seventy-nine in the brain, and more than ninety-nine in the saliva.

How necessary is water to the body?

All the living tissues of the body perform their work under water. Food can not enter the body, nor can the wastes leave the tissues, unless carried by water. Water is essential to all vital processes.

In what way is water-drinking conducive to health?

The free elimination of water from the system demands a certain amount of water to make up the loss. With an insufficiency of water, all the vital processes are conducted at a disadvantage. Within certain limits, the more water one drinks, the more free the elimination, not only of water, but also of various wastes. Free water-drinking flushes the sewers of the body.

How much water does the body need daily?

This varies according to the health, age, occupation, etc., and the weather. The average man requires about three quarts of water a day.

From what sources is the water in the body derived?

From the food and drink. All foods contain some water; and the organic part of the food is changed in the body largely into carbonic-acid gas and water. Our drinks are essentially water with other substances held in suspension or in solution. The essential part of all drinks is the water, and the purer it is, the better it serves its purposes.

What kinds of impurities are especially objectionable in water?

Mineral impurities may be actively poisonous, as arsenic, or may, like lime and magnesia, render the water hard, and consequently less wholesome. In general, it may be said that organic impurities are far more dangerous than mineral impurities. This organic matter may be decaying plant or animal matter, with myriads of living microbes, some of them capable of transmitting deadly diseases.

If water is clear, cool, and tasteless, is it necessarily pure?

No; water possessing all these qualities may be reeking with organic filth and disease germs. In order to be certain that it is not impure, it is necessary to give it a chemical and bacteriological examination.

Is there a simple and fairly reliable test for the purity of water?

A simple and quite reliable test for organic impurities is to put just enough potassium permanganate with some water that is known to be pure to turn it slightly purple, and then put the same amount in an equal quantity of the water to be tested. Have the two solutions in clean glass bottles, and put them away for twenty-four hours. If at the end of this time, the water under test has any less color than the pure solution, it is unsafe.

Name the most common sources of contamination of well-water.

Seepage from barn-yards, cesspools, decayed vegetable and animal matter. Another danger is from insects, bugs, worms, vermin, and small animals that fall into uncovered wells.

Is rain-water usually pure?

Frequently not. It contains impurities from the air and the roofs, and often the cistern is filthy.

May rain-water be obtained in a condition safe to use?

It may, by having a clean catching surface, and frequently cleaning the cistern, and rejecting the first water of the rainfall.

When is spring-water safe to use?

When it contains no very large amount of mineral salts, and when there is no opportunity for contamination.

What are some of the contaminations of city water?

Chiefly sewage and privy contamination of its source of supply.

Are typhoid, cholera, diphtheria, and other disease germs destroyed in running streams?

The typhoid germ in ordinary drinking-water can live for considerable periods, and may be carried alive for long distances down a running stream. It is coming to be recognized that no city and no person has a right to contaminate a running stream; for typhoid fever, cholera, and other diseases are transmitted from one person to another, sometimes over long distances, through the drinking-water. Until the laws regulating the disposal of sewage are more uniform and more strictly enforced, the ordinary river water is not very safe for drinking purposes.

Is there any danger in city water-pipes?

The solvent action of water upon metals, especially lead, must be guarded against.

Is muddy or roily water dangerous?

Water may be turbid from suspended impurities which are comparatively harmless, though naturally such water is less desirable than pure, clear water. Filtration will remove the suspended impurities.

How may water be filtered?

The chief filtering mediums are sand, sponge, iron, charcoal, sandstone, and porcelain. Sand or sandstone removes only suspended matter.

Spongy iron removes also small particles of organic matter, but is objectionable because it impregnates the water with iron.

Charcoal removes the suspended matter, and a large proportion of the organic matter, together with the germ life, provided it is fresh. The charcoal should be frequently renewed. An old filter, unrenewed, is worse than none, as the water comes out of it filthier than when it enters.

Unglazed porcelain, if properly cared for, will remove practically all disease germs, provided it is baked in an oven at frequent intervals.

Will filtering take the place of boiling?

No; boiling destroys all disease germs, drives off objectionable gases, and precipitates a part of the mineral matter which renders the water hard. Suspicious water should be boiled for at least fifteen minutes. It may be rendered less flat tasting by pouring it back and forth from one dish to another.

What care of the filter is necessary?

In order to be safe and efficient the filter requires cleansing every few days. No filter should be used longer than a month without cleansing; and it is better to cleanse it at least once a week.

The sponge filter should be cleansed and scalded two or three times a week.

The charcoal filter should have the charcoal either changed for new or heated to redness in an air-tight vessel, and replaced when cold.

Why is soft water preferable to hard water?

Soft water ordinarily contains less mineral matter than hard water. When there is a large amount of mineral matter present, it is decidedly better to distil the water, as this will rid it of its mineral impurities.

Is there much danger in the use of impure ice?

Impure ice is, perhaps, as dangerous as impure water. The idea that water in freezing eliminates its impurities is misleading. To a certain extent it does, but not wholly; and ice from contaminated ponds or rivers may transmit disease as readily as impure water.

In what ways is ice a source of contamination?

It may come from a contaminated stream. It may be, and is sometimes, dragged across a sidewalk, taking up the spittle and filth of pedestrians. This, especially of the large pieces of ice served to restaurants, soda-fountains, etc. Manufactured ice may be made in a filthy place from impure water. If such ice is kept from direct contact with foods and drinks, it may do no particular harm. If the ice is to be used in the drinks (a questionable procedure, by the way) or in direct contact with the foods, care should be exercised to obtain ice that is known to be uncontaminated. In nearly every city there are some companies that furnish pure ice.

What are some of the sources of contamination in water-coolers?

The water may be from a contaminated source. The ice may be impure, or it may be handled with dirty hands, or placed on a filthy floor, and not washed off before putting into the cooler. The cooler may not be cleaned as frequently as it should be.

THE CONSULTING ROOM

Conducted by G. A. Hare, M. S., M. D., Fresno, California

Intelligent Removal of Obstructions

You say you have led a more or less indoor life for ten years, and have always been troubled with inactive bowels; sometimes when you neglect them, they do not move for four or five days. You do not think it is possible for them to move unless you take powerful cathartics, and you have given up all hope that they will ever be any better. You want a doctor who will give you *something that will make your bowels move regularly.* Now, see here! you look like an intelligent man, and on taking a second look at you, I can hardly place you in the class who have asked me that question more than a hundred times. You want a medicine that will make the bowels move, will make them move regularly, and that will not wear out.

You are a manufacturer of foods. I will therefore ask you to find me a food that will keep my brain clear, that will make me go to my office regularly, will keep me from getting tired, and that will never lose these effects. When you are able to produce such a food as that, you will be able to help me make a medicine such as you desire. Of course such a request is unreasonable, because such a food can not be made. It is just as reasonable, however, as the request you made, and it would be just as easy to make such food as it would be to make the medicine for which you ask.

The fact is that the bowels were never intended to be moved by any medicine. Regular habits, maintained from childhood, together with proper food and exercise, and a proper mental attitude, will keep the bowels as regular as clockwork. Before you can ever hope to regulate your bowels, you must decide to regulate yourself. Almost every function of the body is performed with a rhythm that is nothing short of marvelous. With but little variation the heart beats seventy-two times every minute, whether a man is an Eskimo or an Italian. Every man breathes normally about eighteen times a minute, and every human body has a temperature of practically 98.6 degrees, whether in the arctic circle or in Panama. Where any slight deviation in heart-beat or respiration does occur in normal health, it always follows the same rhythmic order. In gastric digestion the food is moved about by waves of muscular contractions, which follow one another in regular sequence. These waves of peristaltic contractions pass along the entire length of the intestinal tract, moving the food about till it is perfectly digested, the nutritive portions completely absorbed, and the residue passed on to the descending colon, where it remains till the time arrives for the evacuation, when the waves of contraction pass over the lower portion of the colon. So far the process is an involuntary one, and a wholly unconscious procedure; and if

the individual will permit nature to have her way, she will complete her work of evacuating the bowels, and repeat it the next day at the same time, almost to the minute. But if there is not voluntary co-operation on the part of the individual, nature's regular method is interfered with, and instead of the peristaltic contractions continuing downward, the direction is often reversed, and the waves of contraction pass from below upward, lifting the contents of the large intestine above the sigmoid flexure of the colon, there to remain until such time as business engagements, social obligations, indifference, laziness, or mere convenience will permit nature to move the bowels.

"Well, doctor, I wish I had known this sooner. I would not have been such an obstructionist. I should have been taught this in childhood. I see why medicine never can make any one's bowels regular. But what can I do now?"

Use your will power. Believe that nature is able to perform every function perfectly, but remember that your will power can thwart her at every step. You say that you have given up hope of being better; change your mental attitude. Put your nerve force to working for you, expect to get well, act as if you believed you would get well, and give nature a fair chance to be regular. Make an effort to move the bowels daily at the same hour; in the morning is an excellent time. If you can not secure a movement, you can use a small, cold enema — about a pint of cold water. Use all such helps as you would use a splint to a broken bone. It will not cure you, it is only a temporary help; discard it after a short time.

Of course you must use good food, including fruits, and coarse foods, like figs and prunes, eating the skin as well as the pulp; lettuce, celery, greens, and any vegetables you like; avoid cakes, pastries, and concentrated foods. Sirups, however, do not constipate. Exercise daily in the open air, and especially develop the abdominal muscles. Come back again after a few weeks, and I will suggest some additional practical thoughts on this subject.

AND HOUSEHOLD SUGGESTIONS

Conducted by Mrs. D. A. Fitch, Glendale, Cal.

A Series of Lessons in Healthful Cookery

George E. Cornforth

I—STARCH (Concluded)

Bread

BREAD is a very common form in which grains are used. We will say nothing about yeast bread, because the process of making good yeast bread has become so well known that those who make their bread usually know how to make good bread, and many bakers make excellent bread.

The most common home-made bread, and the most objectionable, is "hot biscuit." In the process of bread-making, it is necessary to use something to make the bread "light." If a dough should be made of flour and water, and baked, it would be tough, difficult to masticate, and hard to digest. In yeast bread the carbonic-acid gas produced by the yeast-cells makes it light. But the process of making bread with yeast is lengthy, and it is sometimes necessary or convenient to use a shorter process. A very common method is to use bicarbonate of soda and sour milk, or baking-powder, to make the bread "light." In either process, carbonic-acid gas is produced by the decomposition of the bicarbonate of soda with the lactic acid of the sour milk, or by the tartaric acid of the baking-powder.

When sour milk and soda are used, inasmuch as it is impossible to know just how acid the milk is, and just how much soda will be required to neutralize it, too much soda is generally used. This very often can be tasted in the bread; it makes the bread yellow, and injures the delicate lining of the stomach.

When baking-powder is used, the two chemicals, bicarbonate of soda and tartaric acid, being present in just the right proportion, no soda is left in the bread. But the two chemicals do not neutralize each other in any such way as to destroy each other; and there is left in the bread a substance identical with the Rochelle salts sold at the drug-store.

Two teaspoonfuls of baking-powder are used to a quart of flour. This leaves in the bread one hundred sixty-five grains of Rochelle salts, and that is forty-five grains more than the amount in a Seidlitz powder.

This foreign substance has no nutritive value, and when taken into the body, must be thrown off by the excretory organs, thus putting extra work upon them. It has been demonstrated that the chemicals found in baking-powder bread retard digestion. Bread thus made can not be called pure. While it may sometimes be useful to take a dose

of salts, the daily swallowing of this substance in our bread can not be conducive to good health. Therefore we may be glad that it is not necessary to use these chemicals in order to make light, pure, wholesome bread.

Air is a gas which has the advantage of being free,— the cheapest gas there is,— and if we can incorporate some of it into our dough or batter before baking, it will do for us what the chemicals do in the common process, and leave nothing objectionable behind.

Air may be incorporated into a batter by beating. The use of eggs will aid in the process, because the white of the egg, on account of its viscous nature, readily catches air, and will help convey it into the batter.

While the beating process might seem long and difficult to the uninitiated, it is really very simple, as will be seen by the following recipe: —

Whole-Wheat Puffs

Put into a mixing-bowl one cup of milk, or one-third cup of cream and two-thirds cup of milk, the yolk of one egg, and one-fourth teaspoonful of salt. Beat together. Add one-half cup of whole-wheat flour, and one cup of white flour (use good quality bread flour). Beat vigorously, preferably with a batter-whip, till the batter is smooth and full of air-bubbles. Then lightly fold in the stiffly beaten white of the egg. Turn at once into hot, oiled gem-irons, and bake twenty to thirty minutes.

Other kinds of puffs may be made by using other kinds of flour, such as Graham, corn-meal, or rye instead of whole-wheat, or by adding one-fourth cup of blueberries or dried currants or one-fourth cup of chopped nuts to the batter when the white of the egg is folded in.

When corn-meal is used, it will be best to use one and one-fourth cups of white flour and one-fourth cup of corn-meal.

Rye Puffs

Rye puffs, made as follows, may have a flavor which some will enjoy: —

One cup of milk (or three-fourths cup of milk and one-fourth cup of cream), one egg, one cup of sifted bread flour, one-half cup of rye meal, one slightly rounded teaspoonful caraway seed, one-fourth teaspoonful salt. Put the ingredients together the same as for whole-wheat puffs, folding in the caraway seed when the white of the egg is folded in.

Pop-Overs

Pop-overs are made in a similar way, the difference between them and puffs being that the egg is not separated, and that less flour is used. Following is a recipe: —

One cup of milk, one egg, one-fourth

A. C. Saunders, photographer, Melrose, Mass.

MAKING PUFFS — Beating the batter

teaspoonful of salt, one cup of sifted bread flour. Beat together the egg, milk, and salt. Sift in the flour. Beat a few minutes. Pour into hot oiled irons, and bake from twenty to thirty minutes.

Kneaded or Beaten Breads

Air may be incorporated into dough breads by kneading or beating with a wooden mallet. In this way tender and crisp sticks, rolls, crackers, and beaten biscuit may be made, which have a delicious nutty flavor.

Brown Bread

Good brown bread may be made without soda by the following recipe. This brown bread, though made without sour milk and soda, closely resembles "Boston Brown Bread:"—

In the evening set the following sponge: One-half cake of compressed yeast, dissolved in one cup of lukewarm water; two and one-half cups of pastry flour. In the morning add the following ingredients to make a dough: Two and one-half tablespoonfuls of cooking-oil, one cup of water, two-thirds cup of molasses, one teaspoonful of salt, one pint of sifted corn-meal, one pint of sifted Graham flour, and one pint of sifted rye meal.

This amount of meal and flour should make a dough as stiff as can be stirred with a spoon. Let the dough rise, but do not allow it to double its bulk. Let it increase only about half. Stir it down well, put it into an oiled brown bread-tin, let it rise till it has increased about one third or one half its size, then put it in a steamer, and steam for three hours. Remove, and place in the oven a few minutes to dry off.

This may be made the day before it is wanted, and warmed up by steaming after it is sliced.

A. C. Saunders, photographer, Melrose, Mass.

MAKING PUFFS

Pouring the batter into the irons

Mothers, Help Them Get a Moral Standing

Mrs. M. C. Wilcox

I WONDER if it would be possible for me to tell our readers the varied emotions that arose within my breast when, two years ago, we decided to put our little nine-year-old boy in school for the first time. It was a fine, breezy morning in September, and the very atmosphere was full of school when I took his hand in mine, and we walked together toward the schoolhouse. His little heart was beating with joy and anticipation, although his baby face did wear a timid, bashful look; but my heart — well, there was a feeling of mother-pride mingled with sadness and regret. I must confess that my step was not so joyous.

We had always been close, confidential friends, and now we must be separated for several hours at a time. I must relinquish part of my claims upon him. He was starting out for the first time to battle with the world alone. He must learn how to meet its trials and temptations, and gain a standing for himself; and, true to true motherhood, no matter how I felt, I must do what was best for the child.

We placed him in a Christian school. I say Christian, because I feel that if the teacher is a Christian, and the children are taught to respect the Word of God, it may be called a Christian school. But even under such favorable conditions there may still be much cause for sadness.

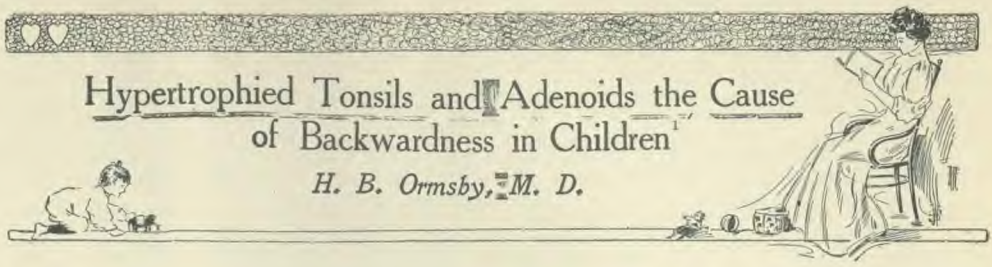
I determined, however, that so far as possible, we would be the same confidential friends as before, and I would keep in close touch with the school through our little son. We had many good visits together over school matters and school associations. It was difficult to discover sometimes which was having the greater influence, the teacher and the text-books, or the pupils and their conduct. All these things were working mightily upon him, I could see. Just at this point I want to say that this is a critical moment in the life of every schoolboy or girl. I felt it, and by God's help, kept perseveringly at work. Home and mother must not be eclipsed by teacher and companions. Our boy must get an experience, and put himself on record as one who would be found on the right side of every question so far as he knew. He must stand for the right and with the teacher, no matter who sneered. So we talked and read and prayed together morning after morning and night after night, with very satisfactory results.

He told me of his talks with other boys, of their low plane of thought and conversation, and I knew he was meeting temptation day after day. Much as I wanted to snatch him from these contaminating things, I would not have him simply "strong for lack of test."

No, the bulwark built against sin must be built *within*. He must face the foe and vanquish him, and not be hidden from him under the shelter of strong home influences. Indeed, this could not always be; for temptation can not be excluded from the heart in the best and purest of earthly homes.

I am still working and watching and praying, and I am not discouraged. How well our little son is meeting his mother's ideals will be better known in days to come, but some results are being reached, I know. It was gratifying when he said to me a few days ago: "Mama, the teacher excused me early, with the lower grades, because I had all my lessons. I started on my wheel to town with one of the boys, when suddenly I stopped him and said, 'I can't go, Harry.' 'Why?' he asked. 'Why, mama told me never to go to town after school without permission, and I promised I wouldn't.' So I came right home."

I am fully awake to the fact that our schools can never reach the high standard of excellence they should reach, without the full co-operation of parents and teachers. It is impossible for any teacher, however thoroughly qualified, to do her work mentally and morally, to make a child all over new in the few hours he is under her care, without the full support of her teaching on the part of the parents. She may teach the most beautiful truths to the child, but it will not lift him to a much higher plane than that of his home life. There is a universal cry coming up from all sides for better schools; but how is it possible to raise this school standard without first raising the home standard?



Hypertrophied Tonsils and Adenoids the Cause of Backwardness in Children[1]

H. B. Ormsby, M. D.

THERE is no other single condition, with the exception of heredity, that plays so great a part in retarding the normal growth and development, both mentally and physically, of the infant and young child, as do hypertrophy of the faucial tonsils and adenoids.

That adenoids often exist without enlarged tonsils is now universally recognized. If we should examine the fauces of the child that has a cold in its head, in the great majority of cases we would find that the child has adenoids. When we do find them, we ought not to temporize with sprays and washes, but should advise their removal with the curette. A general anesthetic is not usually necessary. A few strokes of the hand will quickly clear the posterior nares. The hemorrhage is not profuse, and the next day the snuffles and cold in the head are gone.

We must teach the parents that if there is any difficulty in breathing during the first few weeks or months of infant life, they must consult the family physician. We must also teach them that the normal child nurses well, sleeps well, increases steadily in weight, and is not fretful either in its sleeping or its waking hours; and we must impress upon the mind of the parents that when the child has these abnormal conditions, it is more susceptible to contagious disease, and that its vitality will become markedly impaired, thereby making it more liable to contract the contagious diseases, such as tuberculosis, typhoid fever, and intestinal disturbances.

Enlarged tonsils and adenoids are diseases of childhood and young adult life. In many instances the difficulty will subside as the child reaches maturity; but in waiting for that time to come, irreparable damage may be done, and many of the most important years of the child's life lost: for it is during these years that the foundation of the child's future health is begun.

The first, and probably one of the most troublesome, symptoms of these growths is the excessive secretion of mucus in the posterior nares [the back portion of the nasal passages]. This mucus forms hard crusts, which further obstruct the child's breathing, and also prevent the secretion from dropping into the lower throat, where it would do little harm. Instead, it is retained in the nose, degenerates into muco-pus, becomes highly infected by pathogenic organisms from the atmosphere, and a hotbed for the further development of disease germs. Finally it passes into the stomach or lungs, where the organisms multiply still more rapidly, until we have chronic gastritis, acute tuberculosis, or intestinal infection to deal with.

The child with this condition now develops an altered voice, a " nasal twang; " that is, the child is said to talk through its nose, as if it had a " cold in its head,"

[1] Extracts from a paper read before the Cleveland Academy of Medicine, June 5, 1908.

whereas, the voice becomes so because the child can not talk through its nose.

Parents will often bring forward the objection that the child will never be able to sing as well if the tonsils are cut. They do not understand that the abnormal condition will do that very thing unless corrected, and that we aim by operation to put the nose back into the same condition that nature intended it to be. No normal structures are removed, only those that are diseased, and so swollen that they act as foreign bodies, and prevent the child from singing and talking clearly.

This obstruction to free breathing soon produces a peculiar facial expression characteristic of the adenoids. The child develops drooping eyelids, broadening of the nose, dropping of the lower jaw and lip. In fact all the bones and muscles of the face fall into disuse, and produce a vacant, semi-idiotic expression, so all who come in contact with the child think that it is not possessed of all its wits.

A chronic cough of greater or less severity is a fairly constant symptom of enlarged tonsils and adenoids. City air is nearly always laden with dust particles, and these would be sifted out by the hairs in the nose, if the nasal passage were patulous [open]. When the dust is breathed through the mouth, it is deposited upon the epithelial lining of the bronchial tubes, later infecting the lungs.

One of the most important functions of the mucous membrane of the nose is to render the air humid as it passes to the lungs; but when the air is breathed in through the mouth, it extracts the natural moisture of the larynx, trachea, and bronchi, keeping the mucous membrane dry and irritated, and producing a dry, rasping cough with its consequent debilitating influence upon the general health, and resultant nervous symptoms. It may now be readily seen how easily a tuberculosis infection may take place. It is a well-established fact that many tuberculous patients state that the trouble was preceded by a chronic catarrhal inflammation of the throat and nose.

Very soon after operation, the child feels so much better that it seems as if nature were delighted to get rid of the offending material. The child acts as if a great burden had been lifted from his shoulders. The flesh becomes pink and firm, the eyes regain their luster, the face assumes a happy, intelligent expression, hearing becomes more acute, the child sleeps better, eats better, learns more rapidly, and grows faster. Surely there is no other act that we can do in our professional capacity that wins such praise and gratitude from the parents of these little ones as the removal of diseased adenoids and tonsils.

SEASIDE HOME

Opinions here quoted are not necessarily all approved by the publishers of LIFE AND HEALTH.

What Is a Drug Habit?

A DRUG habit is not a habit. A habit is the result of education or of accumulated experiences, by which repeated conscious efforts have at last become automatic and are performed subconsciously. By habit we come to have characteristic ways of speaking, walking, eating, adjusting our clothing, doing our accustomed tasks, and performing most of the various and multitudinous duties that make up the sum of each day's life. Habit makes no impress upon our being, other than to give us easier ways of doing things, or peculiarities, tricks, and mannerisms that comprise those outward appearances which we recognize as personality. Habit makes no change in the organism. The man who acquires a habit is the same man that he was before. Compel him to give up his habit, or acquire a new one, and we find no change in the man.

But in a drug habit we have a very different picture. The man who acquires a drug habit is a different man from what he was before. Compel him to forego indulgence in his habit, and he is another individual. A drug habit grips the being with a tighter clutch than does a true habit, and in a different way. It stamps an impression upon the organism impossible to be imprinted by the elements responsible for the formation of a true habit. . . .

In watching the effects of the administration of a medicinal dose of morphin, we observe two sets of symptoms: one, the specific effect of the drug itself, and the other, . . . a diminution of glandular secretion and of excretion, a crippling of digestion, and a paralysis of peristalsis. . . . As a consequence, the toxins constantly elaborated through normal cell action and through putrefactive and other changes in the contents of the intestinal tract are hindered in their escape from the body, and the organism is thus subjected not alone to the poisonous action of the morphin, but also to the deleterious effect of its own waste matters. . . . So we find, after the morphin action has ceased, the usual picture of auto-intoxication; namely, languor, headache, constipation, scanty, high-colored urine, nausea, deranged digestion, coated tongue, foul breath, neuralgic pains, uneasiness, mental depression, and a host of indefinite distresses commonly following auto-intoxication, whether produced by the paralyzing effects of morphin, or from gluttony, or from constipation, or from any other cause whatever, and to avoid which we are accustomed to follow the medicinal use of morphin with salines, enemas, and other eliminative agents.

But instead of eliminating these toxins from the system, . . . we might cover up their effects and relieve the patient by another dose of morphin. We would then lull the intellectual faculties to quietude, render each nerve cell again indifferent to its duty, and the pain-centers deaf to the calls of relief. The secretions would be still further diminished, and thus the quantity of toxins in the system would be still further increased.

The poisoning would be intensified, but the usual discomforts arising from toxemia would be put to rest under the comforting touch of the narcotic; and thus the condition might be indefinitely continued, . . . the morphin aggravating the poisoning, the toxemia demanding more morphin.

This is what the drug victim does for himself. He is self-poisoned to an extreme degree, and suffers all the myriad distresses ordinarily arising from the auto-toxemic state. He is also affected by hypersensitiveness to pain, or a morbid intolerance of any kind of distress, and a degree of mental incompetency probably always more or less present in pronounced auto-toxemias, which render his self-control and his judgment inadequate. . . . He knows that morphin is a certain, quick, and pleasant cure for his discomfort; and though he may know that the relief may be but temporary, he does just what most of us would probably do in the same circumstances, he takes the morphin.

This, I take it, is the morphin disease, a condition of auto-intoxication for the relief of whose discomforts morphin is taken. It is a condition of double poisoning, first and least by the drug, and secondly and mostly by the toxins of the body itself.— *Charles W. Carter, M. D., in the Journal of Inebriety.*

Tobacco and Cigarettes

SEVENTY-FIVE per cent of inebriates are users of tobacco, and in this abuse is to be found the proximate cause of so much alcoholic intemperance. The real danger to the smoker consists in the habit of inhalation, whereby the volatilized poisons of tobacco are brought into immediate contact with many hundred square feet of vascular air-sac walls in the lungs, and are thus promptly and fully absorbed, to be diffused into the blood, and carried on their fatal errand to the several organs of the body. Young subjects immediately learn to inhale. They are, moreover, markedly susceptible to the influence of these poisons, which include ammoniacal vapors that dry the throat and liquefy the blood; deadly carbonic oxid, that induces a drowsy, dizzy condition and disturbed heart action; prussic acid in combination; and nicotin equivalents,— all virulent nerve poisons, capable in their conjoint action of paralyzing the muscles of breathing, and so causing death. Schoolboys who become addicted to cigarette-smoking, exhibit in a brief time its demoralizing effects. Their sallow skins, sunken eyes, and discolored fingers betray the secret they would like to conceal. They are listless and forgetful, backward in study, and conspicuously lacking in power of attention and application. As the habit is pushed, they become excessively nervous, suffer from shortness of breath, fluttering heart, giddiness, tremor, insomnia, irritable throat, impaired digestion, malnutrition, and often from dimness of vision, which has been known to culminate in blindness. The whole system becomes tobacconized, and the organs and tissues of the body smell of tobacco.

The mental decline is appalling. Boys who begin the use of cigarettes at six or seven years of age, as many do, break down and become hysterically insane. Boys who contract the habit later in their youth, going to the usual extremes in the abuse of cigarette-smoking, are likely to become nervous bankrupts before they are twenty-one. But greatest of all the resulting evils is the lessening or complete loss of moral sensibility, with a conspicuous tendency to falsehood and theft. The moral propensities are evidently destroyed because of the

destruction of those elements of the brain-cells through which moral force is expressed. The victim degenerates into an unmanly, unprincipled, irresponsible doddy-poll, in splendid fettle for the penitentiary or madhouse.

Cigarette-smoking has become a stigma of degeneration, and for the best of reasons. The association with the habit of moral involution should insure its extinction among refined persons. It is the recognized brand of ethical instability.

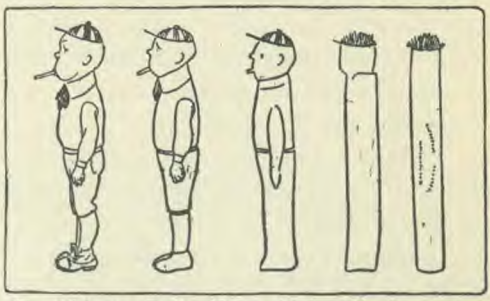
The circulation of tobacco smoke through the brain poisons the capacity for expressing earnestness and sincerity in efforts to reform. Fortunately, the damage done the cells is reparable by the discontinuance of the poisons and the judicious administration of nourishment, general and specific.—*John D. Quackenbos, M. D., in Journal of Inebriety.*

Effects of Tobacco Upon the Young

THE most conspicuous effect of nicotin upon the organic nervous system, is its disturbance of the heart's action. The tobacco heart is an irritable heart; frequently, not always, accompanied by an intermittent pulse, and not to be depended upon under calls for severe physical exertion. The tobacco heart of youth will always cause the rejection of applicants for the military or naval academy, and it marks the young soldier as of doubtful efficiency. The disturbance of the nerve-supply by tobacco not only degrades the tissues in general, but predisposes to neuralgia, indigestion, and functional disorders of vision, some, not all, of which may follow in its train with any particular individual.

There is a consensus among educators, who study their scholars, that the habitual use of tobacco dulls memory and dampens intellectual glow. On this account, the use of tobacco in the public schools of France was forbidden in 1861.

In our own higher places of learning, as a rule the first group, the honor men, in every class abstain from tobacco as completely as competing athletes. In the public schools, observing teachers find that when a promising pupil begins to



The Chicago *Daily News* thinks this is what may become of the little boy who smokes

decline in his work, it is almost certain that he has begun using cigarettes. It certainly should require neither personal experience nor complex argument to convince any one that an abnormal condition exists when a drug, whose use is acquired only by considerable effort, establishes a craving for the gratification of which there arises an exigeant demand. Entirely regardless of what may be its direct effects, the analogy to the call made by opium, hashish, cocain, or alcohol itself, is too close to be disregarded.

Our youth should not be allowed to become entangled in the coils of a habit, escape from which is practically a struggle as with disease.—*Alfred A. Woodhull, A. M., M. D., LL. D., in American Health.*

Another Cause of Railway Wrecks

As a railway traveler, I have crossed the continent from ocean to ocean, and from Assiniboin on the north to the Gulf and the Rio Grande on the south.

I have been in wrecks, and have helped to carry away the dead and care for the injured. I am "kid" enough to want to jump off at every stop, and see things, and I know pretty well what is going on in railroading. I am pleased to count among my warmest friends railway superintendents, managers, and train-dispatchers. I am not unfamiliar with the heroes of the cab and caboose, and I know many of the trials of the section boss and his men, and have a large sympathy for all.

My profession and work are those of a physician and pharmacist, and have been so for a third of a century. Travel is my enjoyment and diversion, my recreation. I can endure the mal-odor of the smoker, if need be, but I prefer the pure air of the platform. I am not prejudiced against the habitual smoker, and I recognize his right. From what I know of the infirmities of humanity and have observed of their deviations from norm, I am persuaded that if tobacco were eliminated by those who manage railways and trains, greater precision and safety would be attained, and the human factor of error and frailty would cease to a great extent, and fewer wrecks would result.

The crowded mile-a-minute schedules of competing roads and of these hurry-times, demand that every man's faculties be at normal at least, and not depressed or debased by any drug habit. When this is so, man will be found superior to any block signal or any automaton.—*D. Litchy, in The Outlook.*

Alcohol as a Demoralizer

ALCOHOL gradually demoralizes and decays the stomach, liver, kidneys, and lungs. A disease easily curable in a man who does not drink is fatal to a drinking man. The drunkard's face shows the ravages of his vice. According to his temperament, he bloats, yellows, or becomes livid; his hands shake; his breath exhales the poison that has steeped his organism; his health, like his intellect, decays; he loses all sense of manly dignity. Morally, he falls to a point where self-denial is impossible.

But he is piteous; he is helpless; his disease makes its own conditions. The pain that he inflicts, the terror, the anguish, are the result of his weakness; he is not responsible for his acts. An honest man may commit the worst of crimes when under the influence of drink.—*Le petit Journal (Paris).*

A Remedy for Sleepy Congregations

THERE is an old saying that bad air is the chief aid of Satan in making a congregation sleepy. If this is true, it behooves every church to give heed to ventilation, as well as to preaching and praying. A congregation half awake is not in a condition to receive or respond to the sermon, no matter how interesting or eloquent it may be. . . .

We are well aware that frequent changes of heated air may affect the coal bill, but when we measure a few dollars for fuel against diseased lungs and befogged brains caused by breathing the same heated air over and over again, there is no argument left for the trustee who wants to save coal at the expense of lungs and brains.

Another difficulty is that very few churches are built in the first place with much thought of adequate ventilation. Church architects and building committees are the chief sinners in this respect. They have assumed all along that because the church is used only once or twice a week, enough air would come in

through the doors and windows, but the figures show that this is a mistake. . . . A man does not have to stay in water long to get wet, and likewise a congregation of very good people can spoil a lot of good air in a few minutes; and if the air is not changed, it will spoil them in turn.— *The Expositor.*

Common Sense in Clothing

THERE is little doubt that many persons at the present day coddle themselves too much, and it is more or less certain that very many of the common ailments of children proceed from their being too warmly clad. It probably is true, too, that woolen garments are not nearly so hygienic as they were at one time supposed to be. They become sodden with perspiration, and, being very absorbent, take up all the effete matters given off by the skin. Common sense in clothing is as necessary as the exercise of that quality in any other question bearing on health.— *Editorial in Medical Record.*

Do We "Catch Cold" or "Catch Heat"?

THAT "colds" are due to catching heat is one of the curious paradoxes due to the modern investigations of disease, and by "colds" is meant all the acute inflammations of the respiratory tract, including pneumonia. Eskimos never have pneumonia at home, but they nearly all die of it when they come to New York. This disease is now the most fatal one in the heat of Panama. Peary states that none of his party suffered from coughs or cold in the arctic; but after their return, they have all had such diseases. "Tropical colds" are the persistent forms of bronchitis found in white men in the tropics, and so are hard to "throw off," or cure. It is well to inquire, now that the benefits of cold air are being recognized, whether our winter colds are not really due to the unwholesome heat of our houses, which are hotter in winter than in summer. If so, we do not "catch cold" when we leave the house, but "catch heat" when we enter it. Every new fact seems to point to the necessity of a reform in our method of overheating our houses.— *Editorial in American Medicine.*

Our School Hygiene

THE school desk, although now adjustable, is still made use of in a manner to cause malposture, and as a result, spinal curvature. In many of our schools the color of the walls and ceiling has thus far been given little attention. We are still following, in our approved kindergarten practise, the prescription of games or plays which require marching and singing at the same time, with the result of much dust inhalation. Dust and tuberculosis are still with us. We have thus far made little investigation into fatigue, its etiology, its symptoms, or the method of its alleviation. Home work increases as the courses of study acquire more content. Books by the pound are carried home at night. The eyesight of children becomes increasingly defective as they progress through the grades, and to increase the defects we give young children books made of highly glazed paper, printed with types frequently of improper size. Incipient cases of St. Vitus' dance are not detected. Stair climbing becomes a greater burden to our girls as our school buildings go farther into the air.

The relation between proper nutrition

and effective school work is recognized by a few but not by many. We are still ignorant as to the great number of children whose vigor is at a minimum because of poor dentition. We have yet failed to adapt our courses of study to the requirements of the period of adolescence. We are but making a beginning in the discussion of defective and abnormal children, and it has been a few years only that we have known what was meant by an "adenoid" face. Program making has been determined by the requirements of the courses of study rather than by the requirements of physiological age and fatigue. We have just begun to discover the corrective effect of play on fatigue, malposture, defective circulation, and similar evils.— *World's Work for July.*

THE SMOKE NUISANCE

According to the cartoonist of the Los Angeles *Times*, the chimney seems to be in fear of losing its job

The School Lunch-Box

THE ideal luncheon for a child to take to school is one that is composed of the simplest kind of fare, prepared in the daintiest manner possible. There should be two or three small sandwiches, made of thinly sliced, well-buttered bread, wrapped in waxed paper to keep them from drying. If possible, it is best that the sandwiches should consist of bread and butter alone, but if this combination does not prove satisfactory, one or two lettuce leaves, a thin layer of home-made jelly or jam, or a sprinkling of grated maple-sugar will give sufficient variety without the use of heavy meats. If hard-boiled eggs are found to be digestible, they may have a place in the lunch-box.

Fruit always makes a welcome addition to the contents of a lunch-box,— an apple, orange, banana, or pear, as the season may suggest. A few nut meats are also acceptable; for when properly masticated, they are not only nutritious and palatable, but are far more digestible than many of the foods that children frequently eat during the school luncheon-hour.

Pie and cake should be excluded, the only exception being in the case of simple cookies. If desired, crackers may be added, but above everything else, candy should never be made a part of the child's lunch. Even the simplest kinds of home-made candy are included in this interdiction; but if the mother desires to cater to the sweet tooth of her little ones, maple-sugar in small quantities should be utilized for this purpose, and due care should be exercised to ascertain that this sweet is pure in quality. — *Miles Bradford, in the September Circle.*

Death-Dealing Drinking-Cups

DURING the past six months I have investigated, by means of direct microscopic examination, by cultures, and by guinea-pig injections, the deposits present on various public drinking-vessels. One cup, which had been in use nine days in a school, was clear, thin glass. It was broken into a number of pieces, and properly stained for examination with a microscope magnifying one thousand diameters. The human cells scraped from the lips of the drinkers were so numerous on the upper third of the glass that the head of a pin could not be placed anywhere without touching several of these bits of skin. . . . By counting the cells present on fifty different areas on the glass, as seen under the microscope, it was estimated that the cup contained over twenty thousand human cells, or bits of dead skin. As many as one hundred fifty germs were clinging to a single cell, and few cells showed less than ten germs. Between the cells were thousands of germs left there by smears of saliva deposited by the drinkers. Not less than a hundred thousand bacteria were present on every square inch of the glass. The mortality statistics of the Census Bureau show that diphtheria, meningitis, bronchitis, tuberculosis, pneumonia, and *la grippe,* all of which are likely to be caused by the use of the common cup, are responsible for nearly four hundred thousand deaths annually in the United States.—*Prof. Alvin Davison, in the Technical World.*

THE PUBLIC DRINKING-CUP

On every railway train consumptives ride — and drink. Do you expose *your* baby to infection by using the public cups? Babies are more susceptible to infection than older people.

Conducted by T. E. Bowen, Takoma Park

A New Sanitarium in Japan

W. C. Dunscombe, M. D.

I AM glad to write you that a new sanitarium for the Japanese has just been opened in Kobe. It has long been felt that a sanitarium for the Japanese was more important than one for the foreigners. So about three years ago Dr. Kiku Noma, who was at that time working with Dr. S. A. Lockwood in the foreign sanitarium, decided to step out by faith and start the sanitarium work for the natives. With a few dollars, and a small salary guaranteed by the Mission Board for a few months, she hired a native house, and with a pail and some fomentation cloths started the work.

This little institution was called the Eisei-in (Hygienic Institute). At first the Japanese were very adverse to water treatments, as the Japanese physicians use drugs almost entirely; but gradually our methods won favor. The small building which was originally occupied soon proved inadequate, and the management rented all the buildings in the small block in which the work was first started.

Although they were connected and somewhat modified for sanitarium purposes, the buildings proved unsatisfactory, and the rooms not suitable for the better class of patients. Nevertheless the work was carried forward under these difficult conditions, the blessing of the Lord attended it, and the patronage continued to increase until they were compelled to rent another small building a block away. Many have been converted, and the Kobe church has been largely built up through the efforts of the workers in this institution.

For a long time the workers have hoped and prayed for a new institution in which they could prosecute their work under more favorable conditions. The Mission Board at home has not been able to help, because of lack of funds. However, through the providence of God the way has opened for a better and more suitable institution.

The daughter of a rich Japanese gentleman, Miss Fukuzawa, came to the Eisei-in for treatment. She had been brought up in a Roman Catholic convent and was a devout Catholic. She was cured, and also converted, at the institution, and has since proved a valuable worker, as she speaks English and French fluently, besides her native tongue. She and Miss Young are now conducting a school for Japanese children; and as they teach, they endeavor at the same time to inculcate true Bible principles.

The father of Miss Fukuzawa, being very grateful for the physical help his daughter had received, advanced money to build a new sanitarium, notwithstanding the fact that times are now very hard here, and money correspondingly scarce. The building, equipment, and land cost about twenty thousand dollars (gold).

The building is constructed in a modified Japanese style. Instead of low Japanese ceilings, the rooms have high ceilings and large windows, thus insuring good air and sunlight. As their building overlooks the sea, there is almost always a breeze, which is refreshing in the hot summer months. The old institution was on lower ground, and so shut in that it was very oppressive in the summer.

The new building was erected in the short space of three or four months, which is very quick work for Japanese. As soon as the building was finished, it was filled with patients, and I have no doubt that under the new and improved conditions, the institution will enjoy a far larger patronage than ever before.

THE "EISEI-IN"
New Japanese sanitarium for natives, nearing completion

India's Salvation Physically

H. C. Menkel, M. D.

THE true medical missionary, whose aim it is to carry the gospel of health to those perishing for lack of knowledge, finds a large and needy field in India to make known God's "saving health." We find a good foundation on which to begin our educational work in the dietetic habits of the people. By nature the Indian subsists upon a plain and simple diet, consisting largely of rice, dahl (lentils), and oil, with the addition of unleavened bread. This, we might say, forms the national diet, to which some add vegetables and meat. Thus the question of simplicity of diet, which is the cornerstone of dietetic reforms, is an easy one to handle. But the dietetic sins of India are very manifest, in both their nature and their effect.

Overeating

While the average meal of the people, consisting of rice, eight ounces; dahl, six ounces; oil, one ounce; wheat flour, two ounces, comes very near furnishing the right number of food units required, those in better circumstances increase this proportion considerably. To put on one dish all the rice and dahl eaten by many at one meal would require a large-sized meat platter piled up about one foot high. This national habit of overeating undoubtedly accounts for the tremendously dilated stomachs and the resulting train of evils so frequently met with in India.

Hasty Eating

Here one sees the typical bolting of food. The practise is to roll up a bolus of food in the hand, then, by a dextrous little fling, toss it into the mouth, give it three or four chews, and swallow it. This bolus is usually first dipped in oil. When you consider the fact that rice and dahl should be well masticated and insalivated, and that the digestion of these foods is rendered still more difficult by their being first dipped in, and saturated with, oil, so that the gastric juice can not do its appointed work, you will again understand why there is so much digestive trouble.

Oils in Excess

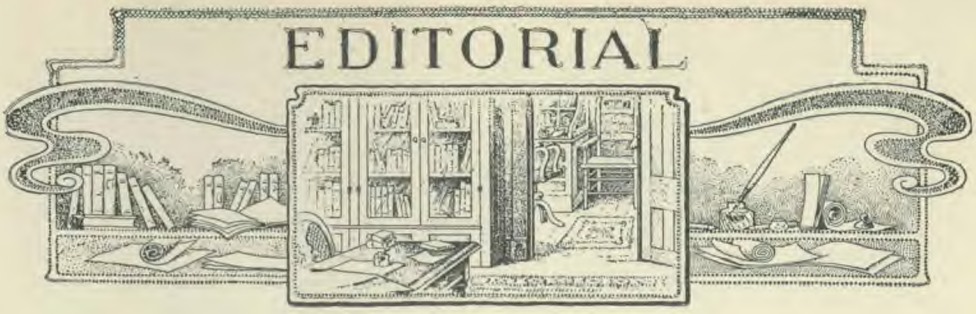
Another mistake is the excessive quantity of oil partaken of with other foods, causing slow digestion. Much of this oil is of a very poor quality, being made from dead animals, often diseased, that are picked up in the cities in large numbers.

These three errors in diet are universal, and the evil results consequent therefrom are equally prevalent everywhere. What the Indian people need is education in the simple principles of healthful living. Thorough mastication, and a proper proportioning of the food substances partaken of, will do much to save India physically.

The splendid specimens of almost perfectly developed bodies which one meets so frequently here, even among the poor coolie class, are a most powerful argument in favor of a diet free from flesh, as well as simplicity of diet. It also shows that the errors in diet which we have mentioned above have not had the same deleterious effect on their physical condition as would be produced by the same errors in Europe and America on a meat diet.

True medical missionary work, in which the principles of healthful living are clearly set before the people, has a promising field in India.

LONG PIER



Prohibition Advances

THE September issue of the liquor dealers' paper, *The Wholesalers' and Retailers' Review,* gives a detailed statement of the progress of prohibition in every State of the Union from 1904 to 1908, from which we make the following summary: —

From 1904 to 1908 there has been a gain of 5 prohibition States, 28 cities, 471 counties, 5,870 towns, 777 townships. These enormous gains for the cause of prohibition were all made between 1904 and 1908, and show that prohibition, instead of dying out, has made decided gains in *every State in the Union.* It is surprising to get the proof of such advancement from the paper mentioned above.

This liquor paper, which has often said that prohibition does not lessen the consumption of alcohol, and that prohibition is a failure, introduces the subject in the following words: "Forcible Prohibition Comparisons. Following is a comparison of the prohibition situation of 1904 with the situation of 1908. The trade should find much food for thought in the compilation."

Not only should the "trade" (the liquor trade) find much food for thought by a study of what the temperance workers have accomplished, but the temperance workers will rejoice to know that "the trade" are getting such sober heads to do their thinking with that they are beginning to appreciate the rate at which this good work is going, and that the American saloon will have to go.

This temperance move has not been a happen-so, but is the logical result of a number of definite causes, some of which are the following: —

Temperance in the Public Schools

During the last few years every State has enacted definite laws requiring temperance to be taught in the public schools, so that every child in America has some knowledge of the effects of alcohol.

Industrial Temperance

Great business corporations have enforced the prohibition of liquor among their employees, and have taught many thousands of both skilled and unskilled workers that the commercial value of brain or muscle is always lessened by the use of alcohol.

Temperance Educational Work

Temperance societies and temperance literature have increased the wave of public sentiment. The competitive prize-essay contest held in all parts of the United States by the W. C. T. U. organizations, at which more than half a million essays have been read, have enlisted the hearty co-operation of millions of the brightest of our young people.

The Result of Experience

And last, but by no means the least, of these powerful influences for the abolition of the saloon, has been the practical object-lesson in every community where

the saloon has been abolished. The decrease in crime, and the corresponding decrease in the expense of administrating local government, and the improvement of the moral tone of the community, offer an argument so eloquent as to be irresistible.

Brains are becoming more valuable; alcohol is a brain spoiler; and thus "the world do move." G. A. H.

Queer Logic from a Psychologist

PROFESSOR HUGO MÜNSTERBERG, in his article in the August *McClure's,* is guilty, it would seem, of at least two striking examples of inconsistency.

He admits that he is practically an abstainer from liquors of all kinds. He has drunk part of one bottle of beer in recent years. And yet he attempts to prove that sobriety will dry up the nation's emotionality — that the average man needs liquor in order to be at his best. Either Hugo is an extraordinary type of man, or else he is not at his best, and had better reform in his old age, by imbibing more freely of the drink of his fatherland, lest he "dry up emotionally."

Again: he says, "I live most comfortably in a pleasant temperance town, which will, I hope, vote no-license as long as freshmen stroll over the old Harvard yard."

And yet he discountenances a general prohibitory law. Why should those particular Harvard boys under his eyes not have the advantage of all the good that may accrue from indulgence in liquor? And why will a law that has proved beneficial and necessary in the vicinity of Harvard in protecting the lives and the integrity of the students, prove disastrous when applied to the populace in general? Would he have us believe that, for the educated, liquor should be prohibited; while for "the German, the Frenchman, the Italian, who enjoys his glass of light wine, and then wanders, joyful and elated, to the masterpieces of the opera," it should be encouraged? Why not apply his slogan, "Better America inspired than America sober," right at home, and say, Better Harvard inspired than Harvard sober? He knows better; but being a German, he has inherited an instinctive antipathy to "sumptuary laws," which even his education and his "Americanization" have not sufficed to eradicate.

He has, however, been shrewd enough to appreciate the immense advantage of an abstemious life to himself, and of a local prohibitory law to Harvard and its students.

Return to the Land

ONE tendency of modern civilization very disconcerting to thoughtful observers who foresee some of the certain results of this growing evil, is the steady flux of population from the country and the small towns to the large cities.

One is amazed at the eagerness with which many exchange the homely and simple freedom of country life for the noise and dust and other inconveniences of city life; but there are important reasons why people prefer city to country life. In some ways, city life is ideal. Here are to be found ample facilities for broader culture; here, the ambitious find greater opportunities for expansion; here, there is every advantage for giving expression to the promptings of the social instincts; here, there is the greatest opportunity to perfect paternal legislation for the good of all.

Health laws, food-inspection laws, building laws, factory laws, laws for the

abatement of nuisances and for the protection of life and property have their highest development in the city. Sewage disposal, transportation, rapid intercommunication, and facilities for the prompt despatch of business are here at their best.

But the great centers of population are marked by fantastic contrasts. Touching elbows with philanthropists and societies for the perfection of city life is the "machine"—a combination of saloon and politics—for the avowed purpose of overthrowing decency and good government.

Almost under the windows of those who have to invent new means to dispose, in riotous pleasure, of their fast-increasing and often ill-gotten wealth, are the reeking dens where a crust and a few rags must satisfy, and where poverty breeds crime and disease.

The city tends to emphasize class distinctions, and to destroy the idea of the brotherhood of man, for which this nation was founded, and which has been one of the principal bulwarks of its greatness.

Nowhere else is so much being done for the eradication of tuberculosis; but the root of the evil is in the congestion; and so long as these overcrowded, poorly lighted, badly ventilated, filthy tenement districts exist, they will continue to be hotbeds for the disease which in this country annually carries off enough people to populate one of our large cities.

Municipal governments and philanthropic societies are resolutely facing the situation, and are earnestly endeavoring to apply adequate remedies. Much is being done to improve the housing conditions of our large cities. In New York in the last six years, old tenements have been pulled down, and new, well-lighted, well-ventilated, sanitary tenement buildings have been erected, sufficient to hold a million people. This is one long step toward a solution of the problem.

But more needs to be done. This is only the beginning. With the best we can do to improve housing conditions in large cities, such a life is in many ways inferior to life on the land; and far-seeing men, perceiving this, are engaged in the problem of checking the cityward human tide which threatens disaster to modern civilization.

"Back to the land" is the watchword of a counter-movement, which has for its object the establishment of every city family on a "homecroft"—a modest home on land sufficient to provide part, at least, of its sustenance. This movement falls naturally under two general lines: (1) the providing of suitable homes for city-dwellers; (2) the creation among this class of a land-hunger.

The first problem is being solved (*a*) by purchasing old farms or estates in the vicinity of cities, and subdividing the same into small truck- or fruit-farms; (*b*) by irrigating the great arid West, and subdividing the irrigated land into small farms for intensive cultivation; and (*c*) by reclaiming the swamp lands of our rivers and coasts, exceeding large States in area, and thus utilizing millions of now unused acres in the establishment of homes for many thousands who at present eke out an unsatisfactory and unfruitful existence in congested cities.

The second and perhaps the most difficult problem is to find families willing to adopt the "natural" life. It is no easy matter to attract those trained to city ways into the country; many would prefer the squalor of city existence to the homely independence of the farm; and so far as the vast majority of the

older people are concerned, the landward movement may be well-nigh hopeless; so in various ways work is being done to interest children in an open-air life.

Some of the means which are helping to educate children to love the open air are: —

1. Municipal playgrounds. These have their influence countryward through the taste they give the young for the beauties of nature,— sunshine, and fresh air, and flowers,— so that the children gradually come to look forward to a more congenial home life than is afforded by the dismal surroundings of the tenement.

2. School farms. No amount of study will equal as an educating force the actual handling of the things of nature. The child who learns to plant, to dig, to raise crops of tomatoes or chrysanthemums, and to enjoy the fruit of his labor on the table, or to realize an income from the sale of it, is thereby developing a love for the land, which will one day probably lead away "from the madding crowd."

3. The Agassiz Association. This association leads hundreds of young persons, perhaps it would be better to say thousands, to make a close and intimate study of nature, not as written in books, but in the rocks and flowers and butterflies. This study naturally forms a strong bond of sympathy with the country, which tends to prevent many young country people from entering the current that is now drawing nearly everything into the cities, and to inculcate in many young city-dwellers a love for the country.

These three educational movements were not intended primarily as part of the "back-to-the-land" movement, but incidentally they are important factors in that movement.

There is yet another project on foot, inaugurated by President Roosevelt, when he appointed, recently, a commission to make a report to him of ways in which the advantages of city life without its attendant evils may be given to the dwellers in the country.

Already the rural delivery, the telephone, the interurban trolley, the motor-car, and the large central graded school, with transportation for the pupils, are bringing the countryman many of the advantages of city life. By careful study of the situation, other advantages may be added to country life, until the tide is turned backward from the cities.

Outside Quacks and Inside Quacks

Dr. George M. Gould, an eminent eye specialist of Philadelphia, who is perhaps best known as a voluminous medical author and editor, in a contribution to the *St. Louis Medical Review,* gives an epitome of a case of epilepsy in which the patient was not only "seized upon" mercilessly by convulsive attacks, but also by members of the profession, medical and surgical. This doctor is not liked by everybody. He has a "bad habit" of "speaking out in meeting," and saying things which might damage the good name of some of his professional colleagues in high places, provided he mentioned names. In the present instance, he very considerately withholds information as to the identity of the principal actors in the drama.

The patient alluded to is a young man who gives a history of neuralgia, headaches, and stomach troubles made worse by close work, finally ending in severe epileptiform seizures, which were re-

peated at frequent intervals for several months. Finally he fell into the hands of "a neurologist, the famous professor of —— Medical College." Learning that the seizures began with contractions of the fingers of the right hand, this famous specialist immediately reasoned that the cause was organic change in the left half of the brain, and had a portion of the skull removed. The patient was better while in the hospital, but as soon as he left the hospital, and used his eyes for close work, his trouble returned as severely as ever. A second operation was advised, and when that proved a failure, he was told, "We have done our duty, and all we can, and it is up to you to get well." Several times the patient tried to tell the learned professors when and how the seizures came on; of his belief that the music playing, his eyes, etc., were at the root of his troubles; but these gentlemen did not wish such unscientific data. As the patient himself said, they were "too important and overconfident in their own opinions."

Proper spectacles were ordered by the eye specialist, and though it has been a year and a half since, there has been but one convulsion.

For the bungling of the other doctors the patient paid more than seven hundred dollars, for which he has the receipts; and he says that he paid, in all, a thousand dollars. He was a poor mechanic, ill able to afford that much outlay, even if the result were a cure. But to invest one thousand dollars on the *guess* of a supposed scientific physician, only to find that guess entirely wrong! — well, just put yourself in his place. It might be a good thing for some of the doctors who work on their reputation if they had a little of that feeling which recognizes, in every human whom they treat, a brother or sister with feelings like their own.

Fortunate it is for the profession that these men — with "scientific knowledge," ability to write and discuss papers, and reputation near the one hundred mark, and actual knowledge of the patient, and of the principle of the golden rule down near the zero mark — are not the kind that form the rank and file of the medical fraternity. There are hundreds doing faithful work,— going miles to treat patients, where they can hope for absolutely no remuneration, who are so touched with the cry of the poor that their acts of kindness are entirely spontaneous and forgotten by themselves,— men who have achieved no reputation, perhaps, and who have hardly earned a decent living. Yet it is such men as these that save the profession from the stigma cast upon it by the men who exploit medicine for the increase of their own personal prestige and wealth.

Some one might write a very instructive and entertaining article on the subject "Licensed Quackery and Unlicensed Quackery: Which is Worse?" The material is plentiful.

A quack is one who pretends to have skill or knowledge which he does not possess. He may hold the diploma of a reputable school, may have the license of one or more State boards, may be an honored (if not honorable) member of one or more influential medical societies, may be a voluminous writer and all that, and — still be a quack.

It is not implied that every one who has made a financial success in the practise of medicine has done so by drowning out his impulse to manifest human sympathy for suffering helpless ones: some had no such impulses in the first place; others have continued doing a large amount of work for the needy, even during the most lucrative practise. Neither is it implied that every doctor who has failed financially is a model of

disinterested benevolence. Some have failed because of their utter and manifest lack of human sympathy; others, because of laziness.

But perhaps, as a whole, one will find the noblest examples of the medical profession — so far as real sympathy for suffering humanity is concerned — in the humbler walks of the profession, among those who are doing, rather than talking and writing.

"ICONOCLAST: One who destroys idols; one who attacks cherished beliefs." The Editor pleads guilty to both counts. Of course, one does not destroy his own idols (until they have ceased to be his) — only those of the other fellow; but that is another story. There are a number of mental idols, cherished beliefs, pertaining to hygiene, among which are the following: —

1. White flour is deprived of all its nutriment.

2. The digestive juices do not act on raw starch.

3. Cane-sugar is a great sinner above all sugars.

4. The more starch is "dextrinized," the more digestible it is.

5. The more one's food is predigested, the better it is for him.

There is a grain of truth in all these statements; but as taught and received, they are not only not proved, but have been actually disproved. Much might be written, and has been written, on this theme; but a few sentences may serve to set some to thinking.

1. White flour would not rise if it were not rich in gluten, which is the flesh-forming part of the wheat. It is true that much of the mineral matter is lost in the hull; but it is a question not yet decided by the physiologists, whether the body can appropriate much of this material in the indigestible hulls. We do not, as a rule, believe it necessary to eat the skins and seeds of grapes in order to get the nourishment.

2. There are many persons who live entirely on uncooked foods, including a good proportion of uncooked grains; and whatever starch they digest is raw starch. As the health of these persons compares favorably with that of those who use cooked foods, there is nothing to indicate that they do not handle the raw starch perfectly. It is true that the digestion of raw starch, especially in the form of mushes hastily warmed before eating, is extremely slow under existing conditions, and is accompanied with much fermentation; but it has been shown that raw wheat, thoroughly masticated, is better digested than mush hastily eaten. It is the pastiness and the hasty eating, resulting in a sticky, slumpy mass in the stomach, unmixed with saliva, and impenetrable by the digestive juices, rather than raw starch, that causes the stomach to become discouraged and to attempt to throw up its job, as well as the food.

3. There is some difference in sugars as to fermentability, digestibility, and irritant properties (but all the advantages are not with any one form of sugar); and there are some who, by idiosyncrasy, are unable to use one or more forms of sugar; but usually the difficulty with sugar is in the quantity used, rather than in the kind. Any sugar taken in excess of the needs of the body, or faster than the body can appropriate it, is treated as so much waste matter, and gotten rid of by the kidneys. And this process may not be to the advantage of the kidneys.

4. Starch too much "dextrinized" is less soluble and less digestible than some undextrinized foods, such as rice, thor-

oughly masticated. One principal advantage of dextrinization is that it encourages thorough mastication. Mush is apt to be bolted without mastication. The writer knows one person who *drinks* his mush swimming in cream.

5. Predigested food for a normal stomach is analogous to a sling for a well arm. There is a proper place for slings, in the treatment of injured arms, but the well arm kept in a sling would soon weaken. Slings and crutches should be disposed of as soon as possible.

Importance of Vegetarianism

IN *Science* for October, 1907, Irving Fisher, Professor of Political Economy, Yale University, discusses the work of Mlle. Dr. J. Ioteyko, the head of the laboratory of the University of Brussels, who has published a twenty-seven-page monograph describing her studies of the vegetarians of Brussels. Dr. Ioteyko found that the vegetarians appeared younger than their actual age, and that the ladies especially were distinguished by a clear, fresh complexion. Comparisons were made between these vegetarians and meat-eaters, showing that while the former did not excel in strength, they had greater endurance than the meat-eaters by more than fifty per cent.

Professor Fisher comments: "These investigations with those of Combe of Lausanne, Metchnikoff, and Tissier of Paris, as well as Herter and others in the United States, seem gradually to be demonstrating that the fancied strength from meat is like the fancied strength from alcohol, a delusion. The 'beef and ale' of England are productive largely of weakness, not strength."

It will be remembered that Professor Fisher himself carried out a line of similar experiments, in which he demonstrated the greater endurance of those on a low-proteid diet.

A Willing Mind

THOMPSON, in "Brain and Personality," well says: "It is a responsibility for any being in the universe to have what man has — the will. That majestic endowment constitutes the high privilege granted to each man, apparently, to test how much the man will make of himself. It is clothed with powers which will enable him to obtain the greatest of all possessions,— self-possession. Self-possession implies the capacity for self-restraint, self-compulsion, and self-direction. And he who has these, if he live long enough, can have any other possession he wants."

This statement is emphatically true, even as pertaining to the things that have to do with this present life. Much more true is it concerning the one who, in confidence of a life to come, has consecrated all his powers to work for the eternal good. Paul said, "I can do all things through Christ which strengtheneth me." The *can* is there for every one whose *will* is set on the right side.

"If there be first a *willing* mind," does not mean — as some might interpret — a mind that consents to be led as a docile horse (though it may include that thought), but a mind that actively *wills*. A willing mind is an active mind, a source of energy, which might be turned in opposition to divine energy, but is definitely turned in line with the divine will for the accomplishment of divine ends.

DOWN at the Congressional Library, on the shelf devoted to scientific magazines, I saw a new arrival, *The Guide to Nature*, and like the small boy, I wanted it "right bad." I wrote to the editor, Mr. Bigelow (whom, perhaps, many of my younger and older readers know through *St. Nicholas*), proposing an exchange. But Friend Bigelow already had more exchanges on his table than he knew what to do with, so he suggested what he doubtless thought would be a poser for me.

If I would give a good write-up of the "AA," he would send me the coveted magazine, *The Guide to Nature*. I examined carefully the matter describing the "AA" (Agassiz Association), and I knew I was one ahead of Friend Bigelow; for I would have been glad to give a description of this association for the good it would do the readers of LIFE AND HEALTH; and here, I have *The Guide to Nature* thrown in!

The Agassiz Association is an organization with a large membership scattered all over the United States, for the study and love of God's works. The name of the association is well chosen; for Agassiz was a teacher not of books. Every rock, every leaf, every beetle, was to him a message from God, from which he brought inspiring truths for his hearers, young or old. He was an interpreter of nature, having the rare ability of mordanting truth on expanding brains. His lessons palled not, but whetted the mental appetite for more. His hearers testify that his talks always seemed to end too soon.

This association, which has been named after the great naturalist, attempts to study nature first hand. It is the aim of those at the head of the work to make it the most extensive and effective organization for popularizing a love of nature among young and old, and for reclaiming and holding mankind in spiritual and harmonious relation to the Creator through a reverent study of his works. It is organized as a great correspondence school, with the object of encouraging and directing its thousands of correspondents into a personal and sympathetic touch with nature. In every way possible, it advocates the healthful, outdoor world as a sanatorium for the prevention and cure of disease.

And right here is what in the association first appealed to the writer. As a sympathetic student of nature, he is wofully deficient, knowing the names of not half the birds he sees — and flowers and trees! Well, what's in a name? He loves them all, and there is nothing on this old earth that affords him more pleasure than to be among them, where the hand of man has not marred. And if this association can help him to use eyes and ears so that the objects he loves so well may tell him more of their secrets, more of their divine Maker, he will appreciate the association still more; but it was the open-air life,— the only life ever intended for man,— which this association encourages, that first strongly appealed to him.

But what about *The Guide to Nature?* It is the organ of the "AA," is beautifully illustrated, and contains matter which will delight every lover of nature, and will make those who have not been in touch with nature wish they were.

With the editor of *The Guide to Nature*, and the scientific gentlemen who have volunteered to answer the questions of members of the association, it is a work of love, for which they receive no remuneration whatever.

For any information regarding the association or in regard to *The Guide to Nature*, address Edward F. Bigelow, Stamford, Conn.

G. H. H.

News Notes

Consumption Increasing in Newfoundland.— The authorities on the island are becoming alarmed at the marked increase in tuberculosis.

Quarantine Against Russia.— Because of the epidemic of cholera in Russia, active quarantine measures have been taken against the infected country by England, France, Germany, and Austria.

Cocain Dealers Raided.— The health department inspectors of New York City have landed eight young men and women in The Tombs for dealing illegally in cocain. About one thousand dollars' worth of the drug was found in their apartments.

Pure Food Crusade in the District.— As a result of the first effort to "clean up" the city of Washington, fines amounting to nearly one thousand dollars were imposed on lunch-room proprietors and meat dealers for criminal nastiness and falsification.

A Return to the Land.—President Roosevelt has appointed a commission of which Professor Bailey of Cornell was made chairman, with instructions to report to the President, before the end of the year, what may be done to improve the condition of country life.

Deterioration of the British Army.— British recruits can not do the work which the recruits of twenty years ago performed. "They are, from want of food and from the cigarette habit, such miserable specimens of humanity that it takes two years to make men of them."

Russia's Attitude Toward Sanitary Problems.— The secretary of the Russian Medical Association issued a pamphlet, "What One Must Know for the Successful Prevention of Contagious Diseases." The entire edition was confiscated, and the secretary was arrested. The Russian who dares manifest interest in his fellow men is in danger.

LIFE AND HEALTH

AIM: To assist in the physical, mental, and moral uplift of humanity through the individual and the home.

GEO. H. HEALD, M. D. - - - Editor
G. A. HARE, M. S., M. D. } Associate Editors
D. H. KRESS, M. D. }

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All matter pertaining to subscriptions, renewals, advertisements, or other business should be addressed to Life and Health, Takoma Park, D. C.
Manuscript and correspondence relative thereto should be addressed to the editor.
Questions or correspondence relative to any of the departments should be sent to the head of that department.
If questions are sent to this Office in connection with other matter, they should be written on a separate sheet addressed to the editor; otherwise they may be overlooked. The editor does not look over the business correspondence.
All questions must be accompanied by return postage. If the reply is not worth that much to the inquirer, it is not of sufficient value to take up our time in replying. We are glad to answer all reasonable questions of subscribers, but we do not wish to pay two cents each time for the privilege of doing so.

The December Number

OWING to an unfortunate circumstance it was necessary to go to press ahead of time with the December LIFE AND HEALTH, before certain illustrations that were to be used in that number could be secured.

DR. SPERRY, the writer of the leading articles in the November and December numbers of LIFE AND HEALTH, will need no introduction to many of our readers. He is the author of several excellent books on health and allied subjects, and conducts regularly a series of very popular lectures under the auspices of the Y. M. C. A. and other organizations.

For 1909

ENLARGEMENT of the magazine to forty-eight pages one year ago, and other improvements, have met with general approval on the part of LIFE AND HEALTH readers, and the average circulation of the journal has more than doubled during the year.

Beginning with the January number, LIFE AND HEALTH will be further enlarged to sixty-four pages, will contain better matter than ever before, and will be better and more fully illustrated.

The price for single copies will remain ten cents. The yearly subscription will be raised to one dollar. Subscriptions, however, will be accepted for one, two, or more years, at the old price, seventy-five cents a year, provided they are received previous to Dec. 31, 1908.

Railway Fatalities.— The first annual report of the Public Service Commission shows that for every million passengers carried on steam railways, twenty-four are killed and two hundred forty-six wounded. On electric roads the proportion is six killed and one hundred five wounded.

Upheld Tuberculin Test.— The Meadville (Pa.) Board of Health requires the tuberculin test as a guaranty of the purity of milk. Dairymen who attempted in the courts to overthrow this ruling were defeated, as the court sustained the health board, and placed the costs of the case on the dairymen.

LIFE AND HEALTH

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Changes a Year Ago

THE changes instituted one year ago — enlargement from thirty-two to forty-eight pages, improvement in matter and illustrations, and increase in price to ten cents a copy and seventy-five cents a year — proved to be a move in the right direction; for the average circulation this year has been more than double that of any previous year.

Further Improvement

In order that the journal may more fully meet the wants of its readers, it has been decided to secure more and better articles by special contributors, and to devote more thought and expense to illustrations. Specially drawn cover designs will make the outside attractive and inviting.

In order to make room for more reading-matter, as well as for more and larger illustrations, the size of the magazine will be increased to 64 pages.

Plans and Possibilities

Those features which have supplied most fully the needs of LIFE AND HEALTH readers will be strengthened, and new features will be added whenever they give promise of increasing the usefulness of the magazine.

Instruction Will Be Practical

No effort will be spared to make the magazine one of *practical* helpfulness to all.

While hygienic instruction is accompanied by the *why* and the *wherefore*, special emphasis will also be placed on the *how* and the *when*.

It Will Answer Your Questions

To every thinking person come problems relating to the prevention of disease, the conservation of health and vitality, the development of efficiency, the answer to which may mean much to him in comfort, in health, in efficiency, in longevity. Such questions we expect to answer in a plain, straightforward manner.

The Best Always

No definite arrangement for the details of the yearly schedule are made, in order that, month by month, that which is most timely, most useful, most in accordance with the last word of science, may be given.

Some General Features

Timely Suggestions Regarding the Avoidance of Disturbances Incident to the Season.

Personal Hygiene — Simple and Progressive Instruction.

What to Do in Case of Sickness.

The Choice and Preparation of Foods.

The Sanitation of Dwellings.

The Care of Infants and Children.

Terms

The price for the single copy will remain ten cents, but the subscription price will be raised, Jan. 1, 1909, to one dollar a year. *Subscriptions received before January 1,* whether for one, two, or more years, and whether for new or old subscriptions, *will be accepted at the old price,* seventy-five cents a year.

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