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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 Next Issue

Do not fail to obtain a copy of the next number of LIFE AND HEALTH. It will contain many valuable features. Here are a few of them:—

Prevention of Autointoxication

Dr. J. R. Leadsworth, who in this issue discusses some of the causes of autointoxication, will next month give some explicit directions for the prevention of this trouble.

Diet and Drunkenness

At the recent congress of temperance physicians (the Association for the Study of Alcohol and Other Drug Narcotics), Dr. D. H. Kress read a paper, "The Relation of Dietary Errors to Intebriety and Crime." The wide-spread interest in this topic is manifested by the number of requests the doctor has re-

ceived for copies of his paper. The substance of it will be published in the next issue.

Healthful Beverages

An article on "Drinks" will complete the series on healthful cooking, by Mr. Geo. E. Cornforth.

What Cooking-Fat Shall We Use?

The question of a healthful cooking-fat or oil is one that, to many persons, still awaits solution. The article by Dr. Godsmark, "Cottonseed Oil as a Food Fat," will be welcomed by such.

Hygiene of Clothing

Mrs. Eva K. Cogshall will begin a series of able and helpful articles on "Dress in Its Relation to Health."

A Mental Uplift From Gardening

Mr. Eastman will furnish another of his racy articles, "Garden Reveries." This paper is, if anything, better than the preceding articles of the series.

Home Treatment

Dr. George will finish the fifth of his practical series, "Treatment for Common Disorders."

The Drink Evil

In addition, there are a number of excellent articles on various phases of the alcohol problem, awaiting publication, by such men as Dr. Crothers, Dr. H. J. Achard, Dr. Anton Weichselbaum, and others.

Prolapsed Organs Raised by Breathing Exercises

A very important article to appear in the next issue (if room permits) is one by Dr. Shattinger, of St. Louis, on "Respiratory Exercises in the Treatment of Abdominal Disorders."

✻

THE large edition of the May number of LIFE AND HEALTH was exhausted by the sixth of May, and for the rest of the month we will be compelled to fill orders with the June number, which we are issuing a little earlier than usual.



LEAD the people to study the manifestation of God's love and wisdom in the works of nature. Lead them to study that marvelous organism, the human system, and the laws by which it is governed. Those who perceive the evidences of God's love, who understand something of the wisdom and beneficence of His laws, and the results of obedience, will come to regard their duties and obligations from an altogether different point of view. Instead of looking upon an observance of the laws of health as a matter of sacrifice or self-denial, they will regard it, as it really is, as an inestimable blessing.

—“Ministry of Healing.”



A HIGHWAY AND A BYWAY

LIFE *and* HEALTH

"Something better is the law of all true living"

Vol. XXIV Takoma Park Station, Washington, D. C., June, 1909

No. 6

Garden Reveries—No. 2

R. O. Eastman

A NOTED atheist, it is said, was once asked, "If you, instead of God, had made the world, could you have made any improvements upon it?" to which he is reported to have replied immediately, "Yes, I would have made health catching, instead of disease."

It was a good answer; but like everything else in godless philosophy, it has no bottom; for that is *exactly what God did*.

Any doctor will tell you that the proper expression to use in speaking of disease is "contract." You "contract" disease. You "catch" health—usually by running after it.

The first meaning of the word "contract" (verb, transitive), in my dictionary, is "to reduce to a less compass," and it is just as good a definition as I want of the word as used when speaking of disease. For it is the *contraction* in life that brings on disease. It is the contracted, withered, shrunken, unnatural life that men and women everywhere are living to-day, that lends itself to the ready inroads of sickness. And the *expansive* life is the only remedy.

What has this to do with gardening?—Everything. When I set down that

little anecdote about the atheist, I was thinking particularly about the way gardening is "catching." Watch it in your own locality next year. It sweeps through just like an epidemic, as in truth it is; for an epidemic is simply something that is affecting many in the same community at the same time. Somebody plows or spades up his back yard. The next-door neighbor looks over the back fence and watches the operations. Pretty soon there is a demonstration in that yard also. Soon the smoke of a new bonfire curls up over the houses. Some one else sniffs the smoke from this bonfire, throws down his paper, reaches for his hat, resurrects his rake, and joins in the activities. Before long there are a dozen gardens in the neighborhood well under way. Why?—Because gardening is catching.

I began my outside gardening this year quite early in April. Simultaneously I began getting up early in the morning. It is easy enough to garden, after you get started; but it is hard to get up early in the morning. Somehow, it was not so hard this year as I expected. I established 5:30 as rising hour about the twelfth of April, and it has seemed perfectly natural ever since. That gives me two hours and a half in the garden

before breakfast. At this time of year there is plenty to do. Somebody has written a book entitled "Five Acres Enough." I should say so! I have one acre, and it is more than enough by a large fraction. Still I would not be satisfied with less, nor would I want to forego the comforts which a place of this kind provides in return for the comparatively small labor it exacts.

For one who is able to give only a part of his time to gardening, a place such as this is not far from ideal, according to my way of looking at it. It is such a place almost as any one may have, no matter where he lives. I moved onto it just about one year ago, and let me tell you, by way of illustration, what I found.

First, less than a quarter of a mile from the city limits and on a well-traveled road, there were just about an acre of ground; a small, comfortable cottage, and an expansive lawn; fruit in abundance, young but thriving, eleven varieties, all told; about half an acre under the plow. Included in the fruit was a large strawberry bed,—perhaps one hundred rows of choice varieties,—which bore their first fruit last season. They yielded us twelve hundred quarts of the most luscious berries you ever saw.

Perhaps when you are reading this, I shall be again picking my first ripe berries from this patch. I have just paused to look over the entries in my last year's diary, and I find that we picked our first berries on June 4. How well do I recall those bright June mornings kneeling in the berry patch and filling box after box with the red-cheeked beauties glistening with dew. There is poetry in a bed of ripe strawberries—plenty of it. But there is something more substantial and satisfying than poetry in the same berries when sandwiched in between two ample slabs of

crisp shortcake, and served with sugar and cream. We had them for breakfast, dinner, and supper one day last summer.

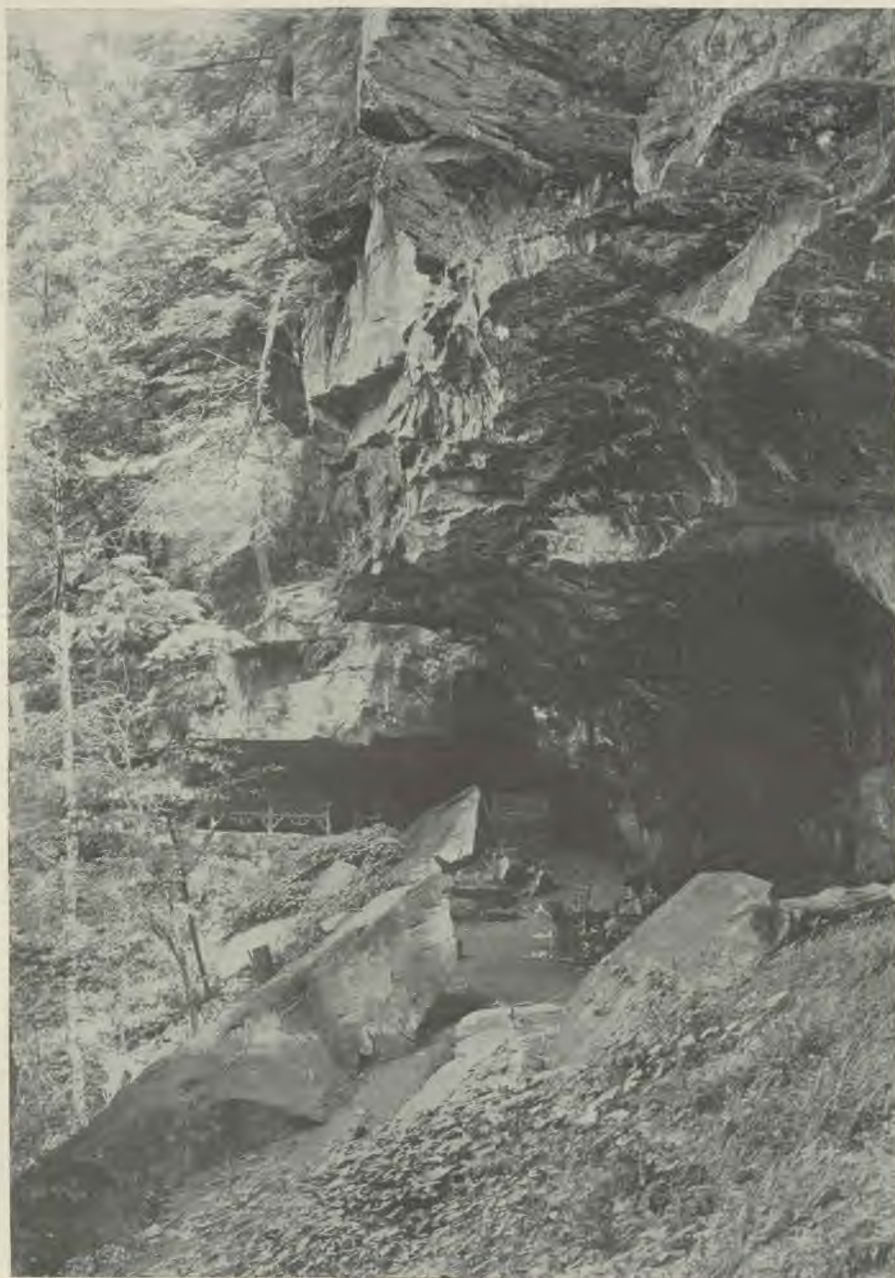
From the money standpoint that strawberry bed is worth just about one hundred dollars a year to its owner as long as it is kept up. This coming summer the chances are that the man with a strawberry farm will go a long way toward lifting the mortgage—if there is one. The great drought of last year forced many strawberry growers out of business. Only the well-tended beds thrived. The price of plants went up, and the plantings this year will be comparatively few. Wise people, therefore, will plant strawberries, if only for their own use.

There was a little sermonette on gardening in the last issue of this magazine, which you may have read. No matter. Its object was to incite activity on the part of other would-be gardeners. There is still time to get started. Resorting to my diary again, I find that last year,—when I was late myself, owing to moving,—I put in my cabbages, some of my tomatoes, some potatoes, and not a few beans, after the time when this magazine will reach you. For the most part, they did well, in spite of the exceedingly dry weather. You can also sow, to good advantage, radishes, lettuce, peas, corn, or almost anything you please for a late crop, any time in June. Year before last I raised three excellent crops of peas on the same ground.

For those whose gardens are under way there is only one brand of advice that is good. *Keep it clean, and keep it cultivated.* It doesn't require much experience to be able to give and to appreciate this advice.

When I was a very diminutive youngster, I had an ambition to be a doctor

(Continued on page 373)



A MODERN "CAVE-DWELLING"—COOL COMFORT



Is Germ-Free Milk Always Safe for Use?

*D. H. Kress, M. D., Superintendent Washington Sanitarium,
Takoma Park, D. C.*

THOUGH the danger of infection from bacteria in milk is now generally understood, the subject of milk poisoning has received very little attention. It is generally held that milk may be rendered perfectly safe and wholesome merely by destroying the bacteria. But this is not the case. The real harm resulting from bacteria is due to the *poisons* they produce. It is the poison produced by the tubercle bacilli that causes the rise in temperature, the emaciation, and death. The poison formed by the germ of typhoid fever is responsible for the high fever, and the disturbed function of every organ of the patient. It is the poison formed by the germs of diphtheria that causes paralysis, and finally arrests the action of the heart.

It is well known that when poisons, such as arsenic, lead, iodine, morphine,

mercury, etc., are administered to cows, they are eliminated through the mammary glands. Milk from animals receiving these drugs is therefore dangerous to young animals and to children. Poisonous plants, when eaten by cows, render their milk very harmful.

The feeding of milch cows with vegetable refuse that has undergone partial decay, as rotten apples, moldy hay, etc., poisons the milk. Extreme fright or anger also causes the formation of poisons in the body of the animal, and these poisons are very probably eliminated in the milk.

The poisons formed by bacteria in the body of a diseased animal are just as real as arsenic, morphine, etc., and often more deadly. These poisons, like those which are administered, may also find their way into the milk.

Dairy products may be boiled and ren-

Bacteria are dangerous because of the poisons they produce.

Cows partaking of poison in their food, or producing it when in a fit of anger, secrete the poison with the milk.

Cows having germ disease, such as tuberculosis, even if they secrete no germs with the milk, will nevertheless secrete the poisons produced by the germs.

This germ poison is not destroyed by heat.

Germ-free milk is not necessarily wholesome milk.

dered free from bacteria, and yet these products are not safe to be used as foods, since the poisons are not destroyed or rendered less objectionable by boiling. The milk of a tuberculous mother may not contain tubercle bacilli, but it probably contains the poisonous product of the bacilli, known as tuberculin. Such milk may be poisonous to the child. A tuberculous mother should therefore never nurse her child.

Poisoning by the use of cheese, milk, and ice-cream, is frequently due to the presence of the poisonous germ products, even though the germs may have been destroyed by boiling.

Dr. Vaughan, in investigating a number of acute cases of milk poisoning, discovered a product to which he gave the name tyrotoxin. Other poisons have since been discovered, all of which are very deadly in their effect. At present not much is known regarding the precise chemical nature of these bacterial poisons. We do know, however, that all pathogenic bacteria produce definite chemical poisons, and that milk containing these poisons, when fed to young

animals, may produce diarrhea, or other toxic symptoms, and in some cases immediate death. Many, if not most, of the diseases of childhood are doubtless caused by the use of milk. Poisons may not be present in sufficient quantity to cause death, or even serious symptoms; but many slight indispositions attributed to other causes may be due to the use of products containing poisons.

The boiling or Pasteurizing of milk does not do away with all the danger from the use of milk, since it can not restore such milk to a non-poisonous condition. It does away with the infection from the living bacteria, and therefore should be encouraged, but it can not render an infected product perfectly safe for use. We must yet recognize that the absence of bacteria in milk, cream, ice-cream, butter, and cheese does not afford an absolute guarantee of wholesomeness. Death may be in the pot even after the germs have been destroyed by boiling; and these products may be a source of danger even though the germs were never present in the products themselves.





THIS PATIENT IS TAKING THE FRESH-AIR CURE ON HIS OWN BACK PORCH

Home Treatment and Education of the Tuberculosis Patient

Eugenia M. Bray

Secretary Association for the Prevention of Tuberculosis in the District of Columbia

ABOUT seven years ago a committee of the Associated Charities was formed to combat tuberculosis in the District of Columbia. The members were brought to the realization of the need of organized effort because of the great prevalence of the disease among the families appealing to the Charities for relief.

In November, 1908, the work had developed to such an extent that the Associated Charities' committee was reorganized and incorporated as an independent society, under the name of the "Association for the Prevention of Tuberculosis of the District of Columbia." The headquarters and dispensary are located at 923 H St., Northwest. This new association is governed by a board of thirty directors, of which Gen. George M. Sternberg is president. It is supported wholly by voluntary contributions, and membership fees which range from one dollar to one hundred dollars yearly. A member receives all publications of the association, and also is made a subscriber to the *Journal of the Out-*

door Life, an interesting and instructive monthly magazine dealing exclusively with tuberculosis. It is the desire of the directors that people of every class shall become sufficiently interested in the work of the association to become members, thus lending both the moral and the financial support which is necessary to success in the efforts being made to suppress this disease in Washington.

The association has for its purpose the prevention of tuberculosis by every possible means,—public education through lectures, printed matter, etc.; formulation and promotion of legislation; establishment of dispensaries, day classes, and camps; organizing and supervising home treatment by trained, visiting nurses; occasional financial assistance to enable patients to take treatment; the establishment and maintenance of a tuberculosis exhibit, etc. The present article will deal only with what is being done to organize and supervise the home treatment.

While it is generally recognized that the ideal place for the treatment of tu-

berculosis in all stages is the sanatorium, and that among the most important factors in the prevention of future infection is the isolation of advanced cases in hospitals, yet because of the present inadequate hospital accommodations and the lack of legislation in forcing such



This brave little telephone girl is making a hopeless fight for life. Everything about the room betokens taste. The importance of fresh air is well understood

isolation, the majority of cases must be treated in their homes. To accomplish this the association supports a tuberculosis dispensary for the free examination and treatment of persons unable to pay, and is affiliated with the tuberculosis clinics of leading hospitals of the city. The patients attending these dispensaries are visited in their homes by nurses.

Instructions are given about ventilation, proper food and how to prepare it; the necessity for cleanliness is explained, and many reforms in the homes are wrought by the patient efforts of the nurse; separate dishes are required for the patients; sputum cups and paper napkins are supplied. The nurse visits as often as is necessary, and patients who are able are required to return to the dispensary to see the physician every

two weeks. The little telephone girl, making a brave but hopeless fight for life, demonstrates the possibility of making the sick-room in a poor home clean, attractive, comfortable, and perfectly safe for the other members of the family. Patients who are not bed-ridden are urged to take advantage of their porches, yards, or near-by parks, and to spend their time as much as possible in the open air.

The relief committee of the association has funds at its disposal to give material assistance where this is necessary. One of the most important forms which this



This tent, which is a part of the exhibit of the association on the prevention of tuberculosis, is occupied by a class patient, who has made a remarkable gain since he began sleeping outdoors

providing separate sleeping-quarters for the patient in cases where the family all sleep in one room. The rent of an extra room provides not only for the comfort of patients, but protects the other members of the family from the danger of infection. The relief committee undertakes also to provide sleeping-tents, cots and bedding, and warm clothing, where these things are necessary, and the patients are unable to procure them, and

sometimes also to provide the necessary sanatorium expenses when such treatment is especially recommended by the doctor.

In March, 1908, a "class" was organized to provide home sanatorium treatment for a few selected patients.



Outdoor sleeping-room. This was built by the patient on his own roof; cost, about six dollars

Only those in a curable stage of the disease, who, for some good reason, can not go to the hospital, are admitted. A special nurse looks after this small group of patients, which never exceeds fifteen in number. The requirements to which patients subscribe when they enter are, first, absolute obedience to the instructions of the physician and nurse; second, complete rest; third, wherever pos-

sible, sleeping in the open air and always spending the daytime out-of-doors. These patients keep a very minute record of temperature, pulse, diet, exercise, etc., in a book for that purpose, which they bring to the doctor once a week in the "class meeting." When

necessary, relief is given to the members of the class in the form of a weekly wage loss, if the patient has had to give up work to take the treatment, or perhaps money is given for paying rent, providing special diet, paying to have heavy housework done, and in other ways according to the special needs of the case.

Much ingenuity is displayed by the patients in trying to carry out the orders of the doctor. One member built an outdoor sleeping-room on the roof of his house at an expense of six dollars. Another has been sleeping all winter in a tent, which is a part of the exhibit of the association. He has been pronounced a "cure" by the physician, and is allowed to return to his

(Continued on page 373)



A room with three large windows, admitting plenty of fresh air and sunlight, was rented for this man, and he was removed from a small, damp room occupied by three or four others, and is making a brave struggle in his new quarters



BIRD'S-EYE VIEW, COLONY "A," MODERN WOODMEN OF AMERICA SANATORIUM.
FIVE MORE COLONIES TO BE BUILT

Beneficial Orders and Tuberculosis

Dr. John E. White, Medical Director and Superintendent, Modern Woodmen of America Sanatorium, Colorado Springs, Colo.

THIS is an age of conservation. We are learning to conserve our natural resources, our forests, our streams, our mineral deposits. The scientific world is also studying means of preserving and conserving human life. The medical profession are giving their closest attention to the study of how to prevent the different infectious diseases, and much has been accomplished within the last few years. This naturally interests the different insurance companies, especially the fraternal insurance companies; for their rates are unusually low, and the closest attention has to be paid to the preventable losses of human life.

The greatest cause of death is tuberculosis. Studying the statistics of the Modern Woodmen of America, one of the largest fraternal insurance companies in the country, with its million members, we find that during the last eighteen years they have paid over five thousand death claims from tuberculosis, costing the order over ten million dollars. Fourteen and one-tenth per cent of all their deaths was due to tuberculosis; and this percentage is low as compared

with some of the other orders and with general statistics.

Naturally the attention of the executive council was forcibly called to studying how this mortality from tuberculosis could be reduced. After thorough investigation it was decided to build a sanatorium to care for its curable consumptives. At the last head camp of the order at Peoria, Ill., the officers were empowered to take from the general fund ten cents a year per member to build and maintain such an institution. After a very thorough investigation, Colorado Springs, Colo., was selected as having the best all-round climate and altitude for tuberculosis. A tract of thirteen hundred acres, with its beautiful scenery, its own pure water-supply, and with its abundant coal deposits, was purchased nine miles north of Colorado Springs.

January 1 the sanatorium was opened, with a capacity of sixty. The institution was immediately filled, showing the actual demand for a larger plant. Building is still in progress, and it is hoped to create a capacity of at least five hundred beds in the near future. Only

early incipient curable cases are admitted, for the reason that it is poor economy to spend money unless lives can be saved to the order.

With the sanatorium as an object-lesson, the Modern Woodmen of America have also very wisely decided to carry on an active campaign of education throughout the order, with the single thought of prevention. Each month, through the official paper, the membership is plainly told how to live so as not to invite tuberculosis. They are taught that tuberculosis is due to a vegetable parasite; that it is communicated from one to another. The consumptive is instructed how to care for his sputum so that it will not infect others in the home. With this same object—prevention—the order

is having a complete booklet printed, giving the same information. Five hundred thousand copies are to be distributed

among the membership at once. Other booklets will follow. In other words, the Modern Woodmen of America are taking

up the two sides of the question—the care of tuberculosis at the sanatorium and its prevention in the order through well-directed, systematic education. It is hoped that in the next few years this education will materially reduce the percentage of deaths from tuberculosis. If New York City could reduce its mortality from the disease forty per cent, and Boston, forty-five per cent, in the last fifteen years through education, it would seem that this fraternal order, with perfect organization and direct communication with its million members scattered in all parts of the country, might do a

magnificent work in the crusade against the great white plague, and materially diminish the number of its victims.



“TAKING THE CURE”



GROUP OF PATIENTS “CHASING THE CURE;” MODERN WOODMEN OF AMERICA SANATORIUM



The Physical Side of the Alcoholic Problem

T. D. Crothers, M. D.

Superintendent Walnut Lodge Hospital, Hartford, Conn.

EVERY advance of modern science, and every exact study of the evils of civilization, shows that alcohol is a very prominent active or predisposing cause, which must be considered in the efforts for prevention and cure of these evils.

In criminality, pauperism, and idiocy it is recognized as a very active and most intimately associated cause. In diseases, particularly insanity, epilepsy, and many other maladies, it is equally prominent.

Modern surgery as well as modern medicine is forced to take into consideration the alcoholic history of the patient in all operations and treatment, and to be influenced by it.

No matter what theory one may have concerning alcohol and its effects, its degenerative and destructive action on the cell and tissues must be recognized. In all efforts to neutralize and prevent these evils, it would seem rational and logical that the physical side be studied first; that something of the nature of the degenerations which follow from the use of alcohol be known. The condi-

tions favorable to their prevention and growth, should also become a large part of all practical study.

It is evident that spirits are used at first, in many instances, for the relief of exhaustion, irritation, poisoning, or starvation. The pain, suffering, and misery are covered up by the use of alcohol, and the impression is created that this is a degree of restoration and stimulation, which has overcome the condition for which it was taken.

After a time the suffering appears again, and the same remedy is repeated until finally it is considered a necessity. In other cases

the desire for spirits comes on suddenly, and is impulsive and almost irresistible at the start. This is frequently traceable to injury, sunstroke, or severe shock to the brain and nervous system.

Numbers of persons who have used wine and spirits at the table and are called moderate drinkers, and persons who were previously known as total abstainers, have suddenly become impulsive, excessive users of ardent spirits.

There are certain physical causes

Alcohol is a prominent cause of the evils of civilization.

Alcohol causes physical as well as moral degeneration.

Alcohol is often used first for temporary relief of physical or mental ills or disabilities.

Young men and women in wealthy families learn to use wine or spirits to soothe discomforts, and in the poorer walks of life liquor is taken to drown sorrow and to add to the strength.

Such training predisposes to the formation of the liquor or drug habit.

Inebriety is a definite disease with a definite cause, and this cause must be reached before the drink curse can be successfully overcome.

Some medical men have accumulated facts and evidence which will yet revolutionize the temperance work.

traceable in all these cases, which serve as the starting-point; and the drinking is a symptom of some change in the organism and its control. There is unmistakable evidence that many drunkards have been trained and educated to their present condition.

Young men and women in the homes of the wealthy, where wine and spirits are used at meals, and kept on the side-table, to be used for all sorts of discomforts, belong to this class. This training lowers the vitality and co-ordinating powers of the brain, and its ability to resist morbid impulses of hunger and thirst, enhances the physiological susceptibility to narcotism, increases the dependence on spirits for every ill-feeling, and produces a delusive confidence in its value as a remedy and concentrated food.

Such training results in a mental and organic predisposition and weakness, which, from some unknown exciting cause, culminates in the excessive use of spirits or drugs for relief. Persons with such training are unfitted and unable to bear the strains and drains of ordinary life without resorting to spirits for help. They have lowered powers of endurance, and are ill prepared to adapt themselves to their surroundings. They have destroyed the very element of reserve force and vigor required to make a success in life.

Down among wage-earners and persons who live on the border-lands of poverty, the same conditions are seen. Beer and spirits are used to cover up the failures, both mental and physical, and their consciousness of adverse conditions, and these drinks increase the unfitness that makes it more difficult to overcome the obstacles of the present.

The laborer in bad surroundings, bringing up his family to use spirits and beer as a food and beverage, is actually

training them to become drunkards and degenerates, and is increasing the miseries and obstacles of life, from which they never escape.

Thus men and women among the very wealthy and the very poor, are in a course of training which is preparing them for inebriety and allied conditions with unflinching certainty. Illustrations of this are familiar to every one.

The evidence, so far, fully sustains the assertion that inebriety, like yellow fever, has a distinct causation, and runs a definite course. The phenomena in all this are not accidental or chance, but are the result of laws of dissolution and disease which can be understood. One fact has become established; namely, that alcohol is a narcotic, and is an anesthetic in its effects on the cell and tissue.

Opinions and theories vary widely about the exact action of alcohol and how far it is responsible for this or that condition, but that is incident to imperfect observation, and to reluctance to give up old theories. There can be no doubt about the moderate drinker's becoming a chronic inebriate and reaching stages of dementia, pauperism, and insanity; and while the steps from one to the other are not very clear, their relation is unmistakable.

Accurate studies of individual cases show a steady movement and a striking uniformity of progressive degenerations. If one could study the inebriate from the terminal stages backward, noting all the facts in the history and line of descent, this movement would become very startling.

Such studies can not be made from the data furnished by the victim himself, because of the presence of egotistical delusions, exaltations, and delirious confidence in the accurate knowledge of his own condition. These studies must

begin with the heredity, and the conditions of early life, surroundings, culture, training, foods, diseases and injuries, and avocations. From these facts the real alcoholic problem can be understood.

There is something very remarkable about the fact that an evil so thoroughly physical should not be taken up by medical men and studied as consumption and other great scourges are. The physician is particularly fitted by long training and constant, every-day experience to examine and determine the phenomena in this field.

His constant study and training fit him to observe the facts of health and disease and the phenomena of nature, to note the variations and changes, and to reason concerning the causes and their effects.

Alcoholism, inebriety, drunkenness, and all the associated evils are matters of fact. They are distinct physical conditions which are within the observation of trained medical men, to be examined and to have their meaning determined.

It is not theory or opinions that have made the poor victim what he is. The physician is not called to balance uncertain, vague theories and probabilities of what it is, or what it may be. It is a question of accurately observed facts, and the laws which govern them, and no one can be more competent to understand and advise concerning the conditions which produce this evil and the methods of prevention, than the physician.

Strangely, medical men do not lead in the great efforts to point out and correct this evil. Perhaps previous theories, personal inclinations, and fear of public opinion prevent them from stating the facts with which they are familiar.

This places them in the very awkward position of non-participants and conservative critics, in the great reform efforts of laymen. The magnitude of the alcoholic problem and the destructive character of the evil, become more and more apparent to the general public every year. Hence, more intense and strenuous efforts are being made to correct and control it, based on theories of what it is, that have come down to us from the past.

The churches have joined the great reform movements, and are urging assistance from the state, but most of these efforts are based on working theories of the predominance of the moral causation of this evil. The physical side does not enter into the reform efforts except in some general educational work.

Physicians are reluctant to join in this, except in a conservative way of general encouragement, leaving the plans and methods for relief to laymen. The empirics, realizing this great gap between theory and practise, have rushed into the field with mystery and pretension, assuming that they are able to cure the alcoholics with distinct remedies.

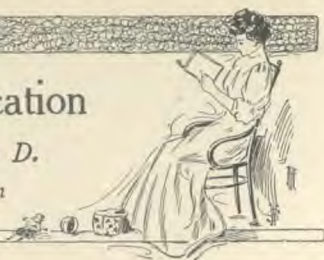
In this way they have drawn attention to the physical causes and indicated possibilities of restoration, which by-and-by, in scientific hands, will become a reality. In this way they are teaching the public that the problem is emphatically a hygienic one.

A great revolution is impending. A few medical men, in each of the civilized countries, are beginning to recognize that this is a new field of practise, and that its recognition and the acceptance of work imposed by it will mark a new advance in medical science.

Causes of Autointoxication

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Physician Loma Linda Sanitarium



IN previous articles we have dealt with a few of the diseases and symptoms produced by auto-intoxication. In this connection the question will naturally come to mind, What causes give rise to intestinal poisoning? What data can be furnished those who are willing to regulate their habits so as to escape the evils that so frequently befall the unsuspecting who wander in forbidden paths? This is what we propose now to answer.

Certain food elements are necessary to build up our bodies and furnish the requisite heat and muscular energy. These food principles are commonly called proteids, fats, and carbohydrates. The last two are made up of hydrogen, carbon, and oxygen, while proteid foods contain nitrogen in addition. Because they are required to repair waste of the living tissue, proteids are the most essential constituent of the daily food supply. Being nitrogen compounds, they are unstable. This property of nitrogen is seen in gunpowder, dynamite, nitroglycerin, etc. These explosives are highly useful and seemingly indispensable for many purposes, but we

do not care to store them too near our living quarters.

Now there is a striking parallel to this in our proteid food. A certain amount is necessary to build up the cells of muscles and nerves and other active structures. But the higher nerve-centers

seem to recognize that it is a dangerous element to keep on hand, and so daily orders are left with the various organs that they must, under no consideration, store this unstable compound. If an excess is eaten, the excretory organs have strict orders to get it off the premises in the shortest possible time.

Where the intake of proteids is greatly in excess of what is needed, it often happens that the waste

channels are not sufficient to rid the system promptly of these substances; or, what is more frequently the case, the kidneys have been driven to this extra work for so many years that their capacity is greatly limited. Because of the sedentary habits of the individual, the skin seldom perspires to any appreciable amount, and hence does not relieve the kidneys of their extra work. These nitrogen wastes are not promptly eliminated. The result is that these un-

Proteid food is absolutely essential to life.

Like other nitrogen compounds, the proteids are unstable.

The body will not store any surplus, but eliminates it immediately.

The extra work may cripple the proper eliminative organs, and throw a surplus of nitrogenous material into the intestine.

Acted on by putrefactive bacteria, this results in the production of poisons which upset mind and body, and shorten life.

The former proteid standard is now shown to be too high. Experiment shows that half the amount is better.

Continued excess in carbohydrates is not so apt to occur, because the disagreeable symptoms serve as a warning.

stable compounds are carried down into the large intestine, where they are set upon by putrefactive germs. Highly toxic poisons are set free by these germs, and it is little wonder that the body functions are thrown out of harmony, the mind depressed, the sleep broken, and the nutritive processes upset.

Some will ask, What are the daily proteid requirements of the body? According to the old dietary standard it was supposed to be four ounces or more. Carefully made tests and experiments seem to prove conclusively that the old-time standards were much too high,—that the vital processes are carried on better on half that amount. Then if two ounces of proteid prove sufficient for men carrying on vigorous exercise, it would seem to be ample for men and women of sedentary habits. A little analysis of the daily food intake will convince most people that they greatly exceed this amount.

To illustrate the daily ration take the following:—

10 ounces of bread contains	1 oz. proteid
5 ounces of steak contains	1 oz. proteid
2 eggs contain $\frac{1}{2}$ oz. proteid
10 ounces of potato contains	1 oz. proteid

Total proteid, $3\frac{1}{2}$ oz.

In this limited bill of fare the proteid intake is three and one-half ounces.

Assuming the truthfulness of the statement that no provision is made to store this substance because of its dangerous character, it can readily be seen

that the kidneys, which are the principal channels for eliminating this compound, have more than enough to do. What wonder then that Bright's disease occurs so frequently among professional people? And it should not cause surprise that the uneliminated wastes give rise to rheumatism, neuralgia, nervousness, circulatory disturbances, etc. The astonishment is, rather, that the resources of the body prove sufficient to preserve and prolong the lives of some offenders for upward of threescore and ten years.

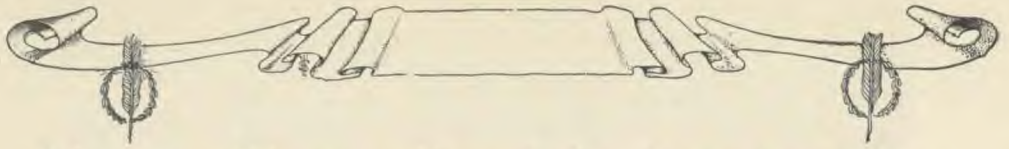
But while such cases are met, we should not forget that the resistance of the great majority is so lowered by overeating that they fall easy victims to contagious diseases or accidents.

The fats and carbohydrate foods, unlike the proteids, are, within certain limits, stored in the body. Although excess of carbohydrate foods may occasion excessive flatulence and other disagreeable symptoms, they do not contain the element of danger that is found in proteids. The distress that arises from a too liberal use of starch and sugars is usually sufficient hint to the epicure to be more moderate in this respect.

But we should exercise true Christian temperance in eating as well as in all our habits. This is the simple process of sowing for health, and the reaping is an assured fact, unless we have already wasted our energies in riotous living. Even then it is seldom too late to recoup a large share of the wasted health.



UNION STATION, WASHINGTON, D. C.



Nervous Diseases Caused by Improper Home Training

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A STUDY of carefully collected statistics, or a visit to a large clinic or dispensary, will readily convince one that a very large proportion of those who seek medical advice and treatment are suffering from some derangement of the nervous system. Thousands of children have impaired mentality, are subject to convulsive seizures, or suffer from such disturbances of sensation or motion as will eventually make them helpless. Young men and young women who should be full of ambition to fit

themselves for the duties and responsibilities of life, have such an unstable nervous system that they can not apply themselves to any useful task. Middle-aged men and women who should be the backbone of the nation and examples of physical perfection are only wrecks of humanity. And this appalling evidence of nerve degeneration is being manifested at an earlier average age, and with more marked intensity, in each succeeding generation.

There are several important causes which, together, destroy the nervous system; but it is evident that those indulgences and transgressions of physical laws which produce the first irritations

to nerve action are really the factors of paramount importance. A noted specialist who has devoted many years to the observation and care of children, and to the study of causes of disease, states that the greatest factors in the cause of nervous diseases among children are the use of stimulants, such as

tea and coffee, and the fact that children live among exciting surroundings. That tea and coffee are the responsible underlying factors in the ruination of thousands of young lives every year is a fact all should know.

Dr. Hetherington in his article has directed attention to one very important cause of nervousness. There are other causes which the doctor may discuss later. It is not his purpose to teach that the avoidance of certain beverages is all that is necessary to insure healthy nerves in children.

Tea and coffee are in no sense foods. Neither are they at any time necessary for the human economy. There is not a particle of food value in them. They do not contain a single element that will give strength to the body or build up tissue. On the other hand, they properly head the list of enslaving drugs,—tea, coffee, tobacco, alcohol, morphin, opium. All these are poisons, and it is a deplorable fact that the great majority of mankind are slaves to one or more of them.

Tea and coffee are stimulants. Their use, even in moderation, can lead only to disastrous results. The astringent principle is tannin or tannic acid. The

poisonous principle is caffeine. This poison excites the nervous system. It enters into the circulation, and is carried to every part of the system, and gradually impairs the energy of both mind and body. Under its influence the living machinery is quickened in its activity and forced to unnatural action. The poison is an enemy to the vital processes, and nature endeavors to rid the system of it as speedily as possible and save the delicate cells of the body from harm. This unnatural, excited action is what gives the tea drinker the impression that tea does him great service and adds to his strength. But this is a mistake. Tea and coffee draw upon the vital forces and use up reserve strength. They leave the nervous system exhausted and weakened, and thus lessen the power of endurance. Headache, wakefulness, palpitation of the heart, and indigestion are among the after-results of tea drinking. Many cases of palsy have been attributed to its use.

It is needless, then, to ask why so many children are cross, fretful, irritable, nervous, and in a state of poor health. A visit to the homes, and a glance at the tables from which foods are served, make it very evident that these conditions exist because there is adequate cause. At the home table children are taught the use of tea and coffee. And there is nothing pleasant or desirable in the taste of either. They are bitter and repulsive to the taste. Chil-

dren make a wry face and protest when first asked to take them. But parents add sugar and milk to disguise the bitterness, and then by repeated example and coaxing the child tastes, soon becomes accustomed to the drugs, and acquires the habit. Pepper, mustard, and hot sauces are served with the foods. These irritating substances create morbid appetites and thirsts, and lead directly to the cigarette and tobacco habit, and later to the use of alcohol. And thus by the home training the child is placed within the grasp of an octopus whose tentacles rarely relinquish their hold until the victim has paid the penalty with his life. It is by such a course that the vital forces are slowly but surely undermined, and life is forced out of the body years before the physiological old age can be reached. There is a limit to the abuse which cell life can tolerate, and these habits hasten the reaching of that limit.

There is a great multitude of nervous wrecks that die every year, but these deaths are no "mysterious dispensation of Providence." They occur as the direct result of causes which could be avoided. Children should be so taught and trained as to develop sound bodies and to bring to them the enjoyment of the blessings of health. And if the proper interest would prevail with reference to this matter, more than seventy-five per cent of the nervous conditions we are now familiar with would disappear in the rising generation.



A Home Vacation; or How to Keep Comfortable in Warm Weather

D. H. Kress, M. D.

Superintendent Washington Sanitarium, Takoma Park, D. C.

THE human body possesses the power of adapting itself to changes in temperature. The temperature of most objects found in nature is influenced by the surrounding temperature. On a warm day butter melts, water and milk become warm, the stones and the earth itself warm up. In cold weather everything changes in temperature from warm to cold. This is not the case with the human body. It adapts itself to external conditions in such a way that the temperature internally remains practically the same, winter or summer, the normal temperature of the mouth being about 98.6°, whether the temperature externally is 20° below zero or 100° above.

How is this accomplished? In the first place, a steady and equable internal temperature is constantly maintained by means of the circulatory system. The temperature of the liver and of some of the deeper muscles in which oxidation takes place probably ranges from 100° to 105°, while the mucous-membrane of the mouth has a temperature of only 98.6°, and the skin a still lower temperature.

The heated blood from the internal organs and muscles is brought to the surface for the purpose of cooling it. The cooled blood is then carried inward to cool off the internal organs; in this way an equable temperature is maintained. When the weather is cold, im-

pressions are made upon the sensory nerves of the skin to that effect, and these impressions are conveyed to the blood-regulating centers, and less blood is permitted to be brought to the surface for the purpose of cooling. This accounts for the white skin, or goose-flesh appearance, noticeable on a cold day. This is one of nature's ways of protecting the body from injury from excessive cold.

In warm weather, the peripheral or surface blood-vessels and capillaries dilate, and permit a large flow of blood to the skin for the purpose of cooling. This accounts for the flushed faces on warm days, and the red, swollen hands. The cooling of the

blood is brought about by evaporation of moisture from the surface, or the skin. A normal adult may give off from two to four pints of moisture every twenty-four hours, and yet show no evidence of perspiration. This is what is known as insensible perspiration. If the weather becomes very hot, more moisture oozes out through the pores of the skin, for the purpose of keeping the body cool. People who sweat freely do not suffer so much with heat as those who have a dry, hard skin. The moisture on the skin answers the same purpose as the moist cloth surrounding a pitcher of water in a warm day.

In hot countries drinking-water is usually kept in cloth bags, and hung

The body has a mechanism for maintaining an even temperature. We can assist this heat-regulating mechanism in summer —
By regulating the clothing; loose-woven linen is best.
By regulating the diet; fruits, with well-baked breads are best.

up so that the breeze, though warm, can get at the water that has seeped through, and evaporate it. No matter how warm the breeze may be, it will cool the contents of the bag. Men and women who work, and as a result perspire freely, as a rule suffer less from the heat than do those who sit quiet and try to keep cool.

By regulating the diet, we can assist the body in its efforts to keep cool in warm weather. In cold weather we feed our furnaces or stoves in order to keep our houses warm. In warm weather we require less fuel. The human body corresponds to a house. It has within it a furnace and an automatic stoker, or fireman. When impressions of cold are made upon the skin, they are communicated to the heat-regulating centers, and a greater amount of fuel is fed to the furnace, and a greater amount of heat is produced internally. In warm weather people frequently eat the same food and the same quantity they do in cold weather. The system has no need of it, and can not utilize it. Even if it should be digested, it would not be consumed, but would be piled up as adipose tissue, or tissue wastes. The lack of energy experienced is frequently due to the clogging of the furnace of the living machinery with this excess of fuel, and not to too little food, as is frequently supposed.

But in warm weather the digestive organs can not digest the same quantity or kind of food that they are capable of digesting in cold weather. Wisely, therefore, nature takes away the desire for food, especially solid foods, on a warm day. Dogs fed the same amount of meat in warm weather as in cold weather become ill, and in place of meat have to be given some biscuits. The digestive organs are in a state of debility, and are not capable

of digesting meat in warm weather. The result is decay of these foods, and autopoisoning.

The cat is apt to have epileptic fits if it makes no change in its food in warm weather. Much of the sickness among men in hot weather is due to the absorption of poisons, resulting from the decay of foods in the alimentary canal. Summer diarrhea is frequently caused by this. Meat, above all food, is dangerous and unsuitable in hot weather. Butter and other animal fats should be used very sparingly in warm weather, if at all. Nearly all would do better without them. Slow digestion and the deficiency in gastric juice favors fermentation and the formation of acids. Cream, being an emulsion, is preferable to butter in warm weather.

Of all foods, fruits are the best in warm weather. The food elements in fruit are served in a form to require little effort on the part of the digestive organs to prepare them for absorption, while the acids and pectose are aids in the digestion of the small amount of solid food that it may be necessary to eat in addition to the fruit. They also contain liquid in the purest form obtainable to supply the needs of the body.

In warm weather I would recommend that the diet be composed almost exclusively of well-baked breads and fruits, with some additional harmless relish, if craved. If this diet should be followed, there would be less summer sickness, and sunstroke would be practically unheard of.

The Clothing

In* summer less clothing should be worn than in winter. Loose cellular linen or cotton underwear is preferable to any other fabric. A suit consisting of light, thin, loosely woven garments is about all that is required in warm

(Continued on page 347)

Shall We Have Foods Free From Poison?

Paul Pierce

Editor of the *National Food Magazine*

THE action of the Board of Food Inspection in permitting the use of benzoate of soda in prepared foods is a setback to uniform food regulations. Many State food commissioners will undoubtedly refuse to fall in line with the findings which permit chemical preservatives, and thus State and national food-law uniformity will be postponed indefinitely.

The report of the inspector of the

These manufacturers welcome the national law, and are fighting the commercial interests which cast discredit upon the food industry, and are carrying on the people's fight at their own expense, when it should be a matter of governmental concern.

Not only has the legitimate trade proved the use of benzoate of soda unnecessary, and characterized it as physically harmful, but it agrees with Judge

"In contrast with the strictly high-grade product is the great bulk of the catchup found on the market. The material is not whole ripe tomatoes, but consists of the waste of the canning factory, commonly designated 'trimming stock,' including the green, moldy, broken, rotten, and generally unusable tomatoes, the skins, cores, and stems from the peeling tables; and the surplus juice from the filling machines,—all of which may be allowed to stand during the day, and be run through the cyclone in the evening. At the end of the season, the frosted and half-ripe fruits may be used. Part of this material can not be considered 'sound fruit,' as contemplated by the Food and Drugs' act. The pulp is put up in barrels, PRESERVED, and allowed to stand, possibly in the sun, until a sufficient quantity has accumulated for shipment. Old catchup barrels may be used, and be none too clean. As a result, it is not uncommon to see an inch or more of pulp in the bottom of a car at the end of shipment, caused by the blowing out of the barrel heads, from fermentation. The sanitary condition of the factory may be poor, the handling of the goods be unclean, the spices may be the refuse from the spice houses, the sugar be of the cheapest grade, and the bottles be only rinsed, or be used without even that precaution. The catchup is a concoction so heavily spiced with hot spices that the tomato flavor is lost, and might as well be anything else. The color is normally dirty brown."—"Experiments on the Spoilage of Tomato Catsup," Report, Inspector Bureau of Chemistry.

Bureau of Chemistry, "Experiments on the Spoilage of Tomato Catchup," a portion of which is given herewith, justifies the stand taken by the American Association for the Promotion of Purity in Food Products. The public is to be congratulated on the benefits it will receive through the action of the pure food manufacturers, who have come to the front in a denunciation of chemically treated and fraudulent foods, and have demanded that the food laws be strictly enforced.

Anderson, of the federal district court of Indiana, as to its being morally harmful. There is no reason why foods should insidiously lead innocent consumers into the drug habit. To this end, the association of legitimate manufacturers unanimously adopted a statement of their sentiments, which, condensed, is as follows:—

"The action of the United States government has opened the door to a practically unlimited use of a chemical substance of a doubtful wholesomeness that may now be used indiscriminately for the preservation

of milk, butter, cheese, meat, fish, fruits, and vegetables.

"The principal commercial use of benzoate of soda is to permit the employment of ill-cared-for waste raw material unfit for human food, the maintenance of insanitary factory premises, the employment of slovenly work people, and the reduction of food value, and therefore it should not be used. It is not necessary to commercial success. Drugs are not food.

"No manufacturer in this association uses or will use an artificial preservative in his product, and this association represents industries that pack meat, fish, fruits, vegetables, confectionery, condiments, and canned goods; in fact, practically the entire line of prepared food products. The choice of drugged food or pure food now rests with the people."

The present regulation on benzoate of soda is likely to be construed as a repudiation of the Bureau of Chemistry, and to be taken as a general license to use adulterants. The result of this would be to undo the large share of good that has already been accomplished under the pure food law, and once more to expose the public to menace in many ways; and the borax man, the salicylic acid man, the sulphurous acid man, the fluoride man, the nitrous acid man, the formaldehyde man, will all be demanding that these drugs be permitted in foods.

The strongest hope, however, of the struggle for pure food is that the adul-

terators have overreached themselves, and that the public will at last understand the situation, read the label, and demand sanitary products, unchemicalized.

The *New York Journal of Commerce*, March 11, asserts that a strong reaction is believed by the government to be taking place against benzoate of soda, to such an extent that numerous manufacturers are abandoning the use of the preservative, *on account of the general public demand for non-preserved goods*.

Another hopeful sign is that the American newspaper press has come out strongly for pure food. Already the press has accomplished inestimable benefit for the consumer by the publicity it has given the subject of food frauds.

If the food industry in this country is to be saved, and the consumer to be protected, it seems to me it is by the American Association for the Promotion of Purity in Food Products. This association is the only large organized effort for the protection of the people and the legitimate trade.

I have fought for nearly fourteen years for pure food, and in this association I see a final victory against chemical adulteration of food products.

How to Live so as to Keep Comfortable in Hot Weather

(Continued from page 345)

weather. The cellular underwear and loosely woven outer garments allow free evaporation to take place, which tends to keep the body cool and comfortable. A certain amount of nervous strain is better endured during cold weather than during warm weather. In order to "keep cool" during the summer

months, it is well to relax and avoid hurry and flurry.

By following out these simple suggestions, it is possible for those who are compelled to remain at home to keep comfortable, even in warm weather, and receive greater benefit than is often received by a vacation of a few weeks.

RATIONAL TREATMENT IN THE HOME

Home Treatments for Common Diseases—No. 4

W. A. George, M. D.

Superintendent Nashville (Tenn.) Sanitarium

THERE is nothing which requires more good sound sense and self-control than does the care of the sick. It is often a difficult thing for parents or friends to decide whether to send for a doctor at once or to wait and try some home remedies. This is especially true where the doctor is many miles away, and the symptoms are not alarming. Often the patient and his friends become much frightened over certain symptoms, such as pain or nausea, while other signs, like swelling of the feet or ankles or a slight cough with loss of weight, are allowed to go on for weeks without much thought. Sometimes a large strong man sends for a doctor, declaring that he is dying, simply because he has nausea or has pain in the stomach, or both. He is advised to drink a quart of warm water with a spoonful of salt in it. He throws up the fermenting contents of his stomach, feels like a new man, and wonders why

he did not know enough to do that without sending for the doctor. On the other hand, very grave diseases often develop insidiously with no warning pain and with very little distress of any kind.

It is a valuable acquisition to be able

to tell by the various symptoms whether or not skilled help should be called. If not certain, it is better to give the patient the benefit of the doubt by calling the doctor, even if only to get his diagnosis. But a little study will enable any one to make a fairly accurate diagnosis of the more common diseases, and to apply simple remedies for their relief.

Every opportunity should be used to learn the meaning of the various signs and symptoms of disease.

Pain, even though very severe, may not be a dangerous symptom except when it occurs in certain locations, and is combined with other symptoms. Acute pain in the abdomen, with no fever, is likely to be a simple colic,

Shall we send for the doctor?
Give the patient the benefit of any doubt.
Significance of abdominal pain.
Relief of colic.
Significance of chest pain.
Treatment of pneumonia.
Taking the temperature.
Taking the pulse.
Significance of the pulse.
Character of breathing, and its significance.
Significance of —
Swollen feet and ankles.
Cough, loss of weight, etc.
Rashes and eruptions.
Dangerous throat symptoms.

and can usually be relieved in a few minutes by the application of either dry or moist heat (hot-water bottle or fomentations). If the pain continues, signs of fever appear, and vomiting begins, the case is more serious, and may be an obstruction in the intestines, or perhaps appendicitis, in which case the pain is usually most severe at a point about two and one-half inches to the right of the navel, and one inch below it; and pressure with the finger at this point will increase the pain. One should always apply the simple remedies for the relief of pain while waiting for skilled help.

Severe pain in the chest, with from 1° to 3° rise in temperature, and the pain made worse by taking a deep breath, points to pleurisy. The patient should be kept quiet in bed for several days, or until the pain stops. The hot-water bottle applied continuously to the painful side, or fomentations given several times a day, will not only decrease the pain, but will hasten the return of the inflamed pleura to its normal condition.

In pneumonia there is usually severe pain in the chest, the temperature runs up to from 103° to 105° , and the respirations are short and rapid. The treatment for pneumonia is very simple. Fomentations to the chest every three hours, and cold compresses (three or four thicknesses of cotton cloth or gauze wrung out of cold water) large enough to cover the whole chest, covered with a piece of dry flannel, and changed every half-hour, form the principal treatment. Added to this should be a hot foot-bath, given two or three times a day, and followed by a tepid sponge-bath to reduce the fever and quiet the nerves. If these simple treatments were employed from the start, there would be fewer deaths from pneumonia, especially among small

children, who react very quickly to this treatment. A patient suffering with pneumonia should be given a liquid diet of fruit juices, gruels, and perhaps milk, and the bowels should be kept open by means of the enema, given daily if necessary. This may be given quite cool, and will aid in reducing the fever. The temperature should be watched closely, and when the crisis comes, and the temperature falls rapidly, the cold compress should be put on after the fomentations and left until time to give fomentations again, and these may be given less frequently.

One should never depend upon the feeling of the skin to tell whether or not a patient has fever. It is often easy to tell that there is fever from the flushed face and hot skin, but there are many cases where the face is pale and the skin cold while the fever thermometer (one should be in every home) shows a high fever—often higher than where the skin is hot and flushed. When a person is having a hard chill, the thermometer will usually show quite a high temperature.

In using a clinical (fever) thermometer, it must always be shaken down to about 95° before taking the temperature. It should be washed carefully in cold (not hot) water before and after using, and when not in use should be kept in a case partly filled with formalin (formaldehyde) to prevent spreading disease germs to others. In adults it is usually most convenient to take the temperature under the tongue, with the lips closed tightly around the thermometer. A thermometer marked "1 minute" should be held two minutes, to be sure that it will register properly. In health, the mouth temperature should be 98.6° , which is indicated by a special mark on the thermometer. In cases of lowered vitality from any cause, the temperature

may go considerably below the normal mark. At the crisis in pneumonia it is common for the temperature to fall in a few hours from 104° to 97° . In typhoid fever the temperature is lowest in the morning and highest in the evening, and as the patient recovers, the temperature goes lower and lower, until it may go as low as 95.5° in the morning and 99° in the evening. As the patient becomes stronger, the temperature gradually returns to normal both morning and evening.

In taking the temperature of a small child or of any patient who is delirious, the thermometer is placed under the arm, in the groin, or in the rectum. It must be remembered that the normal temperature under the arm or in the groin is about one degree lower than in the mouth, and in the rectum one degree higher.

The pulse may be taken in the wrist, on the face just in front of the ear, or on either side of the neck just back of the larynx. It can be felt at the latter point when it is so weak that it can not be felt at the wrist. The normal pulse-rate is anywhere from sixty to eighty a minute — faster in young children.

Fever increases the pulse-rate in direct proportion to the rise in temperature, the pulse-rate often running up to one hundred twenty or more with a high fever. A very rapid weak pulse is a danger-signal, and may indicate an internal hemorrhage or some other serious condition.

The respirations are made more rapid by fever. The normal rate is about fifteen to twenty a minute, and in ordinary fevers is increased with the pulse-rate, still being about one fourth as fast as the pulse. Where the lungs are the seat

of the disease, however, the respirations are more rapid, often being half as fast as the pulse. In young children suffering with pneumonia the respirations may reach eighty or ninety a minute. In counting the respirations it is well to do so without letting the patient know what is being done, as he is likely not to breathe naturally if he knows. This can be done by watching the movements of the abdomen or chest or by listening to the breath sounds.

Swelling of the feet and ankles, with no pain, may mean some serious disease of the kidneys or heart, and a good physician should be consulted.

A continued cough, loss of weight, and a temperature of 99.5° to 101° in the evening, are among the symptoms of tuberculosis (consumption) of the lungs, and should not be allowed to go on without consulting a skilled physician.

Rashes or eruptions on the skin, with a rise of temperature, usually mean some contagious disease, and should be reported at once to the health officer, even though the patient may not seem sick enough to need a doctor, and may be treated by sponge-baths, a liquid diet, and rest in bed.

Many do not know that the symptoms (mild sore throat and a temperature of 101° or 102°) in the early stages of diphtheria are often much more mild than in tonsillitis, and so this dread disease — diphtheria — is often allowed to go until too late before help is called, and in the meantime is passed on to others.

It has been truthfully said, "The proper study of mankind is man." We can not understand these wonderfully constructed bodies of ours too well.



Photograph, Saunders, Melrose, Mass.

CAKE MAKING; FOLDING THE FLOUR INTO THE BATTER

Cooking Lessons—No. 5 (Continued)

George E. Cornforth

Healthful Desserts

CAKES may be made without baking-powder, and need not be made "rich" with butter or other fats or spices.

These cakes, like the puffs in the first lesson, require no chemicals to make them light, but are made light by beating air into them.

Sponge-Cake

3 eggs
 $\frac{1}{2}$ cup boiling water
 1 cup sugar
 $1\frac{1}{2}$ cups pastry flour
 Flavoring

Break the eggs into a mixing bowl. Set the bowl into a pan of boiling water. Beat the eggs till light. Then add one third cup of boiling water. Beat again till light. Then add a little of the sugar, and beat; then a little more sugar, and beat till all the sugar is added, and continue to beat till

the batter is stiff, and the sugar is all dissolved. Remove the bowl from the water. Beat in the flavoring, then fold in the flour carefully and with as few strokes as possible, not sifting all the flour onto the batter at once, but sifting a little flour onto the batter and folding with two or three strokes, then sifting a little more flour, and folding again. Have a piece of oiled paper fitted into the bottom of a cake tin. Pour the batter into the tin, and bake in a moderate oven, till a broom straw stuck into the cake comes out clean.

When the cake is removed from the oven, turn it bottom side up to cool, placing something under one edge of the tin to allow the air to circulate under it. This will keep the cake from falling. A nut cake may be made from this recipe by putting some of the batter in the bottom of a cake tin, and then sprinkling in some coarsely chopped nuts, then adding more cake batter, then more nuts, then the rest of the batter. Raisins cut into halves may also be used with the nuts.



Photograph, Saunders, Melrose, Mass.

CAKE MAKING; BEATING THE EGGS

This cake may be baked in layers, and various fillings used to make layer cakes, such as walnut, fig, maple, cream, strawberry, orange, etc.

It may seem a little strange to warm eggs in order to beat them light, but it will be found that the whole eggs, when warmed according to directions, beat more quickly and more stiffly than when cold. Whites of eggs must be cold in order to beat light.

A wire folder is better than a spoon for folding flour into cakes. By folding is meant dipping the folder or spoon down at the sides and lifting it up through the center of the batter so as to keep the cake light, placing the batter that is lifted by the folder onto another part of the batter.

In some of the recipes we use weights instead of measures. Better results are obtained in that way, because by weight we can get the exact amount required; it is difficult to get the exact amount by measure, and perhaps we should have said before this in these lessons that whether we get good or poor results in following the recipes given, will depend upon the exactness with which we follow the directions,—upon the accuracy of our weighing and measuring.

We might say that one cup of granulated sugar is about equal to eight ounces, and one cup of sifted flour, measured lightly, about equal to four ounces.

Angel Cake

- 1 cup egg whites
- 1 tablespoonful lemon juice
- $\frac{1}{2}$ pound sugar
- $\frac{1}{2}$ pound pastry flour
- $\frac{1}{2}$ teaspoonful salt
- 1 teaspoonful vanilla

Sift the flour and sugar together. Add the salt to the whites, and beat them till creamy. Add the lemon juice, and beat till very stiff. Add the vanilla. Fold in the mixed sugar and flour with as few strokes as possible.

Wet a cake pan in cold water. Pour the batter into it, and bake in a moderate oven.

When it is taken from the oven, turn it upside down to cool, putting something under edge of tin to allow the steam to escape.

Nut Cake

- 2 eggs
- $\frac{3}{4}$ cup boiling water
- 1 cup sugar
- 6 ounces pastry flour
- $\frac{1}{2}$ cup chopped walnuts
- $\frac{1}{2}$ teaspoonful salt
- $\frac{1}{2}$ teaspoonful vanilla

This cake is put together in the same way as the sponge-cake, folding the flour and nuts in at the same time

Blueberry Cake

- 3 eggs
- $\frac{1}{2}$ cup hot water
- 1 cup sugar
- 7 ounces pastry flour
- $1\frac{1}{2}$ cups fresh blueberries sprinkled with flour

Put together in same manner as the sponge-cake, folding the blueberries in last.

Cream Sponge-Cake

- 3 eggs
- $\frac{3}{4}$ cup cream, whipped
- 1 cup sugar
- 6 ounces pastry flour
- $\frac{1}{2}$ teaspoonful salt
- $\frac{1}{2}$ teaspoonful lemon or vanilla flavoring

Break the eggs into a mixing bowl. Set the bowl into hot water. Add the salt. Beat until the eggs are very light, then beat in the sugar, a little at a time, and continue to beat till the batter is very stiff and the sugar dissolved. Add the flavoring. Whip the cream. Put the whipped cream onto the beaten eggs and sugar. Sift on some flour. Fold with a few strokes. (It is not necessary to fold all the flour in every time some is added.) Sift on more flour, and fold. Continue thus till all the flour is added, but do not fold more than is necessary to mix the ingredients.

Molasses Cake

- 3 eggs
- 9 ounces molasses (just a little more than $\frac{1}{2}$ cup)
- 6 ounces flour (pastry)
- $\frac{1}{2}$ teaspoonful salt

Heat the molasses to boiling. While it is heating, beat the eggs in a bowl set in a pan of hot water. Have them beaten stiff by the time the molasses comes to a boil; and as soon as it boils, pour it slowly into the eggs, beating as it is poured in. Continue beating till the batter is very light and stiff. Fold in the flour. Bake in a cake pan which has a piece of oiled paper fitted into the bottom.

Cookies or Lady's-Fingers

- 6 eggs
 $\frac{1}{2}$ pound sugar
 9 ounces flour (pastry)
 $\frac{1}{4}$ teaspoonful salt
 Flavoring

Break the eggs into a mixing bowl. Add the salt. Set the bowl in a pan of hot water. Beat the eggs till light. Add the sugar a little at a time, and beat till the batter is as stiff as it can be made. Add the flavoring. Fold in the flour. Put the batter into a pastry bag which has been wet on the inside with cold water. Oil a pan, sprinkle it lightly with flour, and with the bag put the batter onto the pan in the form of lady's-fingers or round cookies. Coconut or chopped nuts or caraway seed may be sprinkled over the cookies, or a raisin may be put in the center of each, just before they are baked.

If a pastry bag is not at hand, the batter may be dropped onto the pan with a spoon.

Nut Cookies

- 2 eggs
 $1\frac{1}{2}$ tablespoonfuls boiling water
 3 ounces sugar (about $\frac{1}{2}$ cup)
 3 ounces flour (about $\frac{3}{4}$ cup sifted flour)
 $\frac{1}{2}$ cup finely chopped walnuts
 $\frac{1}{4}$ teaspoonful salt
 Flavoring

Put together just the same as the nut cake, and put on a pan with a pastry bag or a spoon.

The objection very often raised to cakes made without soda or baking-powder is that they require so many eggs that they are quite expensive. The recipes given in this article do not require as many eggs as the recipes for "hygienic cakes" in common use, and if the reader will compare the cost of

these cakes with similar cakes of the same size, made with chemicals, it will be found that these cakes cost but little if any more than baking-powder cakes, when eggs are at a moderate price.

If the cream sours, there are various ways of utilizing it without combining it with soda, in making cake or bread, one of which is in the making of—

Layer Cake Filling

- $\frac{3}{4}$ cup sour cream
 1 cup sugar
 $1\frac{1}{2}$ cups chopped nuts.

Mix, and heat slowly, so as not to scorch, boiling it for five minutes. Then beat until cool enough to spread between the layers.

It is difficult when using the common recipe to put boiled frosting on a cake so quickly that it will not become too stiff to spread smoothly before it is all on the cake. To avoid such difficulty observe the following directions:—

Boiled Frosting

- 2 eggs, whites
 1 cup sugar
 $\frac{1}{2}$ cup water

Put the sugar and water into a dish which has a closely fitting cover, and set it on the stove to boil. Have the egg whites in a bowl ready to beat. Boil the sugar and water with the cover off the dish till it threads well, not just till it begins to thread, then set the dish off the stove and put the cover on tightly while you beat the whites stiff. Then pour the hot sirup in a small stream into the whites, beating continuously, and beat till it becomes cool enough to spread on the cake.



COOKIES: CAKE WITH ORNAMENTAL FROSTING

If properly made, this will be stiff enough to stay in place, but not too stiff to spread smoothly even if it should take some few minutes to spread it on the cake.

Ornamental Frosting

Ornamental frosting is simply the beaten white of eggs and powdered sugar mixed together, the proportion being about one pound of powdered sugar to four whites for the foundation, then more sugar is added to make it a little stiffer for the ornamenting. The whites of the eggs are beaten, adding a few drops of lemon juice when they are partly beaten, then the sifted sugar is added, and the mixture is well beaten together. The cake is covered with a smooth layer of this, which is allowed to dry. Then, with a pencil, the design is drawn on the cake. A little cone is made of heavy paper. The thick frosting is put into the cone, and the lines on the cake are followed by the use of the cone.

If it is desired to put a design on a cake in color, powdered sugar may be stirred into a teaspoonful of strawberry juice or cranberry juice till it is stiff enough to hold its shape when put on the cake, or powdered sugar may be stirred into the yolk of egg to make a yellow color, or spinach juice may be used to make a green color.

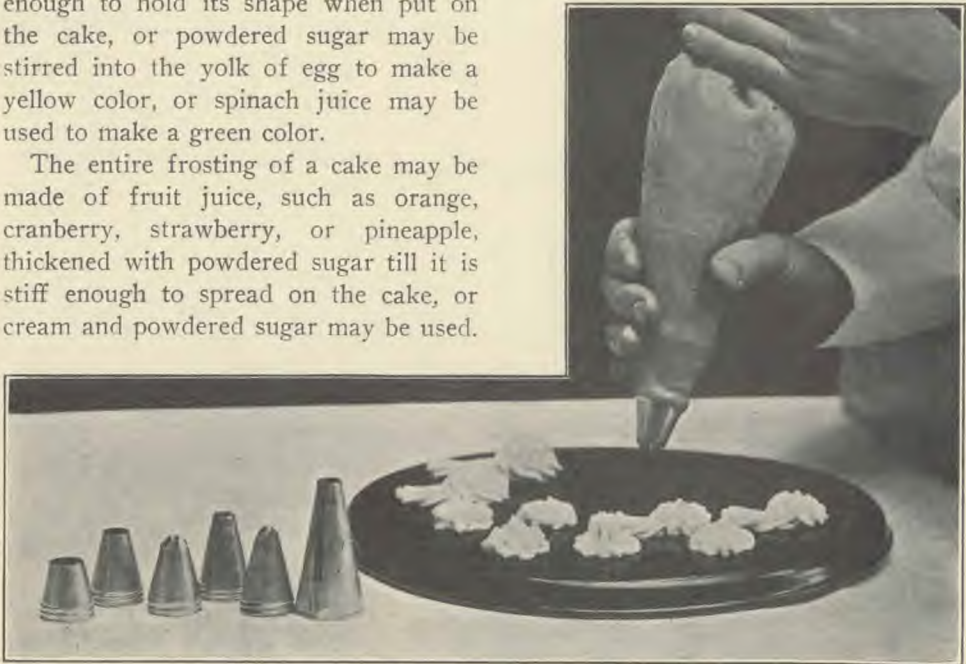
The entire frosting of a cake may be made of fruit juice, such as orange, cranberry, strawberry, or pineapple, thickened with powdered sugar till it is stiff enough to spread on the cake, or cream and powdered sugar may be used.

To Make a Pastry Bag

Pastry bags with tubes of various sizes and shapes may be bought ready made, or one may be made at home. It should be made of heavy canvas. Take a piece of canvas the size and shape indicated by the diagram, having the selvage along A B. Hem C D. Fold A and B, and C and D together.



Sew edges together, taking up one-half inch on each side in making the seam. This will make the opening at C D one and one-half inches wide after the bag is made. Tin pastry tubes may be bought ready made, or one could have some of different sizes made at a tinner's.



Photograph, Saunders, Melrose, Mass.

USE OF THE PASTRY TUBE



Walking

AN item in our London letter this week again calls attention to a form of exercise as healthful as, in this country, it is uncommon. Surgeon-Major Hinton, who enjoys the distinction of being the oldest member of the Royal College of Surgeons, in his ninety-fifth year is reported as "walking for pleasure five miles or more a day." How many Americans—physicians or laymen—of even one third the age of this veteran surgeon, walk half that distance daily?

In the country the buggy, in the city the ubiquitous street-car, and in both the ever-increasing number of automobiles, all operate to make us a nation of riders rather than of walkers. While within the past year walking has been taken up as a passing fad, pedestrianism as a recreation is practically unknown in this country. So much is this so that a man seen walking along a country road is mentally estimated as either a book

agent or a tramp—the estimate varying according to his general appearance.

Thus a vicious circle is established, and the thought of being considered eccentric operates to make walking unpopular. Yet from a hygienic standpoint there is probably no healthier or more invigorating form of exercise. The various ingenious substitutes in the form of calisthenics are, as is the case with all substitutes, a poor excuse for the real article. Horseback riding, which seems to be popular among a certain class, is probably equal to walking as a form of exercise. But horseback riding is possible only for the few, certainly not for the average city dweller. Walking is possible for all, and a brisk four- or five-mile walk, taken not as a duty but as a recreation, is a physical and mental tonic of no mean value. Did it cost money instead of involving effort, it would be more popular.—*Editorial, Jour. of the Amer. Med. Assn.*

Rabies Prevalent

RABIES is rapidly spreading in this country generally, and in New York State particularly. The question before us is, How can it be checked? As rabies spreads in civilized countries almost entirely by bites from rabid dogs, the problem narrows itself at once to the proper control of dogs. Some years ago rabies became so prevalent in Berlin that there was a case in man every day. The en-

forcement of what is known as the chain-and-muzzle ordinance promptly eliminated the disease. The ordinance consisted in not allowing a dog on the street unless it was muzzled, and led by a chain. With the steady and rapid increase in the amount of rabies, we must either submit to many deaths from it or eliminate the homeless dogs and take care of the others. This should be done

not only to protect our children and domesticated animals, such as cattle, horses, and swine, but also to protect our dogs. The kindest and most humane thing to do for our dogs is to protect them from this horrible and deadly disease. Just how the worthless and homeless dogs are to be exterminated, and what regulations shall be enforced concerning the care of other dogs, is not agreed upon. It seems, however, that a heavy tax, with proper restrictions as to the freedom of home dogs, will be the only method for eradicating rabies. Aus-

tralia has been kept from this disease by imposing a six months' quarantine on all dogs coming to the continent. Great Britain has practically eliminated rabies by the enforcement of a proper muzzle regulation. Berlin and Paris reduced it to a minimum by the chain-and-muzzle acts. Whether a better method can be devised for our State is an open question, and one which every lover of dogs should carefully consider. We can not afford the suffering imposed alike upon dogs and the human family by rabies.—*New York State Journal of Medicine.*

Vicious Reading for the Young

THERE is no class in the community whose moral and intellectual life ought to be more carefully guarded than the children; and it is in the hands of the children that we are placing these comic supplements. This is the material with which, in the most susceptible years, we are making their eyes familiar; this is the interpretation of life which in their most sensitive period we are constantly putting before them. To call the whole supplement business a vulgar mess is to characterize it with exactness. The root evil of America from the beginning has been lawlessness. There is nothing that American children need so much for their happiness and for the safety of the country as education in respect for law and au-

thority. Now, the chief function of the comic supplement, as evidenced by its pictures and its text, is to destroy all respect for law and authority. Its standard joke is the joke about the old man who either deceives the child or is deceived by him; it is the joke about the parent who is being hoodwinked, or the joke about the wife who is playing some sort of game on her husband. When children are introduced as figures, they are of the kind that one would expect to find on the stage of the most vulgar vaudeville. They are shapeless, inane caricatures; and their mischief is crude, cheap, and obvious. The *Outlook* regards this outrage on children as one of the greatest perils in the life of the country to-day.—*Outlook.*



Abstracts



IN this department, articles written for the profession, which contain matter of interest to LIFE AND HEALTH readers, are given in abbreviated form. Where practicable, the words of the author are given, but often the passage is abbreviated, or else paraphrased in popular language. Technical matters and portions of articles having no popular interest are omitted.

Lactic Acid as an Agent to Reduce Intestinal Putrefaction

METCHNIKOFF thinks that intestinal putrefaction is primarily due to the presence of the large intestine, and that premature old age is the result of accumulated waste products which remain for some time in the colon, subject to the action of putrefactive bacteria.

Herter agrees that premature old age is due to putrefaction caused by anaerobes [bacteria that work in the absence of oxygen]. The character of the food influences the intestinal bacteria, causing a difference not only in number, but also in kind. In infants fed exclusively on human milk, a certain germ [the so-called "friendly germ"] is present in large numbers, which produces too much acid for most bacteria to live in, and so affords protection against bacteria in general, especially against disease-producing and putrefactive germs, which thrive best in alkaline media.

In the intestines of infants fed on cow's milk, several species of anaerobe bacteria find suitable conditions for development. These bacteria break down proteins, producing substances which may become injurious to the system, especially if large amounts of protein [as on a meat diet] reach the colon.

Acids have been employed as remedies for intestinal putrefaction, but it

is difficult to administer them in sufficient amounts to serve the purpose without causing injury. Intestinal antiseptics are of doubtful efficacy.

Metchnikoff strongly advises the swallowing of lactic acid bacilli for the prevention of intestinal putrefaction. From remote times food has been preserved by the use of sour milk. Lactic acid bacilli have been used [in the treatment of intestinal disorders] by various authors, some claim with great success. The bacillus recommended by Metchnikoff (*B. Bulgaricus*) produces a large amount of lactic acid, more, in fact, than is pleasant to the taste. It also causes changes in the fat and casein that make a disagreeable taste. For this reason he advises that another germ (*Strept. lacticus*) be used in connection with his germ.

In order to produce lactic acid it is necessary to have carbohydrate [starch or sugar] present. We must remember that many bacteria are able to produce lactic acid from sugars, some species producing but small amounts, others larger amounts, and some produce other acids than lactic acid. Lactic acid up to one per cent in milk is pleasant, but if mixed with volatile acids, such as acetic acid, formic acid, etc., the taste becomes unpleasant. It is therefore of impor-

tance to select the kind of lactic acid bacillus with care. *Strept. lacticus*, the organism responsible for the ordinary souring of milk, produces about the right amount of palatability. In fact, milk which has reached the stage of extreme activity of this organism is eaten by many persons as a delicacy. When milk is solidified by this germ, it contains these germs in almost pure culture, and the acid present is almost pure lactic acid. If the milk is kept longer, molds decompose the casein, causing an alkaline reaction, and putrefactive germs begin to work.

Buttermilk may contain various degrees of acidity and fat. If from sweet cream, it contains very little acid. The amount of fat depends largely on the thoroughness of the churning. The souring previous to churning is either the natural process or is brought about by starters [cultures of germs, largely lactic acid, added to the milk to hasten the process, or to prevent the growth of germs giving bad flavors]. In the natural process *Strept. lacticus* is the usual agent producing acidity, but may fail to give good results if excessive numbers of other bacteria are present. If starters are used, unpleasant flavors are avoided, especially if commercial starters are used. These consist chiefly of cultures of *Strept. lacticus*, some being actually pure cultures. The cream may be Pasteurized previous to inoculation with these cultures, and thus the influence of foreign bacteria be avoided.

Buttermilk is therefore sour milk from which the fat has been partly removed. Churning may influence the taste and aroma somewhat. Much buttermilk is manufactured by inoculating separator milk or skimmed milk with starters, and churning after coagulation. During a recent investigation ordinary sour milk was tasted by a number of

persons who knew nothing of the origin, and they invariably declared that they were drinking first-class buttermilk. If milk is allowed to remain at room temperature for two or three days, then thoroughly shaken, a pleasant and wholesome beverage results, if proper care is taken to obtain a good grade of milk.

Our experiments have shown that if milk is Pasteurized or boiled, the cooked taste is not eliminated by the bacteria, especially if it is boiled. This is certainly a disadvantage. Pasteurization furnishes a more palatable product than boiling, but less palatable than raw milk. Since pathogenic bacteria [disease germs] are often found in milk, it may be safer to Pasteurize previous to inoculation; but as this also kills the lactic acid germs which happen to be present, it is then necessary to use artificial cultures ["starters"]. Pasteurized and boiled milk also contains spores of putrefactive bacteria, which, however, are suppressed if lactic acid bacteria are inoculated in sufficient numbers. On the whole, Pasteurization may be recommended unless the milk is produced under strict hygienic precautions.

[The author here details the results of a number of experiments with certain much-advertized proprietary preparations of "friendly germs," and summarizes his results as follows:]

The usefulness of lactic acid or lactic ferments as curative agents for intestinal putrefaction is still problematical. Much evidence in its favor has accumulated of late years, and it is to be desired that exact scientific investigations of a decisive character will be undertaken.

The evidence in favor of the use of *B. Bulgaricus* as a lactic-acid-producing organism for the purpose of arresting intestinal putrefaction is not convincing. The association of *Strept. lacticus* [the

common sour-milk germ] with the Bulgarian bacillus [the high-priced "friendly germ" of the laboratories] leaves doubt which one of the two organisms is the one responsible for the beneficial effects claimed. The Bulgarian bacillus produces a disagreeable taste in milk by decomposing some of the fat, and the addition of *Strept. lacticus* is universally practised to overcome this difficulty.

Assuming that the presence of free lactic acid in the digestive tract is beneficial, it has not been definitely shown that lactic acid is actually produced in considerable quantity by the presence of lactic acid bacteria in the intestines. The evidence is decidedly in favor of the introduction of sour milk, or pure cultures of lactic acid bacteria in connection with a diet in which milk is a prominent feature. Lactic-acid-forming bacteria are constantly present in the digestive tract, and we have no convincing evidence that the additional introduction of lactic acid bacteria is of benefit.

There is so far no convincing evidence that sour milk prepared with commercial cultures is preferable to naturally sour milk, so far as the therapeutic effect is concerned. It seems advisable, however, to boil or Pasteurize milk if good reliable "certified" milk is not obtainable; and if this is done, an artificial starter is necessary. For this purpose either one of the preparations above discussed may be used, or one of the commercial butter starters. In those countries where sour milk is generally used, the starter consists of a small amount of the previously prepared milk. This can be done with any other starter. A small amount of the prepared sour milk may be used for inoculation of the next lot after this has been boiled or Pasteurized.

Yahourth of the Bulgarians, kefir, koumiss, leben, and all the other fermented milk beverages contain alcohol-forming yeasts, although the amount produced is very small.—*P. G. Heine-
mann, M. D., Chicago, in Journal of the
Amer. Med. Assn.*

Food Intoxication in Infancy

DIGESTIVE disturbances are commonly accompanied by more or less serious nervous symptoms pointing to intoxication. The babies look as if under the influence of a drug. We have become so used to thinking these symptoms due to bacterial action that a simpler explanation has escaped us. Finklestein has the past year demonstrated that these disturbances are not due to absorption of bacterial toxins, but to faulty metabolism of the food.

Whoever sees one baby so profoundly intoxicated that death seems to be a matter of only a few hours, show within twenty-four hours marked improvement, and within forty-eight hours give

evidence of well-established convalescence, where no treatment has been used except to withhold food and freely administer water as a drink, is in a position to receive the idea of a food intoxication rather than a bacterial intoxication. The term "food intoxication" does not mean intoxication from sour or spoiled food. The most wholesome food under certain circumstances, if in excess of the baby's capacity, may act as a poison as certainly as any drug.

The child that has apparently thrived becomes fretful, less playful, does not care for the bottle, and has a little fever. Baby is not very sick, and no physician is consulted; then suddenly a change

comes over the baby who has been upset for a few days. He is unmistakably ill; and the doctor being called, finds a pale, listless baby, with general appearance of prostration, an anxious expression on its face, and appearing as if under the influence of a powerful drug. The baby refuses food, but takes water freely. The temperature may be 103° , the respiration fifty, the movements of the bowels frequent, sour, and irritating. If food is taken, the child commonly gets worse, and usually dies in collapse. The condition is one of the most common we meet with in infancy.

An intoxication is never a primary condition, but is always grafted on some other state. It most commonly accompanies digestive and infectious disturbances. Whenever the general condition of the organism has been reduced to a certain point, all that is necessary to bring on intoxication is food in slight excess. An absolute withholding of food will usually restore the young patient to health.

The discharges of these babies show that it is fat that is the disturbing factor. On top of the disorder in nutrition caused by giving too much fat there is an intoxication. If all food is withheld for a time, recovery is rapid and uninterrupted, though one adds, slowly, increasing amounts of food, provided caution is exercised in the use of cream. It is a matter of common experience that these patients for a long time can not tolerate cream or whole milk except in very small amounts, and yet they will stand fat-free milk almost from the start.

Sugar is often more liable to bring on intoxication, and is second only to fat in its tendency to produce relapse. In fact, sugar is probably the cause of the intoxication, and fat, of the previous digestive disturbances.

Babies fed on condensed milk and malted milk—that is, the sugar foods—are prone to these gastrointestinal disturbances. Many of these babies show these disturbances regularly whenever a certain amount of food is exceeded. Sugar will bring on relapse almost as certainly as fats.

The casein, for many years supposed to be the disturber in infant feeding, is now known to be not hard to digest, and will not bring on a relapse. The important step in the treatment is to withhold all food for a sufficient period of time. This will produce a normal temperature and absence of toxic symptoms within twenty-four hours in the milder cases. *Give water freely. With plenty of water alone, the child can live for many days.*

If at the end of twenty-four or forty-eight hours, the temperature is normal, the eye clear, the stools greenish-brown, and rather slimy looking (characteristic of hunger), we can give small quantities of fat-free food—for instance, a small amount of skimmed milk in barley water. The more completely fat-free the milk is, the surer the result. When the fat-free diet is used for a day or two, we can safely add a small amount of sugar, and gradually increase to the amount the child should have when in health.

Only after days, weeks, or months can we safely begin to substitute whole milk for fat-free milk.

Drugs occupy a very minor place in the treatment. It is doubtful if the preliminary cathartic has much value except in constipated cases.

If at any time there is a relapse because of too rapid increase in food, go back to the hunger diet again; the less one compromises with the procedure, the better.

Is there any way of recognizing and

preventing an intoxication? An intoxication is always preceded by warning symptoms that are usually easy to recognize—fretfulness, failure to gain in weight, bowel signs of indigestion, variable temperature. Mothers learning the significance of these signs, can prevent an intoxication by lessening the food.

In any case it is unwise to use foods rich in fat, such as cream mixtures. Even in babies fed with mother's milk, it is sometimes a fact that the baby does better if the cream is first removed by means of a separator.—*Joseph Brenne- man, M. D., Asst. Professor of Pediatrics, Northwestern Medical School.*

Relation of Mouth Infection to Abdominal Disease

SINCE my connection with the out-patients' departments of this hospital, my attention has been called again and again to the great influence exercised over the entire organism by the condition of the mouth. Good health is a matter of sheer impossibility in many cases, owing to the neglected state of the mouth. There is no more urgent need than for institutions where the poor can get their teeth repaired at a cost within their means. The duty of caring for the teeth should be a part of the routine instruction in all elementary schools.

A lady was operated on for appendicitis. The appendix was distended with pus. The patient made a complete recovery. Three weeks later she became grievously ill, with a temperature of 102° and 103°. After it was determined that the inflammation was not due to the old trouble, her teeth were examined. Several were found decayed and in a bad condition. It was dentistry she needed. After removal of the infected teeth, the temperature fell to normal, and the recovery was complete. Is it not reasonable to suppose that the appendicitis was in some way the result of the infected teeth, by means of swallowed infectious material? To me, it appears probable that if there had been no bad teeth, there would have been no appendix abscess.

In the case of another operation for appendicitis, all went well until the fourth

day, when the parotid gland inflamed, forming a deep abscess. The temperature arose to 103°-104°. There was no trouble in the abdomen. Before the operation I had neglected to examine the teeth. To all appearances the patient had a beautiful set, and the whiteness and evenness of those in front contributed in no small measure to her good looks. But I found to my chagrin seven molars with cavities which had, evidently, infected the parotid gland. It is curious to note that appendicitis in this case followed an infected mouth.

I can not help thinking that the great prevalence of appendicitis bears a very definite relationship to the prevalence of decayed teeth.

My experience is that dyspepsia, gastritis, enteritis, when chronic, are closely connected with, or probably due to, faulty dental conditions. If teeth are absent, mastication can not be performed; so digestive ferments can not properly work. If there is mouth infection, then toxemia may follow. It is better to have no teeth than infected teeth, and toothless patients are generally in a better physical condition than those with infected mouths.

If the mouths and the teeth of the population were kept in a healthy state, we should seldom hear of gastric or duodenal ulcers, dyspepsia, malnutrition, and appendicitis.—*Selected.*

Poisoning by Egg

A CHILD aged twelve months developed severe poison symptoms when a raw egg yolk was added to its bottle of milk. These symptoms, consisting of pallor, nausea, cyanosis [blue lips and finger-nails, etc.], contracted pupils, severe vomiting, prostration, muscular weakness, weak pulse and heart action, lasted five or six hours, and were followed by diarrhea. A few weeks later the use of the whole egg produced similar symptoms. The white, however, caused no such disturbance. On another occasion the cooked yolk made the child ill. After the fifth year the child was gradually trained to tolerate eggs nearly as well as an older person.

Such idiosyncrasy is not uncommon, and cases of egg poisoning are reported from time to time. Individual susceptibility as regards egg is extremely variable. With some the egg always acts as a poison; with others the poisonous effect is variable, being more potent at certain times than at others. In some cases the method of preparation may determine whether or not the egg will be tolerated. In my case, it was the yolk that caused disturbance, but in many cases it is the white.

The symptoms of egg poisoning differ very greatly in degree, sometimes only

headache and nausea being manifest; in other cases there may be the most violent symptoms. In some cases we have the symptom complex commonly known as biliousness, which is, after all, simply a form of autointoxication.

As the symptoms of egg poisoning are essentially those of so-called ptomain poisoning, we may assume that they are due to the action of putrefactive alkaloids, such as develop in cheese, milk, fish, shell-fish, and meats.

It is true that the eggs in these cases are apparently fresh, but it should be remembered that the shell is porous, and admits micro-organisms, which cause the egg to rot; and that though an egg may appear fresh, it may contain bacteria that in susceptible persons under certain conditions of digestion may cause poisoning.

Dr. Hutchinson suggests that with some persons the action of the digestive juice on eggs produces poisons. One fact is significant; namely, that eggs, milk, fish, shell-fish, etc.,—the dietary articles with which individual susceptibility is most frequently associated,—are the very ones susceptible to changes from overkeeping.—*Dr. D. J. M. Miller, Visiting Physician to the Children's Hospital of Philadelphia, in Medical Record.*



THE MEDICAL FORUM



Proprietary "Friendly Germs"—Are They of Real Value?

WE give, in this issue an abstract from an article which shows the results of an investigation which seems to prove conclusively that the claim of certain proprietors that the Bulgarian bacillus is superior to the common sour-milk germ in the prevention of intestinal troubles is extremely doubtful. In the same number of the *Journal of the American Medical Association*, in its Department of Pharmacology (Jan. 30, 1909, page 397), this statement is made:—

"The present interest in what may be called the 'sour-milk therapy' in intestinal putrefaction makes the article by P. G. Heinemann in this issue a timely one. While much of the work done on the subject seems to show that lactic acid or lactic ferments possess value in cases of intestinal putrefaction, the question has in no sense been settled. Still less has it been proved that the *bacillus Bulgaricus*, as a lactic-acid producing organism, possesses the advantages in arresting putrefaction which Metchnikoff originally claimed for it." "Heinemann's experiments show that the claims made for the various preparations on the market for the artificial souring of milk, are not justified in the light of our present knowledge of the subject. The question is not whether lactic acid, lactic-acid bacteria, buttermilk, or sour milk has any therapeutic value, but, admitting that it has, whether sour milk prepared with commercial cultures possesses any therapeutic advantages over milk naturally soured. The evidence at hand fails to give the artificially soured product any such pre-eminence."

Various proprietary preparations are discussed. Here is a sample:—

"Y—t contains a variety of bacteria, and at least one species of yeast, so that the composition of the fermented product is very similar to that of the others. The term 'meat bacteria' is used in the advertising pamphlet, though what is meant is not altogether clear, since non-sporing bacteria are killed if meat is thoroughly cooked. The Y—t tablets are called an 'antitoxic ferment'—whatever that may be. The bowels must be kept active, otherwise C—x, a 'patent medicine,' must be used. The number of diseases cured by milk prepared by the Y—t tablets is enormous. An elaborate list of symptoms is given, some of which may easily be imagined by the anxious layman. In fact, the descriptive matter regarding Y—t reads very much like a Lydia Pinkham advertisement."

This is a hard accusation to bring against an institution that is making vociferous claims that it is working in strictly ethical lines.



Lactacid Milk for Children

DR. KERR, professor of diseases of children, Brooklyn Post-Graduate Medical School, gives in *Pediatrics* for January, a report of ninety-six cases of feeding children with lactacid milk produced by using one of the proprietary tablets of lactic acid germs.

The doctor makes a marked distinction between "buttermilk feeding" and "lactacid milk feeding," and states that "buttermilk is always an uncertain expedient, and its continued use is not always feasible." He finds lactacid milk.

if made with care from perfectly fresh and clean milk, to have a distinct advantage over buttermilk. The percentage of fat can be regulated, and the danger of germ infection avoided.

The doctor concludes, regarding the value of lactacid milk, that—

“it has a very definite value in difficult feeding cases when the various modifications of milk are not well borne, and particularly if there is diarrhea as an accompaniment.”

“If the diarrhea is fermentative, the use

of the milk causes an almost immediate beneficial result.”

“In the eliminative diarrhea which so often accompanies the general diseases, and particularly the acute infectious diseases, it has a decided effect upon the severity of the diarrhea, and also upon the nutrition of the patient.

“In chronic diseases it offers enough relief to warrant its extended trial. There seems to be no age at which its effect is more marked than at another, the youngest infant and the oldest child being influenced alike by its administration in proper proportions.”

What Is Success?

SUCH is the question naturally raised in reading the editorial article in a recent number of the *Medical Record*, which discusses a lecture on the psychology of success, by the British alienist, Dr. Clyde Shaw.

Dr. Shaw understands, by success, the achievement of fame and fortune, and, according to the *Record*, he—

“seems to be in favor of the view that so generally prevails—succeed honestly if possible, but at any rate succeed.”

This view of the cost of success is not attractive to the *Record*.

“This is not a pleasant conception of the mental and moral make-up of the successful man.”

But it is evidently a fairly faithful conception of his make-up, according to Dr. Clyde Shaw, for the *Record* continues—

“It is acknowledged, he said, that some of the most important parts of the mental content that make for success are cruelty, sacrifice of others, and deceit. Dr. Shaw

thinks that this can not be avoided, and that a strong man is generally a ruthless man who tramples his way to the goal of his endeavor. Although every one professes to admire virtue, charity, and courtesy to others, these very qualities are often the outward visible signs of incapacity. Again, some individuals are constitutionally and by temperament virtuous; that is to say, they have no temptation to err, and such are not the successful ones.”

But what is *such* success worth when it is attained? It could not be satisfying to any person morally endowed. It can only remind one of the ethics of the poultry yard, where might, and quickness, and the determination to look out for number one are the essentials.

How much has humanity—“successful” humanity—risen above the brute? And many of the unsuccessful are so, not because of any moral scruples, but because of incapacity.

It is comforting, however, to believe that there are not a few who want no such success at any price.



The Medical Missionary At Work



From Washington, D. C., to Mussoorie, India

Edith Bruce

HAVING now been in India some little time, and taken up the duties of matron in the sanitarium, about the same as I had in Washington, D. C., I will give a description of the journey and a few experiences since reaching this field.

After leaving England, I had a variety of experiences, pleasant and otherwise. From London I went to Marseilles, France, where I took the "Arabia" for Bombay. I found, to my dismay, when I reached Marseilles, that my baggage had not arrived, and so the only thing left for me to do was to leave my keys with an agent there, and make the voyage the best I could without my baggage, which was very inconvenient, to say the least. But I met some very kind English ladies, and I got through better than one would imagine it possible to do under the circumstances.

On the Mediterranean it was very pleasant indeed. The weather was beautiful, and the sea was as smooth as a mill-pond. It was extremely warm going through the Isthmus of Suez and the Red Sea.

I had an opportunity of doing real missionary work on the boat, in caring for a child who the physician said he thought would have to be buried at sea. I gave him treatment, and he came out all right. I also had many precious opportunities of presenting the words of truth to several of the passengers.

We reached Aden in time to get the effect of the monsoons. Our boat tossed and rolled. With many others, I was ill the last few days. During that time my watch was stolen, and I was never able to recover it. But on the whole, I had a good voyage, and was of the best of courage all the way. When I first went on the boat after leaving my baggage in France, I took out my Bible, and let it open where it would, as I often do for a word of comfort under some trial. These are the words that my eyes rested upon: "When thou passest through the waters, I will be with thee; and through the rivers, they shall not overflow thee." Isa. 43:2. That was a great comfort to me, and it was truly verified in my experience.

At Bombay Brother and Sister Enoch came to meet me. And as I had to wait a week for the arrival of my baggage, I went home with them to Satara. I found them very comfortably located, and busy with the language. Brother Enoch is making rapid progress in this study. Satara is a pretty place, in a good section of the country, two hundred miles north of Bombay. My baggage arrived on the next steamer from France, and I proceeded to Mussoorie, a distance of twelve hundred miles. I had the privilege of stopping a night and day at Brother and Sister Miller's in Lucknow, where a business meeting was being held. The weather was quite

warm on the plains, but it has been very cool in the hills, and has rained every day since I have been here — not gentle little showers, either; but it has just come down in torrents sometimes. The natural scenery of Mussoorie is beautiful. One has to see it to appreciate it. The sanitarium is seven thousand feet above the sea-level, located in a very healthful place. It is certainly an ideal spot for a sanitarium. I was happy to see how the Lord had blessed in the efforts that had been put forth here along the medical line, but sad to see the great disadvantages under which our people have been obliged to work. The Mussoorie Sanitarium is the only institution in this great country to give the gospel of health to these millions; and to think that work must be so ham-



"All the water that we have to use for bath treatments, cooking, or drinking, is carried up the steep, rocky hills, on the backs of men, in goat-skin bags."

pered for the want of a little means seems too bad. This sanitarium is only a twelve-room house, and one of these rooms is the front porch, which is made into a reception room, and one corner of this is screened off for the nose and throat apparatus. Two of the nurses room in the bath-room, and I am located in a little sheet-iron house ten by twelve feet, at present having no windows or doors, and only a rough floor loosely laid. I am in hopes that some day I may have windows and a door put in.

All the water that we have to use for bath treatments, cooking, or drinking, is carried up the steep, rocky hills, on the backs of men, in goat-skin bags. The water for treatment is heated in a small tank over a kettle of coals. We have no cook-stove, but are obliged to do our cooking in the old-fashioned way, in a brick fireplace, and a sheet-iron oven, which must have coals on the top and bottom to heat it.

These are only a few of the inconveniences that we have to put up with. In spite of all these things, we are doing a good work, and I believe that many souls will be saved through the efforts of the sanitarium workers. Three influential persons have accepted the gospel message in the sanitarium.

We are very much in need of apparatus for

treatments. Electrical treatments are much in demand, but for the lack of a little means, we have not been able to get the necessary appliances. How many times I have wished, since I have been here, that our brethren and sisters in the home land could just take a peep at this work here, and see the sacrifices that the workers are making, and the great needs of the field. I am sure that they would be glad to contribute a little to help us get a start. I believe that the work here has been

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The New England Sanitarium

M. Estella Houser, M. D.

[The writer of the following article, for several years was connected with our general Mission Board office, as home secretary and as editor of this department of LIFE AND HEALTH. With the view of going to a foreign field as a medical missionary, she took the medical course; but, on account of health, it seemed advisable that she connect with one of our home sanitariums. The New England Sanitarium is indeed fortunate to secure the services of Miss Houser, and we are pleased to be able to present our readers with a description of this beautifully located sanitarium, from her pen. We are also encouraged that from this institution some strong workers will come forth trained for service in the mission field, and thus, although Miss Houser herself can not go at present, in the persons of those whom she may help to train she may yet accomplish, through her influence and work here at home, much for the great needy mission fields beyond.—Ep.]

FOR a long time I have been interested in the work of the New England Sanitarium. When I found that I could not carry out my long-cherished plan to go to one of our more needy mission fields, after spending some time in the sanitarium at College View, Neb., I naturally counted it a privilege to be connected with the workers here.

In many ways the region all around the New England Sanitarium is interesting and inviting, even fascinating. In the great city of Boston, near by, are thousands of persons who can probably be reached with the gospel for this time in no other way than through the sanitarium and its methods of combating disease. And now when men are turning from drugs to the more rational treatment of diseases, they naturally turn to us.

An editorial in the April number of the *Ladies' Home Journal* shows that the public is beginning to have its eyes opened. I will quote a few sentences, as those who have not read it will be interested: "Out of all the psychic and non-medical movements that are to-day taking such a strong hold on the public, one great and vital truth is coming to the front: that the day of drugging the sick, as we have known it, is over. . . . In other words, the day of non-medic-

inal measures is at hand, and at last the natural body is to be given a chance." Comparing non-medicinal measures with the old-time methods, the editor continues: "Generous amounts of water, a vegetarian diet, regular habits, exercise, and massage are infinitely better, and indeed the natural and only means of cure." He adds, "A few advanced physicians have used these methods for years."

With such an awakening among people of intelligence,—and it must sooner or later reach the masses,—it is truly a privilege to be prepared to help them when they come to us.

The New England Sanitarium is completely equipped to do this work. Although not extravagantly furnished, every department is supplied with the best appliances for doing thorough work. The location is ideal; we are in the midst of the beauty of a wilderness of woodlands, so completely isolated from the rush and hurry of the world outside that one can scarcely realize that such a world exists, and yet within easy access of a city of six hundred thousand inhabitants, with all its interest and advantages.

The rooms in the sanitarium are neatly and artistically furnished. The dining-rooms, the bath-rooms, and the gymnasium are inviting. A feeling of

rest and quiet pervades the house. All these conditions must aid in bringing the sick back to health.

But none of these things impressed me so much as the spirit that seemed to possess the helpers. Arriving late Thursday evening, and with the extra work that marks Friday in a sanitarium, I saw very few of the workers until they gathered for their regular Sabbath-evening prayer and praise service. The spirit of devotion, of love for the truth, of giving up all that some might be won to the better way, impressed me.

I meet here the daughter whose parents gave their lives for the cause of present truth in India; a young woman

whose two brothers are faithful workers in China; representatives from the West Indies; young people ready to go to the needier fields beyond when their preparation is completed, and others can take their places here. Such workers must be a success; and a sanitarium manned with such help can not fail to fulfil its mission,—to give the gospel of healing and salvation to those who come into its haven for health, physical and spiritual,—and at the same time, to train missionaries to carry this same gospel to the millions in the regions beyond who sit in darkness and the shadow of death. I am glad to unite with the workers at this place.

From Washington, D. C., to Mussoorie, India

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started in the right way. The sanitarium is small and very plain; but Dr. Menkel has kept up expenses, and has combined the spiritual with the medical work. I know how many calls there are for money; but just a little now would put us on our feet, so that we would not only be self-supporting, but would be a financial help to the cause here in India. We are paying running expenses now, which is excellent for the first season, and a little help would do much to advance the work.

I have begun to study Urdu. I do not have much time, but hope to make some progress. I have native servants

to deal with, so am obliged to learn something of it. My health is very good; and, though I love my home land and friends dearly, I am thankful every day that the way was opened for me to come to this needy field to do the little that I can to help. When we look at the millions of people who know not of Christ, it seems a tremendous proposition, with the little handful of workers. But I realize that it is "not by might, nor by power," and that when God's people have "a mind to work," as had the children of Israel, much can be accomplished in a short time; for the Lord will be their helper.





Unsigned articles are by the editor

The Medical Practise Acts

THERE is a need for medical practise acts. There is a real benefit conferred upon the community by the proper administration of wise medical practise laws. It is proper, in the same sense that the government attempts to protect the people from imposition in the matter of food, that it should protect against medical impostures. Much that has been said against the medical profession, as a so-called medical trust, is the outburst of irresponsible fanatics.

This much is granted. But there is another side. There is a nurturing of medical legislation—a securing of stringent laws obtained “by skilled medical aid” that bodes no good for the future of this country.

In New York none but properly qualified physicians are permitted to practise medicine. That seems innocent enough; but what is it to “practise medicine”? Here is the definition practically as it now stands on the New York statute-books, and exactly as the president of the Medical Society of Pennsylvania would have it stand on the statute-books of his State:—

“A person practises medicine within the meaning of this act who holds himself or herself out as being able to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition, and who shall either offer or undertake, *whether with or without drugs or medicines, and whether with or without fee therefor, by*

any means or method, to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition.” I have italicized a few significant words.

And no one who is not a qualified physician has a right to practise medicine in the above sense. The law is iniquitous! But perhaps I would do better to allow the reader to judge for himself.

Any one is practising medicine who treats pain by any means whatsoever, or who prescribes for injury. A mother who rubs her child's bump and stops his crying is guilty of practising medicine, according to the act; so is a kind neighbor who fomenta a lame back, pulls out a sliver, or bandages a cut finger, or a friend who advises a consumptive to sleep outdoors and live on milk and eggs. Such treatment and advice, being medical practise, is unlawful in New York, even when performed without pay, and would be in Pennsylvania if this representative physician had his way.

Anyway, why should not such presumptuous persons pay a fine? What business has a mother to rub her child's head and rob a doctor around the corner of a fat fee? What right has a busybody to use a fomentation cloth for the relief of pain, pull out a sliver, or do up a cut finger, and thus rob yonder medic's children of their daily bread? Wherein is there any justice in allowing any one to say “fresh air, milk, and

eggs," to his tubercular neighbor, when there are hungry doctors who are anxious to say it?

The only prescription which the law should recognize is, "If you have a pain in your toe, call on Dr. Kill'em!"

Now the result of such absurd laws will be a declaration of independence

by every right-minded person. Man has certain natural rights of which legislative bodies can not justly deprive him. This law plainly aims to curtail these rights. I know one person, at least, who will relieve pain and distress when he has the opportunity, LAW OR NO LAW!

The Vivisection Question Again

GREVILLE MACDONALD last year wrote a letter to the *London Times*, in which he said, of the friends and opponents of animal experiment, that both classes "are honest, both something learned in the subject, and neither altogether scrupulous in their arguments."

Perhaps he could not have stated it better. In any controversy in which men differ there is the same tendency (perhaps unconscious) of both sides to sift evidence, to suppress certain facts, and to give others undue importance. Each party to the controversy has a mind which automatically marshals the facts so they tell his side of the story. That is largely what makes differences in belief. Our early training, our interests, etc., prevent our looking at facts with glasses that are uncolored.

I have before me a tract written to prove that animal experiment tends to encourage the use of helpless human beings for the purpose of experimentation.

A famous British physician is stated to have said that the outcome of vivisection would be experimentation of human living beings, and the statement is quoted, "For already we hear prominent practitioners in both America and England advocating killing people who are hopelessly affected."

I was present at a meeting where a

famous physician made the statement that he "favored the use of morphin when a tuberculosis patient was near his end and suffering, in order to ease the pain, and let the patient die easy." A prominent paper published, with sensational head-lines, that this physician favored killing hopeless consumptives with morphin. This statement was copied far and wide in Europe and America. The paper was afterward compelled to retract the statement, and to pay heavy damages, which sum was turned over into the fund for the relief of tuberculosis; but did the papers that copied the libeling article retract their statements?

It is very easy to start such reports, and it is most natural for one unfavorable to animal experiment to make use of such reports, as in the preceding quotation. I have no doubt but that these people are honest at heart. There is, perhaps, a tendency on the part of those favoring animal experiment to suppress the worst features of it. There are extremes on both sides of this question.

It would seem that in the matter of animal experiment there are certain points on which all reasonable men might agree:—

First, that there accrues to man an untold benefit as a result of animal experiment.

Second, that the prohibition or undue

restriction of animal experiment could not but work disaster to scientific medical progress.

Third, that some men have at times been guilty of undue and wanton cruelty

in the name of animal experiment.

Fourth, that any means which could prevent unnecessary cruelty without interfering with legitimate work would be most desirable.

An International Opium Conference

IN response to a call by the United States, twelve nations sent representatives to attend a conference held in Shanghai, February 1, to discuss the question of international action looking toward the limitation and final suppression of the opium traffic.

England, whose connection with the dark story of China's degradation by opium forced on her at the point of the bayonet is a part of modern history, was as earnest as any of the countries represented, in its purpose to help undo the wrong that has been inflicted on a helpless nation.

The conference dealt with the opium trade not only as a national, but as an international menace, and the resolutions

adopted look to a limitation of the traffic in this narcotic. For instance, it was recommended that every country should, as far as possible, prohibit the shipment of opium to any country which forbids its entry; that each country should apply its own pharmacy laws to its own citizens residing in China; that each government should take measures to suppress opium smoking in its own territory and dependencies.

It was also recommended that governments having concessions in China should suppress opium smoking and opium trade in these concessions, and that all governments should at once take drastic measures to suppress the spread of the morphin habit.

Study of Drug Narcotics

THE American Society for the Study of Alcohol and Other Drug Narcotics, held a meeting in the parlors of the Hotel Raleigh, Washington, D. C., March 17-19, 1909, which was, probably, the most important meeting ever held by that body. Heretofore the society has held its meetings in conjunction with those of the American Medical Association. On this occasion there was nothing to divert the attention. Many excellent papers were read, and the interest manifested in the discussion of the various topics was gratifying.

The papers presented were from men qualified to speak with authority, and they constitute an important addition to the literature of the subject. In future issues, we will give at least the substance of a number of these papers.

Leaders of the temperance movement have sometimes been accused of making use of unwarranted statements in the presentation of their cause. It is the purpose of this body of men to avoid one-sided and unscientific statements, and to study critically and impartially every phase of the problem, and to give

to the public the latest pronouncements of science on the subject of drug narcotics.

One important testimony voiced by several of the speakers was that the drug habits are one — that tobacco and alcohol act together with other narcotics to produce a more abject slavery to the drug habit; that tea, coffee, and flesh-meats have an observable influence in this direction; and that the only certain way to overcome one of these habits is to abandon all. A number of speakers emphasized the pernicious effect of tobacco on those addicted to the liquor habit.

Dr. T. A. Williams, of Washington, showed how early training — or rather, lack of early training — often results in a condition characterized by want of

nervous balance, a condition favoring the establishment of the drug habit.

Dr. W. P. Spratling, of Baltimore, testified of the influence of alcohol in the production of certain forms of epilepsy.

Prof. Howard A. Kelly, of Baltimore, in his paper, "The Alcohol Problem in Every-Day Life," and Dr. G. O. Webster, in his paper, "Alcohol and Public Health," touched forcibly the sociological side of the problem.

Dr. H. J. Achard, of Asheville, N. C., showed the potent influence of alcohol in the production of a hereditary predisposition to tuberculosis.

The paper by Dr. D. H. Kress, showing how a wrong dietary may pave the way for the formation of drug habits, was well received by the society.

Thirteen

NOW we are sure of it. This is why: Thirteen sailors at the Mare Island Navy Yard (note the number) discovered a can of rubber lineoleum cement dissolved in wood-alcohol. They were thirsty. They knew the joys of a good milk punch. By some means they precipitated the rubber, leaving the alcohol comparatively clear. Adding milk and sugar, they had a delectable beverage. Some of them noticed with misgivings

that there were thirteen in the company; but fate was against them, and not desiring to cut down their allowance, they did not invite a fourteenth to join their number; and in consequence, within two hours, three of them were dead, and several others were not expected to live.

The lesson to learn is that if men are going to drink wood-alcohol punch, they should be certain that the number of their company is not thirteen.

Sea Water in Tuberculosis and Other Diseases

A CORRESPONDENT with the *Journal of the American Medical Association*, E. C. Dalton, of Alaska, recommends sea water as an efficient remedy in tuberculosis, anemia, chlorosis, and dyspepsia. He notes in tuberculosis a remarkable gain in weight, one patient gaining thirty-five pounds in three months, another gaining sixteen pounds

in one month, and after the first quart of water, ceasing to have night sweats. He has treated twelve patients, all of whom retain their weight, and are apparently well.

He has his patients take from one to three pints of sea water a day, undiluted. He finds that when carbonated, it is more agreeable, and fully as efficient; but the

plain water is relished after a few trials.

If the supply of this remedy could be "cornered" by some concern aching for dollars, it would be exploited to the ends

of the earth, and the marvelous cures would be heralded to the stars. But plain sea water! It's too cheap, too easily obtained, to be worth pushing.

Home Treatment and Education of the Tuberculosis Patient

(Continued from page 334)

trade, although he carries on his work under the supervision of the nurse. All the class patients have made most satisfactory progress under this specialized treatment, and have demonstrated that cures may be effected in the homes of the patients.

Home treatment has two advantages over sending patients away to institutions: First, the patient is cured in the environment where he will continue to live, and after he recovers, he will be much more likely to continue in the ob-

servance of the regulations which effected his cure; and thus the danger of a relapse is much lessened; second, the educational effect upon the immediate neighborhood of his home is most valuable. People learn quickly from an object-lesson. The neighbors who at first scoffed at the tent or the sleeping-porch, and predicted an early death from such rashness, learn to appreciate the value of fresh air and the other simple methods of treatment when the patient improves and is cured under their eyes.

Garden Reveries

(Continued from page 328)

— an ambition which I later outgrew. Like a "specialist" who is operating in that same region of northern Wisconsin to-day, I had only one remedy for all diseases. My remedy was sand and water. Later-day scientists have adopted the water portion of this therapy, and have called it "hydrotherapy." You have heard about it. I still cling to the sand. And somehow or other, I am quite firmly settled in the belief that with plenty of sand, of both the external and internal varieties, one can usually ward off all the need of either hydrotherapy, homeopathy, or tombstones quite effectually.

I find it easier to work the garden at this time of year than to write about it. It seems natural to tramp over the freshly turned ground, raking it smooth, and sowing rows of seeds. It is natural to be out in the yard or among the berry bushes, cleaning out the debris, pruning the shrubs, or spraying the trees. It is not natural to sit here trying to write about it while the work remains undone. I am not satisfied with what I have said, nor with the way I have said it. The subject deserves better treatment. But it will have to wait till next month to get it — I must get back to the garden.

Chats with our Readers

An Unsolicited Testimonial

We occasionally have a magazine returned to us. The other day one came back, of which we are so proud that we have had it reproduced in miniature for the benefit of our readers.

It tells its own story. One of our agents evidently sold a copy to a man who believes in the saloon. We are glad to be classed with the enemies of the saloon, but we are not a "by-product" of the Anti-Saloon League; for we were bearing a message against alcohol and the saloon before the Anti-Saloon League came into existence.

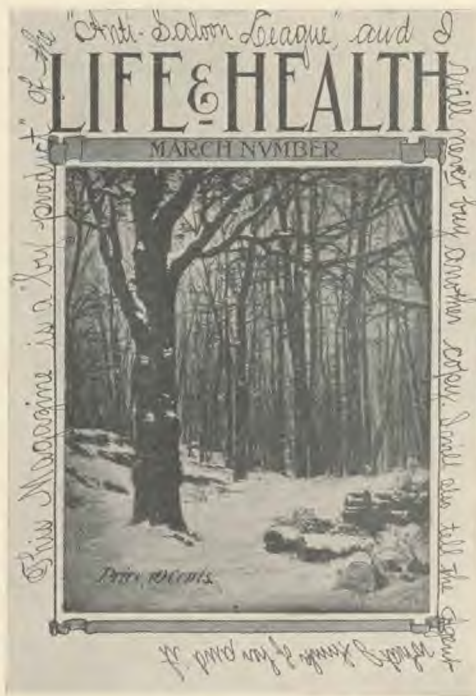
It is a noteworthy fact that this champion of the saloon did not think it worth while to sign his name. Incidentally he violated the federal law, in writing on a package mailed as printed matter. But per-

haps that is in keeping with the spirit of the business that thrives on widows' tears.

It may be stated as a certainty that if our critic has a wife, the mother of growing boys, she has no sympathy with her husband's pro-saloon proclivities. She knows too well the menace to her family of the corner groggery.

We would like to state that our enmity is not for the saloon-keeper, but for his business. many of these men, under proper surroundings, would gladly give up the business which, they know too well, proves the ruin of thousands of young men. But, like many others, they "have to make a

living," and see no way to get into something more honorable and useful, and they yield weakly to the temptation.





International Congress on Hygiene.—An international congress on hygiene and dermatography has been called to meet in Washington, D. C., Sept. 26 to Oct. 1, 1910, under supervision of the United States Department of State.

What Is Sausage?—One court, in a decision, defined sausage as "a skin with anything inside of it." The definition is quite comprehensive, but nothing more specific would include everything which has been sold as sausage.

Fake Opium Cures.—An investigation is in progress at the Bureau of Chemistry, of a number of so-called cures, which prove to be preparations of opium or some worse drug. They can only lead to still greater degradation of the victim.

A New Cure for Tuberculosis.—Dr. Mays, of Philadelphia, in a recent paper gives the history of a number of cases showing that rattlesnake venom has a remarkable influence in arresting tuberculosis and other diseases of the chest.

Opium Importation Regulated by Law.—On April 1, the congressional act prohibiting opium importation except for medicinal purposes went into effect, and stringent rules for its enforcement have been issued by the Treasury Department.

Inflammations.—Epsom salts (magnesium sulphate) is successfully used not only in the control of erysipelas, but in many other inflammations. A wet compress of the solution applied in ivy or oak poisoning has been followed with excellent results.

The North Carolina Liquor Decision.—In the federal court it has been ruled that the purchaser of liquors is equally guilty with the seller. It is evident that down in that State they intend to see that prohibition prohibits. The law forbids the sale of liquor, except for medical purposes on medical prescriptions; and in many of the counties the antiliquor sentiment is so strong that the druggists have not felt free to take out licenses to handle liquor even for medicinal purposes.

State Dispensary Work.—In the one hundred six State dispensaries of Pennsylvania, more than ten thousand tuberculosis patients were treated last year, and six thousand are now under treatment.

Outdoor Sleeping for Asthma.—Jackson says in the *Australian Medical Gazette*, that he has excellent results in his asthmatic cases by having them sleep outdoors on the veranda. He does not have as good results when they sleep in the room with doors and windows open.

Sour Milk for Typhoid Carriers.—One physician, who has had no success in curing typhoid carriers by removal of the gall-bladder, has had good success by the administration of sour milk, soured by Metchnikoff's Bulgarian bacillus, and he urges other physicians to try sour milk on their bacillus carriers.

Good Roads Congress.—The mayor of Baltimore, and the various trade and commercial organizations, have joined in extending an invitation to the National Good Roads Congress to hold its second National Good Roads convention in the McCoy Hall, Johns Hopkins University, Baltimore, May 18-21, and in the New Willard Hotel, Washington, D. C., May 22, 1909.

Progress in the Medical Sciences.—It has been demonstrated that arteries which have been kept for several weeks outside of the body may be transplanted; that both kidneys may be transplanted from one animal to another, and do good service for several weeks at least; and that a leg amputated from one dog may be made to grow on the amputated stump of another dog, healing normally.

Diphtheria Spread by School-Books.—Not long since, in the Raynham district in England, an outbreak in a school was traced to some school-books that had not been disinfected after an epidemic of diphtheria about six months before. This time the books in use in the school where the disease originated were destroyed, and the premises were thoroughly disinfected and sprayed.

Ohio Medical Men Discard Liquor.—A resolution was recently adopted unanimously by the Union County Medical Society in which the members agreed to write no prescriptions for whisky except at the bedside of patients, and then only when absolutely indicated.

To Fight Sale of Cocain.—It is known that many New York physicians buy cocaine for the purpose of selling it to victims of the habit; but, because of lack of funds, the board of health is powerless to bring the offenders to terms. An appeal has been made to the Woman's Municipal League for money for this purpose.

Movement to Prevent Blindness.—There is a wide-spread movement on the part of prominent physicians, by education, by personal work with midwives, and by the free distribution of preventive eye-drops, to eliminate the unnecessary and disgraceful condition of children coming into the world blind—unnecessarily blind—owing to the ignorance or neglect of those who ought to know better.

Bleached Flour Dangerous.—Recent United States government investigations prove that the bleaching process in use by some millers to make flour white is exceedingly dangerous. Extracts from the bleached flours killed rabbits in a few hours. Extracts from unbleached flours proved harmless to rabbits. The Department of Agriculture has declared such flour an adulterated product.

Frequency of Tuberculosis.—Of 1,100 bodies examined post-mortem, the infants under one week were free from tuberculosis. Under one year it was rare, but increased rapidly with the age. Between six and fifteen years nearly two thirds of the children were affected. Of adults fifty-eight per cent were tuberculous, the highest percentage being between the ages of sixteen and thirty. More than one half of the bodies (omitting the infants) were tuberculous, though only about one sixth died of the disease.

Posture for Tuberculosis Patients.—Dr. Wise, in the London *Lancet*, recommends a position which is said to give marked aid to patients who have a copious sputum which they raise with difficulty. The patient lies face downward on a bamboo or wicker sofa, with feet a little lower than head, but with hips well elevated, so that gravity aids in draining the bronchial tubes of their contents. The position also affords a comforting sense of support to the chest. It is not recommended in cases where there is bleeding of the lungs.

Christian Endeavorers and Tuberculosis.—The Christian Endeavor Society is taking an active interest in the warfare against tuberculosis. At their international convention to be held in St. Paul, July 7-12, a large tuberculosis exhibit will be on display, and the ten thousand delegates will be given careful tuberculosis instruction. This seed will doubtless be well scattered all over the world.

The Paris Antitobacco Society.—This society, with headquarters at 12 Rue Jacob, Paris, announces for a subject for competition this year, "Report of Observations Showing That Smokers Are More Subject Than Others to Cancer." Rewards will be given for excellent papers not only on this subject but on other live topics concerning use of tobacco. Papers should be sent to Dr. Georges Petit at the headquarters.

Instruction in Public Hygiene.—Beginning June 14 and continuing until July 24, the University of Virginia will give a summer course in public health and sanitation especially adapted for health officers, medical inspectors, and the like. The course includes chemistry, bacteriology, medicine, hygiene, and epidemiology. In September the university will begin a more elaborate four-years' course for the training of sanitary engineers.

To Save the Baby Lives.—The New York Department of Health has a bureau of child hygiene which began its annual campaign April 15 with one hundred forty-one nurses and one hundred fifty physicians, who visit mothers and instruct them in the care of their infants. Each mother receives a card with a few simple instructions, which urge that in case the baby is ill, a physician shall be called or the department of health be notified at once.

Milk in Siberia.—Is it a member of the Ananias Club that reports that milk in Siberia is purchased frozen; and that for convenience it is allowed to freeze about one end of a stick while the other end serves as a handle to carry it by? It is said that the milkman does not sell his milk by the pint or quart, but by the chunk, and that "the children in Irkutsk, instead of crying for a drink of milk, cry for a bite of milk." There one is asked, not to spill the milk, but rather, not to break it. In this way broken milk has the advantage over spilled milk, because you can pick it up. A very formidable weapon is made from a stick by allowing a quart of milk to freeze on it. The milkmaid cares for the milk, not by pouring it into pans, but by hanging it on hooks.

Increase in Use of Tobacco in Canada.—The cost of tobacco in 1896 was hardly sixty-four cents per capita. In 1908 it was nearly \$1.13 per capita—almost double in twelve years. Cigarette-smoking is rapidly on the increase.

Local Health Officers Not Awake.—A public health conference was held in April at the University of Illinois, and though this was widely advertised, invitations being sent to all the local health officers, and though there were matters discussed at this conference which would have been of inestimable value to any health officer, there were only five of the more than five thousand local health officers present, a fact which does not bode well for the health conditions of the small towns of that State.

The New York Sewage-Disposal Bill.—A bill recently passed in the New York Legislature gives the commissioner of health the power to determine by investigation whether the sewage from any city, town, building, steamboat, or other property, being discharged into the waters of the State, is polluting such waters in a manner injurious to health or comfort, and if so, to order the discontinuance of this discharge and to provide for more healthful method of disposal.

The Milk Problem in Chicago.—From Dr. Evans, commissioner of health of Chicago, the information comes that the management of the Chicago milk problem is a vast undertaking. This can be understood when it is realized that the milk comes from twelve thousand farms, situated in four States, every one of which must be inspected. These farms, if they should average ten acres apiece and be together in one place, would measure fifteen miles one way by ten the other. This means that the work of the inspectors, which includes making maps of the farms and records indicating their equipment, sanitary condition, and surroundings, is enormous. In addition to this, more than thirty thousand eight-gallon cans of milk are received daily in the city. It is the business of the milk inspector to know that this milk is not adulterated. These cans, if stood closely together on one platform, would occupy a space of sixty-seven by two hundred feet, or thereabout; that is, they would cover a large suburban lot. It is the business of the health inspectors, as far as possible, to be certain that this milk is not under-grade, is clean and fresh, and not from diseased animals. The work of food inspection is one of the most important rendered by a municipality to its citizens.

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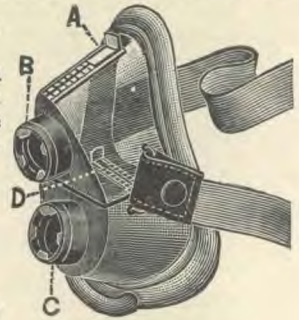
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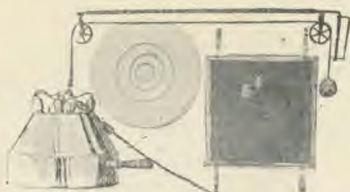
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