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TOASTING MARSHMALLOWS

Life & Health

HOW TO LIVE

EDITORS

L. A. HANSEN G. H. HEALD, M. D.

VOL. 35 MARCH, 1920 No. 3

EDITORIAL

The Fuller Freedom

THERE is a great cry for liberty these days. The spirit of freedom breathes everywhere. Men band together to oppose oppression and to resist restraint. Ideas of individual independence run a range that is wide and varying. Anarchism, Bolshevism, Communism, and almost an entire alphabet of isms, good or bad, offer various brands of so-called freedom.

Without saying anything for or against any particular form of freedom found in federations or offered in alliances, we may say that there is a liberty available to every individual which is fundamental to all freedom. It is a liberty which, if a man does not possess it, he vaunts in vain of freedom and can poorly pose as an apostle of liberty.

"While they promise them liberty, they themselves are the servants of corruption: for of whom a man is overcome, of the same is he brought in bondage." 2 Peter 2:19.

No man can boast of being free who is held captive to his own lust, be it for power, wealth, fame, impulse, or passion. He who cannot break the rule of his own natural inclinations knows not freedom. The man who is subject to self is still a slave. He who is held by habit is but a bondman.

The fullest freedom, the largest liberty, shows first in the ability of a man to do in his own life those things he knows he should do. No man carries the proper credentials as a preacher of reform who is not himself a reformer in practice. He who is enslaved by his own self is indeed bound.

Some things that seem small may tell whether one is able to assert individual independence or is held in the grasp of an overmastering tyrant. There is the man who "can drink or let it alone," but finds that as long as he does

drink he can't let it alone. There is the woman who takes tea and "can stop when she wants to," but finds that for some reason she either never wants to or can't if she does want to. The other woman and her cup of coffee, the young man and his cigarette, the girl and her candy box, persons with inordinate appetites, soda-fountain fiends, drug addicts, and many others, tell the story of overpowered wills.

There is a true freedom for all, a real deliverance from every captivating power, a genuine liberty in which all may walk at will. It is not based on the promise of man nor found in men. It is a heaven-given freedom, backed by a higher power than our own, the power which is necessary to all men in overcoming any habit or breaking any hold.

"If the Son therefore shall make you free, ye shall be free indeed."

L. A. H.

A War with No Peace Terms

THE World War may be over. Peace of nations may be proclaimed, at least for a little season. Men may stay their destruction of one another. Battles of bullets may cease for a bit. But all is not peace.

There is a war going on all the time, greater than even the greatest we have yet seen between peoples or governments. Its annual victims outnumber all the slain by shot and shell. Its wounded and maimed total more than have yet been gathered from fields of blood.

The war that rolls up the largest list of casualties, that causes the most suffering, that gives the greatest grief, that brings bereavement the oftenest, that entails the heaviest cost, is a war that we can stop if we will. We need sign no peace, nor any armistice. No surrender is necessary, though we too often make it.

The war that is waged by disease and is year by year killing and disabling more men, women, and children than any other means is a conquerable one. Actual achievements show that yellow fever, smallpox, cholera, tuberculosis, typhoid fever, diphtheria and many other devastating diseases are subject more or less to control and in some instances may be almost wholly eradicated. Then there is a long list of individual ailments, at present on the increase, which are practically our own product. In other words, disease is with us because we permit it and provide for it. Our own conduct is the cause of our sickness.

Men who know tell us that disease prevention is largely a matter of individual attention and effort. Public health work helps, but the personal element is the most important in the fight against disease. Boards of health have a limit in their reach. They cannot go beyond the door of personal responsibility. The authority and the benefit of organized effort stop at the will of the individual.

The war against disease must mostly be fought out in private. In our own lives, in our personal habits, must we make battle on things that war against us. To make an earnest fight against disease, we must look at the things we do from the viewpoint of their healthfulness, and determine that we will not do the things that militate against health.

The war with disease enters into the very chambers of the soul; for the overcoming of hurtful habits becomes a question of whether we shall let conscience rule, or whether we shall be controlled by taste, desire, wish, or whim. This fight is mostly one of intellect and morals, for most of our ills are the result of ignorance or indulgence. Sound sense and real religion are the principal weapons for winning. L. A. H.

The Right Kind of Kings

As rulers of nations, kings have met with some depreciation of late. The world is not anxious for monarchs of this sort. And yet the world is in great need of kings of the right kind, and many of them.

Never was there greater need of men who know how to exercise kingly power and to rule wisely. If every man were a king of the right kind, there would be less cry of misrule, for every man would be ruler over himself, which is the greatest kind of kingship.

Self-control means the exercise of kingly power over reason. It places in authority a will that governs the appetites and passions of the man, making them subject to the higher interests of his entire being.

True nobility holds sway when one's eating and drinking and everything one does is made to serve its true purpose in life.

The man who holds his body subject to reason, eating and drinking only that which he knows is good for him; who corrects every depraved tendency; who overcomes hurtful habits; who knows how to turn temptation into victory, is a king of the right kind. Such men are much needed. L. A. H.

AS WE SEE IT

Conducted by
G. H. Heald, M. D.

ONTARIO'S EMPHATIC INDORSEMENT OF PROHIBITION

THE liquor interests of Ontario, not satisfied with the existing prohibitory laws of the province, secured a referendum vote in which four questions bearing on prohibition were referred to the voters. Their purpose was, if they could not succeed in securing a repeal of the prohibitory law, to obtain at least the withdrawal of some of its teeth.

The result of the vote was an overwhelming victory for the "drys" on each of the four questions submitted, and moreover, in *every one* of the 105 ridings, or election precincts, into which the province is divided, the victory was for the "drys" on each one of the points at issue. Probably in the history of prohibitory legislation there has not been another such uniform vote declaring the intention of the common people to have no more of the liquor traffic.

There were more than a million votes cast, and on each of the questions there was a very decided majority in favor of decency and good order — the "dry" majorities for the different questions being 406,676; 364,193; 325,425; and 246,683, respectively. Practically sixty-five per cent of the voters voted "dry" on every question, and thirty-five per cent of the voters voted "wet." It would look as if liquor were permanently outlawed in Ontario.

And what has taken place in Ontario will probably be followed by similar action in other provinces. The common people of Canada have awakened to the fact that the liquor traffic is an evil with no extenuating virtues; that it is evil and only evil.

THE INCREASE IN CANCER MORTALITY

THE mortality statistics for 1917 recently issued by the Census Bureau show a cancer mortality for 1917 in the Registration Area of 61,452 or 81.6 per 100,000 of population. The average death rate from this disease in the five-year period 1906-10 was 72.6; for the following years, to 1917 inclusive, the rates were, respectively, 74.3, 77.0, 78.9, 79.4, 81.1, 81.8, and 81.6 — an increase every year but the last. And the tables giving the cancer death rate for different cities and States, give a similar increase from year to year in nearly every case. There are a few exceptions. But it would seem that gradually cancer is becoming more and more an important factor in the general death rate.

The suggestion is sometimes made that this apparent increase may be due largely to a greater skill in diagnosis. But evidently there must be a limit, sometime, to such an increase in diagnostic skill. The general opinion is that cancer is actually increasing in prevalence.

Notwithstanding the huge sums spent and the vast amount of work done to unlock the cancer secret, little progress has been made. Just what causes can-

cer, we do not know. We do know that cancer can be inoculated artificially into certain animals, under certain conditions; and we know that constant irritation of certain areas of the body favors the beginning of cancer; and that, once begun, cancer is progressive. It is malignant. If it is not eradicated, it sooner or later destroys the life of the patient.

We know that the golden opportunity to remove cancer is at the very inception, when there is little or no suspicion of any growth, and that if operation is postponed until the growth becomes troublesome, the favorable time for operation has passed, and life can be prolonged but a few months at best.

POISON IVY AND POISON OAK

SCHAMBERG, of Philadelphia, gives in the Oct. 18, 1919, *Journal A. M. A.* a report of his success in conferring immunity against ivy poisoning. His method is to administer *Rhus toxicodendron* (extract of poison ivy) in increasing doses. He prescribes

Tincture of *Rhus toxicodendron*	1 cc
Rectified spirit	5 cc
Sirup of orange sufficient to make	100 cc

The patient is instructed to take the medicine in half a glass of water after meals, increasing a drop at each meal, as follows:

Breakfast	Lunch	Dinner
Drops	Drops	Drops
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21

Then during the remainder of the ivy season the patient is to take one teaspoonful of the Rhus mixture in half a glass of water once a day.

Schamberg suggests that one should be certain that it is ivy that has caused the poisoning, on the theory that *Rhus toxicodendron* would afford no protection against poison oak or sumac.

Dr. F. F. Abbott, who was for a time located where the poison oak was very thick, in commenting on Schamberg's paper (*Journal A. M. A.*, Nov. 8, 1919), relates this experience:

> "One of the male nurses, who had formerly been susceptible to the poison, had developed a high degree of immunity so that he could even grub out the roots of the plant with impunity. When pressed for the secret, he related how he had begun by eating very small portions of the crushed berries, and had gradually increased the dose until he could eat a half dozen berries at a time. He kept himself immune by occasionally eating some of the berries. With this as a basis, we experimented with some of the help who could be persuaded to try the treatment. At first we used the berries and later the tincture of *Rhus toxicodendron*. The results were very gratifying; many who were previously susceptible developed and maintained a good degree of immunity. The tincture seemed to work as well as the berries."

The writer when a boy was familiar with one form of this *similia similibus curantur.* There was a tradition among the boys that if one would chew the poison oak twigs, it would afford protection against poisoning by the plant. He chewed the twigs when quite young, and at intervals later, never experiencing any evil effects; and he has had an almost absolute immunity against poison oak, though when a little child he was susceptible. Once, after digging out a hillside which was pretty well grown up with poison oak, pulling it up by the roots, and meanwhile perspiring profusely, he had a few small blebs on the wrists which passed away in a day or so. Aside from that, he has handled it repeatedly with impunity.

He does not, however, suggest that any one else try this method of prevention. Better take the one-per-cent *Rhus toxicodendron* where poison ivy is abundant and one-per-cent *Rhus diversiloba* where poison oak is abundant. Although according to Dr. Abbott's experience, *Rhus toxicodendron* gives immunity against poison oak.

As a further means of prevention, a susceptible person who has been exposed to one of these poisonous plants should, as soon as possible, wash thoroughly all exposed parts with a good soap lather. It should be remembered that the poison may have touched the clothing, and even after washing, one may again be poisoned by this poison from the clothing being transferred to the hands or other parts of the body. So if one is very susceptible, it would be well not to use the exposed clothing again without a thorough renovation.

There are numerous treatments advised for poison ivy and poison oak. The following have proved efficacious:

A large crystal of alum moistened in water and rubbed over the surface has been used successfully in many cases. It also might act as a preventive if applied early, that is, after exposure.

A recent treatment is a saturated solution of soda in ice water applied freely and continuously. Both cold and alkali seem to be beneficial, and this combination is an especially good one.

Lobar Pneumonia

Description, Causes, Symptoms, Prevention, and Treatment

B. E. Crawford, M. D.

LOBAR pneumonia, otherwise known as croupous pneumonia, or lung fever, is the most widespread and fatal of acute diseases. It attacks persons of all ages, and prevails about equally in warm and cold climates, being most frequent in the late winter and early spring. The right lung is affected more often than the left, both lungs being involved in from ten to fifteen per cent of all cases.

In the United States from seventy to eighty thousand people die every year of lobar pneumonia, and the disease appears to be increasing in frequency. Dr. Osler characterizes pneumonia as the "Captain of the Men of Death." It is especially liable to prove fatal in young children, in old people, in persons addicted to the immoderate use of alcoholic liquors, in cigarette smokers, and in those cases which develop in connection with influenza.

Very old persons seldom recover from the disease, although they usually experience comparatively little suffering during its progress, passing away peacefully after a brief illness, for which reason pneumonia is called "the friend of the aged."

The first step in the development of pneumonia is the retention in the system of poisons derived either from autointoxication as the result of faulty elimination through the skin, kidneys and bowels, or from some external source. These poisons circulating in the blood irritate the lungs, resulting in congestion, exudation, blood stasis, and engorgement. In this engorged condition the lungs become a favorable field for the propagation of various bacteria, some of which are normally present in the mouth and air passages. Unless prompt measures are taken to abort the disease, the bacteria multiply rapidly, and form toxins that cause a continuance of the initial fever and other symptoms.

For convenience, the disease is divided into three stages: first, the stage of congestion; second, the stage of red hepatization, or consolidation; third, the stage of gray hepatization, or resolution.

The first stage is characterized by sudden onset, usually with a chill, sharp pain in the chest, rapid rise of temperature, a short, sharp cough, rusty-colored, viscid sputum, and difficulty in breathing. The lung is enlarged, dark red, less elastic than normal, and engorged with blood. If the ear is placed to the chest, there may be heard, during inspiration, a fine crackling sound, resembling that produced by rubbing hair between the thumb and finger. This is caused by the breaking up of the mucous adhesions in the lungs.

During the second stage there is increased difficulty in breathing, continuous high temperature, and rapid pulse. Headache and delirium may be present. The lung is filled up and consolidated by coagulated fibrinous exudate and large numbers of red and white blood corpuscles and broken-down lung cells.

The third stage usually begins between the fifth and ninth days, and is ushered in by a sudden drop of temperature, followed by free sweating, nat-

ural sleep, and relief from suffering. The dark-red color of the lung of the stage of congestion changes to a gray color, and the lung rapidly softens. A digestive ferment possessed by the leucocytes, or white blood corpuscles, causes the liquification of the blood corpuscles and fibrin, and the broken-down lung cells undergo fatty and granular degeneration, and in from two to four weeks the inflammatory products are removed, partly by absorption through the lymphatics, and largely by means of free expectoration. When the process of resolution sets in, the patient usually makes a rapid recovery.

Causes

The chief predisposing causes of pneumonia are poor circulation; insufficient nourishment; the immoderate use of alcoholic liquors; cigarette smoking; depressing conditions, as fatigue, anxiety, poverty, and debility; unsanitary conditions, especially filth, overcrowding, and poor ventilation; exposure to cold, or to combined cold and wet, followed by chilling. Sitting or standing in a draft when warm and sweaty is a frequent cause of pneumonia. Cold in the head and bronchitis often lead to pneumonia if these affections are not promptly and properly treated. Many chronic diseases predispose to pneumonia. An attack may be brought on by injury of the chest, or by breathing irritating gases or air filled with dust.

There is some evidence that the direct cause of pneumonia is a specific microorganism, the Diplococcus pneumoniæ, which, gaining entrance to the lungs when the system is in a lowered state of vitality, multiplies rapidly and produces toxins which poison the system.

Symptoms

Usually the disease begins abruptly, with a severe chill followed by fever, the temperature rising rapidly to 103° or 105° F., and remaining high. There is pain in the chest, increased by coughing or breathing; rusty-colored, viscid sputum; a short, painful cough; rapid pulse; rapid and difficult breathing, and flushed face. After from seven to ten days a crisis occurs; the temperature becomes lower, and the patient is comparatively comfortable.

In the aged the disease frequently begins without any well-defined symptoms. There may be a chill or a pain in the side, or the chief symptom may be a feeling of exhaustion. If the patient is already suffering from asthma or chronic bronchitis, the disease may manifest itself merely by a tired feeling, followed by sudden death.

How to Avoid Pneumonia

As prevention is better than cure, one should exercise reasonable care to prevent an attack of pneumonia. This is especially true of those who have once had the disease, as it is frequently recurrent. Avoid as far as possible all the causes previously mentioned. Standing or sitting in the cold and becoming thoroughly chilled after walking or exercising is an exceedingly dangerous thing to do. Those especially who are subject to throat and lung troubles, as bronchitis, coughs, and colds, should be careful to avoid becoming chilled.

An excellent preventive is to frequently bathe the neck and chest with cold water, and follow with a thorough rubbing to stimulate the circulation in the parts and to increase the resistance to cold. A moderate amount of exercise, and plenty of good nourishing food will help to build up the system and increase resistance to all diseases.

Avoid the use of alcoholic liquors, remembering that those who are addicted to their use are much less likely to recover from an attack of pneumonia than those who leave alcohol alone.

Treatment

Until recently pneumonia has been considered a self-limiting disease which must in all cases be allowed to run its full course. It is now known that if the case is promptly and properly treated during the first part of the stage of engorgement, the disease can usually be

aborted, and in other cases greatly lessened in its severity, or shortened in its course.

The patient should be put to bed in a warm but well-ventilated room, where he can have quiet and complete rest of mind, body, and lung, and the room should be kept at a nearly uniform temperature. Frequent examinations of the lungs should be avoided, as they disturb the patient and are unnecessary. Some physicians strongly urge the use of the cotton jacket, or "pneumonia jacket," at the earliest recognition of pneumonia or bronchitis. Any local application desired may be applied under the jacket.

It is important to obtain free elimination by way of skin, kidneys, and bowels. A saline laxative should be given every two hours until the bowels move freely. To dilate the capillaries and equalize the circulation, a hot mustard foot bath may be given under the bed clothes. Alternate hot and cold applications to the chest are often of great benefit. These should be changed every four or five minutes and continued for about an hour at a time. This treatment may be repeated every two to four hours. Frequent sponging of the body with tepid water assists in reducing the temperature, and is grateful to the patient.

The patient should be placed on a liquid diet consisting chiefly of milk, oatmeal gruel, gluten gruel, whipped raw eggs, soft boiled or poached eggs, and fruit juices. Water and lemonade may be given freely.

The treatment of pneumonia, other than as outlined above, should be prescribed by a competent physician, who will adapt the treatment to the individual case.

Chamberlain (S. Dak.) Sanitarium.

* * *

The Protein Content of the Diet

PROTEIN food does not occupy the high position in diet which was formerly credited to it, and this is especially true with regard to the protein of meat. There was published in the *American Journal of Public Health* for June, 1919, an article by Lieut.-Col. John M. Murlin, Sanitary Corps, U. S. Army, and Major Caspar W. Miller, M. C., U. S. Army, detailing the preliminary results of nutritional surveys in the United States army camps. In this article it is pointed out that it is the general consensus of opinion among experts in nutrition that an excess of protein is undesirable in the dietary of a hard-working man, since muscular work does not involve destruction of muscular tissue beyond the amount sustained by that tissue in muscular rest.

The amount of protein, which in general is held to be sufficient to repair all the wastes of the body and to supply an adequate reserve, is 13 per cent of the total energy intake. It seems to be a matter of indifference to the muscles whether they receive their energy from carbohydrates or from fat, except that carbohydrate yields its energy more rapidly than does fat. Hard muscular work, therefore, can be done on a high carbohydrate diet, or upon a high fat diet. It is of general experience, however, the authors state, that muscular work is done with less effort if there is a plentiful supply of carbohydrate. Moreover, it is well known that carbohydrate is a cheaper source of muscular energy than fat.

The conclusion has been arrived at by these investigators that all the requirements for the training of soldiers, that is, for men in the prime of life doing hard manual work, will be met by a dietary supplying 12½ per cent of the total energy in the form of protein, 25 per cent in the form of fat, and 62½ per cent in the form of carbohydrate. Views on dietetics have altered very considerably within the past few years. It is not very long ago that it was an article of faith that those who used a great deal of muscular energy required larger quantities of protein in the form of meat, although it had long been observed that Italians and other southern people did hard manual labor on a largely vegetable and fat diet, and that the Japanese performed strenuous work mainly on rice. Now meat and protein food generally appear to be relegated to their proper place in the nutritional scale.—*Editorial, Medical Record, Aug. 9, 1919.*

Antiseptics in the Home

L. A. Sutter, A. B., M. D.

AN antiseptic is a drug that inhibits, or prevents, the growth of germs. It does not necessarily kill the germs. An agent that kills germs is called a disinfectant. Therefore, we define a disinfectant as some chemical or mechanical process of killing germs.

Every one has heard of or has used antiseptics. Many have used them unwisely.

If we consider the fact that our tissue cells are as easily killed as are bacteria, or more so, we may readily comprehend the fact that we cannot destroy germs in a wound without causing more or less injury to the cells.

There are a great many chemical disinfectants,— some good; some fair; and others, indifferent or useless. Let us consider the most common of these in their relation to our everyday needs.

Boric acid is found in nearly every household. It may be used in various ways, from the simple eyewash to the cleansing of infected wounds. I have even seen it used to kill tubercle bacilli; but this it can never do. A four-per-cent solution of boric acid in distilled water makes a soothing application to drop into a red and inflamed eye. Here, by its mechanical action, it washes many germs from the surface of the eyelid and the eyeball, retarding the growth of many others, and perhaps preventing the development of some. In this way boric acid solution serves a useful purpose.

Fresh or old wounds that are dirty may be washed with a four-per-cent boric solution for cleansing purposes, and a piece of clean gauze soaked with this solution may be carefully bound over a wound. This helps to allay irritation, and prevents the entrance of germs. Boric acid powder mixed with vaseline makes a good ointment for crusting ulcers or old burns. In making this ointment, use thirty grains of boric acid to an ounce of vaseline.

Hydrogen peroxide is a good cleansing agent. It not only inhibits the growth of germs, but may kill many of them if left on a sufficient length of time. We must not forget that hydrogen peroxide is dangerous when poured into the canal of the ear, or when forced into a nail wound of the foot, or into any other cavity. When it comes in contact with a rough surface, oxygen is given off, and in a cavity this expansion may push germs far into the tissues, and do a great deal of damage. The bubbling that takes place when hydrogen peroxide is poured into a wound is due to the liberation of oxygen, and not to the killing of germs, as many suppose. A mixture of hydrogen peroxide and water, half and half, makes a good mouth wash, or a gargle for the throat. This is also good for soaking loose dressings that adhere to a wound, or for washing dirty surface wounds.

Alcohol is one of the best disinfectants. It is an antiseptic when used in weak solutions. A twenty-five-per-cent solution of alcohol in distilled water is excellent for washing fresh cuts or bruises, and for soaking clean gauze, or pieces of cotton for binding over infected wounds, dirty wounds, or boils. Alcohol, fifty per cent in water, is useful for soaking nail clippers, rubber combs, fever thermometers, knives for paring corns, razors that have been used for shaving questionable faces, or lances for

opening boils. Instruments immersed for twenty minutes in this strength alcohol are probably free from living germs.

Tincture of green soap is a valuable disinfectant. Few persons realize the germ-inhibiting and germ-destroying power of soap. Tincture of green soap is used very extensively in cleansing wounds, where coal dust, grease, or other dirt may have been carried into the wound. When a child playing in the barnyard falls and cuts or abrades his knee, there probably will be particles of rock, dirt, and manure in the wound, and the injured part should be thoroughly cleansed, because the germs that produce lockjaw are always present where there is manure. A thick lather of green soap and warm water, and a piece of absorbent cotton or clean cloth, can be used to wash the wound free from all contamination. Then a wet dressing made by soaking ten or fifteen thicknesses of gauze in a twenty-five-per-cent solution of alcohol is bound over the wound.

Bichloride of mercury is very effective when rightly used, but is very dangerous, and should not be kept in the household medicine closet, however, unless it is in a distinctive bottle with a peculiar cork and a large poison label. Even then, only the colored tablets should be used. These precautions are to prevent some one from getting the bichloride confused with some other medicine, in the dark or when in a hurry. It is best to have a large-mouthed bottle with small projections along the corners. The bottle should be nearly square, brown or blue in color, with a glass stopper, and should have a poison label with the name "Bichloride Poison" on each of its four sides. If there is only one label on the bottle, it may become dim, or be removed. With such a bottle, there is little danger of any one's getting the drug by mistake, provided it is kept out of the reach of children.

Bichloride must not be used on metal, as it will destroy the surface. In a 1-1,000 solution, it may be used to wash one's hands after handling a typhoid patient; or rubber gloves used in waiting on a typhoid or other infectious case may be soaked in this solution for one-half hour or longer. In a 1-1,000 solution, bichloride may be used to wash the skin before taking out a deep splinter, or old, dirty wounds that are running pus, may be washed in a 1-4,000 bichloride solution.

The way to make a 1-1,000 solution is to use one of the large tablets bought at drug stores to every pint of water. A 1-4,000 solution is made by adding one tablet to four pints of water.

Many persons use bichloride in too strong solution. This not only inhibits the growth of bacteria, but it destroys many tissue cells, and in this way may prevent a wound from healing, or even make it much larger.

Washing soda in a hot solution is a good cleansing agent for scrubbing floors and woodwork that have been exposed to tuberculosis germs. It is necessary to make a strong solution of the soda, and to use plenty of the fluid on the floors and window sills. It should be applied with a scrub brush.

Tincture of iodine, half strength, is an excellent disinfectant for fresh wounds. This is best applied with a cotton applicator. To make an applicator, take a toothpick, and twist cotton around one end. The cotton should be drawn out into a long narrow wisp, then firmly twisted around the end of the toothpick, by holding the cotton firmly in one hand and rotating the toothpick between the thumb and first finger of the other hand.

When there is a fresh wound, such as a cut, pin scratch, needle prick, or other injury to the skin, pour a little iodine into a butter chip, moisten the cotton on the toothpick in the iodine, and then apply directly to the wound. The iodine will not only aid in the destruction of germs, but it will tend to check bleeding.

Iodine is poisonous, and will cause blistering if put on the skin in too strong

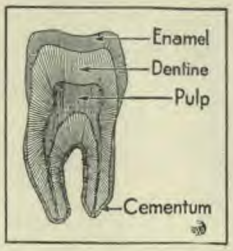
a solution. It also destroys the cork to the bottle in which it is kept; therefore, it should be kept in a bottle with a glass stopper. The bottle should have a distinctive shape, so that it will be recognized if picked up in the dark.

Lysol is a strong disinfectant when used in a two-per-cent solution. It is very poisonous, however, and causes blistering if applied to the skin in too strong a solution. A one-per-cent solution is good for washing woodwork and floors in rooms that have been occupied by an infectious case. It is also good for washing the hands after waiting on a typhoid patient. Before using it, however, the hands should be washed with soap and water.

Carbolic Acid is a very dangerous antiseptic, and should never be used for dressing wounds or for applying to the skin. Very destructive burns have been caused by using carbolic acid in dressing wounds. In fact, legs and arms have required amputation as a result of burns from a carbolic acid dressing applied to a slight wound.

Carbolic acid, one part to twenty parts of water, is a very useful solution in which to soak small articles that have been used around infectious cases. The infected material should remain in the solution for one hour, and then be taken out and washed well with soap and water.

Wichita, Kans.



Why Sound Teeth?

William Curtis Dalbey, D. D. S.

ONE'S ability to combat a disease is in direct ratio to the resistant forces of the body. If one's system is run down, there is not the resistive force within to combat the disease, and the patient may fall a victim.

In infectious diseases, the teeth play a most important part; for if they contain cavities, there is sure to be disease-producing germs therein. In and around these unclean teeth, micro-organisms grow and multiply.

There is hardly a person who reads this article that has not deadly germs of tuberculosis or pneumonia in his mouth. Why do we not all die of these diseases? Why should only 10 per cent die? Because the majority have that resistive strength to fight these diseases, and to destroy them in the system.

The white blood corpuscles have the power to leave the blood stream and wander out into the tissues and to seize upon infectious germs and destroy them, thus saving the individual from the ravages of infectious diseases. Thus, with good environment and good inherited constitution, we can, up to a certain point, resist or combat disease germs.

If the teeth are kept free from cavities and from decayed matter around them, these disease-producing germs cannot thrive. They pass *out* of the system without finding openings to pass *into* the system.

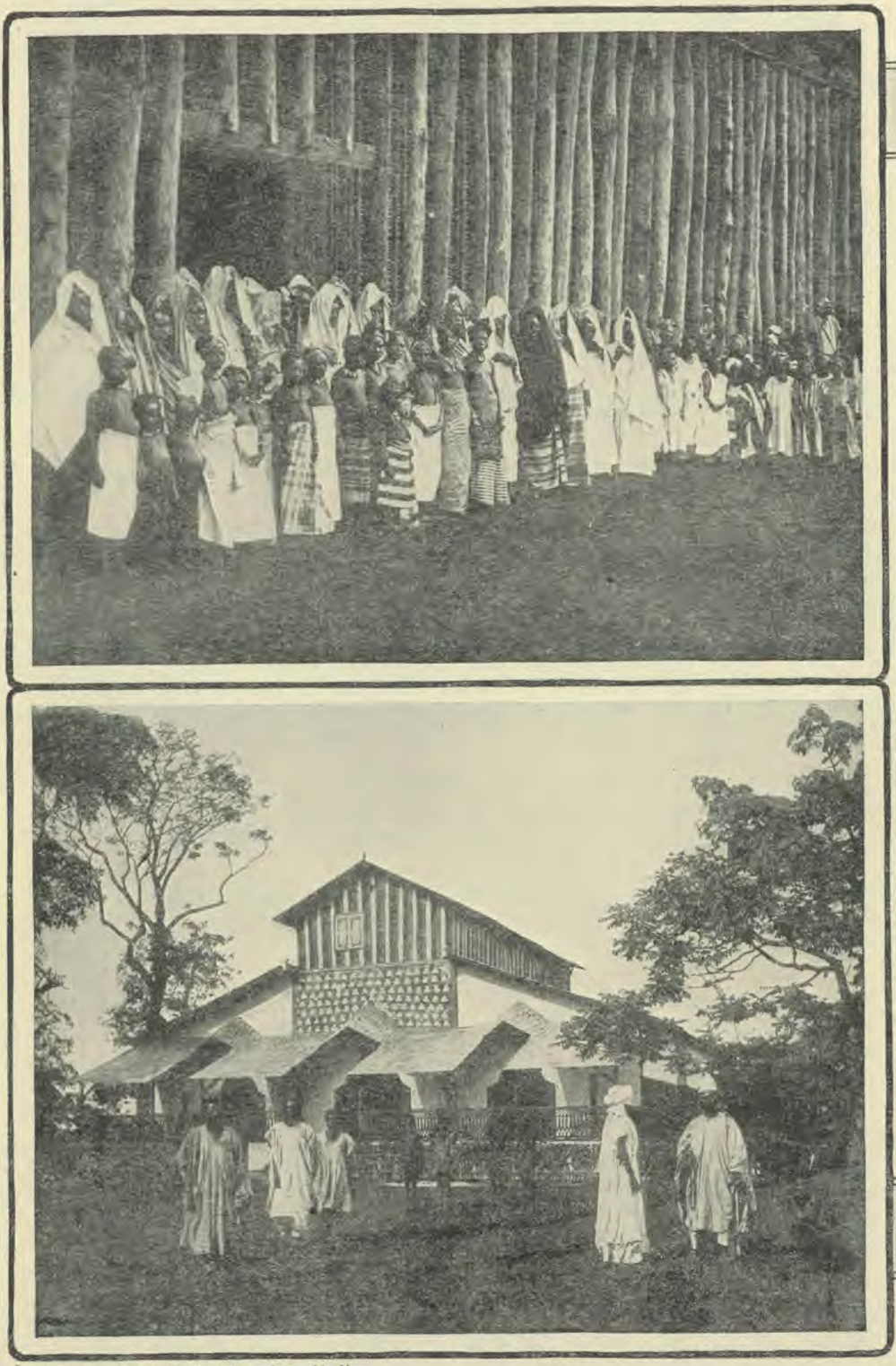
In preserving the health and building up resistive force, the teeth play a most important part. Good, wholesome food, well masticated, is better prepared for the system than any amount of food, be it ever so good in itself, that is bolted without chewing. And as proper mastication cannot be done without good, sound teeth, one can readily see what an important part the teeth play.

The market today is flooded with predigested and prechewed foods. The success of these foods is due to the fact that many people want to be relieved of the trouble of chewing and digesting their food. But this is a great mistake, for to chew well insures increased nourishment and resistance to disease. One who possesses a sound, clean set of teeth, and uses them well in chewing good, wholesome food, is rich in this world far beyond gold.

Let me speak not only to the adult, but to the child as well. The child should be taught very early to chew its food well. Food is digested well only in the proportion that it is masticated well. Much of our food is starch; and starch, to be digested, must be changed into sugar by the action of the saliva.

Then, if much of our food is of the starchy variety, and must be changed into sugar by being chewed well to be digested, one can easily see that this can be done only by the proper use of good sound teeth. If this act of disposing of starch is not well looked after, the body cannot be properly nourished.

Starchy food is food for bacteria. If starch is allowed to remain around the teeth, these germs thrive and may poison the whole system. Thus we can readily see the importance, not only of having sound teeth, but of keeping them clean as well.



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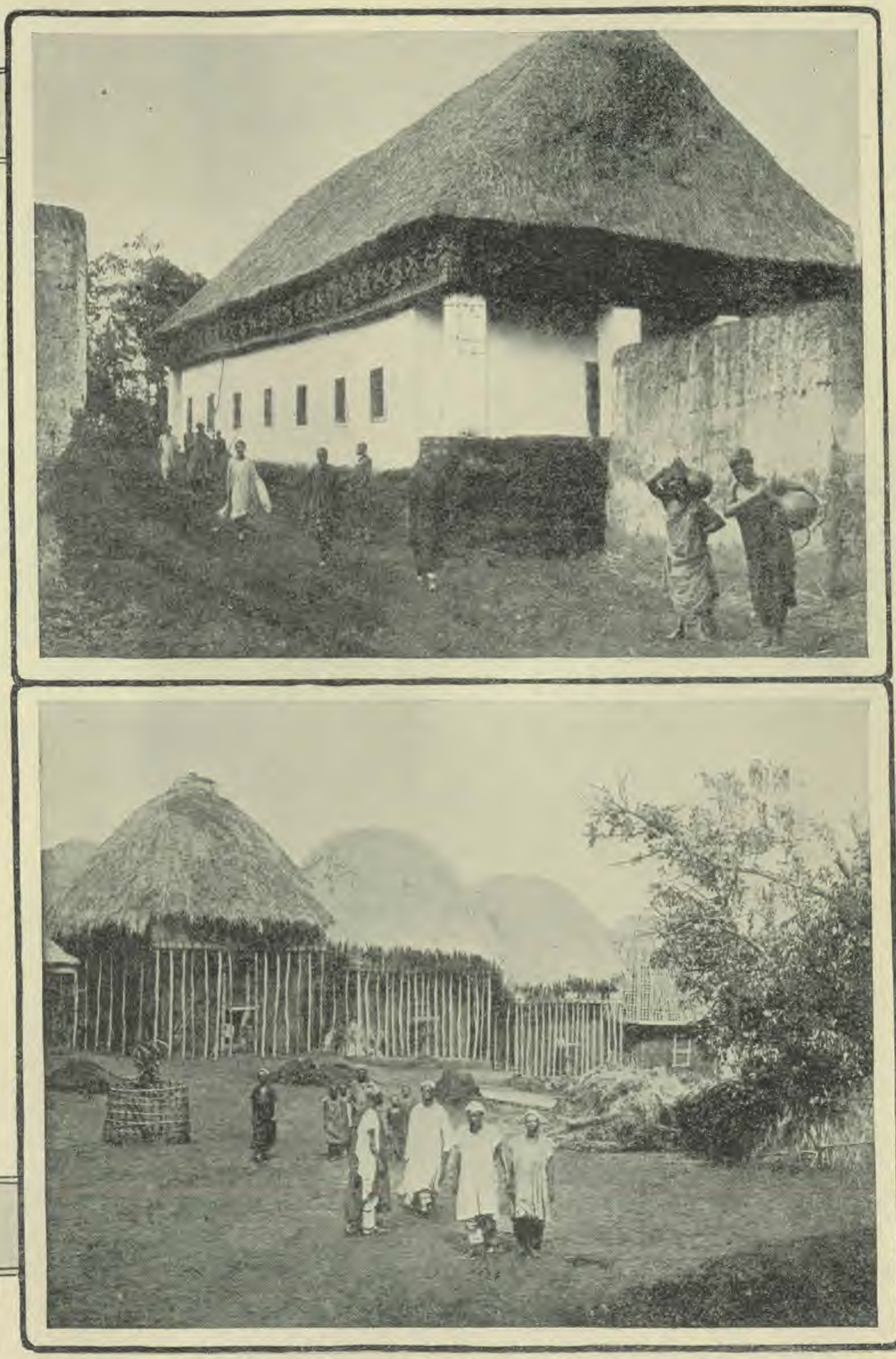
SCENES IN GE

Some of the Wives of the Sultan of Kamerun
The Banum Church (native), Fumbina



N EAST AFRICA

School for Banum Natives, Modernized, but Retains the Native Roof
Native Huts of Fumbina, One under Construction at the Right

Dietetics

Food: Its Composition and Relation to Health

George E. Cornforth

WATER is a chemical compound of two gases, hydrogen and oxygen; two parts by volume of hydrogen to one part of oxygen. Water freezes at 32° F. and boils at 212° F. Unless under pressure, as in the boiler of an engine or in a pressure canning apparatus, water cannot be made hotter than 212° F. After boiling has begun, it is a waste of fuel to attempt to hasten cooking by increasing the fire.

The food we eat or drink contains considerable water. Vegetables and fruits contain from 75 per cent to 95 per cent of water, milk contains 87 per cent of water, and even dry foods, like zwieback and crackers, contain from 5 per cent to 10 per cent. The body consists of 60 per cent water, and water is being constantly given off by the lungs, skin, and kidneys, and the water taken in food is not sufficient to make up the loss. For this reason we must drink considerable water besides that which we get in food. Water is not digested, or changed, by the body. It is one of the regulators of body processes and serves the following purposes in the body:

1. It forms the chief ingredient of all the fluids of the body.

2. It makes the tissues soft, elastic, and flexible.

3. It dissolves food and carries it in fluid form to the various parts of the body.

4. It has much to do with distributing and regulating the heat produced in the body.

5. It dissolves and carries off waste material.

6. It moistens the skin and various internal surfaces of the body which are in contact and thus prevents friction.

While it is possible to live without food for weeks, one can live only a few days without water. On the average about three pints of water should be drunk daily, besides the water taken in food. Of course the amount of water needed by the body varies with the amount of exercise taken, and with the temperature to which the body is subjected. The water which the body requires should be taken between meals rather than with meals, and if water is drunk as freely as it should be between meals, and if hot condiments are not used, if plenty of fruit is eaten, and the food is sufficiently masticated, water at meals will not be greatly desired.

I am aware of the fact that certain experiments that have been made have been interpreted to mean that the taking of large quantities of water with meals is beneficial to the health. I think these experiments have been wrongly interpreted. Many people, perhaps the majority, seldom drink anything between meals, and the first thing they wish to do when they sit down to the table is to drink a glass or more of water. Water aids metabolism, and if people who do not drink between meals, also do not drink with meals, the result will not be so good as when considerable water is taken with meals, provided that the taking of the large quantity of water with the meals does not upset digestion. But I believe better results are gained when the water that is usually drunk

at meals, and more besides, is drunk between meals. As much care should be taken to feed water to babies and patients as to feed them food.

Hard water is water which has lime or magnesium salts dissolved in it. It is called hard because soap does not form a lather with it. Soft water is best for cooking, and soft water, or at least water that does not contain an excess of mineral, is best for drinking. Vegetables are toughened by cooking in hard water. Some kinds of hard water are softened by boiling, others are softened or partially softened by the addition of soda. The only time when there is an excuse for using soda in cooking vegetables is when hard water must be used. Mineral water is water which contains sufficient mineral to give it a decided flavor, or medicinal value, real or imaginary. Many mineral waters are laxative, or they are diuretic, increasing the activity of the kidneys.

Impurities that consist of decayed animal or vegetable matter in water are especially undesirable because they invite germs which may be a menace to health. The location of wells should be so chosen that animal or vegetable matter is least likely to drain into them. Lead pipes should not be used to convey drinking water, but if they are, the water should be allowed to run for some minutes before using it, to avoid lead poisoning, which may result from using the water which has stood in the pipe, because it may have dissolved some of the lead.

Filtered water is freed from dirt but it may contain disease germs or chemical poisons. Unless filters are frequently cleaned, impurities gather upon them and increase the impurity of the water rather than decrease it. Small filters that are screwed on faucets are of practically no value. When there is any doubt about the purity of water, it should be boiled. Boiling kills disease germs but does not remove dirt nor chemical poisons. Boiling drives out of water the air that is dissolved in it and throws out of solution some minerals so that boiled water is less palatable. Typhoid fever, cholera, and dysentery are largely water-borne diseases, and when there is any suspicion as to the purity of the water supply, the water should be boiled.

Distilled water is the only absolutely pure water. Even the purest distilled water contains a minute residuum of impurities. It is water that is obtained by condensing the steam from boiling water. Rain water is naturally distilled water, though it may gather impurities as it falls through the air, especially the first part of a rain fall. That which falls after it has been raining for a little time is not open to this objection.

Carbonated water is water that has been either naturally or artificially charged with carbonic acid gas, also called carbon dioxide. Several different kinds of naturally charged water are sold in bottles. The "soda water" sold at soda fountains contains no soda but is artificially charged with carbon dioxide. Some of the drinks sold at soda fountains consist simply of carbonated water flavored with a syrup made from sugar and an extract of herbs and roots. Others contain objectionable drugs, such as caffeine. Carbonated water is valuable in inducing people to drink more water, and to relieve nausea and vomiting, but it should not be used to excess or to the exclusion of plain water.

The benefit derived from water cures is not due so much to the medicinal character of the water itself as to the amount of water taken and to the treatment and change of surroundings, associations, and occupations. Benefit can be obtained by following the same treatment at home.

Cool water is the natural drink for quenching thirst. Ice water should not be drunk when one is overheated, nor with meals. Ice water may be given to fever patients. Swallowing small quantities of crushed ice may relieve nausea.

Drinking hot water may aid weak digestion and be of benefit in chronic invalidism. A cup of hot drink at meals

stimulates digestion. Hot water relieves thirst more quickly than cold water because it leaves the stomach sooner, and is more quickly absorbed.

The value of a beverage lies in the water it contains, or, in the case of fruit drinks, in the mineral matter, acids, and sugar contained. Milk should not be considered a beverage. It is a food, becoming solid in the stomach.

Coffee and tea are objectionable drinks on account of the tannin and caffeine they contain. Tannin interferes with digestion, and caffeine is a drug which has a marked influence upon the nerves and heart. Continued use of tea and coffee is often the cause of sleeplessness, stomach trouble, palpitation of the heart, headache, constipation, nervous disorders, kidney disease, liver trouble, high blood pressure, and hardening of the arteries.

Recipes

George E. Cornforth

Pimento and Cottage Cheese Loaf

2 cups cooked lima beans.
⅔ cup cottage cheese.
5 canned pimentos, chopped.
Bread crumbs.
1½ level teaspoons salt, or salt to taste.

Grind the beans through a food chopper, mix with the cheese and chopped pimentos and add enough bread crumbs to make the mixture stiff enough to form into a roll. Put in an oiled pan, and surround with 1 cup water and 2 tablespoons oil. Brown in the oven, basting occasionally with the water and oil in the pan.

Make a gravy by thickening the water in which the loaf was baked with two level tablespoons flour stirred smooth with cold water. Add salt. A little browned flour may be used in place of part of the white flour for thickening.

Cornmeal and Nut Cakes

2 cups cold white cornmeal mush.
½ cup chopped nuts.
1 egg.
1 tablespoon oil.
¼ tablespoon salt.

Mix and form into cakes. Put in an oiled pan and brown in the oven. Serve with chili sauce or cranberry sauce.

Ice Cream

(This recipe calls for no sugar and no cream.)

1 quart milk.
1 16-ounce can condensed milk.
1 junket tablet.
1 teaspoon vanilla flavoring.

Warm the milk till lukewarm (100° by the thermometer). Dissolve the junket tablet in one tablespoon warm water, and add it to the warm milk. Let stand in a warm place till the milk is thickened, then stir into the milk the condensed milk and flavoring. Freeze, using three parts chipped ice to one part coarse salt.

Date and Cocoanut Pudding

1 pint milk.
½ cup shredded cocoanut.
1½ cups dates measured after they have been stoned and ground through a food chopper.
¾ cup stale bread crumbs.
¼ teaspoonful vanilla.
2 eggs.
A few grains salt.

Heat the milk and cocoanut together in a double boiler. Stir the chopped dates into the hot milk and cocoanut and work them smooth. Then stir in the bread crumbs and vanilla. Separate the whites from the yolks of the eggs, beat the yolks and stir them into the pudding, also the salt. Beat one of the egg whites stiff and fold it into the pudding. Put into a pudding dish. Set the dish in a pan of hot water in the oven and bake till the pudding is set.

Beat the other egg white stiff with half a teaspoon of cold water, then beat into the white 2 level tablespoons sugar. Spread this over the pudding and brown in the oven.

The Skin and the Health

G. H. Heald, M. D.

THERE seems to be a close connection between a healthy skin and a condition of good general health. Even the plain man or woman recognizes the fact that a good complexion betokens good health, and that a sallow, blotchy, dry skin indicates poor health. But which is cause, and which is effect? Does good health give a good complexion, or is a well-cared-for skin an important factor in the health of the body as a whole? To both questions we may reply in the affirmative. The health of the skin and the general health are inseparably connected, each as cause, and each as effect.

What is the secret of the almost perennial youth of famous stage beauties who at sixty and sixty-five look no more than thirty or thirty-five? Do they maintain their youthful charm by means of skin treatment, or as a result of the practice of general hygiene? Ask any of them, and you will learn that their program devotes much time to physical training of some sort, to careful treatment of the skin, and to the adoption of a careful dietary régime. It will be found that those who do not attend to all these details do not succeed in remaining young in appearance when they are old in years.

Bad skin conditions and bad general health form a "vicious circle" as it is called by the doctors; each condition reacting on the other and making it worse. It stands to reason, then, that a program of health building should include measures for the care of the skin as well as for the rest of the body. Grooming a horse, which is nothing more or less than a skin massage by means of a stiff brush, not only improves the coat of the horse, but makes him feel better, and he shows it in his better action.

Some one has supplemented the statement that a man is as old as his arteries, with a similar one, "Man is as old as his skin."

The first signs of advancing age are to be seen in the skin. While the skin retains its youthful texture and characteristics, one remains young, no matter what his age in years; and on the other hand, one in whom the skin shows characteristics of age is becoming senile, even though in years he is but an infant.

In youth, the skin has an excess of oil, often manifested by the presence of pimples, blackheads, etc. This blotchy condition is sometimes attributed to the eating of certain kinds of food, but more likely it is a natural result of the metabolic changes incident to the transformation of the boy or girl into a man or a woman. This excess of oil is only temporary, and sooner or later it is followed by a deficiency of oil — the characteristic of advancing age — manifested in an untransparent, harsh, dry skin, which when pinched up between the fingers assumes very sluggishly its normal position. Possibly life insurance examiners will some day pay more attention to the skin signs as an evidence of the life expectancy of applicants for life insurance.

Many persons who give attention — perhaps undue attention — to their complexions, do not do it wisely. They do not fully sense the bearing of the general health on the complexion, and so they neglect the bowels, and thus permit a condition which makes for a muddy or blotchy complexion, and then attempt to camouflage this condition by

the liberal use of cosmetics, some of which have a damaging effect on the skin, and consequently on the health.

Sometimes those who are not guilty of such practices injure their skin in another way — by too much soap and water. A daily soap bath is probably more harmful than beneficial, at least in those whose skin tends to be dry, in that it depletes the skin of its oil faster than the glands can replace it. An occasional soap bath is a stimulant to oil secretion, but the daily soap bath tends to leave the skin dry and harsh. Such a bath might be adapted for the oily skin of youth, but it is a detriment to the skin of the older person, which tends to dryness rather than oiliness.

There is evidence that many skin diseases begin because of a harsh dry skin due to lack of oil. An oilless skin means less protection against the weather, and necessitates the use of more clothing and bedding. One reason why old people are so "cold-blooded" is that their skin is unusually dry. Let a person with a dry skin, who must sleep in a cold bed, try the experiment of giving himself a full oil rub just before retiring, and the chances are that in a short time he will be uncomfortably warm. One who finds the water too cold for swimming will find that he will feel the cold very much less, if, before the bath, he gives himself an oil rub or a mineral oil rub. The oil should not be used in such quantity as to leave the skin shiny. It should be well rubbed into the skin so that its presence is not apparent to the sight. One who, otherwise, might find the water too cold for comfort will, in this way, enjoy bathing. This should be a full demonstration of the fact that the coating of oil on the skin acts as a conservator of the heat of the body. For this reason, those who feel that they must have a daily soap bath, should — unless they are young enough to supply oil to the skin rapidly — follow the bath with an oil-rub. Skin troubles come largely from dryness,— too little oil; from disturbed metabolism, the result of wrong eating, etc.; and from action of germs and parasites.

Care of the skin should include oil rubs after soap baths if taken frequently, unless the skin has a tendency to be too oily; flesh rubs by hand or brush; sun baths and air baths.

The benefit of these sun and air baths is most apparent in some of the tuberculosis cures. However, there should not be too much sun treatment, as an excess of the actinic rays acts injuriously.

Other measures for the care of the skin are: Cleanliness inside and out, and a well-balanced dietary. Pellagra and scurvy are examples of the effect a poor diet has on the skin.

Will Prohibition Increase the Use of Habit-Forming Drugs?

D. H. Kress, M. D.

ONE of many arguments brought forth against prohibition, is that suppressing the sale of alcoholic beverages will increase the use of habit-forming drugs. True, it is natural for one who is accustomed to the use of one narcotic, when deprived of it, to resort to another, which may be more injurious. Health Commissioner Copeland, of New York City, while favoring prohibition, sees the need of not merely prohibiting the sale of alcoholic beverages, but of protecting the abnormals, made by drink, from resorting to the use of some one of these other drugs. He says:

"I am convinced that the number of drug addicts will be greatly increased when prohibition is enforced, unless Washington enters into an international agreement with our border countries to stop the importation of opium. It is not hard to get opium in this country at present. I hope it will be later. There is a great deal of clandestine selling of dope in this city. We imported 476,000 pounds of opium last year.

"This crude opium is shipped from China to Canada and Mexico, and then smuggled across into the United States. This has got to be stopped. It must be done by international agreement, so that opium and its derivatives will be dispensed by Government agents.

"It is a very trying condition to me as health commissioner. I can take these thousands of girl and boy addicts up to Riverside Hospital and cure them. Then they come back to the city, get their dope surreptitiously, because society doesn't give them a job and protect them, and then the thing begins all over again. It is exasperating, to say the least.

"We must have this international control of habit-forming drugs, and with that the greatest possible activity on the part of the police to see that the dives and dens are closed up. I have on my desk at present a list of half a dozen places where drugs are dispensed. We will pick them off, but they will spring up somewhere else."

This is no argument in favor of the sale of alcoholic beverages, in fact, it is one of the strongest arguments in favor of prohibition. In dealing with these cases, we are dealing with degenerates, found in "dives and dens," made so, frequently, by the use of alcoholic beverages. Prohibition, if enforced, will at least aid in the prevention of the growth of another crop of these abnormals, and we shall in time lessen the demands even for habit-forming drugs. To bridge us over, however, we shall have to do everything possible to protect those in whom this craving for narcotics has been already developed, by making it more difficult, if not impossible, to obtain these habit-forming drugs. This is what Commissioner Copeland is pleading for the city of New York.

The craving for narcotics is quite universal. No less a personage than Dr. Parkhurst made the following sweeping statement a few years ago:

"The desire for something more stimulating than anything found in brook or cistern is a *natural* one."

Being a natural desire, *as he thought*,

he argued that to withhold the milder alcoholic beverages would be a wrong interference with personal liberty. It is almost a universal desire, I admit, but not a natural one. It is wholly an unnatural desire. There is no creature aside from man that possesses a craving for anything stronger than water. In man this craving for narcotics is a product of cultivation. It may be inherited, but more frequently it is cultivated at the dinner table.

What we eat has much to do with what we drink. Highly seasoned and stimulating foods may create a thirst that the town pump will fail to quench. The excessive use of salt, the use of pepper, mustard, vinegar, and other irritants, will produce an abnormal and inflammatory condition which nothing but a narcotic can temporarily soothe.

There is an intimate relation between the free-lunch table in the saloon, and the bar — the one leads to the other. The saloon keeper may not be able to give the scientific reason for this, but he is so fully convinced of it that he is willing to risk, at considerable expense, a free lunch to his patrons. The fact is, he is running no risk. To him it is a perfectly safe business proposition.

An inventory of this free-lunch table will reveal sausages, liver, pig's feet, smoked ham, pepper, mustard, and a liberal supply of salt. Why does he not serve peaches, pears, grapefruit, oranges, etc? Though unable to give the scientific reason for it, he knows that such foods would lead from the bar instead of toward it.

It would be a good thing if wives and mothers should make this discovery, and supply their tables with the kind of foods that lead away from narcotics, instead of those that create a craving that cannot be quenched by brook or cistern. The thirst created by such irritants can be quenched better, even by a smoke, than by a drink of sparkling water. Any narcotic, whether alcohol, tobacco, opium, or heroin, will afford temporary relief from such inflammatory conditions.

The saloon does not *create* the craving for drink. It merely culls out those in whom this craving exists. Wives and mothers are playing into the hands of the saloon keeper by furnishing their husbands and children the same kind of food found on the saloon free-lunch table.

Should the wives and mothers of America have combined and determined to furnish upon their tables none of these irritants, but to supply their families freely with foods that are non-stimulating and non-irritating, they might have closed up every saloon within a year without legislation of any kind.

Prohibition is right and should be enforced; but something more is needed. Mothers must make reformations in their homes in the quality of foods and drinks served to their families. Unless this is done, the craving for narcotics will not be done away, and naturally when deprived of one narcotic, men will resort to another.

A prominent temperance lecturer of England once said in my hearing:

"I greatly sympathize with the women of England who are addicted to the use of beer, for I drank it myself up to fifteen years ago, and my craving for it today is just as strong as it was then."

This woman possessed the same craving the streetwalkers possessed, but fortunately she was in possession of a will-power that some of her more unfortunate sisters did not possess.

I well recall a scantily clad woman with a babe in her arms who came to me in Liverpool at the close of a lecture, asking for advice. She said: "I am a drunkard. I did not drink until I gave birth to my second child, when the doctor prescribed porter for me. I did not like the taste of it, but it seemed to satisfy a craving I possessed, and since then I have been addicted to its use, and find it impossible at times to pass the saloon door. After taking one drink, I loose all self-control and I drink until I am drunk."

There are those who pass through life "longing for something they know not what." Sometime they may discover what it is the system craves; whether or not they will continue to gratify this craving will depend entirely upon the power of the will.

The relation existing between the food and the use of narcotics is clearly brought out in the Scriptures. Referring to the condition existing in the world, one of the prophets said that the people were "slaying oxen, and killing sheep, *eating flesh, and drinking wine,*" saying, "let us eat and drink; for to-morrow we shall die." Isa. 22:13.

In referring to the low moral standard of the antediluvians, Jesus said, "They were *eating* and *drinking,* marrying and giving in marriage until the day that Noe entered into the ark, and knew not until the flood came, and took them all away; so shall also the coming of the Son of man be." Matt. 24:38, 39.

God had chosen to make of the children of Israel light bearers to the world — to make of them a holy people. He corrected their physical habits. He withheld from them *flesh* and *leeks* and *onions,* and instead gave them *manna* to eat and *water* to quench their thirst. Daniel, the Hebrew captive in Babylon, "purposed in his heart that he would not defile himself with the portion of the king's *meat,* nor with the *wine* which he drank." He said, "let them give us *pulse* to eat, and *water* to drink." Daniel 1. The meat and wine on the king's table formed a natural combination. One created the demand for the other, and the *pulse* and *water* also formed a natural combination. Natural thirst does not demand anything stronger than water to satisfy, but this unnatural craving, produced by the use of unnatural foods, demands wine or some other narcotic.

There is room for great reform. "We then that are strong ought to bear the infirmities of the weak, and not to please ourselves." Rom. 15:1.

Paul said, "If meat make my brother to offend, I will eat no meat while the world standeth, lest I make my brother to offend." 1 Cor. 8:13. And again he said, "It is good neither to eat flesh, or to drink wine, nor anything whereby thy brother stumbleth, or is offended, or is made weak." Rom. 14:21.

We have all gone astray. We have wandered away from the original diet given to man. The gospel is designed to lead us back to our Father's house and to the bill of fare given to the happy holy pair in Eden,— the fruits, grains, nuts, and other natural and nonirritating foods. To subsist on such a diet will, in many instances, destroy in time all craving for narcotics, and will prove a valuable aid to all who are struggling with the craving for drink. To make prohibition safe, and an aid in solving the problem of checking the inroads being made by habit-forming drugs, it is essential to give attention to the diet.

Takoma Park, D. C.

Cancer an Increasing Menace for the Middle Aged

MEDICAL science is making rapid advancement in the limitation of the acute infections, and has even made much progress against tuberculosis; but notwithstanding the lavish expenditure of money, and of time, in the effort to unravel the mysteries of cancer, little advance has been made. We do not know the cause of the disease, and we know of no way, except by prompt removal, to arrest its growth. When it has developed so that it is no longer localized in one small spot, nothing can be done, but to make the patient as comfortable as possible. The American Society for the Control of Cancer, 25 West 45th St., New York City, gives this reliable information regarding it:

"1. During the great war the United States lost about 80,000 soldiers. During the same two years 180,000 people died of cancer in this country. Cancer is now killing *one out of every ten persons over forty years of age.*

"2. Many of these deaths are preventable, since cancer is frequently curable, if recognized and properly treated in its early stages.

"3. Cancer begins as a small local growth, which can often be entirely removed by competent surgical treatment, or, in certain external forms, by using radium, X-ray, or other methods.

"4. Cancer is not a constitutional or 'blood' disease; there should be no thought of disgrace or of 'hereditary taint' about it.

"5. *Cancer is not a communicable disease.* It is not possible to 'catch' cancer from one who has it.

"6. *Cancer is not inherited.* It is not certain even that a tendency to the disease is inherited. Cancer is so frequent that simply by the law of chance there may be many cases in some families, and this gives rise to *much needless worry* about inheriting the disease.

"7. The beginning of cancer is usually painless; for this reason its insidious onset is frequently overlooked, and is too easily neglected. *Other danger signals must be recognized and competent medical advice obtained at once.*

"8. Every persisting *lump in the breast* is a warning sign. All such lumps are by no means cancer, but even innocent tumors of the breast may turn into cancer if neglected.

"9. In women, *continued unusual discharge or bleeding* requires the immediate advice of a competent doctor. The normal change of life is not accompanied by increased flowing, which is always suspicious. The return of flowing after it has once stopped should also be considered suspicious. Do not expect the doctor to tell you what the matter is without making a careful physical examination.

"10. *Any sore that does not heal,* particularly about the mouth, lips, or tongue, is a danger signal. Picking and irritating such sores, cracks, ulcerations, etc., or treating these skin conditions by home remedies, pastes, poultices, caustics, etc., is playing with fire. Warty growths, moles, or other birthmarks, especially those subject to constant irritation, should be attended to immediately if they change in color or appearance, or start to grow. Avoidance of chronic irritation and removal of just such seemingly insignificant danger spots may prevent cancer.

"11. *Persistent indigestion* in middle life, with loss of weight and change of color, or with pain, vomiting, or diarrhea, call for thorough and competent medical advice as to the possibility of internal cancer.

"12. *Radium* is a useful and promising means of treatment for some kinds of cancer, in the hands of the few skilful surgeons and hospitals possessing sufficient quantity of this rare and very expensive substance; it must not be thought of as a cure-all for every form of cancer. No medicine will cure cancer. Doctors and institutes which advertise 'cures without the knife' play upon the patient's fear of operation in a way that leads too often to the loss of precious time, and fatal delay in seeking competent treatment. Go first to your family physician.

"13. *Open warfare by open discussion* will mean the prevention of many needless deaths from cancer. The common belief that cancer is a hopeless malady is partly due to the fact that cases of successful treatment are frequently concealed by the patient and his family, while cases of failure (too often resulting from delay) are apt to become common knowledge."

The Danger in Too Much Sugar

W. H. Addis

In view of the scarcity and extremely high price of sugar the following article may be some comfort to the readers of Life and Health.— Ed.

UNDER the head "Exit King Alcohol," a great Chicago candy manufacturer sends forth the word that in 1916 the people of this nation spent $600,000,000 for candy.

Chicago, the greatest meat-producing market in the world, used more candy than meat. A certain chain of five-and-ten-cent stores sold 89,000,000 pounds of candy in one year, and 21,000,000 pieces of chewing gum. Eighty per cent of this was purchased by the laboring class. . . .

The consumption of sugar has increased over 450 per cent in this country since 1865. . . . We used more than 9,000,000,000 pounds in 1916.

Experiments conducted at the experimental station of the University of Minnesota determined that a hardy north woodsman working all day in the open air could barely consume, or oxidize, four ounces of sugar, and this with a tremendous effort. Now our per-capita consumption of sugar exceeds four ounces a day, and it is high time that we consider the effect that this prodigious consumption of concentrated carbohydrate will cause in our national health. . . .

Cane Sugar and Digestion

Sugar used in quantities, clogs the system, irritates the digestive organs, and affects the brain. The free use of candy and soda fountain concoctions is a prolific cause of catarrh in the stomach and bowels. Especially is this true of the youth. Sugar is a powerful corrosive. It will corrode iron and steel, and is powerful enough to take lead into solution. . . . For this reason the confectioner uses kettles that are made of copper and tin plate. . . .

In its natural state the juice of the sugar cane contains many minerals that are required by the human body. Among these are iron, calcium, magnesium, phosphorus, and silica. The affinity of sugar for lime is so great that the juice of the sugar cane contains nearly one-fifth calcium oxide, which it has drawn from the soil. . . . In refining sugar, these minerals so precious to the human body are removed. In consequence, the sugar now takes on an insatiable hunger for lime, iron, etc. Understanding this, it is easy to see how demineralized sugar attacks the lime and iron of the tissues, which in turn demand to be replenished from the blood, and the way is prepared for disease to establish itself in the body. . . . It is this greed for calcium, that causes the teeth of the candy and sugar eater, to decay. As the blood stream becomes depleted, it in turn takes from the teeth its toll of lime, for the blood is the life and must be saved.

As we use sugar let us remember that it is a very highly concentrated food, and should be used accordingly. If we do this, we shall have done much to avoid diabetes, Bright's disease, gastritis, colitis, and hosts of other diseases that find ready lodgment in the alimentary tract when it is irritated and inflamed. Honey, malt, sirup, and brown sugar will satisfy, and in these days of high cost of living, will be a real economy in health and wealth.

THE death rate from malaria in Cuba is said to have dropped from 25 per 10,000 population in 1898 to about 2 per 10,000 in recent years. When the United States took administrative control of the island, malaria was at the head of the causes of death.

QUESTIONS AND ANSWERS

Answers this month by G. H. Heald, M. D.,

This is a service for subscribers to LIFE AND HEALTH.

For personal reply, inclose two-cent stamp, and address Editors LIFE AND HEALTH, Takoma Park, D. C.

If you are not already a subscriber, send also the subscription price with your question.

Replies not considered of general interest are not published; so if your query is not accompanied by return postage for a personal answer, it may receive no attention whatever.

Remember that it is not the purpose of this service to attempt to treat serious diseases by mail. Those who are sick need the personal examination and attention of a physician.

State your questions as briefly as possible, consistent with clearness, and on a sheet separate from all business matters. Otherwise they may be overlooked.

Colon Massage

"In the book 'Epidemics,' page 94, instruction for colon massage is given. It is stated, 'Follow the colon up the left side with a kneading motion, cross just above the umbilicus (naval), and continue down the right side. The idea is to force the contents toward the rectum, making room for it farther up in the colon.' Is this an error or a misprint, and should not the direction of kneading be just the opposite?"

The statement as printed is not an error, although it may not be as full as it should be. The kneading motion should begin on the left side at the lower part of the colon. The motion should be one of stripping the colon, to move its contents onward, a little at a time, but following the colon backward, up the left side, across, and then down on the right side. The idea is to move a small part of the colon contents at a time, not to try to force the entire mass forward at once by pressure from behind.

Owing to the fact that some have misunderstood these directions, later editions of the book give the old method, which is really inferior to the new method, but is more readily understood.

Fever Blisters — Water in Fevers

"Will you kindly give me the cause of, and a quick relief from, fever blisters? When a person has any kind of fever, is it essential or harmful to give him cool water to drink? I will thank you for a reply in the December number of your valuable magazine."

This letter was received November 13, very nearly two weeks after the December issue was in the mail. The January issue was already too far advanced for it to be put in that, and the manuscript had already been sent in for the February number. We have enough questions and answers ahead to occupy all the available space up to the May number. It is well, therefore, for subscribers to remember that if they want immediate answers to their questions, they should inclose stamp and give name. Many publishing houses refuse to answer questions of individuals who do not sign the name to a communication. This is no more than right. We never print the name of the person writing, but it should be given to us as an evidence of good faith.

I do not know that any one can state just what is the cause of fever blisters, or cold sores, as they are frequently called. They appear on the lips often at the beginning of a cold, sometimes in connection with the fever. Perhaps as good a treatment as any is to touch each blister with undiluted peroxide of hydrogen.

In fevers it is always beneficial and essential to give cool water to drink.

Tonic for Nervous Exhaustion

"I am sixty-seven years old, and my general health is good, but I suffer from nervous exhaustion. Can you recommend a tonic?"

Perhaps your general health is not so good as appears, if you are suffering from nervous exhaustion. I regret to say that I know of no good "tonic." For exhaustion, there is no such remedy as rest. The so-called "tonics" support a person and enable him to continue working when he should be having a rest. In fact, a "tonic" masks the fact that one is tired, and if masking is kept up sufficiently long, there will eventually be a nervous breakdown from which recovery will be extremely difficult. Coffee is such a tonic, but all tonics are deceivers, borrowing from the future to make the present easier, and sometime the debt must be paid with interest. What you want in nervous exhaustion is not a tonic, but carefully regulated nourishment and rest.

Not knowing more about your habits of life, or of the cause of your exhaustion, I can make very few suggestions. Possibly you are on your feet too much; or it may be that certain troubles in your life have caused worry and unrest of mind, and that you need a change of scene. Or some lack of balance in your diet may have deprived you of certain essentials.

If you could spend some time at a sanitarium, the rest and treatment would do you good, and what you would learn there regarding the regulation of your life would be a great help to you in the future.

Is Insanity Contagious?

"I was told that if any one stays with, or takes care of, a mentally deranged, lunatic, or insane person for too long a time it is bound to affect his mind. I should like your opinion as to this."

I know of no reason why constant contact with a mental patient will have an injurious effect on the mind of a normal person. Some doctors and nurses make a specialty of mental diseases, and are constantly with this class of patients, without its having any effect whatever on them, so I think you need have no alarm regarding the possible outcome of your handling such a patient.

Burns

"What is the best emergency remedy for burns?"

The best is the one you can get in the shortest time — the one nearest at hand at the time of the accident. If it be carron oil — linseed oil and limewater, equal parts — use that, though it is a messy mixture. Picric acid, 1-per-cent solution, is more saitsfactory, but is not without danger from absorption, in case of severe burns. Tincture of the chloride of iron painted several times over the burned surface, with a camel's-hair brush or a cotton swab, is an excellent treatment. The burn should then be covered with a gauze dressing. In using the iron solution, the pain first increases then ceases altogether.

The engineer at a large sanitarium kept on hand a pot of shellac, and whenever burned, dipped the burned area into the shellac. The relief, he said, was instantaneous. Venice turpentine is said to be most effective in relieving the pain of a burn.

High Blood Pressure — Weak Heart

"Describe the symptoms of high blood pressure, and tell if there is any relief to be given to one who is thus afflicted.

"Could one in this state take massage?

"What is the best remedy for weak heart?"

The surest sign of high blood pressure, and really the only one worth anything, is that obtained by use of the sphygmomanometer, the instrument devised for recording the blood pressure. Unless your pressure has been taken with such an instrument, and it is known how high your pressure is, and what is the probable cause of increased pressure, it would be inadvisable to attempt to treat it. In attempting to reduce a high blood pressure, it is possible to do more harm than good, for the reason that often a high pressure is compensatory; that is, it is nature's attempt to protect the individual from something worse. If there is some condition requiring the high pressure as a compensation, the high pressure might be the lesser of two evils. So first determine definitely whether you have high pressure, and then determine what is causing it, and as far as possible, eliminate the cause. Of course, this will require the attention of your physician.

Perhaps there is no definite reason why massage, properly administered, should not be given in case of high pressure.

If you have dilated heart,— what is known as an uncompensated heart trouble,— you should be under the careful supervision of a physician who can regulate your diet, exercise, rest, and the like. Such regulation of your life could not be done by mail, as the advice would have to be given in accordance with the changing conditions of the heart. In general, it may be said that the best way to build up a weak heart is to build up the body as a whole. If there is a weak heart, it is generally because the muscular system as a whole is weak. The heart is not receiving sufficient nourishment. If this is owing to the fact that the blood vessels supplying the heart have become hardened, there is not very much that can be done.

Gastric Catarrh

"Is it harmful to use a heaping tablespoonful of common kitchen soda to a gallon of water for stomach wash in case of gastric catarrh of the stomach; if so, what is the best thing to use? Tell me through the pages of LIFE AND HEALTH, *the next number if it is so you can, what is the very best thing to do for gastric catarrh of the stomach."*

Gastric catarrh is catarrh of the stomach. We do not use the expression "gastric catarrh of the stomach." Baking soda (not washing soda) used in the quantity and manner described in the query, should be harmless. Table salt used in the same quantity should also be useful.

The "very best thing" to do, is to place yourself in care of a competent physician who can determine the exact condition, learn what has led up to it, and regulate your manner of life accordingly. The intelligent physician does not treat a disease, but a patient. There is all the difference in the world. Strictly speaking, there is no "very best" treatment for gastric catarrh. What might be the very best for one patient and under certain conditions, would not be best for another patient, or under other conditions. A course of treatment in a well-regulated sanitarium would be beneficial to you.

Mumps

"In case of mumps, how may the infection be kept from spreading to other glands?"

"If, in case of mumps, one notices a beginning soreness in the breast, or sex glands, a hot fomentation or hot mustard poultice over the sore gland in the fact will draw the soreness back to that gland, and prevent its spread. During this treatment, the patient should, of course, be kept in bed.

BOOK REVIEWS

Health Through Will-Power

by James J. Walsh, M. D., Ph. D., Sc. D., etc. Price, $1.50, net. Little, Brown, and Co., Boston.

It is Dr. Walsh's purpose in this book to help restore the will to its rightful place as "the supreme faculty of the mind." He believes that when people recover, it is because they have exercised their will-power to that end.

As to whether the will-power *as such*, or a condition of active hope is the determining agency which starts the body cells in the reconstructive process, is a point on which the writer of the review — much as he respects the author's attainments and scholarship — would have to take issue with him.

Very often nothing like a will to be well can be determined, only a vague wish, a hopeless wish, perhaps, and when, through the sympathetic, encouraging words of the physician, or the exaggerated optimism of the nostrum ad., the patient has a ground of (to him) tangible facts to which he can attach his hopes, he anchors to that. His attitude is often little more than passive. He has the confidence, the trust, the new outlook upon life; but in many cases, little will-power is manifested. Often these patients must be babied through their entire recovery.

That such a recovery is not necessarily permanent stands to reason. In nearly every case of illness there are wrong habits of life to be corrected; and it is to the correction of these, the taking of adequate air and exercise, the regulation of the diet, the foregoing of hurtful indulgences, that we must look for permanent recovery. It is here, I take it, in the changing of life habits, that the "will to be well" is the forceful factor.

Dr. Walsh's chapters on "Habits," "Sympathy," "Self-Pity," "Pain and the Will," "The Will and Air and Exercise," "The Will to Eat," are a good corrective for much of the mushy literature that has been published on the subject of self-cure. He also has excellent chapters on "The Place of the Will in Tuberculosis," "The Will in Pneumonia," "Coughs and Colds," "Neurotic Asthma and the Will," "The Will in So-Called Chronic Rheumatism," "The Will in Intestinal Function," "Psycho-Neuroses," etc.

The Science of Eating

by Alfred W. McCann. Price, $2, net; George H. Doran Company, New York.

A glance through this book suggests such descriptive words as "mental legerdemain," "rhetoric," "muckraking," "innuendo," "insinuations," "hysteria." Because of the large amount of "padding," the writer of this review found it hard to get interested in the book, and frequently felt the temptation to take his blue pencil and delete phrases, lines, and paragraphs, in order to get it down to where it would consist of proposition and proof, with not too much rhetoric, filling, and surmise.

There are numerous slams at the Government departments. But the reviewer finds it easier to understand the Government bulletins than he does McCann's book; a fact which he regrets, for on the whole, McCann is championing a great and important cause. He has the courage of his convictions, and is fearless; and the worst that can be said of him is that when pink appears, he sees it as deep red. He cannot help it, perhaps, nor help making unproved statements. It would seem that reformers who have to meet great and influential opposition must have that in their makeup.

He stands for natural foods, as against the adulterated, sophisticated, denatured, devitalized foods that modern rapacity has conceived, and in doing so, he has had to meet the bitter enmity of intrenched capital, and of a servile officialdom, and a worse-than-servile press. Like Dr. Wiley, he apparently fears neither man nor devil, and like Wiley, he has promptly consigned to hades the scientific body that failed to agree with him. If science or medicine, in the personnel of its leading men, fails to bear him out in his findings, so much the worse for science or medicine.

For those who like this kind of reading, and who are able to distinguish between fact and inference, the book should be of great value. And at any rate it will compel some to think on the subject of nutrition who have always given the subject a wide berth.

If I should characterize the book in one expression, it would be that, like some of the foods he condemns, it is a bulking out of the good with worthless filling. This four-hundred-page book would be more useful if it were but two hundred and fifty pages.

NEWS NOTES

Deaths from Tuberculosis

According to the report of the Executive Committee of the National Tuberculosis Association, the annual death rate for tuberculosis in the United States is more than 150,000; that is, more than we lost in the Great War.

The Hookworm Scourge

According to the annual report of the Rockefeller Foundation, many of the soldiers in the recent draft, coming from infected districts, though they had comparatively few hookworms, had a mentality equal to that of children twelve years old. Of some ten thousand men at Camp Travis who had hookworm, the mentality was found to be about a third below normal.

Schools Establishing Classes in Diet

Under the direction of nurses and dietitians, three schools in Pennsylvania are establishing classes in "eating," including instruction for both parents and students in the causes of malnutrition. Medical school inspectors state that malnutrition is due not only to poverty, but also to improper feeding, to eating between meals, and to an excessive amount of candy. These schools will be well equipped with apparatus for carrying on this work.

One Million Consumptives

There are in the United States one million persons suffering from tuberculosis sufficiently advanced to produce noticeable symptoms. It is true, all these cannot be called consumptives, but all are on the way to consumption, unless the disease is arrested. Of this number 150,000 die every year, but these are being constantly replaced by fresh cases. Moreover, for every case of recognized tuberculosis, there are two unsuspected cases, if we may judge by investigations made at Framingham.

Cause of Rickets

E. Pritchard, in the *British Medical Journal* of Nov. 5, 1919, maintains that all forms of malnutrition in children end in rickets, which, he says, is essentially a failure of the bones to take on sufficient lime salts. This, he believes, is due to the fact that other bodily functions call for the lime and rob the bones. The usual precursor of rickets, he says, is acidosis, which necessitates the use of lime to neutralize the acid in the blood. Any dietetic error which favors acidosis, then, will eventually bring on rickets.

Hookworm in Australian Children

An examination of 340 Queensland children heavily infected with hookworm showed an average mental retardation of about two years. The longer the child had been infected, the greater the retardation.

Women Physicians in England

There are now more than 2,250 women studying medicine in Great Britain. This is said to be an enormous increase over pre-war conditions. More than a thousand women are in medical practice in that country, with the prospect that the number will be doubled within five years.

Germ of Food Poisoning

Bacillus botulinus, the germ that has caused so many cases of violent and fatal poisoning in connection with sausages and other meats, and in connection with canned vegetables and fruits, would seem to be pretty widely scattered in nature. Mrs. G. S. Burke, of Stanford University, California, made 235 cultures from samples collected in five localities in central California, fifty miles or more distant from each other. These cultures were made from tap water, hay, leaves, vegetables and fruits, insects, spiders, sow bugs, snails, caterpillars, garden soil, manure, and from other sources. In seven of these cultures *B. botulinus* was found.

The New Quackery

There are fashions in quackery. The 1919 model is that which commercializes the trend of the public toward the so-called drugless methods of healing. A mail-order course on "How to Cure What Ails You Without Drugs: in Six Easy Lessons," by Dr. Quack or Professor Fake, is the lure. It proves a veritable gold mine for those who promote the scheme and for the magazines whose advertising pages furnish the point of contact between the seller and the purchaser — the spider and the fly. The theories so solemnly propounded by the exponents of the new quackery are usually made up of about 5 per cent banalities of elementary science and 95 per cent of pseudoscientific flapdoodle. The occasional rational, if obvious, things that quacks of this type say mislead intelligent people into accepting the ridiculous theories that are thus commercialized. Because the product sold is not put up in a bottle, the public assumes that it is free from quackery; therein it is mistaken.—*Journal A. M. A.*

Hookworm and Efficiency

Statistics from Costa Rica, India, and other localities show that after successful treatment for hookworm, the efficiency of laborers is increased fifty per cent.

Food and Nutrition

A special committee, consisting of physiological chemists and specialists in nutrition, has been appointed by the National Research Council, to study food and nutritional problems.

British Medical Students

Students who have been released from army service are crowding the universities, some to continue their interrupted medical course, others to begin the freshman year. From a dearth of physicians, the result of the war, it looks as if Britain would soon have an oversupply.

Smallpox in Canada

Owing to the prevalence of smallpox in Ontario, a quarantine has been established at the international border, and no one is permitted to cross the line into the United State who cannot give evidence either of having recovered from the smallpox, or of having been successfully vaccinated.

Unsuspected Tuberculosis

There were 100,000 men between the ages of 21 and 31 rejected in the draft because of tuberculosis — men who till that time did not suspect that they were tuberculous. If any one begins to get tired easily, to lose a little weight, to manifest neurasthenic symptoms, there is more than a possibility that it is a case of beginning tuberculosis. The great difficulty is that many physicians, when such a case comes to them for examination, refuse to pronounce it tuberculosis unless they find actual cavities in the lungs, or find tubercle bacilli in the sputum. When a diagnosis is made on that basis, the case is far advanced, and there is not nearly so much prospect of arresting the disease.

Birth and Death Rates

In 1917, the death rate in the birth-registration area of the United States was 14.1 per 1,000 population, the birth rate for the same period being 24.6 per 1,000 population, an excess of 74 per cent. This excess, 10.5 per 1,000 population, would make, if these figures also represent conditions in non-registration States, an annual increase in the population of the United States of more than a million, exclusive of immigration. No race suicide here — yet.

To Make Plaster Adhesive

On account of the discharge from the wound, or because of the inflammation of the surrounding skin, it is often difficult to make adhesive plaster stick properly. In order to remedy this defect, it has been recommended to paint the skin area with dilute tire cement, prepared by adding one part of common rubber cement, such as is used in mending tires, to ten parts of ether. The plaster will then adhere much better.

Eye Defects in Children

Dr. Thomas D. Wood, in an address before the National Committee for the Prevention of Blindness, said that from 25 to 35 per cent of the school children of this country have defective eyesight, and that much the larger proportion of these defects could be remedied. Of many children so handicapped, very few have ever had the help they need.

St. Helena Sanitarium

THE MAIN BUILDING — SHOWING THREE OF THE FIVE STORIES
New Concrete Hydrotherapy Building at the Right

¶ Away from the noise, excitement, and contamination of the city, and nestled close to the heart of nature, on a beautifully wooded slope of Howell Mountain, is situated the St. Helena Sanitarium.

¶ Its natural setting, in a forest of live oaks, firs, manzanitas, and madronas, together with an almost unending variety of flowers and foliage, gives a beauty and fragrance to the place that beggars description. It must be seen and enjoyed to be appreciated.

¶ Every modern facility favorably known to medical science in the treatment of curable conditions, has been incorporated into the institutional régime. Thus nature and science have combined to make the St. Helena Sanitarium all that can be desired by the diseased body or the weary mind.

Health Is Contagious at St. Helena

¶ Sixty-five miles from San Francisco, easily accessible by either steam or electric line; three and one-half miles from St. Helena; 750 feet above sea level; splendid climatic conditions at all seasons of the year; pure mountain water; beautiful view of valley, mountain, and plain; seven physicians, seventy nurses; excellent service, liberal cuisine,— these and many other advantages are to be enjoyed at this beauty spot of California.

The St. Helena Sanitarium

Sanitarium, Napa County - - - California