Life & Health

THE NATIONAL HEALTH MAGAZINE

August 1916

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LIFE AND HEALTH

August, 1916

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C. M. & St. P. Ry.

CAMP INDIAN HENRY

Mount Rainier National Park, Washington.

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Life & Health
THE NATIONAL HEALTH MAGAZINE

AUGUST
1916

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

G. H. HEALD, M. D., Editor

L. A. HANSEN, Associate Editor

Do You Know That—

BAD teeth handicap children?

Typhus fever is spread by lice?

Insufficient sleep endangers health?

Untreated pellagra ends in insanity?

Today is always the best day to clean up?

Polluted drinking water causes many deaths?

Efficient muzzling of dogs will eradicate rabies?

Fresh air, food, rest — these three combat tuberculosis?

An efficient health officer is a good community investment?

Bad temper is sometimes merely a symptom of bad health?

Insanity costs every inhabitant in the United States $1 a year?

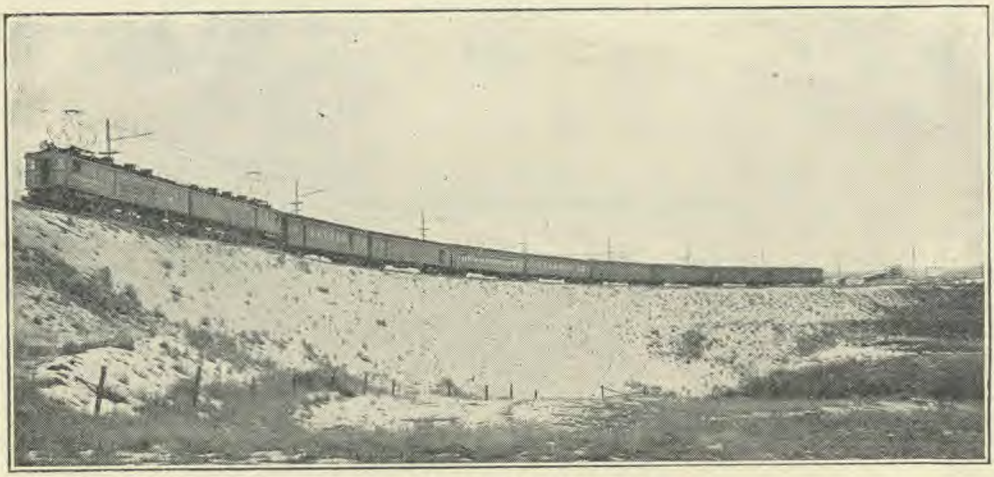
The protection of the health of children is the first duty of the nation?

In the lexicon of health there is no such word as "neutrality" against disease?

Overeating, constipation, lack of exercise, foul air, eyestrain, may produce headache?

The U. S. Public Health Service has reduced typhoid fever 80 per cent in some communities?

The death rate of persons under forty-five is decreasing; of those over forty-five it is increasing?



C. M. & St. P. Ry. **A TRAIN WITHOUT CINDERS**

The "Olympian" crossing the Continental Divide, Montana.

RAILROADING BY WATER POWER

G. HENRY HALE

WHEN the creaking old overshot wheel which had always furnished the motive power for the Stumpville saw-and-grist mill was given honorable discharge on a life pension, and replaced by a steam engine, a great advance was made in the utilization of power,[1] so the natives thought; those edgings and slabs had to be burned anyway, and when burned in the new mill furnace they afforded a more responsive power than the water going over the old wheel, for the governor of the engine threw on more steam to compensate for any increased load. Moreover, the siren call of the steam whistle gave an air of importance to the little village, which made it feel bold to measure strength with its more prosperous neighbors. The change seemed a profitable one, and for years the water wheel and flume lay idle, and the water that passed the neglected milldam ground no grist and sawed no lumber.

The age of steam had its triumphs. The steam engine and the line shaft made possible the conduct of industries on a scale undreamed of by our fathers of the water-wheel days. And Master Steam, not satisfied with his conquest of the industries, cast envious eyes on the means of transportation, and then there were more retirements with a pension,—the stage coach, the prairie schooner, the ox-and-horse caravan, the sailing vessel. Steam power gave so much more rapid and better service that the older methods of transportation and travel were all but superseded.

But the steam age was not without its drawback. The operation of these rapidly growing industries and transportation facilities necessitated the consumption at an alarming rate of the fuel treasures that should be the birthright of our children. After us the deluge!

Meantime improvements had been made in the old water wheel, so that it now had all the advantages of the steam engine, and the additional advantage of requiring no consumption of fuel. In some cities great flouring mills, pouring out a stream of flour amounting to thousands of barrels a day, were harnessed to the water of the near-by dam or waterfall; and wherever cities had a

[1] The word "power" is used in its popular sense.

C. M. & St. P. Ry. **THE SOURCE OF THE ELECTRIC POWER**

The great hydroelectric power plant at Great Falls, Mont.

water power close at hand, manufacturing concerns multiplied.

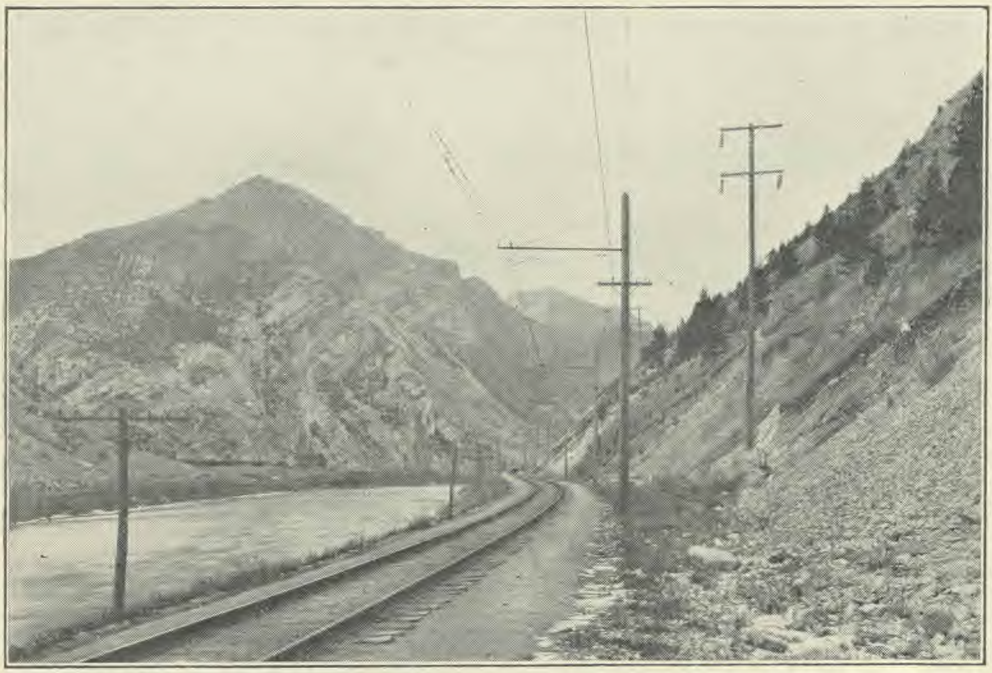
In fact, the location of great water powers in a measure determined the location of great industries and of dense populations; but not altogether, for other factors entered the problem, making it more advantageous often to utilize the more expensive steam power than to locate near a remote source of water power. If this mighty power of falling water could but be transmitted to a distance! It was at this point that the strange force, electricity, came to the center of the stage of action and made its bow to the public. Since then this force has been the star actor in the great drama of life.

The writer, as a boy, seeing on the wagon of a street vender in early San Francisco a crude machine or toy running by electric power furnished by a battery, wondered whether this power could ever be utilized to do practical work. In his lifetime he has seen the means of controlling and utilizing this power so developed that now it performs any work capable of being done by steam, and does it more satisfactorily. Moreover, engineers have learned how to transform the power of the milldam and waterfall into this marvelous form of energy, which is capable of being transmitted over small wires to far-off cities, where it is used for lighting, cooking, heating, and running trolley lines and machinery.

Not all the water power of the country has been harnessed, and not all the cities have the advantage of electric current from water power. Many cities still use steam (and hence fuel) for the production of electric power.

But all the water powers will eventually be utilized for the production of transmissible power, with a consequent reduction in the consumption of fuel, lowering of the cost of service, and saving of fuel for its legitimate purpose.

In some cities, in order to do away with the nuisance of smoky, dusty tunnels and terminal stations, the railway terminals have been electrified; that is, trains are hauled in and out of the city by electric locomotives; and interurban trolley lines, with their small light-weight units, have become popular, and are meshing the populous sections with their tracks; but the first steam railway to electrify its road extensively in the interest of efficiency and economy was the Chicago, Milwaukee & St. Paul, which



C. M. & St. P. Ry. A BIT OF ELECTRIFIED ROAD

Cañon of the Jefferson River, Montana.

has electrified its main line from Harlowton, Mont., to Avery, Idaho, a distance of 440 miles over the great Continental Divide. It took approximately $12,000,000 and three years' time to make this change, said to be the most important in the history of railroading since the invention of the steam locomotive; and undoubtedly the investment will pay well; for with a fuel consumption reduced to nothing, the new electric monsters are able to haul trains such as were hardly dreamed of before. Moreover, there is greater dispatch in train operation, a closer adherence to schedules, the virtual elimination of vexatious delays due to snow blockades and cold weather, and a much cleaner, more dustless and smokeless ride for the passengers.

The portion of railway electrified passes over three summits at altitudes of 5,778, 6,322, and 4,163 feet respectively. For a distance of more than twenty miles, at one place, the road mounts a two-per-cent grade; and there are other grades which would make hard work for a steam locomotive. But the monster electric locomotives, the most powerful in the world, carry the largest trains over these difficult parts of the road without a hitch or complaint.

The power which operates the road does not come from near-by streams, but from Great Falls, Mont., many miles from the main line. Below the dam at Great Falls is a power house developing a 100,000-volt alternating current, which at the substations is stepped down to a 2,300-volt alternating current; then by means of motor generators operated by the alternating current a direct current of 3,000 volts is developed, which is conducted to the feeder and trolley lines, thence through the pantographs (equivalent to the trolleys on trolley cars) to the motors under the locomotives.

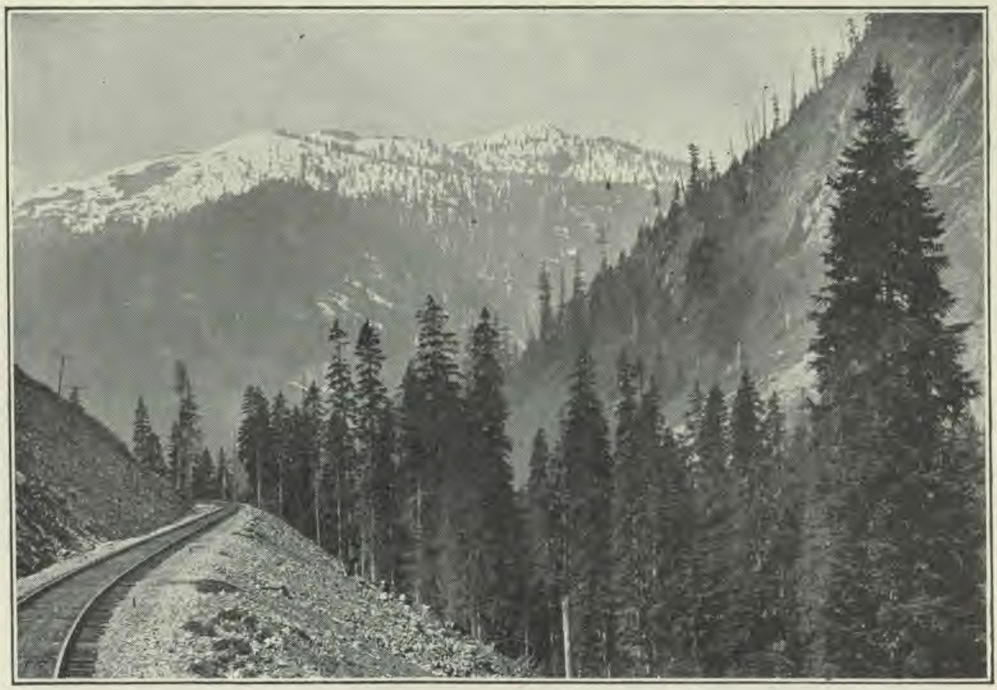
To haul the ordinary freight and passenger traffic of the road, forty-two of these electrical giants are required. Each of these locomotives, 112 feet 8

inches long, driven by separate motors, twin geared to each of eight pairs of driving wheels, weigh 284 tons, and costs approximately $112,000. Each freight locomotive is capable of hauling a load of 3,200 tons at an average speed of sixteen miles an hour up a one-per-cent grade. Passenger locomotives, geared for greater speed, haul an 800-ton load over the same stretch at an average rate of twenty-five miles an hour, or on the level at sixty miles an hour.

One remarkable feature of these great locomotives is that while holding back trains on the down grade, they are actually storing up more current, the motors for the time becoming electric generators. At the summit the helper locomotive is brought from the rear to the front of the train, coupled with the power locomotive, and both are operated as one. The system of utilizing the motors for breaking provides maximum safety, eliminates wear, insures uniform speed on down grades, and returns electrical energy to the overhead wires from twenty-five to fifty-two per cent of the current being recovered in this way.

The advantage of the electric over the steam locomotive is especially apparent in cold weather, for when the steam locomotive is losing much of its power with loss of heat, the electric locomotive does even better work than during warm weather, as the cold weather keeps the electric motors cool and in better working condition.

Undoubtedly this pioneer work of the Chicago, Milwaukee & St. Paul is but the beginning of much more extensive electrification of railway lines, which will reduce costs, save fuel, and add much to the safety, comfort, and pleasure of passengers. The Canadian Pacific is planning a similar change for their mountain section.



C. M. & St. P. Ry. OVER THE CASCADES

On the east slope of the snow-covered Cascade Mountains, Washington.

C. M. & St. P. Ry. VALLEY AND MOUNTAIN

Kendall's Peak, Cascade Mountains, Washington.

KEEPING COOL

JAMES FREDERICK ROGERS, M. D.

MANY people suffer in hot weather from doing absurd and often dangerous things in their efforts to keep cool.

In order to keep as comfortable as possible, one should avoid "getting hot" or "stewing" about the weather. Any discomfort is increased by fretting about it, and we should get our minds off the subject by directing our attention toward something else. Work is, under ordinary circumstances, a good thing to keep us from fretting and fuming about the weather.

The heat that really troubles us is not from without, but is within the body; for we are, each one of us, living furnaces. We cannot put out the fires in these furnaces; and when the temperature of the air goes up, it becomes more and more difficult to get rid of the heat from within at such a rate that the body will not grow uncomfortably hot. There are but two ways of reducing this heat: one is to check our body furnace as much as possible, and the other is to get rid of the heat as fast as safety and circumstances permit.

To reduce the internal fires we must relax our muscles as far as possible; in other words, be as lazy as our pocketbook will allow. It is the natural thing to do in hot weather, and our Southern cousins set us a good example. They are quite sensible in going slowly, and in having their siestas in the hottest hours of the day. A great many of us who live in the temperate zone are so strenuous and foolish as to exercise our muscles unnecessarily in work or play, and we must take the uncomfortable consequences. While it is a good thing to be busy on hot days, it is unwise to exercise more than is necessary.

To get rid of the heat which the body is, willy-nilly, producing, one should certainly avoid outside sources of heat; and yet many people, on hot days, go out into the sunlight needlessly. A shady place, one where the air is stirring, offers the best means of drawing off the heat of the body. Then, of course, the loss of heat should not be interfered with by wearing thicker clothing, or in more layers, than is necessary. Thin, loosely woven cotton garments are best.

There is danger here, however, of overdoing the thing, for, because a cool place is a good thing, it is not safe to sit in a cold cellar. Because moving air extracts heat from whatever it blows upon, it is not safe to sit in a breeze until we feel chilled. Above all, it is most unsafe to lie down to rest in a cool or drafty place with too little clothing on. One must exercise horse sense even in keeping cool.

We may help to reduce the heat of the body by cold baths, and at least one such bath a day is a great assistance in boosting us over the superheated season. Cold water taken internally also has the same effect, but the stomach is a far more delicate organ than the skin, and ice-cold drinks are always likely to be injurious if indulged in very freely. Besides, we often drink too much water, and must then stir up our internal fires to get rid of it; we sweat more than we need to, and are made more uncomfortable than we need be.

Ice cream and other cold foods are well enough if taken slowly and not too often, and if we do not eat too much besides. This leads up to the matter of food. If one wishes to check a stove, he does not pour in more fuel. Nature checks our appetite in hot weather, and we ought to see that this loss of appetite is a good thing. If we follow our appetite and eat what the body demands, we shall be far better off than if we eat more just because things look or taste good. Little meat is needed, and less of bread and butter and potatoes than during cool weather. Other vegetables and fruits are more to the purpose. All alcoholic drinks, instead of cooling us, are likely to render us more susceptible to heat; and those who are their constant users are much more liable to sunstroke than the teetotalers.

To keep cool, we should, then, be temperate in mind and as temperate in body, and use good sense in keeping our heat production at a minimum and our heat loss at a maximum, always avoiding going to foolish extremes in our cool-keeping conduct.

BATHING IN THE ATLANTIC

SIXTEENTH CENTURY BAS-RELIEF, ROUEN, FRANCE

PHYSICAL PREPAREDNESS

J. E. CALDWELL, M. D.

NO question for a generation has appealed to the American people more strongly than military preparedness as it has lately been urged by press and platform and from the floors of Congress.

Historians tell us that in ancient Sparta the welfare of the individual was sacrificed to the supposed interests of the government, and every child was taught from infancy that his very best belonged to the state. Under that régime the state was paramount, and the man, yielding to the will of the state, and submitting to a system of strenuous training, reached his highest possible efficiency for the one purpose intended, namely, military preparedness. Since the glory of the state was the thing most highly prized, everything else of value was cheerfully sacrificed to it, even to the ignoring of individual rights, held so sacred in our loved country as to be especially defined in the preamble to our American Constitution.

The great nations of the world now in the throes of a mighty struggle for supremacy or for continued national existence, in a few months, as a war necessity, have, through improvement of the individual as a working and fighting animal, wrought wonderful changes for national betterment. Though betterment of the individual has been incidental, its benefits have in the aggregate been so colossal that some have looked upon them as worth the cost of the war. But could not an enlightened people reach the same standard of moral and physical excellence in times of peace? Is not virtue its own reward? Some pugilists while in training deny themselves all needless indulgences, only to become intemperate spendthrifts again after the contest in the ring is over. But we are not a nation of pugilists.

In order to reach the degree of preparedness now secured among the belligerent nations, reformations amounting to revolution in political, social, and commercial life were necessary; and before anything worthy was accomplished, all the capital available and many precious lives had to be devoted to national defense.

Preoccupation so profound as to appear like indifference to national welfare characterized the attitude of the masses in Great Britain at the beginning of the war; but repeated destructive raids by German airships, and submarine activity so great as to threaten British maritime supremacy were finally successful in startling the English people out of their indifference.

In matters of health, also, many seem so indifferent and preoccupied with other things that their very life is

threatened by disease before they give heed to the laws of nature and employ her defenses for the conservation of health.

Important means to this end, acknowledged by all, are good, nonstimulating food, fresh air, pure water, clothing suited to the season and the occupation, regular habits, a contented mind, plenty of sleep, and a temperate life. Some of nature's defenses, however, though she has employed them every hour since creation, have for centuries eluded human research, to be discovered by the microscope in this last generation. I refer to the mechanisms within the body which defend it against infectious diseases.

In 1882 Koch discovered and described the bacillus of tuberculosis. That discovery made an epoch in medical science. Since then human knowledge of disease germs has increased at an astonishing rate. Men, apes, cows, sheep, horses, rabbits, guinea pigs, and field mice are said to be susceptible to this microorganism. By this is meant that in these animals the germ finds a favorable home in which to multiply, and that its reproduction in their tissues results in the generation of a toxin producing symptoms of disease that may end in death.

C. M. & St. P. Ry. FOLLOWING THE RIVER

The picturesque Missoula River Gorge, Montana Cañon, Montana.

Goats and dogs are immune to it; that is, these animals do not contract tuberculosis, since their tissues are not friendly to the growth and reproduction of its causative germs. This lack of susceptibility to tuberculosis on the part of the goat and the dog is called *natural immunity*. Thus susceptibility and immunity are terms having opposite meanings. There are varying degrees of sus-

ceptibility and immunity; an increase of the one indicates a diminution of the other. The young of all animals are more susceptible to infection than adults; thus children are more likely to contract measles, scarlet fever, and whooping cough than their elders.

Lowered vitality from fatigue, from excesses, from poor digestion, from wasting disease, or from tardy elimination, increases susceptibility. Races seem to acquire a degree of immunity to a given disease by its prevalence among parents and offspring for several successive generations — by ancestral experience. The first visit of a disease to a people who have not had this ancestral experience is apt to be disastrous. The first epidemic of measles that reached Fiji raged with such violence that 30,000 deaths occurred in a population of less than 150,000.

Immunity to infectious diseases may be acquired in some cases and increased in others; therefore a study of the laws governing acquired immunity is interesting and of utmost importance.

Means that increase vital resistance may be said to lessen susceptibility to all infectious diseases;[1] otherwise acquired immunity to one disease confers no immunity to others.

The oldest known artificial method of combatting germ diseases is by the administration of strong drugs to kill, or, at least, to weaken the disease-producing germs. Mercury and arsenic to destroy the germs of syphilis, and quinine to kill the malaria plasmodia, are the best-known drugs used in this manner. These drugs are called specifics for the diseases named, and doubtless their action often justifies the classification; but the harm sometimes done shows that a sure and safe cure cannot be promised. Within a mile of the writer resides a doctor who has not heard ordinary tones of the human voice for about forty years. His affliction is attributed to poisoning by quinine given for malaria.

Nature has various methods of increasing immunity. One called phagocytosis is the destruction of the disease germs by body cells called phagocytes; another is the production by the tissue cells of chemical substances known as antibodies, to neutralize the poisons generated in the system by the germs. Perhaps the best and most scientific means of curing disease is by aiding nature in these efforts.

Leucocytes are white cells, globular in warm-blooded animals, and larger than the red corpuscles, found floating in the blood stream in varying numbers. The immunity to certain infectious diseases largely depends upon the number and activity of the leucocytes, for one of their offices is to ingest, or swallow, and then to digest unfriendly microbes found in the body. On this account they are sometimes called militiamen or home guard warriors.

When an individual recovers spontaneously from malaria or tuberculosis, and many do, it is by the successful activity of these white blood cells. By actual count under the microscope it has been shown in many experiments that both the number and the activity of these leucocytes may be generally increased by cool or cold external applications. Like other powerful agencies, however, cold applications are capable of doing harm. The one unvarying essential to make them effective and to prevent injury, is to secure a good reaction afterward. Indeed, the virtue of the procedure is believed to be chiefly due to the vigorous reaction which follows.

The cold bath, for those who react well, is best taken by a plunge into a river or lake or ocean, where exercise helps to secure the reaction. But for the delicate person not able to bear the shock, a preparatory hot treatment is necessary. This is best applied in the form of a vapor bath, electric light bath, or a short hot water bath. For feeble individuals

[1] This is equivalent to saying that means that increase vital resistance increase vital resistance. What the writer intends to say is that when a disease is contracted, though it may render the patient immune to another attack of that disease, it does not necessarily increase his immunity to other diseases. But if the general defensive powers of the body are increased, this will in a measure increase the resistance against all diseases.

hot fomentations may be best, to be followed by cool sponging or cold mitten friction. Those of experience know that in properly selected cases these procedures are followed by results that fully justify the claims made for them. Indeed, cold baths were employed successfully as "tonic measures" long before scientists could give a satisfactory reason for their favorable action.

Two other methods of increasing the natural defenses of the body are known, both depending upon nature's forces rather than upon drugs, and both employing these in an artificial way.

As already described, the tissue cells produce antibodies (antitoxins) when stimulated to action by toxins introduced by disease-producing germs. When these antitoxins are not sufficiently abundant in the body to neutralize the poisons, we are taught to increase their number artificially by injecting into the circulation a fluid surcharged with antitoxin taken from the blood of the horse or other domestic animal. Diphtheria and tetanus, when measures are undertaken early, are both successfully treated by this method. Many thousands of lives have been saved by its employment. In treatment of these diseases delay is dangerous.

An individual highly susceptible may contract an infectious disease and in due time recover. Afterward he will be found to be immune to that disease. This is true of smallpox, and this immunity may continue during life, though in some diseases the period of immunity is limited. Vaccination is practiced to secure a similar immunity without the dangers of having the disease. Virulent smallpox germs are used to inoculate a calf; being only slightly susceptible, the calf suffers a mild attack. The resulting germs, having been generated in the body of an unfriendly host, have their virulency so far mitigated as to make them safe for the inoculation of men. This is the physiology of vaccination. By this means smallpox has lost nearly all its malignancy in enlightened countries, and fear of a plague from that disease is no longer felt, though this immunity does not destroy susceptibility to other diseases.

If laboratory culture of germs is made and the life of those germs is destroyed by heat, the injection of a certain number of these dead germs into the tissues of a man will not only tend to increase his immunity to that variety of germ, but the injection will exert a curative action where disease from that germ already exists. These dead germs are called vaccines, or bacterines, and their use is said to be more general than any other method of producing immunity by artificial means.

By this method typhoid fever has been almost obliterated from the United States Army, also from most of the great armies of the world. It is no less valuable as a preventive in civil practice. By it, also, rheumatism, eczema, otorrhea, hay fever, chronic catarrh, incipient blood poisoning, and many other diseases, have often been greatly improved or cured.

Summary

1. The defenses of physical life, like those of national life, can be increased, but not without sacrifice.

2. Obedience to the laws of hygiene is of first importance in the prevention of disease.

3. By phagocytosis and the production of antibodies, nature protects herself against unfriendly invading germs and their toxins.

4. Cold baths greatly strengthen life's defenses by increasing phagocytosis.

5. The injection of serums and bacterines may save life (preventing infection or curing disease) by increasing in the body the natural agents of defense.

SCHOOL of HEALTH

DIET, DRESS, GENERAL HYGIENE, HOME TREATMENT, NURSING, ETC.

PREVENT THE FLY

That the fly is an enemy to the human race, especially to the babies, is pretty well known, and the swatting, screening, poisoning, and trapping campaigns have accomplished fairly good results. But prevention is better than cure and is often much easier.

When the flies come myriads strong and swarm about the various doors, it is almost impossible to keep them all out of the house, even with the best of screening; and then there is that almost daily task of chasing and swatting those nimble fellows who have dodged in while the screen door was momentarily opened. They are only a few, but they may carry typhoid or other dangerous germs on their legs, to be washed off in baby's milk, or to be scraped off on the sugar or other foods.

Now that we know so well the life cycle of the fly, why not go to headquarters and put a stop to the work of the fly factory? It can be done, and done easily. The presence of flies around the house is an indication that the fly factory is not far distant — probably on the premises. The following instruction regarding the destruction of fly larvæ is furnished by the Department of Agriculture: —

FLIES lay their eggs chiefly in stable manure. Powdered hellebore mixed with water and sprinkled over the manure will destroy the larvæ which are hatched from the eggs. Since powdered hellebore is readily obtainable, this puts in the hands of every one a remedy for one of the pests that has been found dangerous as well as troublesome.

Previous methods of destroying the larvæ by the use of strong chemicals have been open to the objection that the treatment under some conditions lessened the fertilizing value of the manure or actually injured vegetation. Hellebore is entirely decomposed in the course of the fermentation of the manure, and even in excessive quantities it does no harm. Chickens picking in manure treated with it suffer no ill effects.

One-half pound of powdered hellebore mixed with ten gallons of water is sufficient to kill the larvæ in eight bushels, or ten cubic feet, of manure. The mixture should be sprinkled carefully over the pile, especial attention being paid to the outer edges. In most places hellebore is obtainable in one-hundred-pound lots at a cost of eleven cents a pound. This makes the cost of the treatment a little less than seven tenths of a cent per bushel of manure. A liberal estimate of the output of manure is two bushels a day per horse. The money involved is, therefore, trifling in comparison with the benefits to the individual and the community from the practical elimination of the disease-spreading fly.

Although fresh manure is the favorite breeding spot, flies lay their eggs in other places,— in outhouses, refuse piles, etc. In these places, from which no manure is taken to spread on the fields, considerable saving may be effected through the substitution of borax for powdered hellebore. Applied at the rate of .62 pound per eight bushels of manure, borax is as effective as powdered hellebore in killing the larvæ, but costs less than half a cent for each bushel treated. In larger quantities, however, or when the manure itself is spread at a greater rate than fifteen tons to the acre, some damage to crops may result. Large quantities of manure are often used by market gardeners and others, and there is always danger of carelessness in applying the borax. The use of the more expensive but safer hellebore is therefore recommended for the treatment of manure. Borax is recommended for all

other refuse in which flies may lay eggs.

Scientists who have been working for years to eliminate the fly are convinced that the use of one or the other of these simple measures is a public duty wherever manure and refuse exist. Sanitarians, however, strongly advise the removal of refuse heaps or other unnecessary rubbish or breeding places for flies. In breeding places which cannot be thus disposed of — such as manure or stables — the daily use of powdered hellebore will keep the flies from breeding in these favorite breeding grounds. The best results are obtainable in a community where every one cleans up his premises, traps or kills the flies, and systematically treats the manure and other breeding places with powdered hellebore.

The fly is not only a nuisance to human beings and live stock; but it spreads disease and filth, and is a menace to public health which cannot be tolerated in the face of a demonstrated remedy.

DIET OF THE AGED

GEORGE F. BUTLER, M. D.

In the May, 1916, issue of the *American Journal of Clinical Medicine* is an article by Dr. George F. Butler, of Kramer, Ind., on "What the General Practitioner can Do in the Treatment of Chronic Diseases," from which the following is taken.

AS the digestive powers wane, the condition approaches that of the infant before the teeth are developed. We do not give meat to infants before they have teeth, . . . so in old age the dietary should approach that of the nursery; and in very advanced life, baby foods are distinctly indicated. Milk with farinaceous foods . . . are suggested. . . . Foods in which the starch has been changed into soluble dextrin and maltose are clearly to be preferred.

Malt is a typical food, and ground malt ought to be added to any farinaceous matter before the milk is poured on for a milk pudding. Also baked starch is preferable to raw starch. . . . If baked flour and broken biscuit be employed with the malt, an ideally digestible food is furnished to the enfeebled system. Such a milk pudding is infinitely better than the ordinary one of raw starch sweetened with cane sugar, as not only being more digestible, but as being far less liable to turn acid in the stomach. . . .

All food should be such as to tax but little the digestive powers, which gradually fail with advancing age. . . . The meals should be small, and should consist of porridge (all the better if made with cereals or other farinaceous matters that have already been exposed to a high temperature). [Here the writer includes a number of flesh foods; but with Lorand, we believe that the protein for the aged is much better supplied by means of milk, and possibly eggs.]

Of course, there are hundreds of persons well advanced in years who have the most unbounded contempt for such a restricted dietary, and who still yield to the temptations of the palate; still the principle of such a dietary is well founded, and such a series of meals forms a base line of what the food ought to be, and a guide as to the direction to be taken in the dietary. . . .

Tissue change and tissue repair are not great in advanced age; while accumulation of earthy salts, especially in the arterial walls and valves of the heart, is a part of the diseases which strike at the waning life of old persons. . . . As the maladies of youth are largely matters of defective nutrition, so in old age the diseases are closely linked with the presence of redundant waste or effete material in the body. The food should be neither too great in bulk nor too rich in plastic materials, but such as is required to maintain the body temperature and repair the tissue waste. The

tissue waste is small, therefore the albuminoid elements of the food should be but sparsely supplied. The body heat is prone to be low, so hydrocarbons [fats] should be given freely. Milk and carbohydrates should form a large portion of the dietary.

It is obvious that the food of the aged should not consist too largely of albuminoid materials. It is the more necessary to insist upon this as the idea is so widespread and so deeply rooted that the flesh of animals is at once the most digestible and sustaining food. The lesson preached all along is that of many dire consequences of a blood laden with nitrogenized waste. The tissue repair of the system in age does not require much albuminoid material. A little protein food will meet the actual necessity. . . .

The food of the aged should be once more like the food of the nursery,—farinaceous matters with milk or messes with lentils, that is, casein either in animal or in vegetable form, the most easily assimilable of all forms of albumen, possessing, too, the least tendency to the formation of uric acid. . . .

Bread and milk and honey form a typical meal for aged persons. To many such a dietary would be so monotonous that they would probably decline eating altogether; still it is a type of what the dietary ought to be. [In his list of foods for dinner he goes back on the principles outlined here, so I omit it.]

There seems to be too little fruit, as a rule, allowed in the dietary of old patients — and young ones, too, some would say. Perhaps a considerable quantity of fruit to one unaccustomed to it may disarrange the bowels, but then it comes within the limits of human possibility to avoid this. A certain quantity of fruit would be good, and would tend to keep the bowels open.

In the summer and autumn, fresh fruits are available; in winter and spring, there are the store fruits, dried fruits, and canned fruits; or fruit can be stewed and served with milk puddings. As to pastry and meat, they are unsuitable; the first from the difficulty of its digestion, the latter from the inability to get rid of it in its waste form. . . . Fat is often repugnant to the palate, but it is a capital fuel food, and that is what old folks mainly require. They do best with it as in milk.

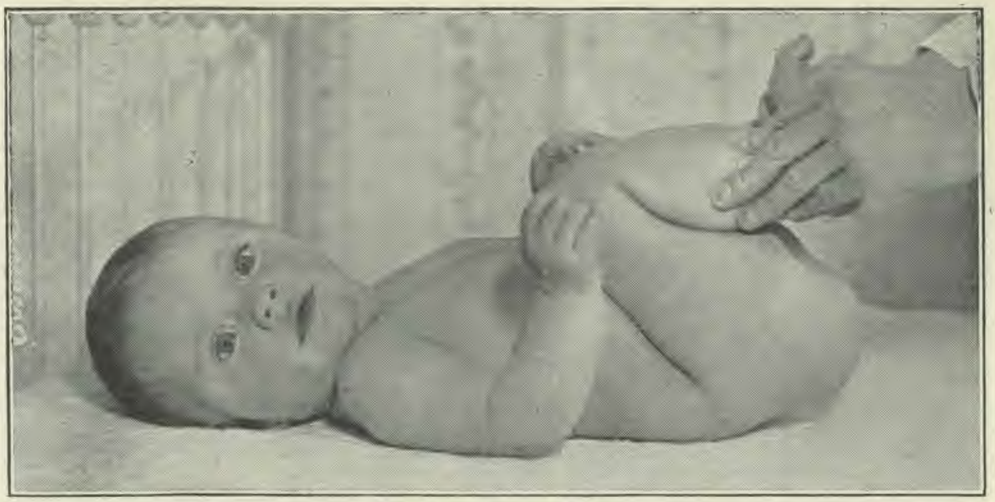
WHERE ALL THE WORLD'S AKIN

FOR THE MOTHER

DEVELOPING BABY'S MUSCLES

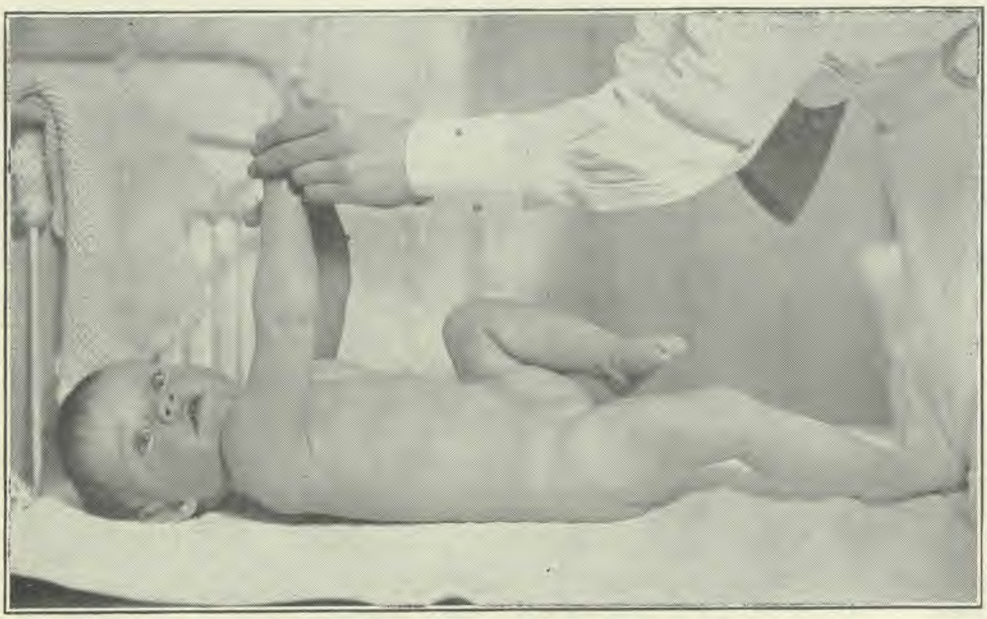
THE normal newborn baby is perfect, in the sense that it is free from disease; but in another sense, it is very imperfect, for its powers are wholly undeveloped. Of all creatures coming into the world, it is the most helpless, and it is helpless for the longest time. It must learn to see, to hear, to smell, perhaps to taste, as well as to walk, speak, read, write, etc. True, it is an automatic sucker, almost from the first, and were it not for this reflex mechanism by which the presence of any body within the lips will stimulate to suction, the baby might not survive, for it probably does not feed because of an inborn liking for the food, but because it has to, as it has to breathe. That is, sucking is probably entirely reflex at first, as breathing is reflex. It is doubtful whether baby has any of its senses developed at first.

As was shown in the April issue, even baby's digestion must be developed, and to this end the mother's milk is so constituted that it trains the baby's digestive powers for the foods normal to it in later life. As was stated, cow's milk or mare's milk, though admirably adapted to the development of the calf or colt, will not give the best training to baby's digestion. This is one important reason why mothers should nurse their own babies if possible, and not leave them to the



EXERCISING THE LEGS

Grasp one foot in each hand, and bend the leg up until the knee touches the body. Do this four times with the right leg, four times with the left, and then with both together. All the leg exercises develop the trunk muscles, and overcome the tendency to constipation.



EXERCISING THE ARM MUSCLES

Let the baby grasp your thumbs while you hold one of his hands in each of yours. Extend his arms straight out at the side, and bring them together over the chest, as in clapping. All arm exercises help to develop the chest and upper back.

makeshift of the nursing bottle and the bottle of milk from the dairyman, or the can of condensed milk from the corner grocery.

Baby's muscles must be developed. He is weeks learning to sit up, and months learning to stand and walk. All this time his delicate muscles and controlling nerves are being trained for their future work, and the only way this training takes place is by exercise.

Baby, after some days at rest, instinctively feels the need of exercise, and how he enjoys kicking and throwing his arms when they are free! Whether or not we direct his exercise, he has his regular gymnastics as often as occasion offers, provided he is a healthy baby; and if he is so bundled that he cannot kick, he will likely squirm and yell, and thus get more or less exercise even if it is not under the most favorable circumstances. But the exercise in the free, with perhaps an air bath if the temperature is favorable, is the best for baby; and he usually can be trusted to take some exercise at the time of his bath. Mother should plan to let him have all the exercise he wants, and should assist him in his exercise, directing his movements; and he will enjoy it, I assure you. The accompanying illustrations show some ways to exercise baby.

But for about two weeks baby takes no exercise. Is it because he is enjoying a necessary rest after the most hazardous and most eventful trip of his young life? During this period he should be allowed to sleep practically all the time except for feeding, bathing, and dressing; and these interruptions should not come too often.

After two weeks, if he is carried in the arms two or three times a day it affords a desirable change in posture; but as the spine is not yet strong enough to bear the weight of the trunk and head, and a little careless handling may induce a permanent spinal curvature, the spine should be supported. A good method at first is to carry him on a pillow or lengthwise of the nurse's arm, so as to give full support to the spine. He should not be lifted by grasping around the chest.

EXERCISING THE ARM AND TRUNK MUSCLES

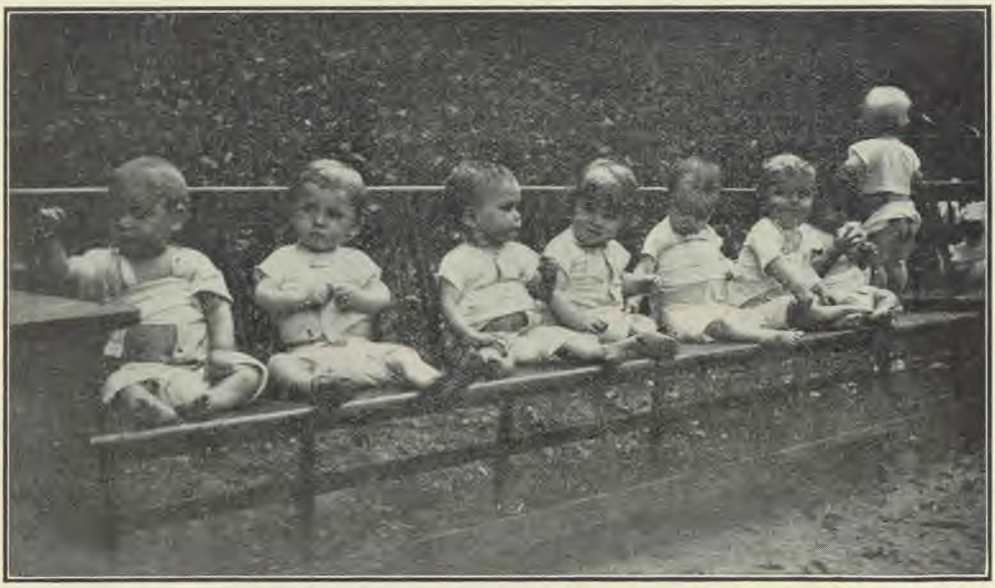
Steadying baby's legs with one hand, allow him to grasp the other hand as shown, and raise and lower him gently several times.

Later, between the age of twelve and thirty weeks, the spine having grown sufficiently strong to afford some support to the trunk, baby may be carried seated on one arm, usually the left, the other hand supporting his head and back. Little by little, as the spine becomes stronger, the support may be diminished.

Do not be in too much haste to expose him to the outdoor air. If the weather is pleasant, he may be given outings at the end of three or four weeks, beginning with a quarter of an hour the first day, and gradually increasing the length of the outing. But in cold weather it may not be wise to begin the outings until he is two or three months old. On damp, chilly, or windy days the outing should be postponed, except for babies who have had some hardening. The schedule which requires baby to go out every day, rain or shine, cold or warm, may do more harm than good. In any case, the condition of the feet and hands should be a guide to the mother or nurse. If the hands and feet are cold, the outing should be terminated immediately, and warmth should be applied to the extremities. Baby should be carried these first outings, but later, as he is better able to manufacture his own heat, he may be pushed in a carriage. The baby carriage should preferably have rubber tires, and should be fitted with a device to protect baby from sun and wind, and should be adjustable to

the growth of the little one, and to the sitting position, and it is better to be collapsible for use on street-car trips.

A pen like the one in the illustration makes a convenient place for baby to play in the open when he is older. But a smaller pen may be improvised for the house, the floor of the pen being covered with a clean sheet. A wire cage, three by four feet, on wheels, with a mattress in the bottom, is an excellent playground for baby while he is young. Crawling and walking are exercises he will begin at the proper time without any urging. The attempt to encourage him to walk before his bones are strong enough may cause deformity of the legs. After the child has learned to walk and has outgrown his carriage, it is not wise to permit him to take long walks at the first. In order to avoid the necessity of carrying him when out for a walk, the two-wheeled gocart may be used to advantage.



THE RELATION OF THE MODERN STYLE OF DRESS TO FEMALE DISORDERS

FRANK ESKRIDGE, PH. D., M. D.

At the fourteenth annual meeting of the Association of Seaboard Air Line Railway Surgeons, held at Wrightsville Beach, N. C., August, 1915, by Dr. Frank Eskridge, of Atlanta, Ga., read a paper in which he stated that women injured on trains are apt to attribute many of their special ills to the injury, hoping thereby to get more damages from the company. Cautioning his fellow surgeons, he called attention to one important cause of female pelvic trouble which is apt to be overlooked. The following is taken from Eskridge's paper, as published in the *International Journal of Surgery*, April, 1916: —

ASIDE from a traumatic pathological state of the pelvis resulting from childbirth, a most important cause of pelvic diseases and mechanical disturbances is the improper dress of woman. With the exception of the binding of the feet of the Chinese women, I know of no other more absurd practice than the corseting of our own [bodies]. This is no new subject to medical men, but the growing requirements so conflicting with our knowledge of hygiene and physiology make it of extreme importance to us as surgeons.

The vicious features in the corset are its contraction of the thorax [chest] with the object of giving "figure," while the long strips of steel and whalebone serve the purpose of giving firmness to this figure. The harm done by the thoracic contraction manifests itself in compression of the abdominal viscera, producing corset liver, movable kidney, malpositions of the uterus, etc. These are all so well known as to need no description here.

The most important damage caused by this strong extra-abdominal pressure is observed in the deleterious effect particularly upon the internal genital organs, producing passive hyperemia and the above-mentioned displacements.

The "staves" of the corset, through their rigid boxing effect, add to these disturbances by replacing the functions of the muscles of the back. It is indeed common knowledge that a woman who has long worn a corset and lays it aside, complains that she cannot hold herself upright.

In consequence of the insufficient work and relaxation of the muscles and the compression from above, we find innumerable malpositions of the uterus which might be termed "modified normal," owing to this abominable custom.

It may be further stated that the growing tendency toward the halting gait through the hobble skirt, as well as the interference with the muscular activity of the lower limbs by high-heeled shoes, play a part.

With these harmful forces of fashion at work, we can never hope for a sound and healthy race; but as surgeons, with this knowledge in hand, we can save our corporations from paying unjustly for these errors in dress.

HOME COOKING SCHOOL

RICE AND DEXTRINIZED CEREALS

GEORGE E. CORNFORTH

THE ordinary white rice is sadly deficient in cellulose and mineral elements, though its total nutritive value, due to its protein, fat, and carbohydrates, is only slightly less than that of other cereals, contrary to prevalent opinion. It would hardly be safe to prescribe rice for an obese patient, as I once heard of a physician's doing, under the impression that rice contains scarcely any nourishment. Rice is nutritious, easily digested, and a fattening food. But in the preparation of white rice the outer coating of bran and mineral elements is scoured off, then the rice is coated with glucose and talc. This puts a gloss on the rice, and also keeps weevils out of it; but it robs the rice of important food elements. The so-called "unpolished rice" is no more nutritious than ordinary polished rice. It simply does not have the coating of glucose and talc. Rice that has not had the outer coating scoured off is called "natural brown" rice. It contains all the nutritive constituents of the rice. The cooked natural brown rice feels in the mouth, while it is being chewed, somewhat like cooked whole wheat. The hull is noticeable.

Boiled Rice

½ cup rice
6 cups boiling water
2 teaspoons salt

Put the rice into a small saucepan. Pour hot water over the rice, and whip it with a batter whip. Pour off the water. Pour on more hot water, whip again, and pour off the water. Repeat the process till the rice is thoroughly clean, and the water that is poured off is clear. Have the six cups of water salted and actively boiling over the fire. Stir the washed rice into it. Keep the rice actively boiling for twenty minutes, stirring occasionally so as not to allow the rice to stick to the bottom of the kettle. Then turn the rice into a colander to drain off the water. Hold the colander containing the rice under the cold water faucet, and run a large quantity of cold water through the rice till all the stickiness is washed from the kernels, so that they remain separate and distinct. Then, after the rice is thoroughly drained, put it into a double boiler to dry and reheat. Do not stir the rice while it is reheating, and in dishing it out handle it very carefully so as not to break the kernels or cause them to stick together. Serve with cream or fruit sauce.

This is a wasteful method of cooking rice, if the water is thrown away, but it is very difficult to cook rice any other way and have the kernels separate. The water in which the rice has been boiled may be used in making soup, and thus the nourishment it contains is saved.

Natural brown rice requires longer to cook than white rice. It should boil twenty-five or thirty minutes, or till the kernels are tender.

Plain Steamed Rice

½ cup rice
1½ cups boiling water
½ teaspoon salt

Wash the rice as directed in the preceding recipe. Then put the rice, boiling water, and salt into the inner cup of the double boiler. Set the inner cup into the outer cup of the double boiler, which contains boiling water, and cook one hour. Serve with cream or fruit sauce.

Creamed Rice

½ cup rice
1 cup boiling water
1 cup milk
1 teaspoon salt

Put the washed rice, boiling water, milk, and salt into the inner cup of the double boiler. Set it into the outer cup, which contains boiling water, and cook one hour. Serve with cream or fruit sauce.

Creamy Rice

¼ cup rice
½ cup cream
1½ cups milk
1 teaspoon salt

Milk alone may be used or a larger proportion of cream may be used.

Put the washed rice, cream, milk, and salt into the inner cup of a double boiler. Set it in the outer cup, and cook two or three hours, or till a creamy mass is produced. This really does not need cream as a dressing. It may be served as a vegetable without dressing. It makes a very appetizing dish when served with one half of a canned peach on top of each helping, and some of the peach juice poured around it.

Rice and the coarser cereal preparations are enjoyable served with a fruit sauce. Nuts may then be sprinkled over the sauce, making the ideal combination of fruits, grains, and nuts.

A fruit sauce that tastes especially good with cereals is —

Raspberry Sauce

Rub through a strainer fine enough to hold back the seeds, sufficient canned raspberries or fresh raspberry sauce, to make one cup.

1 cup raspberry pulp or juice
1 tablespoon cornstarch
1 tablespoon water

Heat the raspberry pulp to boiling. With a batter whip stir the cornstarch and water together, then stir it into the boiling juice. Allow it to cook gently for two minutes.

Rice, whole or cracked wheat, Scotch oatmeal, and pearl barley make palatable and nutritious dishes for either breakfast or dinner, served with gravy instead of cream. Cream sauce may be used, or one of the gravies to be used with macaroni, recipes for which will be given in another lesson.

Cream Sauce

1 cup milk, or part cream
2 tablespoons flour
1½ tablespoons cold water
¼ teaspoon salt

Heat the milk to boiling in a double boiler. Put the flour into a bowl, and with a batter whip, not a spoon, stir the flour smooth with the cold water. Then, using the batter whip, whip the flour mixture in a small stream into the hot milk. Allow to cook five minutes. Add the salt.

Unless one has a fireless cooker, those cereal preparations that require long cooking are more suitable to be used in the wintertime, when no extra fire would be necessary in order to cook them the required length of time.

Dextrinized Cereals

In the process of digestion, starch is changed to a form of sugar. It is possible partially to accomplish this by cooking. When starch is browned, it is changed to a form of carbohydrate intermediate between starch and sugar. Cereal foods in which this has been accomplished may be said to be partially predigested. The browning also gives a toasted taste to the cereal, which is palatable for a change. It is this change in the starch that gives the palatable flavor to the crust of bread.

Browned Rice

Pour one-half cup rice into a pie tin. Set it into the oven. Stir it occasionally until it reaches a light-brown or straw color. Then wash and cook this browned rice according to the directions for cooking plain steamed rice. Browned rice is not pasty and sticky after it is cooked, but is light and fluffy. Serve with cream or fruit sauce. Orange sauce blends nicely with browned rice.

Orange Sauce

1 cup water
½ cup orange juice
⅓ cup sugar
1 tablespoon cornstarch
A few grains salt
1 egg yolk, if desired

Stir the cornstarch smooth with a little cold water. Heat the one cup of water to boiling, and stir into it the cornstarch mixture. Let it boil gently two minutes. Add the sugar and salt and the grated yellow rind of half an orange. Be careful to grate off only the very outside yellow part of the rind. If a richer sauce is desired, after thickening the water with the cornstarch stir a little of the sauce into the egg yolk and mix well, then stir the egg yolk into the sauce; then add the remaining ingredients.

Rolled oats may be toasted slightly before cooking, for a change from the plain cereal.

Zwieback

Lay slices of bread on a baking pan and put them into a moderate oven to dry out and brown lightly throughout the slices. Zwieback is the ideal toast — better than toast made by simply browning the outside of a slice of bread and leaving the inside of the slice like a slice of fresh bread. Another advantage that zwieback possesses over other cereal foods is that it compels mastication, which is necessary for the best digestion of cereal foods. And a change is produced in the starch by the browning, so that when zwieback is moistened with water or any other liquid, it does not become pasty.

Zwieback may be eaten plain, or spread with dairy butter, nut butter, jelly, or marmalade. Or it may be used in making toasts, such as the following: —

Cream Toast

Put a slice of zwieback into a cereal bowl. Pour over it one-half cup of hot cream, and serve at once.

Cream Gravy Toast

Dip a slice of zwieback into hot water to moisten it. Then pour over it one-half cup of the cream sauce previously given in this lesson for use with cereals.

Egg on Toast

Moisten a slice of zwieback in hot cream or hot water, and place a nicely poached egg on it.

Egg and Celery on Toast

Cut into dice sufficient tender stalks of celery to make one cup. Add this to the cream sauce. Moisten a slice of zwieback. Cover it with the creamed celery, and place a nicely poached egg on top.

Fruit Toast

Moisten a slice of zwieback in hot cream or hot water. Place it in a cereal dish, and pour over it one-half cup of the raspberry sauce given for cereals. Chopped nuts may be sprinkled over the top.

Blackberry sauce for toast may be made by following the recipe for raspberry sauce.

Pear sauce for toast may be made from either canned pears or stewed fresh pears. Cut the pears into thin slices. Measure the juice, heat it to boiling, and thicken it with cornstarch stirred smooth with a little cold water, using one tablespoon cornstarch for each cup of juice. Use a batter whip to stir the starch and cold water together, then whip the boiling juice with the batter whip while the cornstarch mixture is poured in a small stream into it. Put the sliced pears into the thickened juice, and allow the whole to remain over the stove long enough to heat the pears.

Peach sauce for toast is prepared in a similar way.

Blueberry sauce for toast is made by draining the juice from canned blueberries or fresh stewed blueberries, thickening it as in making pear toast, then putting the berries into the sauce to heat.

Cherry sauce is made in a similar way, first removing the stones from the cherries.

Apple toast, made by serving hot apple sauce over slices of zwieback moistened in hot cream or hot water, tastes especially good with chopped blanched almonds, chopped pecans, or chopped walnuts sprinkled over it. It is then called nut apple toast, or is named according to the nuts used, as almond apple toast.

FIELD OF PINEAPPLES, HONOLULU, H. T.

DIET AND DISEASE

Exclusive Oat Diet Leads to Acid Poisoning

A. MORGEN and C. Beger conducted a series of feeding experiments[1] with rabbits to determine the effect of an exclusive oat diet. The animals receiving the pure diet wasted away, but when calcium carbonate or sodium bicarbonate was added to the diet, the rabbits gained in weight, and ate a constant or increasing amount of the oat ration. The conclusion of these men was that oatmeal does not supply a sufficiency of basic mineral, and hence poisoning results from its use as an exclusive food.

This experiment is interesting in the light of the work of H. C. Sherman and others,[2] who have shown that the ash of certain foods is alkaline in reaction, while in others it is acid; and in Sherman's opinion, this fact, as well as the amount of proteins, fats, and carbohydrates, should be considered when selecting a dietary.

Following is a partial list of foods which, according to the *Journal of Biological Chemistry*, yield an alkaline or basic ash: —

Almonds, apples, asparagus, bananas, beans, beets, cabbage, carrots, cauliflower, celery, chestnuts, currants, lemons, lettuce, milk, muskmelons, oranges, peaches, peas, potatoes, prunes, radishes, raisins, turnips.

Foods yielding an acid ash follow: — Corn, crackers, eggs, fish, meat, chicken, oatmeal, peanuts, rice, wheat (entire), wheat flour.

From these lists, it would seem that the animal protein foods and the cereals are generally acid, and the fruits and green vegetables are alkaline.

Milk, it will be noticed, is one animal protein that has an alkaline ash. This fact may explain why it is so often helpful to patients who cannot take flesh foods.

Milk and a cereal, it would seem, is an admirable combination, not only as to the proportion of protein and carbohydrate, but also as to the avoidance of excessive acidity. A person living exclusively on oatmeal might in a short time develop an acidosis, but if a sufficiency of milk were taken, this would be avoided.

The lists given above will explain why a person on a meat diet craves potatoes, green vegetables, and fruits.

Is Arteriosclerosis a Disease or Only a Symptom?

DR. BISHOP defines arteriosclerosis as "a disease consisting of a disturbance of metabolism (meaning a disturbance of the physiology of individual cells), leading eventually to changes in the heart, blood vessels, kidneys, and other organs."[1] That is to say, arteriosclerosis is primarily a disturbance in function,

[1] Hoppe-Seyler's Zeitschrift Physiol. Chem., 94 (1915), quoted in *Experiment Station Record*, March, 1916, p. 366.

[2] *Journal of Biological Chemistry*, 1912, xi, 323.

[1] "The Importance of the Early Recognition of Arteriosclerosis," by Louis Faugeres Bishop, M. D., a paper read at the First District Branch of the Medical Society of the State of New York, Nyack, Oct. 9, 1915, and published in the *New York State Journal of Medicine*, May, 1916.

though it eventually leads to some change in structure.

In plain language, then, if Dr. Bishop is right, the beginning of arteriosclerosis is a condition in which the cells have acquired some bad habits or wrong ways of doing things.

Bishop believes that the cells have come to act in an abnormal manner toward proteins, and that this change of behavior is the result of sensitization of the cells. It may have been some infectious disease or a great nerve shock, or it may have been the entrance of foreign protein into the body. When the cells have become sensitized to a certain protein, a very minute quantity of that protein, if present, may set up a reaction or an irritation of the cells.

But what can one do to avoid such a mischance? According to Bishop, who has had a large experience in treating circulatory disturbances, "a man who is living on small quantities of plain food and who is getting an abundance of outdoor exercise, is not nearly so liable to develop cardiovascular-renal disease [arteriosclerosis] under the influence of infection or nervous strain as is the lazy man who is consuming large quantities and many varieties of proteins."

In other articles Bishop shows that one who uses freely of such proteins as meat, eggs, and fish, is especially in danger. His treatment of the disease, which is based on the theory that the disease consists "of an intolerance to certain proteins," includes "the strictest attention to the intestinal tract, the absolute withdrawal of as many proteins as possible, and the stimulation of metabolism by exercise and other means."

In regard to the early detection of the disease, he says: —

"Often enough, repeated attacks of so-called biliousness, sick headaches, and intestinal fermentation point to a tendency to this disease. One of the earliest symptoms of the disease that I know of is discomfort in the front of the chest on exertion after eating. This discomfort has usually been referred to the stomach, but it is referable to the heart muscle at a time when this muscle is being flooded by the products of digestion as they are absorbed into the blood."

The next early sign is a disturbance of blood pressure: —

"At this stage, proper dietetic, hygienic, and medical treatment can very often arrest the disease entirely and restore the patient to health. At a later stage, a checking of the process and a continuation of life and strength can only be accomplished by a continuous and strict regimen."

Might be Alive Yet but for His Indiscretion

THOMAS PARR, they say, died in his one hundred and fifty-third year. At his death his autopsy was made by one of England's most famous surgeons, William Harvey (1578-1657), the discoverer of the circulation of the blood, who found every one of Parr's organs in perfect condition at that great age. How much longer Parr might have lived no one knows. But unfortunately the king of England heard of him, and desiring to become acquainted with so remarkable a person, he invited Parr to be his guest. Parr, who had lived in health for one hundred and fifty-two years on his ordinary frugal fare, succumbed after a few days' exposure to the royal dainties. He was evidently not so wise as the young Hebrew, Daniel, who refused to partake of the king's meat or to drink of his wine.

The curse of America today, which is apparent in the increase of degenerative diseases in the prime of life and the cutting off of useful careers, is not a scarcity of food, but an oversupply, especially of the highly nitrogenous foods. As Seneca said, "Man does not die; he kills himself."

Pellagra Caused by Sensitization to Maize and Sugar Cane Products

DR. ROY BLOSSER, of Atlanta, Ga., is convinced that pellagra is caused, not by the absence of some essential ingredient from the food, but by the presence in the food of some one or more injurious and abnormal ingredients to which the individual becomes "sensi-

tized." He believes that pellagra in the South is caused by the use of maize and sugar cane products, particularly the latter, and that the history of the disease in this country dates from the time when there was a marked change in the methods of preparing these articles for food. To quote from his article in the May, 1916, *Southern Medical Journal:* —

"The comparative modernity of pellagra in this country is accounted for by the coincident change in the method of refining sugar whereby large quantities of cheap sirups — concentrated extracts of sugar cane — have been thrown on the market. *The consumption of all sugar cane products in this country has doubled during the last fourteen years.*"

Experimenting on dogs, he gave to one animal cane sugar with a mixed diet, and to another a similar diet, with the exception that in place of the sugar he gave a corresponding amount of sugar cane sirup. Dog 2 did not develop well, and was weak and flabby as compared with dog 1. Autopsy of dog 2 showed intestinal and skin conditions simulating those of pellagra. Other confirming experiments were made. According to Blosser,—

"the greater prevalence of the disease among poor people is ascribed to the fact that these concentrated sirups, either as such or made up into candies and cakes, are the cheapest sweets obtainable, and are largely used by poor people to take the place of more expensive foods.

"The great prevalence of the disease in the South is explained by the fact that sugar cane is grown in this section, and is naturally more freely eaten, and has been in use for a longer time, than in the North."

In some cases, he says, the consumption of maize is the main factor in the production of the disease, but he believes that the use of unrefined sugar products is a more active cause of pellagra than the use of maize. He notes that in all cases of pellagra —

"sugar cane products cause a burning sensation of the tongue, esophagus, or stomach; there is also palpitation of the heart and nervousness. As in alcoholism, he craves the stimulation, but the knowledge of the unpleasant reaction which will follow causes him to indulge his appetite less and less. At a later stage, particularly following a period of abstinence, a small amount of sugar cane product will cause a severe gastro-intestinal upset. Therefore it is not rare to find that such an individual has apparently eliminated nearly all sugar cane products from his diet; but the small amount used is sufficient to cause more harm than the larger amount used at first, and therefore we find a steady impairment of health, and increase of the pellagrous symptoms."

Blosser believes that whichever of these foods may cause the onset of the disease in any case, the attack is one of sensitization to certain constituents in these foods.

THE OUTDOOR LIFE

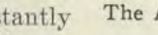
Outdoor Life Not a Cure-All

In a letter to the April *Medical World*, Dr. J. Madison Taylor, who, it seems, has for years taken vacations in the wilds, accompanied by guides and frontiersmen, writes under the title "Chronic Miseries of Outdoor Workers." He finds that because of failure to take care of themselves these men are subject to various diseases and affections.

Many of us have believed that the person who dwells outdoors constantly is immune to colds. Not so, according to Dr. Taylor, who gives this experience: —

"In long hunting trips in our Rockies and the Canadian Rockies, half the time in or on ice and snow, I created much sport, and finally some admiration, by stripping naked before the fire and rubbing down in all weathers. Thereafter I slept warm and dry. This is imperative, and can always be done. As a consequence, I never caught a cold in the open. Often all the guides had colds."

What a pity to puncture our most cherished beliefs in such a manner! Perhaps Dr. Taylor would say, "Take the daily cold bath, and you will never have a cold," but even this rule has its exceptions.



The Automobile and Longevity

Recently a quotation appeared in this magazine in which an automobile manufacturer asserted that the use of a motor car would probably add ten

years to a man's life. Doubtless there are persons who have had their span of life lengthened in this way. But Dearborn (*New York Medical Journal*, April 5, 1916) seems to believe that the automobile in connection with other things may serve to shorten life. He says that a sedentary person — a clerk in a store, for example — not eating much food, is not suffering much from lack of exercise; but if he should eat two or three times as much food, or exercise twice as much and eat half as much food, there would be trouble. As long as he eats a reasonable amount, he can live a very inactive life, and a long and healthy one, perhaps. Only when such a person eats too much or exercises too little is there trouble. Dearborn proceeds: —

"The man who becomes rich and retires from business is an illustration of the lack of balance, frequently. The man who hustles from 8 A. M. till 5 P. M. makes his pile, buys an automobile, joins two or three clubs, largely increases his eating because he has more time and more money, exercises less; so *breaks the balance of efficiency*, the result being, perhaps, arteriosclerosis or some other ill; he 'grows stale,' and ends his life years, often ten, before he needs to end it."

The man who takes a little booze and then attempts to beat the train across the grade crossing, occasionally shortens life.

FAULTY FOOTWEAR

Tells of Injuries from Faulty Footwear

IN the April 15 *Scientific American Supplement* is an article taken from *Die Umschau*, which describes the injuries resulting from improper shoes. The author asserts that the present fashion in shoes has two objects, to make the body look larger than it really is, and to make the feet look smaller than they really are. But injurious shoes are a very poor means of improving the appearance. A large body and a small foot do not follow the laws of beauty,— which first of all demand a pleasing proportion,— any more than a small body and a big foot. The writer of the article would have a woman compete "with her sisters for a grace which is built upon elasticity, strength, and good bearing. To be beautiful means first of all to be healthy."

"The present questionable fashion in shoes, however, injures the health, deforms the body, and prevents elasticity of movement and good carriage. The chief fault of a modern shoe is the misshapen heel, which is too high, pushed too far forward, and too small on its under surface.

"A heel of the right height, that is, not over one and one-fifth inches, placed in the proper position under the foot and broad enough to give security to the step, plays no mean part in the preservation of a sound foot, for a moderately high heel protects to a certain extent against the commonest foot disease, in fact, the commonest disease in general, flatfoot."

The writer of the article says that moderately high heels tend to make the foot toe in, thus lifting in a measure the inner edge of the foot and giving flexibility and play to the lower ankle joint. But higher heels, especially if they taper downward, tend to make the foot strain toward the under or outer side.

Among the evil results of high heels this writer names mincing steps, wrong and ungraceful posture of the body, "for, on account of the increased demand upon the strength, it is impossible for any one whose feet are kept by high heels in an unnatural position to hold the knee and hip joints stretched and the body upright. . . . So the wearer of high heels has ordinarily a standing position which is bent and unlovely."

Other evils are corns, painful callouses, increased pain in walking, consequent inactivity and increase in weight, and more trouble for the feet. The article ends with this instruction: —

"Whoever by correct use of his feet or by such exercise as can be fitted frequently into the tasks of the day, makes and keeps his feet sound, does not need to worry for fear they may fail him in old age. . . .

"Now that corsets, hoop skirts, and similar instruments of torture are disappearing more and more, may the knowledge become widespread that the foot cannot be abused with impunity; and may our women give to those shoe manufacturers who put such dangerous objects on the market the answer they deserve."

STIMULANTS AND NARCOTICS

Is Coca-Cola a Dope?
White Asserts that It Is

J. LEYDEN WHITE, correspondent, of 130 First St., Northwest, Washington, D. C., has released for publication a statement involving the integrity of the coca-cola people and the composition of their product which merits the careful attention of innocent users of the so-called "soft drink."

First, Mr. White gives his reasons for believing that through the influence of the attorney of the coca-cola company a "joker" was left in the Harrison Anti-narcotic Law, reading,—

> "The provisions of this Act shall not apply to decocainized coca leaves or preparations made therefrom, or to other preparations of coca leaves which do not contain cocaine."

According to Mr. White, this provision was placed in the law solely for the benefit of the coca-cola company. He further states that, as far as he has been able to learn, "the only product from decocainized coca leaves which the exemption at the end of Section 6 would affect is known as 'Merchandise No. 5,' a secret preparation produced only at one chemical plant in New Jersey, the entire output being controlled and taken by the coca-cola company and used in the manufacture of coca-cola."

It is true that analyses of "Merchandise No. 5" fail to reveal the presence of cocaine, but it is also true that in the case of some so-called asthma remedies, admitted by the makers to contain cocaine, the analyses could not detect it.

The coca-cola people admit that their product contains caffeine, and assert that it is no worse than so much coffee. But why are they so anxious to continue the use of coca leaves? Mr. White asks the following very pertinent questions:—

> "I have referred to the claim of its defenders that 'coca-cola is just like coffee.'
>
> "Then why do thousands go direct from the breakfast coffee to drink glass after glass of coca-cola at a fountain? Why do they not stop at restaurants for more coffee?
>
> "If it is 'just like coffee,' why do other thousands of coffee drinkers use it in their homes, not only between meals but at the table with coffee?
>
> "If it is 'just like coffee,' how is it that nearly every town or neighborhood has those who are openly known as 'coca-cola dopes,' who drink from five to twenty glasses or bottles per day, when among coffee habitués not one in hundreds drinks five cups per day?"

The Effect of Tobacco Using, as Viewed by a Physician

DR. ROBERT ABBE is senior surgeon of St. Luke's Hospital, New York. At a meeting of the Practitioners' Society of New York, Dec. 2, 1915, he read a paper on "The Tobacco Habit," which is given in full in the *Medical Record* of Jan. 29, 1916. Dr. Abbe cannot be accused of prejudice against tobacco. He himself either uses it or has used it, and he evidently believes that tobacco in moderation is beneficial to those of mature age. This fact will give more point to the following quotations from his paper:—

> "It is fair to say that medical experience shows that the farther we get away from natural life, the more it is clear that nature exacts a penalty. Youth has a surplus of energy, is tireless, and unable to judge fairly of the right and wrong of the effect of tobacco; but the very young boy, or the system of a man past middle life, is a more sensitive index, and here we often see the toxic effect of nicotine. There are very few boys in their first experience with tobacco who are not nauseated, dizzy, faint, pallid, confused, and afterward depressed. In later life, also, excessive use of tobacco in any form creates, at times, palpitation, indigestion, vertigo, and confusion of mind. I am told training on high athletic competition requires abstinence from tobacco. Every man of us has recognized 'tobacco heart,' and vetoed smoking until improvement. . . .
>
> "It may be admitted that in any form tobacco exerts the same influence. It stimulates the body forces for a short while, and is followed by a degree of depression recognized in any sensitive person, and calling for another cigarette or cigar, and another to follow that, as the evanescent effect passes away. The pleasing stimulation is so gratifying that its subtle power steals on one, and one indulgence follows another in rapid succession, so that the blood is surcharged with nicotine before one is aware of it. We all know, after a period of abstinence, how we feel when we take it up again. The heart palpitates, head throbs, and the tongue next morning has a fuzzy, burnt feeling where the hot tobacco smoke strikes the surface, in contrast to the clean natural tongue of health.

"This gives the clue to the terrific charge against tobacco in causing cancer of the tongue and mouth, taken from my private notes during fifteen months when the cause was searched for. I demonstrated that nine tenths of the patients were inveterate users of tobacco. Thirteen cancers inside the cheek were all found in men who chewed or had chewed. The others were inveterate smokers. I was amazed at the demonstration. . . .

"During the last six weeks I have been consulted by ten patients with grave cancer of the throat or tongue, every one of them heavy smokers, that is, from ten to twelve cigars daily. One man said fifty pipes a day would not exaggerate. He was one of the finest type of Spanish gentlemen, otherwise unsurpassed in health and physique, but with an advanced cancer of the tongue and floor of the mouth — a hopeless condition."

So the doctor goes on giving examples of the damage tobacco has wrought. In his experience the tobacco habit is easily given up. He rarely finds a person of mature years who cannot give it up. It is essentially a social habit, fostered by association with other smokers and by advertisements of the manufacturers. He believes that when fashion dictates the decline of tobacco, habit will follow. "Already one sees," he continues, "more and more enjoying each other's company after dinner without smoking. Conversation seems even more worth while when men are not artificially put at their ease by after-dinner cigars."

He states that in some of the Western States great strides are being made in self-control of the hurtful habit; continuing: —

"Notably in Los Angeles an anticigarette clinic is conducted by the city, to which clamoring mobs of boys and men go on certain days to get their tonic treatment. It is said to make the taste of tobacco repugnant after five or six treatments. The master of juvenile delinquents who started this clinic, found that nine tenths of those brought before him were cigarette fiends, which had much to do with their depravity. This has been the growing and universal experience with social workers and in juvenile courts the country over. The tobacco habit thus early initiated, leads to lounging, bad association, deception, lying to parents, stealing to buy cigarettes, thirst for stimulants to match the biting stimulation on the tongue which water is inadequate to quench, all of which is succeeded by lassitude and reaction, requiring repeated stimulation by tobacco, and thus the vicious circle."

Influence of Habit Drugs on Longevity; The Opinion of a Medical Editor

THE editor of the *Medical Times* queries whether life insurance examinations as at present conducted are the only way and the best way to test men physically and estimate their life expectancy. He believes that there are better ways of judging how long a man is apt to live than by examining his heart and pulse, etc. "Life insurance examinations do not test the whole man," he says, and continues: —

"We should say that they are of value only in the presence of gross lesions, and then they show unfitness no better than the practical methods we have suggested. Men have so many defects that practical physical efficiency tests offer a better criterion than stethoscopes and mercury scales."

A point not usually given the consideration it should be, is the habits of the applicant. The following quotation should be considered by those who have formed any destructive habit: —

"Selected risks must be men who live right, of course. Alcoholism, nicotine, or caffeine poisoning, and bad personal hygiene must always be carefully considered. We should prefer a man with almost any kind of moderate lesion who lives right, to a physical paragon who abuses alcohol, nicotine, and caffeine, and who violates the first principles of hygiene with respect to sleep, cleanliness, exercise, and the sexual life."

OUR WORK AND WORKERS

ESTABLISHING A DISPENSARY AMONG THE KARENS, BURMA

MARY GIBBS

Miss Gibbs, a trained nurse who has been studying the Karen language for some time and is proficient in its use, gives us a few of her experiences as she enters upon medical missionary work while waiting for the building of a dispensary in connection with the new mission being established within the Karen country, on the Salwin River. Her letter follows.

THE very next day after we arrived, patients began to come; and since the medicine cases arrived and were opened, there has not been an idle day. For lack of better accommodations, I have some store boxes under a zeethee tree [1] near the leaf house where we are staying. One box serves as treatment table and another as instrument table. A kerosene oil tin on some bricks is a sterilizer and a fomentation tank combined. With this apparatus I cared for eighteen patients today, with no assistants. I treated two persons having sore eyes, two having sore throat, one having a bad ear, one who had had a serious accident, and an old man who has so many abscesses that it takes an hour and a half to treat and dress them. Some of the patients just mentioned, and all the others, had to have medicine compounded for them, so you can just imagine it is quite a busy life. There are no doctors nearer than seventy miles, so the very worst cases are brought here. I have all the dressings, treatments, and compounding to do, as there is no way to use a native untrained assistant until we can systematize the work.

[1] The zeethee is a kind of tree that bears a small fruit with one hard seed in the center. There is nothing in America exactly like it, but it is probably a branch of the plum.

TYPICAL JUNGLE KARENS

These people are learning for the first time that there is a religion of love. The facilities for treatment are the crudest, but with this meager outfit, skilled and loving hands are already accomplishing a great work.

So far we have no place for people to stay, but they come such distances and are so ill that they have to stay. There is a rotten old leaf house on the place here, and they all crowd into that. We need two good bamboo huts, and are asking the Karens to build them, but do not know yet what they will do.

The people of Burma hate littleness in money matters, especially in Europeans, so it was quite a question what to do about charging for medicine. For the first three months we did not charge, but kept an account of the value of the presents they brought; but the things to be had in the jungle do not bring a very large price, and for a month the receipts were only three rupees — one dollar. Finally I told the people they would have to begin to pay for the medicine, or else soon it would be all gone and we could not help them any more; and it is very gratifying to see the way they now come with the cash. Today some long-outstanding bills were paid, so the receipts total about seven rupees, — the best day yet. They seem perfectly willing to pay, and are just as willing to listen to the gospel afterward. One woman and her two daughters seem much interested. They were here all day yesterday. Today a woman came and asked if the Sabbath was finished. She said she wanted to come yesterday, but could not get a boat. She sat by me one day while I sewed, and I told her the story of creation and the fall. She does not think as quickly as some do, so I have to repeat many times for her.

THE OPEN-AIR OPERATING-ROOM

This patient came daily from a village across the river to have an abscess on his back treated and dressed. The woman on the right has brought a nursing-bottle to get medicine in it.

One old man sent a carrier a distance of thirty miles, with a letter written in fine Burmese, asking for medicine; but the carrier said that the writer could read Karen. So I sent medicine, and a letter advising him to come himself if possible. A few days later a company of eight arrived, expecting me to know them at once. Four young men had carried that old man on their shoulders all that distance. He was nearly dead,

but thanks to God's blessing, he was able to start out to walk home a few days ago. He and his wife are Christians, converted from devil worship. Since they were converted, they have lost two children under very sad circumstances, and their devil-worshiping relatives and neighbors taunt them, saying that it is the result of being Christians — not a very easy thing to bear.

One poor fellow has six abscesses on his back. All these places have to be drained with instruments, as they are too deep-seated to lance; and so all have to be dressed daily and fomented. He likes fomentations as well as any one I ever saw. He was nearly dead three weeks ago, when he came here with great pouchy places on his body. He was having fever every day, and could not retain his food. It was too serious a case for me, but it meant a chance for him to live if I treated him, so I took the chance. As he cannot read, I talk with him on religious subjects. I hope his long stay here will not be in vain.

Burma is a cosmopolitan country. Our patients include Sgaw Karens and Pwo Karens, Burmese, Chinese, and Mohammedan and Hindu natives of India. Relief has been given to more than a thousand cases.

We are ninety miles from a railroad, twenty miles from the end of the steam-launch run, and horses are very seldom seen here; so the only methods of travel are walking, boating, and bullock-cart riding. As we are on the banks of a grand river, the Salwin, we prefer boating; but even that could hardly be called a pleasure jaunt, for calls usually have to be answered in the heat of the day, when the rays of a tropical sun on the head and shoulders, accompanied with the glare from the water, are wilting. Then the boats the people come in are often small, old, dugout canoes that are not sure of their balance. The passenger must take the low seat and dispose of feet and skirts as well as may be, in order to avoid getting wet, for these boats all leak. But given a fair-sized boat with strong hands to paddle, the boat trip is to be preferred to a ride in a bullock-cart.

From village to village there are no roads, but paths across rice fields that are swamps in the wet season, and rough, sun-baked gridirons in the dry season. The carts have neither seats nor springs. Indeed, it would be impossible to balance on a seat if there were one. So the passenger arranges his outfit as well as he can, climbs into the cart, and deposits himself among the things or on top. Whatever he does, he will think before long that some other way would have been better. I sometimes think the Karen or Burman enjoys a good jolting, for he never tries to avoid ridges or chuck holes, but urges his bullock to go faster when he sees either ahead of him.

When possible we give literature to those who can read. Some are beginning to show an interest in the gospel. I have had the privilege several times of telling the story of creation and salvation to grown men and women who had never heard it before. The Karens and many of the others are devil worshipers. They seem never to have bothered to think of the beginning of things or how they came to be. They are kept busy appeasing the demons that inhabit every house and tree and boat and river.

Pray with us for these children of the jungles, that they may behold the great Light and learn to follow.

HEREDITY AND THE CIGARETTE

DR. D. H. KRESS

AT a medical meeting, a doctor who was demonstrating a sphygmometer, a new instrument for determining the blood pressure, after testing a physician friend of mine and me, expressed surprise to find us at the age of over fifty with a normal blood pressure. My friend, who has for years been an extremely temperate man, said to him, "How is your blood pressure?" To this he replied, "High." "Well," said my friend, "do you smoke?" He said, "Yes." "But," said my friend, knowing that tobacco is reputed to be one of the chief causes of arteriosclerosis and high blood pressure, "you ought to know better;" to which he answered, "I do, but what is a fellow going to do when he feels like the devil?"

Here, possibly, we have the true cause of the tobacco habit, and, in fact, of other forms of drug addiction. Tolstoi ascribed smoking "simply and solely to the desire to drown the warning voice of conscience." Tobacco is so prevalently employed because so many feel as did this physician when they attempt to do without it. The unpleasant feelings may be physical, mental, or moral. Tobacco smothers for the time being these unpleasant and unwelcome symptoms. It is in heavy demand in the trenches at the present time.

Some time ago, when I was traveling with a physician's wife who was a social worker and temperance advocate, she told me how extremely nervous she was. Our conversation drifted to cigarettes and their growing use among women. To my surprise, she said, "Doctor, do you know that notwithstanding all I know about the evils of cigarette smoking, if I thought they would give me relief from my nervousness I would take up their use?" Then she added, "I have actually been tempted to resort to them, even if they afforded only temporary relief."

Boys often begin the use of cigarettes because they have disagreeable nervous symptoms, and after having formed the habit they continue their use because of the aggravation of these symptoms when attempting to do without cigarettes.

But why are there so many nervous children? There must be a cause for this condition which leads so many of them to seek relief in cigarettes. Some time ago, in passing through a building in the city of New York, where there was a Child's Welfare Exhibit held especially for the education of the poor of the city, I noticed one poster which read, "Do not give coffee or tea to children. They are poison to the child." I said to myself, "Well, that is sensible." But the thought came to me, "Why not go farther? If tea and coffee are bad, and only bad, for the child *after it is born*, because of its delicate organism, are they not equally bad for the child before its birth, when its organism is still more delicate?" Women should abstain from the use of tea and coffee for the sake of the child that is to be.

The welfare of children must be thought of before their birth, if we would have normal children. Many of the children of today are born with unstable nervous systems because of the wrong habits of fathers and mothers before their birth. These little ones, being nervous and often mentally deficient, naturally take to the cigarette or any other form of drug addiction.

Scientists who have carried forward investigations for the purpose of ascer-

SMOKING AND NONSMOKING BOYS

The four boys in the picture represent two classes of boys that may be found in many of our schools. The two larger boys were the only boys among twenty-one in a schoolroom who had never smoked, while the two smaller boys had used cigarettes practically as long as they could remember. The four boys were of the same age, fourteen. The smaller boys were inferior in every respect.

taining the relation that mental defectiveness sustains to prostitution, claim that eighty-five per cent of the prostitutes in our large cities are mentally deficient, and have entered upon a life of shame because of this unstable and defective mental state. Ninety per cent of these prostitutes are cigarette smokers, and many of them are victims of other drug habits. A few years ago experiments were conducted in England on inebriates. It was found that eighty per cent of the inebriates gave evidence of having been mental defectives. This was undoubtedly responsible for their being slaves to drink. Should the same scientific tests be made of boys who at nine, ten, eleven, or twelve years of age begin to smoke cigarettes, it would probably be found that mental deficiency or an unstable nervous mechanism is responsible for seventy-five or eighty-five per cent of the cigarette addiction. From my own observation I should say that two thirds of the boys who are victims of the cigarette or other forms of drug addictions are so because they have a defective heredity. There is usually a history of the father's being a heavy smoker or a drinker, or both, or of the mother's being a heavy tea or coffee drinker.

Another thing I have observed is that boys whose fathers did not smoke nor drink are usually more moderate in the use of cigarettes, if they form the habit, and are able to give up the practice much more readily than are those whose fathers smoked or drank.

It is recognized that youthful criminals are almost without exception cigarette fiends. But the cigarette-smoking boys who fill our criminal courts are usually those whose fathers also smoked and drank. It is in the second and third generations of smokers that evidences of

mental and moral degeneracy are most marked.

Three fourths of our youthful criminals, we may safely say, are slaves of the cigarette, and they are such because of poor heredity. The cigarette and smoke inhalation in America date back only about forty years. The use of cigarettes has increased 700 per cent during the past thirteen years. Already we are beginning to reap the results of our fathers' transgressions. What the next generation will be can scarcely be imagined. Had we the privilege of choosing our ancestors, which unfortunately we have not, not one would chose those who are victims of the cigarette habit. If this evil is permitted to be perpetuated, conditions will soon be irreparable.

ITEMS OF INTEREST

College Fraternity Bars Liquor

At its recent annual convention the college fraternity Theta Chi passed with enthusiasm a resolution prohibiting the traffic in liquor in all chapter houses throughout the country.

Dry Victory for District of Columbia

The Excise Board of the District of Columbia has ruled that persons driven out by prohibition laws of other States shall not establish mail-order houses in Washington for the purpose of shipping liquor into dry territory.

Liquor Importation for Personal Consumption

In a recent convention of the State Association of Chiefs of Police of Washington, a resolution was passed requesting the next legislature to prohibit the importation of intoxicating liquors into the State for private consumption.

Prohibition Prosperity

According to the papers, Washington under prohibition is enjoying a prosperous time. There is little unemployment, wages are good and are increasing, retail business is improving, lumbering and building are active, and the banks are flush with money.

Tacoma, Dry, Makes Saving

As a result of State-wide prohibition, the city of Tacoma, Wash., has reduced its police expenses fifty per cent, thus saving the taxpayers $30,000 a year. It is thought that other savings, resulting from prohibitory enactment, will make a total of $50,000 yearly.

New Uses for Alcohol Sought

The Russian minister of finance has offered prizes amounting to 250,000 rubles, a little more than $125,000, for new methods of utilizing alcohol for technical purposes. In other words, Russia desires to continue making alcohol, but to devote it to some useful purpose.

Prohibition States

The following nineteen States are now under prohibition, either constitutional or statutory: Alabama, Arizona, Arkansas, Colorado, Georgia. Idaho, Iowa, Kansas, Maine, Mississippi, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, Tennessee, Virginia, Washington, and West Virginia.

Result of Drink

A patient in a hospital and two wrecked automobiles was the result of intoxicating drink, at Topeka, Kans. A young driver recklessly ran down and seriously injured a pedestrian, and then smashed into a big touring car. He admitted that he had been drinking.— *Automobile Dealer and Repairer, May, 1916.*

Mortality among Abstainers

According to Arthur Hunter, actuary of the New York Life Insurance Company, the experience of some American companies and one Canadian company is that the mortality among abstainers is from ten to thirty per cent lower than among nonabstainers. It will be remembered that insurance companies do not accept heavy drinkers as risks. The comparison, then, is between abstainers and moderate drinkers. If a man wants long life, he must abstain from the use of intoxicants.

Killed under Car after Drinking

Five men were returning from a trip somewhat the worse for drink. When near Chatsworth, Ill., the left back wheel crushed down under the weight, and as the wheel went under, the front wheels turned to the right and the car overturned. One of the men was caught under the machine, the edge of the body of the vehicle striking him over the heart and crushing him. He died in a few minutes. They all had been drinking, with the exception of the driver.— *Auto Dealer and Repairer, May, 1916.*

Interpretation of the Antinarcotic Law

The United States District Court for the northern district of New York has decided that it was the purpose of Congress in passing the Harrison antinarcotic law to limit the quantity of habit-forming drugs that may be prescribed by a physician or sold on a physician's prescription, to such an amount as is necessary to meet the needs of the patient for whom the prescription is given. The court holds that a prescription for an unusually large quantity of any of the drugs enumerated in the law must show the reason why the large quantity is required, and if it does not, both the physician who writes the prescription and the druggist who fills it are guilty of violating the law.— *Public Health Reports.*

Prefers to Remain Dry

During a strike in Hooversville, Pa., the judge ordered the saloon closed. At the end of a few weeks, when labor conditions were again normal, the saloon was opened, the result being a number of drunken men on the streets. It was such a contrast to the dry period that the people of the town circulated a petition to have the town made permanently dry.

No Resubmission in North Dakota

Notwithstanding the efforts of the Personal Liberty League, the question of prohibition will not be resubmitted to the people of North Dakota. Evidently the league members could not get enough signers to their petitions, for the reason that the great majority of the people of North Dakota are well satisfied with the results of prohibition and have no desire to go back to the open saloon.

Antiliquor Demonstration in Paris

Recently two great temperance meetings were held in Paris. At the Sorbonne meeting, Prof. Paul Painleve, minister of public instruction, in a powerful speech said that the fight against liquor must be continued with the greatest energy. At both meetings resolutions were adopted urging the passage of legislation to suppress the liquor traffic. Evidently the abundance of light wines is no cure for the liquor evil.

Drunkenness a Mental Defect

Massachusetts has an establishment for the treatment and reform of drunkards. The superintendent, after an experience of five years, is convinced that in one fifth of the younger men the alcohol or drug habit is a manifestation of mental defect, and that such persons are not likely to be improved with treatment, or if they improve, will relapse under temptation. He believes they might do well if constantly in an alcohol-free environment. For the sake of the hundreds of thousands of such weaklings, we want to make the environment of the entire country alcohol-free.

Alcohol and Mental Disease

Rosanoff, in an address published in the *Boston Medical and Surgical Journal*, April 27, 1916, says that even moderate drinking, especially when it becomes a daily habit, though not likely to make one insane, is sure to reduce physical and mental efficiency, thus killing the best that is in one as long as it is indulged in. Many persons, he continues, who have an inborn predisposition to mental disease, but who, had they abstained from alcohol, might have avoided an actual breakdown, have been brought to hospitals for the insane by habits of intemperance. Much larger numbers have been brought to hospitals by the same cause who would never have developed their insanity were it not for their intemperance. This is only the mental side; on the physical side is the part played by alcohol in the production of such diseases as chronic gastritis, cirrhosis of the liver, and inflammation of the nerves. Nor is this all; we have in addition the relationship which exists between alcohol and vice, crime, pauperism, and other social evils.

Will Vote This Year

The following States will submit to the people the question of State-wide prohibition at the election in November: California, Idaho, Michigan, Montana, Nebraska, and South Dakota, also Alaska.

Why Not Kill Off the Unfit?

Why not let alcohol weed out the weaklings and leave a more vigorous race? The trouble is that alcohol is slow in weeding out the weaklings; and while it is doing this, it is producing in these same people a tendency to sexual irregularities which will guarantee a still greater crop of weaklings. Meantime alcohol is taking youth not weak by inheritance, and preparing a new race of weaklings. It's a rule that works the wrong way. Where alcohol is most freely used, there you find the greatest degeneracy.

The Real Gain

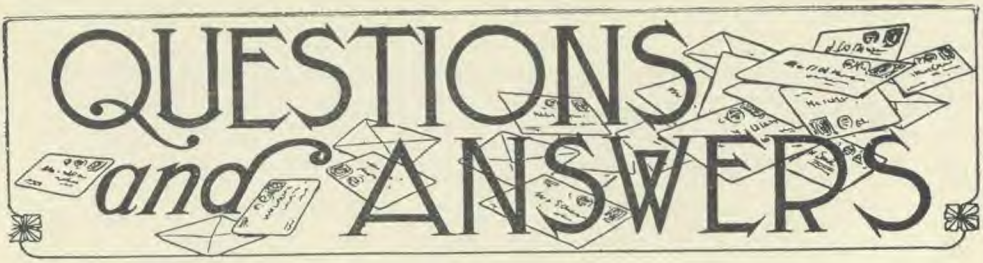
It is safe to say that a large part of what the States have lost in revenue from the sale of liquor, banks and business houses have gained. What women and children have gained in well-being and in self-respect and hope is immeasurable. In a matter like this we hold that governments have no right to consider the loss of revenue; the only thing that counts is the greater good of the greatest number of citizens. If prohibition will accomplish this, then that system should be resorted to without delay.— *Good Housekeeping.*

Factory Experience

A Boston food factory employing between eight hundred and one thousand men and women, finds it advantageous to have regular health inspection. A nurse is employed, and a surgeon visits the establishment three times a week. In order to keep up the efficiency of the employees, those found to be suffering with a vice disease are promptly discharged and can never be reemployed. All persons addicted to the immoderate use of alcohol are excluded. The attending physician says that to keep such persons near high-power machinery would be to court disaster.

Expert Information

Being asked his attitude toward the liquor question, the editor of the *Ohio Penitentiary News*, an inmate of the institution, gave a reply in that paper, from which the following is quoted: "Is the victim of the rattlesnake's venom in favor of the rattlesnake? Is the poor devil whose home, loved ones, and worldly possessions have been swept away by the devastating tornado, very much in favor of the tornado? Well, no, we should think not! That is exactly our attitude with reference to the saloon. It has been the curse of our existence. If it were not for the saloon, the chances are we should not be here. If it were not for the saloon, men who are being committed to this prison almost every day of the year, would not be coming. The people of Ohio would be astounded if they knew the number of capable men in the Ohio penitentiary who are here because of the saloon. No sensible man will deny that the saloon is the manufacturer of criminals."



Questions accompanied by return postage will receive prompt reply by mail.

It should be remembered, however, that it is impossible to diagnose or to treat disease at a distance or by mail. All serious conditions require the care of a physician who can examine the case in person.

Such questions as are considered of general interest will be answered in this column; but as, in any case, reply in this column will be delayed, and as the query may not be considered appropriate for this column, correspondents should always inclose postage for reply.

Tender Feet

"In summer my feet scale easily, itch, and have a bad odor. What shall I do to toughen them?"

I should suggest the use of very light footwear, cloth in preference to leather; low shoes, and very light stockings. Wash the feet daily, or twice a day, using a little ammonia in the water; and if this is not enough, add a little formaldehyde to the water.

Diarrhea

"What can I do for looseness of the bowels? What are the best foods for such trouble?"

Use nothing but milk for a while, then milk and white bread. Later use rice, oatmeal, and eggs, and avoid fruits and vegetables. Better rest on your back during an acute attack.

You should have an examination to find out whether this condition is due to tuberculosis infection or infection from some dysentery germ.

Is It Hookworm?

"At twenty I lost my eyesight, and when I returned to work, found my strength much impaired; I also lost in weight, from 145 pounds to 105. I partly recovered, went to Alabama, and in about a year had run down again, going down to 115 pounds, which has been my weight ever since. I seem to pick up temporarily, but cannot hold it, and can do only half a man's work. I am now fifty-four years of age, and have weak digestion. Can this be hookworm infection, and can I make a test myself? or is it a condition of chronic catarrh of the digestive system?"

The only way to determine the presence of hookworm is by careful examination of the discharges. I think a microscope would be necessary, and you would not be able to make the examination yourself. If hookworm is prevalent in a locality, I think it is usually possible for one who is not able to pay to get an examination free.

It is quite possible, of course, that you have hookworm, or you may merely be suffering from a chronic catarrh of the digestive system.

Flowers in Sleeping-Room

"I have heard that it is injurious to one's health to have flowers in the sleeping-room. Is this true?"

There is probably no truth in the statement that flowers in the sleeping-room are injurious to the health, certainly not if the room is properly ventilated. The statement probably comes from the fact that at night plants give off carbon dioxide and take in oxygen, just the opposite to what they do in the daytime. But the amount given off by the number of plants likely to be in a sleeping-room would certainly not affect perceptibly the condition of the atmosphere.

Aches and Pains

"The flesh of my back, hips, and legs is sore, the pains varying and changing places; catch pains in the left hip and in the back often; sometimes the pain seems all in the bones. A hot bath at night gives temporary relief, but I awaken with my legs feeling like heavy weights. There are frequent rheumatic pains in my arms, heels, knees, and elbows. Fomentations give relief, but for six months symptoms have been more severe. Stomach burns and forms gas.

Many misunderstand the purpose of the Questions and Answers department. We do not pretend to treat difficult conditions by mail. No reputable physician would attempt to treat your case without making a physical and chemical examination. Even with a superficial examination, the doctors are apt to be led astray in a case like yours.

It is possible, as you suggest, that the "rheumatism" is due to the food going wrong. I think it is so in most such cases. Possibly there is excessive acidity.

Suppose you try a diet largely of milk and bread, with a minimum of fruit. Later, use green vegetables, if you desire, and potatoes if they agree with you. Be sure to keep your bowels well regulated. If you are well nourished, a few days' fast at the beginning of the treatment may benefit you.

I think, however, that you would do better to go to a conscientious, competent physician than to attempt to treat this condition by mail.

Lard in Crackers

"Do the common soda crackers not made by Seventh-day Adventists contain lard?"

The common soda crackers usually contain lard; at least they used to. It is possible now that some bakers use some of the vegetable shortenings instead of lard. You may be sure that they use that which costs the least.

Nuxated Iron

"What do you think of the inclosed advertisement?"

I am not acquainted with the drug mentioned in the advertisement you sent, but I think it is no better than the host of patent medicines that are constantly coming out. The patent medicine men know that the fools are not all dead yet, and as soon as one patent medicine is exposed, they change the name of the product or the name of the firm, and start sending it out in some other way, and the people take it just the same. The safest way to do with patent medicines or with advertised medicines is to let them entirely alone.

Are Glasses Needed?

"About seven years ago I had a severe eyestrain from night study, and had ulcers on one eye for about six months; since then have had glasses from three oculists, without getting any relief, except that the last oculist did give me relief from the severe headaches from which I have suffered for years. My eyes are all right until about noon, when they begin to get tired, and by night I can scarcely hold them open, they are so weak and watery, and the strain of trying to see brings on a headache, and soreness around the eyes down to the cheek bones. I should like to know whether I need other glasses? or should my eyes be treated?"

Not knowing anything regarding the nature of your work, it would not be possible for me to determine to what extent your eyes may be relieved by a change of work. If you are doing close work, that is possibly the reason why your eyes give out about noontime.

Again, it is possible that the trouble is due to an excess of light, which might be remedied by the use of an eye shade worn on the forehead or by the use of colored glasses. The fact that the last glasses relieved your headaches indicates that there must be some eyestrain due to improper refraction. Whether or not your glasses are properly fitted, or whether you might be relieved by better-fitted glasses, is something that can be learned only by direct examination.

Bloody Discharge

"I am having a slight discharge tinged with blood; am sixty-five years old. There is more or less prolapse and tenderness."

I should most earnestly urge you, at your age, to have a careful examination, as there is a possibility that this is cancer, and if it is, the sooner it is taken care of, the better. It might be remedied now, but in a few months nothing could be done for you if it happens to be cancer.

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A valuable book on a most important subject, by one generally recognized as an authority.

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Varicose Ulcer of the Leg

"What should I do to heal the sores that have formed in connection with varicose veins of the leg?"

You would better place yourself under the care of a physician or surgeon, for your own treatment is apt to be followed by extremely slow recovery, or by extension of the ulcer.

There are two important indications in a case of varicose ulcer: to stimulate the indolent tissues and to remove the passive congestion. The first is accomplished either by curetting the surface of the ulcer or by some stimulant application, as silver nitrate in strong solution. The second is accomplished by the application of pressure by means of bandages. From time to time the ulcer should be stimulated. Treatment of the general physical condition is often necessary in varicose ulcer.

Hay Fever

"My daughter has had hay fever every summer for six years. Can you send us a remedy? A prescription with iodide in it seemed to help her. Do you know of something better?"

A physician recently reported that he had treated fifty cases of hay fever on the assumption that there is always present with this trouble an acidity of the blood. He gave a teaspoonful of sodium bicarbonate (common baking soda) three times a day, and had fairly good results on ninety per cent of his cases, and excellent results in seventy-five per cent of his cases. The suggestion is at least worth trying.

Stubborn Constipation

"Kindly advise what to do for a stubborn case of constipation of several years' standing."

We frequently give advice regarding constipation, as you will notice by looking over our Questions and Answers in back numbers.

You have not mentioned in what way your case differs from these, or what you have been doing to relieve your condition. I suppose you understand that the use of laxatives only makes the matter worse.

Among the things that may be mentioned for the treatment of constipation are, cold water, drunk freely, especially before breakfast; bran, a tablespoonful in water before breakfast; an apple or two or an orange or two before breakfast; dates, figs, stewed prunes, coarse vegetables, also Graham bread and coarse-grain preparations, eaten freely. If, however, laxatives are needed, you will do better to use agar-agar or liquid paraffin in preference to medicinal laxatives.

You should be careful to take some abdominal exercises, as mentioned in previous numbers, especially the stroking and kneading of the abdomen, the body bending, and the thigh flexions.

You will need to adopt a regular time for stools, preferably after breakfast, and continue the practice. Establish regular habits. Do not wait for the impulse, but go every morning at the same time, and wait patiently.

Avoid cheese, white bread, refined or bolted cereals, and in general all foods that contain little or no indigestible residue.

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FOOD IN HEALTH AND DISEASE, by Nathan S. Davis, Jr., A. M., M. D., second edition.

Part I. General Principles of Diet, and Diet in Health.

Part II. Diet and Disease. Considered under the heading of the various ailments.

$3.50, $3.75, $7.00.

THE MILK QUESTION, by Walter J. Rosenau, Professor Preventive Medicine and Hygiene, Harvard Medical School.

Considering the fact that milk is practically a necessity, and that it offers one of the most frequent means of transmitting disease, there is no more important branch of public hygiene than that of securing a pure milk supply. No one is better prepared to write on this subject than Professor Rosenau.

$2.15, $2.35, $4.00.

The Dentist and Health

WITH regard to mastication it is interesting to note that it is essentially the vegetable portion of our food that demands thorough chewing. As Dr. Harvey Campbell points out in an article in the *Lancet*, April 8, 1916, the carnivora do not masticate their food, while on the other hand all the vegetable-feeding mammals are laborious masticators. This is because vegetable food consists of a cellulose framework more or less dense, which it is necessary to break up, so as to liberate the contained nutrient particles and allow them to come under the action of the digestive juices.

Man, as is shown by a study of the teeth of primitive man and of our ape relatives, is a masticating animal, but the work of the miller and the cook in civilized life has to a great extent relieved us of the laborious work. The vegetable food we eat nowadays is for the most part served in pulpy, pappy, pultaceous, and spongy forms; it is not properly mixed with the saliva, a most necessary process of good digestion, and the teeth and salivary glands are cheated of their normal work. Mastication, then, is all-important if health is to be preserved and maintained at a high standard.

The best way to secure adequate mastication is to choose foods which invite or even compel mastication, and this advice or warning applies in particular to the cereal foods. As said before, however, proper mastication is difficult or impossible if the teeth are defective. If they are not capable of doing their work effectively, a dentist's aid must be called to remedy the defects.

False teeth, well put in, are better by far than lack of teeth or defective teeth, but undoubtedly a good deal of the trouble with teeth could be avoided by insisting that children should eat foods which exercise the teeth and salivary glands adequately.

Finally it may be said that the health of a person depends largely upon the condition of teeth and mouth. The teeth should be not only sound, but they and the mouth should be kept in a thoroughly sanitary condition. Therefore the rôle of the dentist is most important.— *Medical Record, May 13, 1916.*

Open-Air Surgery

AMERICAN surgeons who are returning from service "somewhere in Europe" are telling us wondrous tales of miraculous cures effected in the face of such mutilation as would make death seem certain in other environment, and they are attributing this in no small degree to the fact that patients are kept and treated almost in the open. One predicted and beneficial result of the awful war is that our massive and palatial hospitals will have to give way to structures of an entirely different character. The European experience seems to teach that the "movable schoolhouse," with some modifications, will be the accepted type of hospital which is to be when we have been able to accept the facts set before us.

But open-air surgical treatment is not so new as is the war. The war has demonstrated its possibilities, possibilities of which many workers had been convinced long before the great conflict had been thought possible. Open air and sunlight have been therapeutically used by many habitually, but usually in connection with time spent in closed and heated rooms. The American people are great on heat, and fearful of cold even in its lesser degrees; they are also fearful of air in its natural and free movement, even in its lesser degrees and with reasonable protections. All this will have to be revolutionized before the American people will accept the new hospital, which we have predicted. But the American people are open to argument, and if convinced they will accept — demand.— *The Medical Fortnightly, May 15, 1916.*

Efficiency and Inefficiency

GEORGE ELIOT, that friend of the lowly, believed that a great deal of happiness was to be found in the enjoyment of work. In "Adam Bede" she introduced a scene where two toilers, working side by side, expressed a significant contrast in attitude. At the end of the day one eagerly dropped his tools, and the other, absorbed in his task, kept on working. Which of the two was the happier? Which of the two was the better workman? There could hardly be a doubt about the answers.

The man that enjoys his work, that loses himself in it, is one of the most fortunate of the earth. Even if he does have his share of trouble, he can escape by working. In work, many a man has found his salvation. It is said that Edison has debauches of work. For days he will not emerge from his laboratory. When, at last, he does appear, as one of his associates said, he "looks tough." He is obviously on the verge of exhaustion. But meanwhile, he has reached absolute concentration. In forgetting himself, he has known the supreme joy of the worker. Compared with work done in this way, what a poor diversion play seems! Absorbing work is, indeed, the finest of all games. Those who miss it lose one of the highest rewards of living.— *John D. Barry, in Washington Herald.*

Nutritional Physiology

by Percy Goldthwait Stiles. Second edition; illustrated; cloth, $1.25 net. W. B. Saunders Company, Philadelphia.

This is not exactly an elementary book. Some knowledge of elementary science is assumed. The spirit of the author is well given in the preface to this edition: "The literature of metabolism and nutrition has long been copious, and its volume is still increasing. If a summary is attempted, it is found more and more dangerous to make dogmatic and uncompromising statements. Almost every assertion has to be qualified. The resulting tone, as the writer knows from long teaching experience, is irritating to the elementary student who craves downright and absolute dictation. But it is well for him to learn that many things are still debatable, and that the power to suspend judgment while awaiting further evidence is a rare and fine one."

Professor Stiles deals with his subject somewhat after the manner of the college lecture-room; but by the use of untechnical language and the free use of illustrations, he makes the subject plain to the ordinary reader. The result is a book differing from the well-known school physiology not only in style but in content; for the author has carefully incorporated the data with which recent investigators have enriched the science of physiology, and which are not found in the usual school textbooks. The choice of new matter, however, has been conservative. For instance, in discussing the functions of the "ductless" glands, the author states only those conclusions which have been pretty generally accepted by physiologists.

Tobacco Habit Easily Conquered; How to Do It Agreeably and Without Drugs

by Max Mac Levy. Cloth; price, $1.25 net. Albro Society, Inc., 181 Lexington Ave., New York City.

The author has had many years' experience in training men. He asserts that one who wants to become free of the shackles of the tobacco habit "must conquer it so completely that he will afterward have no more hankering for tobacco than for fried crow."

In this volume he tells how to do it. At the head of each chapter is a dictum which summarizes in a few words the entire chapter. There are twenty of these, followed by a "Dictum of Dictums:" "Pray daily to God for whatever aid you may feel in need of, to help you in the simple task of following the rules in this book to a victory over the tobacco addiction."

His second dictum may sound odd. It is, "*Continue with tobacco as usual for two weeks.*" His reason for this is, by means of training which he directs, to prepare the body for the deprivation. His fifteenth dictum is, "*At the end of two weeks you are to discontinue the use of tobacco completely.*"

Any one who is seriously desirous of breaking away from the tobacco habit ought, with the aid of this book, to free himself from his slavery.

American Public Health Protection

by Henry B. Hemenway, A. M., M. D. Cloth, $1.25 net. The Bobbs-Merrill Company, Indianapolis.

The French failed utterly in their effort to dig a canal across the Isthmus of Panama. The cause of the failure was the unhealthful climate. Panama at that time was the "white man's grave." The United States succeeded because those in charge understood the value of an energetic sanitary or public health organization for the Canal Zone. The result of the efficient sanitary supervision of the Zone was a condition of health better than the average in the United States, but not better than what the people of the United States may have when they appreciate the value of an efficient public health administration, and demand it.

Dr. Hemenway has written with the purpose of instructing the people on the importance of this their greatest need — the need of more efficient machinery for the prevention of disease.

The book will be found interesting and profitable by physician and layman alike; and especially should it be read by those who fear that the health machinery of the country is to be given over into the hands of allopathic physicians. Dr. Hemenway shows that ordinary physicians are in no way qualified to act as health officers; in fact, the doctor of public health is in reality a new profession requiring a special training, which as yet is being given in very few of the universities.

It is to be hoped that Dr. Hemenway's book, which gives a very excellent brief résumé of the history of sanitation, will have a wide reading.

Women a Great Force

Governor Whitman, in addressing the five thousand club women recently, told them that they were one of the greatest forces for good in this country.

More Defective Births among the Rich

According to the registrar of the New York City Department of Health, deaths from congenital defects are more prevalent among the rich than among the poor.

Poisonous Bread

In parts of Russia, bread fermented by a yeast of unusual type has a bitter taste, depreciated nutritive value, and poisonous properties. Its consumption is followed by serious illness.

Dietetic Treatment of Asthma

At the annual meeting of the Southern Medical Association, held at Dallas, Tex., Nov. 8-11, 1915, Dr. Allan Eustis, of New Orleans, maintained in his paper, that in the dietetic management of asthma, animal proteins, except buttermilk, should be kept from the patient as much as possible.

Tuberculosis in Infancy

In a series of sixty-two successive autopsies on children, tuberculosis was found in twenty-five, and was considered to be the direct cause of death in twenty-three and a contributing cause in the other two, according to C. H. Dunn, in the *American Journal of Diseases of Children*, February, 1916.

Leprosy in the United States

According to Dr. Wm. A. Pusey, of Chicago, in an address before the Chicago Medical Society, there are five hundred lepers in the United States, of whom 275 are in Louisiana, 100 in New York City, 50 on the Mexican frontier, and 5 in Chicago. Dr. Pusey advocated the establishment of a general leprosarium.

Too Many Cases Diagnosed Tuberculosis

From the time when a man had to be in a very advanced stage before his tuberculosis infection was discovered the pendulum has swung to the other side, so that many are now diagnosed as tuberculosis from some slight reaction who might recover without any treatment. It is to this fact, perhaps, that we have such a showing of arrest of early cases in the sanatoria. There are cases that almost from the start are hopeless. Fishberg, in the *Medical Record*, Jan. 22, 1916, suggests that cases of incipient tuberculosis, instead of being sent at once to a sanatorium to occupy a bed more needed by some more advanced case, should be kept under observation for a few weeks.

Loss in Boiling Potatoes

A German periodical states that when potatoes are boiled without their skins, there is a loss of at least two per cent. There is less loss if salt is added to the water before boiling. [There would be no loss if this water were used in soups or in other ways.]

Nondrug Methods

Perhaps medical school faculties will some day awaken to the value of other-than-drugs treatment methods. Then, when these are taught to their students by capable instructors, illiterates who exploit a "new school" in treatment will, like Othello, find their occupation gone. Medical faculties have until now been themselves to blame.—*The Medical World.*

Nonpartisan Health Administration

In an address delivered before five thousand club women at their biennial convention, Governor Whitman of New York defined public health work as the most important function of government, and pledged himself for a nonpartisan rule of the New York State health activities. This is a move in the right direction. A man's efficiency as a health officer is not to be measured by his activities in helping to elect some party ticket. It is more likely to be in the inverse.

Destruction of Tubercle Bacilli in Milk

By means of experiments with milk from a tuberculous cow, of milk from a cow with tuberculous udder, and of milk artificially infected with tubercle bacilli, it has been shown that it is possible to render tuberculosis milk noninfectious by means of electricity. Each sample of milk was divided into two parts, one being treated with electricity and the other not. In each case the milk not so treated developed tuberculosis in guinea pigs, the treated milk did not. (Reported in the *British Journal of Tuberculosis*, January, 1916.)

Common Colds

According to Kruse and Foster, who each conducted a series of carefully controlled laboratory experiments (*Journal A. M. A.*, April 15, 1916), the common cold seems to be transmitted, at least in some instances, by an organism of the filtrable type; that is, an air organism too small to be seen with our microscopes, and therefore called ultramicroscopic, and small enough to pass through a Berkefeld N Filter, which will not permit the passage of ordinary bacteria. A number of infectious diseases which long puzzled bacteriologists are now known to be due to "filtrable viruses," which is but another name for ultramicroscopic organisms.

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The Sanitary Privy

The Michigan State Board of Health has issued a pamphlet on "The Sanitary Privy" (Engineering Bulletin, No. 8), giving drawings and specifications for the erection of outhouses which will meet every demand of decency and hygiene. No price is given, but doubtless for ten cents in stamps a copy would be mailed to any one interested, outside of the State of Michigan. They are free to the inhabitants of the State. Published at Lansing.

Lead Poisoning

The United States Department of Labor has recently published a bulletin, "Report of British Departmental Committee on the Danger in the Use of Lead in the Painting of Buildings." In its more than two hundred pages it masses much evidence regarding the way in which lead paint causes poisoning. The important part of the summary, so far as workers are concerned, follows: The danger spot in painting operations is dry rubbing down; personal cleanliness is important; overalls should be washed once a week; five minutes should be allowed before each meal for washing of hands; employers should furnish washing facilities, soap, and towels; workers in paints should undergo medical inspection at intervals of two months.

Remiss in Reporting

Asserting that more than half the cases of tuberculosis and close to three fourths of the cases of typhoid fever are not being reported, Commissioner Hermann M. Biggs of the New York State Department of Health has sent a letter to all physicians in the State, warning them that continued laxity will result in prosecution under the public health law.

Smokers Will Smoke

Notwithstanding the large number of warning signs, it seems impossible to suppress smoking in the New York subways. The first three months of the present year, 167 persons have been arrested for this offense, and fines were collected to the amount of $181, and yet they will smoke. What will a man not do to satisfy the cravings he has developed in himself?

Is Beriberi an Intoxication?

Williams and Johnston, in the *Philippine Journal of Science*, suggest, as a result of their incomplete work, the hypothesis that beriberi is caused by a toxin produced either by some organism or as the result of body metabolism, and that the vitamines act as an antidote to this poison, and not as a food. This theory might throw some light on some unexplained facts regarding pellagra. There are some things which point strongly to the theory that this disease is an intoxication — perhaps the result of an infection. Are there vitamines in complete foods which antidote certain poisons?

Influence of the Atmosphere on Colds

Leonard Hill (*British Medical Journal*, April 15, 1916) states that colds are most common when the humidity is great and the temperature variable, but on the whole cool; when there are raw winds with thawing snow, or strong winds charged with cold rain, and the ground is cold and wet. The common cold may be caused by infection. There is a class of people who suffer from nervous derangement of the nasal membrane, the nasal reflexes being unduly excitable. Sudden changes in the weather may in these cases bring on an attack. In crowded rooms infection takes place from mucous spray sneezed or coughed, or sputtered out when talking.

Thymol from Horsemint

The commercial production in this country of thymol from horsemint, according to recent investigations of the United States Department of Agriculture, may be, under favorable circumstances, a profitable undertaking. Thymol is extensively used in medicine, and forms the basis of a number of important pharmaceutical compounds. Now that the European war has reduced the importation of thymol from more than eighteen thousand pounds in 1914 to a little more than two thousand in 1915, it is believed that to some extent the demand can be supplied at home. For several years the Department of Agriculture has been experimenting with horsemint, which occurs as a common weed in many localities. These experiments have resulted in improving the plants by selection to a point which it is said warrants the use of horsemint for the commercial production of thymol. Full information is given in the Department of Agriculture Bulletin No. 372.

New York to Have Dental Hygienists

Governor Whitman of New York has just signed a bill which provides for the training, registration, and licensing of dental hygienists. This is in response to the great need for increased attention to the condition of the teeth of the children in New York, of whom it is asserted that at least ninety-five per cent require dental treatment.

Bones Utilized as Food

In an Austrian chemical periodical is discussed a method of using bones for food. The bones are ground and then treated with dilute hydrochloric acid in order to remove the lime salts. The insoluble residue is cooked with a dilute solution of sodium bicarbonate to precipitate any remaining lime salt. The product, consisting of gelatin and fat, is suitable for soup stock.

Serum to Restore Life

Johns Hopkins Hospital physicians are experimenting with a serum said to have successfully restored to life a number of animals several hours after they had been drowned. Thus far there have been serious after-effects, such as high blood pressure or hardening of the arteries. But a person would rather be restored in such a condition than be left with no blood pressure. In one instance an animal dead four hours from drowning was restored to life, but soon died from high blood pressure. Other cases were more successful. The *Scientific American* is authority for this story.

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Christiania Health Home, Akersgaden 74, Christiania, Norway.

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Kimberley Baths, 7 Cheapside, Kimberley, South Africa.

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Natal Health Institute, 126 Longmarket St., Pietermaritzburg, Natal, South Africa.

River Plate Sanitarium, Diamante, Entre Rios, Argentina, South America.

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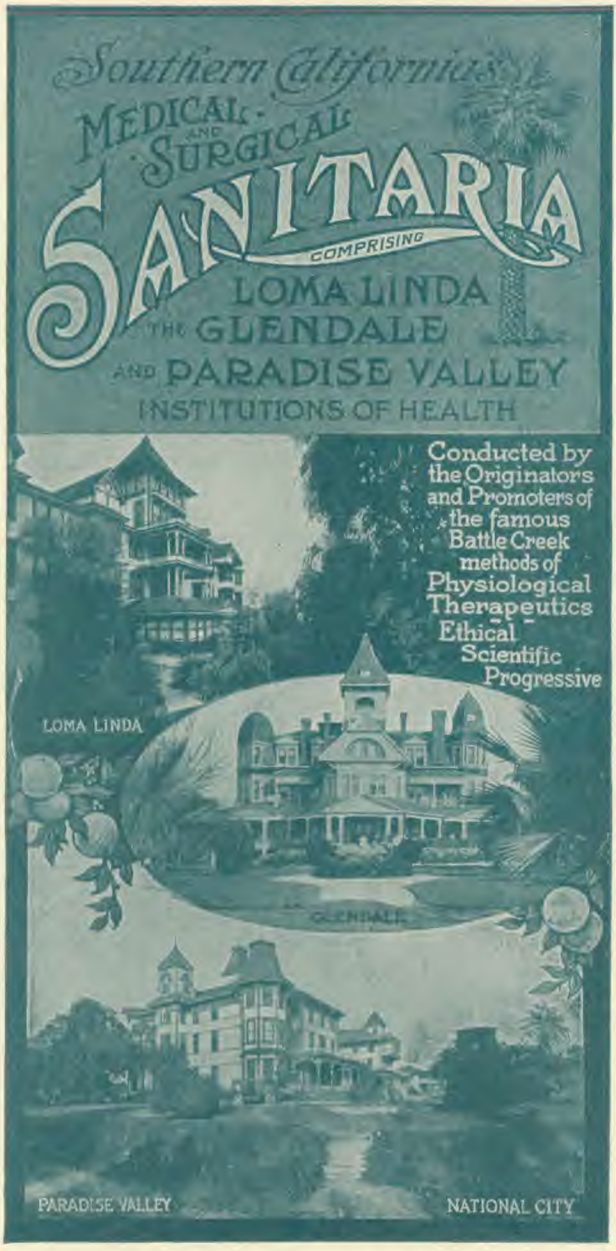

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