Herald of Health

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The Editor's Corner

"Swat the Mosquito"

¶ It's about time to say something more about Mrs. Mosquito. For the last two weeks she has been trying to find the vulnerable places in my net, with appetite and energies at the best after an enforced rest of several months of cool weather. Of course some of our less fortunate companions in misery have her company all the year, but they will be glad to learn that we sympathise with them part of the time at least.

¶ My 1917 Indian Year Book just came to hand, and according to that no less than 40,92,459 people succumbed to fever in India alone in 1914. During three years of war among the great nations of Europe 50,00,000 men have been killed. From these figures we can see what the mosquito is doing for India, for undoubtedly a large number of the deaths from fever are due to that insect, and no one knows how much damage this pest is doing in spreading other diseases.

¶ Our first article this month tells us how to defeat this foe of our health, happiness, and patience.

¶ The hot weather with the attendant flies, mosquitoes, and vermin of all descriptions, is coming on. If we are to live out our allotted term of years we must avoid infection, poor food, bad water, unsanitary surroundings and all the other things which are waiting to seize upon us.

¶ We may not be able to do all we should like, but we can do all possible to reform conditions we find about us and make our part of the world better for our living in it. After all, that is worth living for, isn't it?

¶ And, by the way, let's not forget to be happy and thankful we are alive *yet*. It's just as easy to whistle as grumble and it's a heap more beneficial. Remember—

"The man worth while, is the one that will smile
When everything goes dead wrong."

General Articles

The Mosquito and Disease

By F. C. Richards, L.R.C.P. and S., Edin.

THE mosquito has slain its tens of thousands. So hostile to man is this insect that no one who is interested in human health and welfare can afford to be without some knowledge of mosquitoes and the part they play in the dissemination of disease.

It has been proven beyond doubt that the mosquito is the carrier of that scourge of tropical lands, malaria. It has further been conclusively established that the mosquito inoculates man with yellow fever—the fatal "yellow jack" of soldiers and sailors. The mosquito also causes dengue fever. If we are to prevent these diseases, the role played by mosquitoes in their dissemination must be understood. Not only so, but the habits and life of this insect must be studied in order that its breeding places may be broken up and malarious districts rendered healthy by the extermination of this pest.

Perhaps no other disease, if we except cholera and the plague, has so terrorised the world as yellow fever. And with good reason, too, for in eight epidemics in Spain 130,000 lives were lost. In America, a single epidemic occurring in one city caused fully 5,000 deaths.

Malaria, yellow fever, and dengue are probably all due to the presence of parasites in the blood. In the case of malarial fever, these parasites may be seen, and have been carefully studied. The parasitic cause of the other two diseases are likely too small to be seen even with the aid of the most powerful microscope. The weight of evidence, however, favours the idea that the invisible causes of these diseases are ultra-microscopic parasites. When the mosquito draws blood from a person who is suffering from one of these diseases, these parasites are taken into the insect's salivary glands. The mosquito is then ready to pass them back to man. The time required for the complete development of the malaria parasite in the mosquito is about fourteen days. The yellow fever parasite requires a day or two less. As the mosquito draws blood from healty victims, saliva containing parasites is injected into the blood. Thus these diseases are transmitted first from the blood of the sick to the mosquito, thence back from the mosquito into the blood of healthy persons. Thus epidemics arise which inspire terror, paralyse trade, and depopulate entire cities.

How to Detect Dangerous Mosquitoes

Fortunately, not all mosquitoes are carriers of yellow fever and malaria. A particular kind of mosquito transmits yellow fever, and a distinctly different kind conveys malaria. The common domestic mosquito is incapable of carrying either of these diseases, though during the past few years evidence has been accumulating which definitely proves it to be the carrier of dengue fever. In our illustration the three varieties of mosquitoes with which we are concerned are placed side by side for purposes of comparison. Females only are shown, as they alone do the biting. Males of all varities of mosquitoes are known by their finer plumage and vegetarian habits. The following points of difference may be noted:—

1. *The Malaria Mosquito.*—The long-legged, spotted-winged swamp mosquito is the carrier of malaria. There are about twenty species of this mosquito, but all belong to the single genus *anopheles*, and all are very similar in appearance. So, for practical purposes, but one kind of mosquito

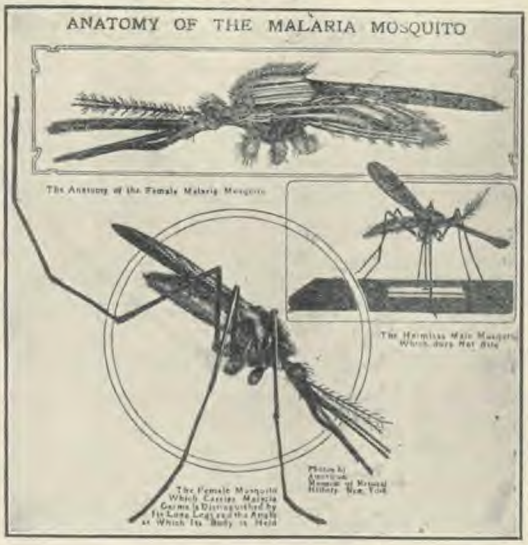
carries malaria, and this mosquito is so different from all others that anyone should be able to recognise it at first sight. The two characteristics which mark the malaria mosquito are (a) its resting position; and (b) the comparative length of its sucking tube and inner pair of feelers. In the malaria mosquito, the sucker and feelers are of almost equal length. In all other female or biting mosquitoes, the feelers are much shorter than the sucker, always considerably less than half its length. A careful comparison of the accompanying drawings will serve to fix this point in mind. The males of all varieties of mosquitoes have long feelers, but as has already been stated, they are easily distinguished from the females by their more elaborately feathered palpi (inner feelers) and antennæ (outer feelers); and, further, by the fact that they do not bite. They are not, therefore, directly concerned in the transmission of malaria.

Concerning the resting position of the malaria mosquito, attention need only be called to our illustration. From this it will be seen that the head of the malaria mosquito is in line with its body, and that the straight line formed by body and head sets at an acute angle with the surface on which the mosquito rests. In the case of all other mosquitoes, a smart bend in the thorax throws the body out of line with the head into a plane paralled to the basic surface. This position of rest at an angle distinguishes the malaria carrier from all other varieties of mosquitoes, rendering it easy of recognition by even a novice, and at some little distance.

As a rule, malaria mosquitoes bite only after nightfall. They are not strong fliers, no instances having been recorded of flight exceeding half a mile from breeding places. Nor are they ordinarily found at high altitudes, their home of choice being low-lying, swampy land.

All species of malaria mosquitoes make every effort to enter houses. They hibernate in the adult stage in outbuildings, cellars, etc., and have been seen during the winter months covering the inner walls of cellar storerooms so thickly that their bodies touched over a space of several square feet.

2. The Yellow Fever Mosquito.—Yellow fever has been proved to be carried by only a single species of mosquito. *Stegomyia calopus* (also known as *Stegomyia fasciata*, and formerly as *Culex fasciatus*). *Stegomyia calopus* is a rather small and very handsome mosquito, dark in colour, with silvery white bands on the legs and palpi, silvery spots on the sides of the thorax and abdomen, and conspicuous, lyre-like silvery stripes upon its thorax. In the British West



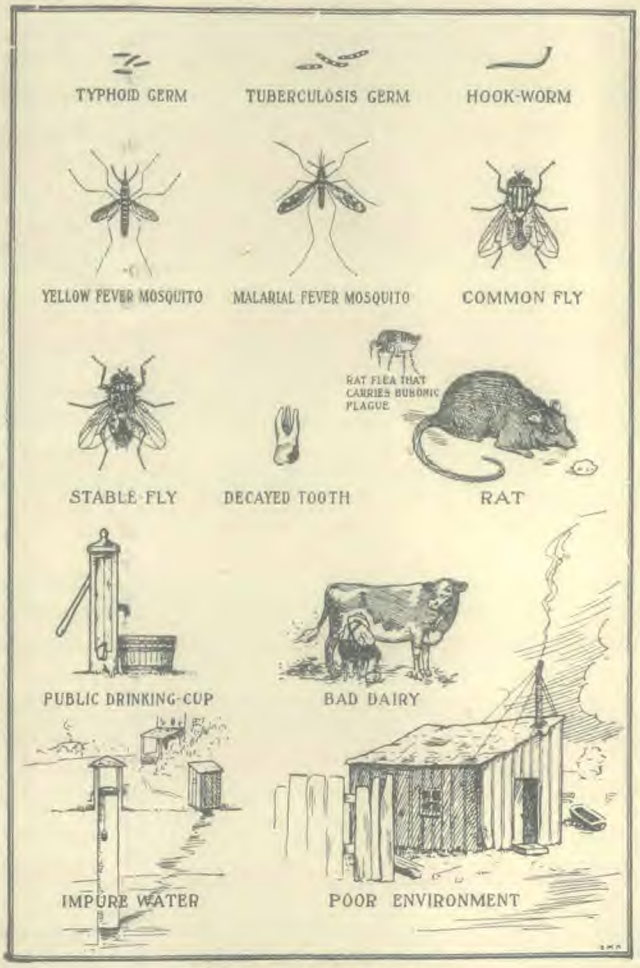
Indies it is known as the striped legged mosquito. It is also known as the day mosquito, because it is most active and bites chiefly by day. It is a domestic mosquito, being seldom found far from human habitations. It breeds in chance accumulations of water about houses, the female depositing approximately fifty eggs at one time. These eggs are very resistant, and will withstand drying for a period of at least three months. Kept thoroughly dry for this length of time they will hatch on being placed in water. Normally the egg will hatch in from twelve to seventy-two hours, depending on the temperature of the water. After escaping from

the egg, the larva grows very rapidly, reaching the pupa stage in as short a time as six days. Development is most rapid in foul, stagnant water containing some sewage. The minimum duration of the pupa state is forty-eight hous. It is, therefore, possible for the mosquito to develop from the egg in as short a time as eight and one-half days. This allows for the egg-stage twelve hours, larva six days, pupa two days. The yellow-fever mosquito is very long-lived, an adult female having been experimentally kept alive for 150 days. In the dry season, and during the winter, such a length of life is certainly common. After an epidemic of yellow fever a new outbreak from infected mosquitoes is, therefore, possible within this period.

3. The common or domestic mosquito, which lives about houses in all parts of the civilised world, belongs to the genus *Culex*. The type of the genus is *Culex pipiens* of Linnæus, the larvæ, or "wrigglers," of which are the common inhabitants of domestic supplies of rain water. The mosquito lays its eggs on the surface of the water in an irregular, raft-shaped mass. The usual number of eggs deposited by a single female is from two hundred to four hundred. The entire egg mass is about one fourth of an inch in length. In warm weather the eggs hatch in from sixteen to twenty-four hours. The larvæ issue from the underside of the egg mass, where they remain for a few hours. They are very active, and wriggle often to the surface to breathe, air being drawn through a tube near the tip of the tail. The wriggler matures in about seven days, when it becomes the pupa. The pupa stage lasts about two days. At the end of this time the full-grown mosquito emerges, using the pupa shell as a boat in which to ride until its wings are dry enough to enable it to fly.

Methods of Mosquito Destruction

The life history of all varieties of mosquitoes is similar. All pass through the egg, larva, pupa, and adult stages, and all require still water to enable them to breed. Effective methods of mosquito destruction may therefore be directed to the prevention of breeding by the drainage of ponds and swamp lands, the flushing of gutters and sewers, the screening of cisterns and other sources of domestic water supply, and the covering with



SOME CAUSES OF DISEASE

(Concluded on page 69)

Nature's Defenses

By Wm. W. Worster, A. M., M.D.

THAT the body is physically in constant warfare with an invisible foe is now a generally recognized fact. Though the enemy is unseen, its action in many instances is more ferocious than that of the wild beasts of the forest. This enemy consists of minute pathogenic bacteria, or in more simple language, disease-producing germs.

They attack us from without and within, and are no respecter of persons. In fact, more deaths occur as a result of their action than are caused by all the armies of the world. Being invisible, they are very deceptive. If we could see them, we should flee in horror; but because we cannot, we many times become their victims. Hence it is necessary for us to be constantly in fighting trim, with our defenses always safe and reliable.

The strength of an army depends as much upon its defenses as upon its numbers, if not more. This has been demonstrated in nearly every military engagement. Three hundred Spartans were able to hold back the hordes of the Persian army. This was evidently due more to defense than to numbers. These defenses may be either natural or artificial. They represent the usual artillery, embankments, trenches, forts, and the like. The body in its constant warfare against germs and their toxins, depends wholly upon its defenses. These, like those of the army, may be natural or artificial, or more technically speaking, natural or acquired.

Natural Defenses

The natural defenses of the body may be divided into two classes, protective and destructive. The former include such defenses as protect the body against the entrance of germs; the latter are those which destroy the germs in case they pass the first line of defense. Among the protective defenses possibly the most important is the skin with which the all-wise Creator has covered the body. This is to the body what an armor is to a modern warship. The nose and throat are parts of the body unprotected by this armor, and as a consequence, need special protection to safeguard them against the inroads of the enemy.

The nose is protected by numerous hairs, which catch the bacteria from the germ laden dust and prevent their entrance into the lungs. Perchance these should fail to filter from the air all the germs, or one should be a mouth breather, nature has a second and possibly more efficient protection. The treachea, or windpipe, is lined with short, fine hairs called cilia. These have a constant upward motion. The germs usually lodge in the mucus secreted by the bronchial tubes, and the cilia carry them upward until voluntary action expels them from the body by a cough. The mouth and throat would form the most easy route for the entrance of germs into the body, were it not for the gastric juice in the stomach. This juice contains a dilute solution of hydrochloric acid, which, when in normal amounts, has a germicidal action. That the gastric juice contains this acid for its disinfectant properties is more evident when we consider that of all the digestive juices, it is the only one containing an acid.

If perchance the germ should gain entrance into the body, it at once begins the formation of a toxin that is more disastrous to the body than the germ itself. Fortunately the body is provided by nature with defenses to destroy the germ and to neutralize its toxin. The blood, the medium by which the germ would be carried through the body, manifests in health a decided germicidal action. But the body does not depend upon this. It has special and more powerful defenses.

Germs that gain entrance into the body through an abrasion of the skin caused by an accident do not pass directly into the blood

stream, but are picked up by the lymph, which passes through a series of lymphatic glands before gaining entrance into the general circulation. These glands have a decided and positive destructive action upon all germ life. Sometimes the first gland is not capable of destroying all the germs, and the remainder pass on to the next gland. Many times the glands filter out the germs, but are unable to destroy all of them. In this instance the glands are the seat of an inflammation which may result in suppuration. Tuberculous glands of the neck are good examples.

If the germ gaining entrance to the body with water or food escapes destruction by the gastric juice, it may be absorbed by the small blood vessels and carried directly to the liver, where it usually meets death; in fact, the liver and the lymphatic glands may truly be called the life preservers of the body.

If, however, neither the liver, the lymphatic glands, nor the blood, destroys the invaders, they are usually lodged in some portion of the body, and there excite a diseased condition. Now another means of defense is brought into play. Nature sends a large amount of blood to the affected part to "wall it off." This process we term inflammation. The white blood cells are despatched to this infected field, and at once begin a hand-to-hand encounter with the germs. The blood-cells usually succeed in destroying them, but in case they fall victims to the germs the dead cells manifest themselves in the form of pus. If enough cells succumb, an abscess is formed. The pus discharged from such abscesses, in the past was looked upon as corruption extracted from the blood, and as a result the body was considered to be in a much healthier condition than before. This is in no sense true. The body would have been stronger had it retained these white cells in the living form.

If the germs temporarily overpower the white cells, or the struggle is somewhat delayed, the germs are very active in the formation of their toxin, which is readily absorbed in the blood. It is the amount of the toxin that produces the severity of the disease, and not the amount of germs actually present. During the time that the white cells are carrying on their warfare, the blood is making a new substance called antitoxin, which neutralizes the toxin. This saves the body from fatal intoxication. It is the amount of this antitoxin manufactured in excess of the real amount needed that determines the immunity of the patient against certain diseases. Some antitoxins are more stable than others, and for this reason immunities against certain diseases are more lasting than others.

Acquired Defenses

Advantage is taken of the destructive defenses to produce an acquired defense. Blood serum from animals that have been immunized against certain diseases is injected into the blood of human beings to give them a relative immunity against the same diseases. Special advantage is taken of this in the antitoxin administered in diphteria. Another form of acquired defense is that used in the prevention of small pox. This is an injection, not of antitoxin, but of the real toxin. The body at once begins the manufacture of its own antitoxin, and thus produces the same effect as when the antitoxin is injected.

Recently there has been discovered a new substance to increase the defenses of the body. The introduction hypodermically of several million dead bacteria will produce a reaction in the blood which increases its power to destroy the live germs of the same kind. This not only gives acquired immunity, but can be used as a destructive defense if injected during the disease. It bids fair to revolutionize the treatment of germ disease.

In consideration of the defenses with which nature has so amply provided us, it behooves each one of us so to care for his body that he will always be in fighting trim. It is better to prevent a disease than to cure it. An ounce of precaution is better than ten pounds of cure.

Cholera and Its Prevention

OF all epidemic diseases cholera is perhaps the most terrible and the most dreaded in the tropics. With the advent of the summer season the "Comma Bacilli" (cholera germs) rise from their long slumber and display greatest energy about the middle of the rainy season, writes Dr. Amrik Singh, Assistant Surgeon of Gujranwalla Hospital. During the period of their active life great havoc is wrought on human life in some places.

In some districts of the Punjab cholera is threatening to break out while in others it has actually broken out. But thanks to the paternal care and vigilance of our Government the authorities in every district are alive to the responsibility of combating the disease.

Cholera, though a highly infectious and fatal disease, can be very easily controlled and avoided. It should be remembered that cholera is "not an air-borne," but rather a water-borne disease which is propagated chiefly by contaminated water used for drinking and washing purposes. The following directions based mainly on my personal observation and experience regarding personal as well as general prophylaxis will surely prove very useful in checking the ravages of this fell disease.

(1) Remember that these tiny foes of the human race (cholera bacilli) gain an entrance into our system through contaminated water, milk or food. Therefore purify your "water and milk," by boiling, and eat freshly prepared hot food when an epidemic is prevalent. Don't use any food or drink about the purity of which you are not certain.

(2) Remember that acid gastric juice of the stomach is highly deleterious to the growth of cholera germs; therefore never go out with an empty stomatch. Since food encourages the secretion of the gastric juice eat something in the morning before going out to work. Fairly liberal use of lime juice and acid fruits tend to keep up the acidity of the stomach.

(3) Don't take any purgative, and treat looseness of the bowels promptly in cholera days. Don't take any fruits or vegetables likely to cause dyspepsia and derangement of the digestive organs.

(4) Avoid fatigue and late hours. Be cheerful. Constant dread of catching infections is injurious and very depressant to the heart.

(5) Remember that the common housefly plays an important role in the dissemination of cholera from man to man and from house to house. Therefore protect your food from the inroads of flies. The flies having been in contact with the discharges of cholera patients settle on our food and other articles of diet and contaminate them.

(6) Remember that filth is the mother of all diseases. Mind your personal cleanliness and improve the cleanliness of your dwellings.

BE SURE THAT YOUR WATER SUPPLY IS PURE

(7) The attendants on a cholera patient and the inmates of an infected house should:—

(a) Thoroughly disinfect their hands before taking food;

(b) never eat anything in the room where a cholera patient is lying.

(c) never use the same utensils which the cholera case is using without proper disinfection.

(d) never allow the discharges of the patient to be thrown about carelessly. The vomits and motion should be immediately treated with disinfectants such as phenyle lotion and quicklime.

(e) never use the bedding and clothes of cholera cases without proper disinfections by boiling or exposure to the sun's rays for some days.

(f) never use their own bucket for drawing water from a common street well. They should ask other people or the special guard to supply them water with municipal buckets.

(8) All sources of water supply should be properly guarded and disinfected with Permanganate of Potash. The water carriers' skin (musak) and all old earthen pitchers used for the storage of water should be daily disinfected with Permanganate lotion.

(9) People should not be allowed to bathe or wash their clothes on the parapets of wells used for drinking purposes.

(10) In cholera days as a precautionary measure keep the following remedies at hand:—

(i) Acid sulphuric Aromt.

(ii) Camphorodyne.

(iii) Spt. Camphor.

In case there are even slight indications of gastro intestinal disturbance take acid sulphuric aromt, camphorodyne, and spt. camphor each 10 minim in one ounce of water at once. Daily use of acid sulph. aromt. in 15 minim doses in a little water every morning is a good preventive of cholera.

Since Pot. Permanganate has become very dear on account of the war, quick-lime may be used freely for disinfection.

How To Relieve Those Bilious Headaches

By Alfred B. Olsen, M.D., D.P.H.

ONE of the most common forms of headache, as well as one of the most unpleasant, is known as the bilious or sick headache. It is usually accompanied by a considerable amount of general discomfort and mental depression. The pain is sometimes sharp, at other times a throbbing ache, which is almost equally uncomfortable.

The Causes

Want of fresh air, a quiet, sedentary life, over-eating, indulgence in rich, greasy foods difficult of digestion, various other dietetic errors, the free use of tea and coffee, alcoholic beverages, tobacco, overwork, and worries—these are some of the common things which are likely to bring on a bilious headache.

The headache is in most cases really a symptom of auto-intoxication or self poisoning. An over-worked stomach and a torpid liver mean imperfect digestion and poor assimilation. Various products of gastric and intestinal fermentation are assimilated into the blood with the food material, and, circulating in the body, produce various aches and pains, including the bilious headache.

The Symptoms

The manifestations of a bilious attack, culminating in what is often called a bilious headache, are so familiar and so common that we scarcely need do more than mention them. Nausea, sickness, bringing up of undigested food with more or less bile, discomfort in the region of the stomach, if not actual abdominal pain, bad taste, a furred tongue, offensive breath, constipation, unfit-

ness for duty, and more or less pain in the head, are the symptoms that are most commonly met with.

Treatment

To relieve the headaches and other unpleasant symptoms it is usually necessary for the patient to go on a fast for a day or two, or take only fruit, either fresh or stewed. While fasting, water should be taken freely at frequent intervals. From three to five or even six pints might be taken in the course of a day to advantage.

One of the best means of bringing immediate relief is the sipping of hot water, followed by a fomentation to the head, or a tepid or cool compress. A hot foot bath with a cold compress to the head is another efficient remedy.

In the meantime the bowels must receive prompt attention. They are almost invariably constipated, and this means the absorption of poisonous matter into the blood. A cleansing enema of about three pints of water, to which a little mild soap has been added, given at a temperature of ninety degrees Fahr., will usually empty the bowels. If necessary, this enema may be repeated in the course of five or six hours, or the next day.

An electric light bath, followed by a salt glow, spray, and an oil rub, makes a pleasant and effective treatment in many cases. A vapour bath is also a good remedy, or even a plain, full-length water bath.

After the treatment, which should only consist of one or two of the above procedures so as not to tire the patient, quiet rest in a well-aired room should be supplied.

To relieve stomachache, fomentations, followed by a cold compress, may be applied locally. Abdominal massage is valuable.

At night it would be well to apply a heating compress in the form of an abdominal girdle. This consists of a linen towel of suitable size, wrung out of cold water, applied snugly round the abdomen and fastened with safety pins. To or three layers of woollen flannel are applied over the moist cloth so as to overlap above and below to prevent the inlet of air, and then carefully fastened. Warm and sometimes even tepid sitz baths are helpful. Fomentations may also be applied to the liver as well as to the stomach, or a liver pack may be given. In some cases fomentations to the full length of the spine give prompt relief.

Preventive Treatment

Persons who are liable to bilious headaches should give careful attention to their diet, and select only plain, wholesome articles of food. Generally speaking, alcoholic beverages, including mild ales and beers, tobacco, tea, and coffee should be strictly avoided. It is also well to discard cocoa, although its influence is not quiet so harmful as that of tea and coffee. Flesh foods should be taken sparingly if at all. Bacon and pork should be utterly discarded. The least harmful of flesh foods is a little fresh fish, either baked or boiled, but it should not be taken more than once a day, or better still, only two or three times a week.

Such patients should also avoid sweets, cakes, and sweet puddings as far as possible. Fats, too, should be taken very sparingly.

Most bilious patients would be benefitted by a much more liberal use of fruit. A breakfast consisting of an egg, or, in place of the egg, a glass of soured milk, with a dish of stewed prunes, or other stewed fruit, a baked or raw apple, or a few grapes, with brown bread and a little butter, would be ample. If vegetables are taken with the midday meal it would be well to exclude fruit entirely. For the evening meal, which should be early, say about six or soon after, fresh or stewed fruit with brown bread and butter would be all that is required.

It is well to avoid drinking with the meals as far as possible, but take water freely between meals.

As a last word of counsel, let all bear in mind that abstemious eating always makes for good digestion, perfect assimilation, and freedom from bilious attacks.

DISEASES AND THEIR TREATMENT

Simple Remedies for Children's Ailments

BY EDYTHE STODDARD SEYMOUR

For a Burn

CARRON-OIL should be kept on hand for burns. Make it by shaking equal parts of lime-water and olive oil together until they form a milky-looking emulsion. Apply on a clean cloth. Vaseline, olive-oil, butter, or lard, can be used until the other is ready, or for a slight burn.

For a Cut

Bathe a cut with hot water; if bleeding much, pack on baking soda and bandage rather tightly; if blood comes in spurts from an artery, tie firmly between the cut and the heart, bandage the place, and send for a doctor.

For Sick Stomach

If sick stomach comes from overeating, stop all food, and give a teaspoonful of lime-water in milk every half-hour. Feed thin milk two hours after vomiting stops. If there is diarrhœa and vomiting, send at once for the doctor.

For Loose Bowels

Give a teaspoonful of castor-oil; but if it is possible to do so, get the doctor at once, especially in the summer, for a diarrhœal condition may in a few hours get so serious that even the doctor may not be able to do anything for the child.

For Constipation

Feed between the regular feedings sweet cream, orange-juice, or strained oatmeal gruel made from long-cooked oats.

For Eczema

Avoid all soap over eczema spots, clean with olive-oil, and if the surface is moist and angry, dust with talcum powder, preferably the borated talcum. Keep the child from scratching the spots. In case of eczema, one can almost be certain that there is something in the diet that needs correcting.

For Heat Rash, Stomach Rash, Hives

For any such eruption first give a dose of castor-oil, then dab moist baking soda over the irritated skin, and let it dry on. Repeat this often if there is itching. Give orange-juice between feedings.

THE VALUE OF VACCINATION.
THE CHILD ON THE LEFT WAS NOT VACCINATED, THE OTHER WAS.

To Remove a Splinter

Heat the end of a needle red hot; when cold, pick out the splinter with it. Drop a little peroxide of hydrogen on the place.

For a Dog or a Cat Scratch

Wash the wound and drop peroxide of hydrogen on it. Always keep this in the house (and bandages, too), as it is very cleansing and healing.

Contagious Diseases

Mothers should know how to distinguish contagious diseases from ordinary heat rash or a rash caused by indigestion. If there is any doubt, call a doctor. Some grow worse so rapidly that the patient gets beyond help before the doctor sees him. I have personally known two lovely girls to die because the parents did not know for a week that their daughters had diphtheria.

Diphtheria

This comes on suddenly, with fever, sore throat, vomiting, and pains in the back and limbs. On examination the throat shows white spots. Children less than a year old or nursing babies seldom contract the disease. It is very contagious, and one should step aside when the patient coughs. The eyes as well as the mouth take the germs. In severe cases of croupy cough, examine the throat for white spots. Membranous croup is one of the worst forms of diphtheria.

If a child has been exposed to diphtheria, or the disease is present in the neighbourhood, have him gargle his throat every day with peroxide and water, or salt and water; if the child is too young to gargle, wash the mouth with a clean cloth dipped in a peroxide solution.

If the baby is already sick from diphtheria send for the doctor, and get a room ready to keep the child separate from the rest of the family. Remove all unnecessary furniture. Make a bucket of water milky looking with creolin, and go over the floor and furniture with a damp cloth wrung from the water. Washing-soda or soap can be used if creolin is not at hand. While waiting for the doctor inject warm water into the bowels to clean them out.

Scarlet Fever

Scarlet fever is also very serious and very contagious; sometimes the case develops so fast that the patient dies in a few days. Others have it very lightly. All should be kept isolated, and stay in bed while the rash is out. Later the skin dries and peels, and the child should stay alone until the doctor says it is no longer likely to transmit the disease.

Scarlet fever comes on suddenly; the child complains of sore throat; sometimes this symptom is very severe. Vomiting usually is severe at first. The rash appears in fine, bright red pimples about the third day, first on the front of the neck and around the armpits. The chin, nose, and mouth are free from rash. A physician should always be called, as dangerous complications may occur.

Measles

This disease is usually considered mild, but often there are complications that make it dangerous, and even fatal. The patient should stay in bed, in a partly darkened room with the eyes shielded from the light, until the rash is gone. The purplish-red rash appears first on the face, the spots being about the size of a split pea. The eyes and nose run, and there is a cough.

German Measles

The rash of German measles resembles that of measles, but is rose-coloured, and disappears a minute after pressure. The glands back of the ears and under the chin swell about the time the rash appears. It is the mildest of all these diseases, and needs no treatment. Keep the child indoors while the rash is out.

Whooping-Cough

starts with an ordinary-sounding cough; after the disease progresses, there are a number of short coughs followed by a prolonged whooping sound. In light cases there is little of the whooping, but it is just as contagious as in severe cases. If there is much vomiting, feed a few spoonfuls of milk between coughing spells. Keep the child out of doors as much as possible, bundling him well when the weather is bad.

Ashes in Pasteur Institute

According to Metchnikoff's wish, his body was cremated, and the ashes will be kept beside those of Pasteur in the Pasteur Institute, Paris, where the greater part of his life work was done.

Horse-Chestnuts as Human Food

A German investigator has succeeded by extraction with water and alcohol in removing the bitter principle of horse-chestnuts, and has produced from them a good grade of flour which has been satisfactorily used in bread making. This, however, was in Germany, where almost anything that would make bread would be considered satisfactory.

Race Susceptibility

Different races of people vary in their susceptibility to disease. Those which are more immune are usually so because of generations of contact with the disease. If the American Indian contracts tuberculosis, he almost surely succumbs. The Jew, on the other hand, living often amid most insanitary surroundings, often has tuberculosis but seldom dies of it. He is particularly susceptible to diabetes. The Negro race seems to suffer comparatively little from pellagra, but is susceptible to tuberculosis, syphilis, and fibroid and keloid tumors.

Remedy for Hoarseness

According to the *Medical Summary*, an excellent remedy for catarrhal affections of the air passages, hoarseness, and affections of the voice is a mixture of one part witch-hazel and two of pure glycerin, to be used as a swab, a gargle, or a spray, as often as the case may require.

Treatment of Burns

Herrick, in the *New York Medical Journal*, suggests in case of severe and extensive burns to immerse the patient in a bath containing two to four ounces of sodium bicarbonate. The temperature of the bath should be raised for subnormal temperature and shock, or lowered for fever. According to Herrick this treatment, is unequaled.

Diet in Hardening of the Arteries

According to the *British Medical Journal*, "first and foremost the diet must be lacto-vegetarian, that is to say, 'milk and articles made with milk, fruit, and a few eggs.'" If meat is eaten at all, it should be limited in quantity, very fresh, and well cooked, and only the white meat used. Not more than two eggs should be eaten a day. The food, then, will consist in the main of vegetable soups, farinaceous articles, certain cooked vegetables, including beans and green peas if well borne, stewed fruit, jam, and cream cheeses. The dishes must not be highly flavored, and not much butter, and still less salt, should be used, especially if there be a tendency to edema. Among the articles which should be forbidden are named various forms of game, fish, and preserved foods. "Spirits, tea, coffee, and tobacco are to be absolutely forbidden."

League for the Increase of the French Birth Rate

Owing to the peril that threatens France from the tendency to limit the birth rate, patriotic citizens are uniting in a league, the purpose of which will be to carry on a propaganda of education regarding the duty to contribute to the increase in population. Not having a constant tide of immigration, and decimated by the war, France will feel the need of taking steps to insure an increasing population.

Simple Rules of Health

Greely, as quoted in *Wisconsin Medical Journal*, suggests, for the prevention of diseases of metabolism (including obesity, diabetes, gout, and rheumatic disorders), the following: thorough mastication; reduction to a minimum of meat, starches, and sugar; increase in amount of fruits and vegetables eaten; the use of only one cereal at a meal; living more slowly; the cultivation of a hobby—a resource for happiness when the real work of life must be suspended.

Simplest Cure for Scurvy

Fruit juices, orange or prune, are the time-honoured remedy for infantile scurvy, but the white potato has proved just as efficacious and within the reach of the poorest family. The proportion generally used is one tablespoonful of mashed potato to one pint of water, and is added to the twenty-four hours' feeding of milk in place of the usual cereal diluent. The potato should be pared very thin, and an average-size potato when mashed covers the amount needed. The mashed potato can be added to the water in which it is boiled, and thus all the vitamines are conserved.—*Medical Record.*

War Diet in Germany

According to an editorial in the *New York Medical Journal*, Nov. 25, 1916, "it has been stated that the Germans, who were accustomed to a generous way of living, and who never stinted themselves in the matter of meat, on the restricted diet rendered necessary by the exigencies of war, are now in better health." Of course! Any one who is eating meat without stint will be better off if some superior power prevents his getting all he wants of it. After all, many of us are children when it comes to eating.

Too Much Meat

The lesson to be learned from a study of the restricted diet prevailing in the belligerent countries of Europe, is that, provided there is a sufficiency of food, and that the various articles of diet are well balanced, the need for meals consisting principally of meat and potatoes is greatly overestimated. In fact, it might be affirmed that in prosperous times many persons not only eat too much, but meat forms too great a proportion of their diet.—*New York Medical Journal, Edit., Nov.* 25, 1916.

The Cause of Goiter

Formerly it was supposed that the prevalence of goiter in the deep valleys of the Alps was due to some impurity in the soil, causing a change in the character of the drinking water. It would seem that this is true, but not in the sense formerly supposed. Dr. Francis Messerli, of Lausanne, Switzerland, as a result of a series of exhaustive researches, has shown that the goiter is due to an infection; that this infection is transmitted to the soil with the intestinal discharges of goiter patients, and thus is transmitted after the manner of typhoid fever, by means of the water. There is nothing in the nature of the soil of the Alps to cause goiter,—no mineral poison,—but a living organism, analagous to the organisms which cause typhoid fever, dysentery, and hook-worm disease, by contamination of the soil. The same is undoubtedly true of the large number of cases found in the hill stations of India.

Alcohol Handicaps Surgery

At the annual meeting of the American Association of Anesthetists, physicians participating in the discussion agreed that alcoholism increases the perils of anesthesia, the greatest peril being in the fact that anesthetists are not always aware that the subject is an alcoholic, and so are not on their guard.

Metric System in Pharmacopaeia

"The revised edition of the United States Pharmacopœia now in preparation uses the metric system exclusively. This means that prescriptions hereafter to conform to this standard must be made out in the metric system. The United States Bureau of Standards has accordingly issued a circular on weights and measures for the instruction of physicians and druggists." In the name of humanity let us have some kind of standard system of weights and measures in India and Burma for our "ata" and "dudh" and "subzi."

Certainly Cheaper than a Funeral

"Once more we invite the attention of our readers to the simple treatment of bubonic plague given by Commissioner Booth Tucker of the Salvation Army. It is so simple and easy in its application that it is well for all to be acquainted with it. It is officially declared to be most effective in the earliest stages of the dread disease. In a district where 2,000 coolies were working in a tea garden there were only 17 seizures and three deaths, owing to the use of iodine as a preventive. Every day two drops of iodine in cold water were given to each coolie. In actual cases one drop of iodine is to be given in a tablespoonful of water every two hours, and the buboes are to be painted with it twice daily, morning and evening. No other medicine should be given. These days when plague is increasing in virulence this simple remedy should be welcomed by all."—*Kaukab-i-Hind.*

Prohibition in Russia

After a trial of a year and a half, Russia is now prepared to make the prohibition of vodka perpetual. A law recently passed the Duma permanently prohibiting the sale of drink containing more than 1½ per cent of alcohol.

The Prayer of the Physician

GOD, I pray that I may have absolute intellectual honesty. Let others fumble, shuffle, and evade, but let me, the physician, cleave to the clean truth, assume no knowledge I have not, and claim no skill I do not possess.

Cleanse me from all credulities, all fatuous enthusiasm, all stubbornness, vanities, egotism, prejudices, and whatever else may clog the sound processes of my mind. These be dirt; make my personality as aseptic as my instruments.

Give me heart, but let my feelings be such as will come over me as an investment of power, to make my thoughts clear and cold as stars, and my hand skilful, strong as steel.

Deliver me from professionalism, so that I may be always human, and thus minister to sickly minds as well as to ailing bodies.

Give me constant realization of my responsibility to the people that believe in me. Into my hands they lay their lives Let me, of all men, be sober and walk in the fear of eternal justice. Let no culpable ignorance of mine, no neglect nor love of ease, spoil the worth of my high calling.

Make my discretion strong as religion, that the necessary secrets of souls confided in me may be as if told to the priest.

Give me the joy of healing. I know how far short I am of being a good man; but make me a good doctor.

Let me so discharge the duties of my office that I shall not be ashamed to look any man or woman in the face, and that when at death I lay down my task I shall go to what judgment awaits me strong in the consciousness that I have done something toward the sanity, health, and happiness of all people, something toward alleviating the incurable tragedy of life. Amen.—*Frank Crane, in Medical Standard.*

MOTHER AND CHILD

Safeguarding the Girls

TO MANY girls the conventionalities that rule in good society, when stated in plain terms, seem to be nothing but a series of meaningless "Must nots." The girls cannot see why bars should be put up against having "a good time" so long as they mean to do right. The secret of the matter is, of course, the girl's ignorance of the dangers beyond. In her innocent ignorance, she is very prone to think that she can take care of herself.

Nevertheless, every thoughtful mother knows that bars must be put up, and that girls must be kept from jumping over. If the mother thinks far enough she knows that the best way is to help her girls understand the reasons for setting limits, so that they will not want to jump over.

One of the surest safeguards, one that makes for instinctive self-protection, is training a girl to be dainty in her personal habits and refined in tastes, so that she is repelled by the coarse laugh, by unseemly conduct and talk, by familiarities offered by men or boys not of her own immediate family. Said a woman of note now past middle age, in speaking of herself and sister, "We were phenomenally ignorant of some things, but our girlhood days were as safe as if we had been under military escort. I can see now that in large measure this safety was due to the fact that we were so carefully trained that we could not be influenced by what touched upon the low and vulgar."

Another safeguard for girls lies in teaching them that no one need do what she knows is not "nice," because others do; that the fact of her knowledge of right is her law; that being fashionable cannot in any wise make right what is really, fundamentally wrong.

Mothers naturally shrink from telling their young daughters about the evil there is in the world. Yet it is to be remembered always that girls cannot be kept from knowing about evil unless they are put into solitary confinement. Much as a mother may shrink before the fact, there are always coming times when a child has to take advanced life lessons, and mother is a better teacher than any other. The best way is to face that situation with love's courage. If the truth of the matter is wisely and kindly put, knowng why bars are up can help the girl to obey the law under the guidance both of reason and of conscience. Moreover, she will in many circumstances understand what she ought to do, as she would not if she were taught only a list of "musts" and "must nots."

One good point to bring to the surface right at the beginning is that all of a girl's older friends, all good people, like to protect her from harm, even from seeming to do what is unwise. Hence, conventionalities have taken form, just as have table

manners, or business etiquette, and are upheld by all who know the ways of the world.

Right here, too, one may show that the chaperone custom is not meant to be a restraint, but that it leaves the girl free to have a good time and yet be free from dangers both physical and moral that can and do often arise wholly unexpectedly. It will be a rare case if a mother cannot tell her daughters a story or two out of her own memory store to show that innocent girls, well meaning girls, have gone out from home alone or with their young mates and have met serious trouble from which an older and wiser person could easily have defended them.

If we teach the girl that she must not allow young men to be too familiar, it is only fair to tell her that this is dangerous ground for the young, that it can mean far more than it seems to mean, that the way of sure safety is to avoid the habit entirely. Also, mother may tell her that impure young men noting her carelessness are almost sure to think they may take liberties. One may tell her daughters pretty plainly that evil minded persons often seek to mislead a girl and entice her into vile places from which it is not easy to escape, and from which it is impossible to come unharmed. She can be taught that if she never allows herself to speak to strange men, or even to women of whose standing she cannot be sure, she cannot be entrapped as too many girls are. She may know that if she keeps within bounds in regard to being out alone in the evening or with a girl companion only, she will not offer to the suspicious any reason for mistaking her character, hence will save herself some unpleasant and dangerous experiences.

A girl may be taught that while loud laughing and talking may be innocent enough when she is at home or among her own neighbours and friends, it is a very different thing when she is in a public place. Some one is sure to be within hearing in a mixed crowd who is ready to mistake the best of girls, may even set a whisper afloat, perhaps do something that attracts attention to her though she is as innocent as she can be. She may know, also, that after making such a break, it is difficult to set one's self entirely right before strangers.

With all the teaching of this kind the girl needs to be helped to feel in the bottom of her heart that mother is simply trying to show her how to take good care of her precious, well-meaning self, so that she may be as free as possible, yet be always safe in her goings and comings, in her business life and in her pleasure seeking. Help her to feel that her own innocence, an unblemished record, is a highly valuable possession.—*Jeannette N. Phillips, Ph. B.*

HEALTHFUL COOKERY

The Eggplant, Cucumber, and Okra

THE eggplant is of East Indian origin. It is botanically allied to the tomato, both belonging to the nightshade family. The fruit is shaped somewhat like an egg, from four to six or more inches long, having a smooth, shiny skin of a dark purple colour. Like the tomato, it is low in nutritive value.

FOOD VALUE IN CALORIES PER OUNCE

PROTEIN	FAT	CARBOHYDRATE	TOTAL
1.4	8.	5.9	8.1

Here are some new ways of preparing this vegetable which is so common in the Indian household.

Boiled Eggplant

Cut the eggplant into three-fourths-inch slices, peel the slices, then cut them into three-fourths-inch dice. Cook in boiling salted water, to which a little parsley and onion have been added if desired, till tender. Drain and pour over it a tomato sauce or cream sauce to which a little curded milk has been added.

Eggplant Lyonnaise

Cut the eggplant into dice, as in the preceding recipe. Chop an onion, and cook it in a little oil till it is lightly browned. Put the onion and the oil over the bottom of a baking pan. Put in the diced eggplant, and pour over it a little of the broth from vegeable soup. Bake till the eggplant is tender. When cooked, sprinkle over it some finely chopped parsley.

Scalloped Eggplant

Dice the eggplant as in the last recipe, putting the dice into cold salted water. Remove from this water and cook in salted water till tender. Drain off the water. Put the eggplant in a baking-pan in layers, sprinkling each layer with bread or biscuit crumbs. Pour over it sufficient rich milk to each pint of which one-half teaspoonful salt has been added, to nearly cover it, then bake three-fourths hour.

Scalloped Eggplant and Tomatoes

Dice the eggplant and boil as in the first recipe. Cook one chopped onion in oil. Spread it over the bottom of a baking-pan. Put in a layer of eggplant. Sprinkle this with curd if desired, salt, and cover with stewed or canned tomatoes. Fill the dish with alternate layers in this way. Bake from twenty to thirty minutes. The onion may be ommitted if desired.

Eggplant on Toast

Slice, peel, and dice the eggplant. Stew it in broth from vegetable soup. When tender stir into it the yolk of an egg beaten with the juice of one lemon. Add one tablespoonful cf chopped parsley. Serve on toast.

Baked Eggplant

Slice and peel the eggplant and put into salted water for one-half hour. Drain the slices and dip them in beaten egg to which one tablespoonful of water has been added. Roll in crumbs. Lay in an oiled pan. Pour a little salted cream over them carefully, so as not to wash the crumbs from the slices. Bake in a hot oven till tender. Serve with any preferred sauce.

The Cucumber

FOOD VALUE IN CALORIES PER OUNCE

PROTEIN	FAT	CARBOHYDRATE	TOTAL
.9	.5	3.6	5.0

The cucumber belongs to the melon family. It is "one of the oldest known table esculents." "It is mentioned as one of the things for which the Israelites longed while in the wilderness, and complained to Moses. Num. 11: 5. The emperor Tiberius had cucumbers on his table every day in the year."

The cucumber is very low in nutritive constituents. It is valued, however, for its flavour, which is enjoyed by nearly everybody, though some consider it unwholesome. But it seems to me that it has been treated as people are treated; that is, it has been blamed for the company in which it is found. I mean that much of the digestive disturbance for which the cucumber has been blamed is due not to the cucumber, but to the vinegar, salt, and pepper, with which it is eaten. A warm, tough, rubbery cucumber, of course, is neither easily masticated, palatable, nor wholesome. But a young, cold, crisp cucumber properly dressed will be found by the majority of people to be a wholesome article of diet.

They should be kept on ice when possible or where it is very cold. About an hour before they are to be served, they should be peeled, sliced, and put into salted ice-water or very cold water. They may be served on salad leaves with a lemon quarter, or with mayonnaise salad dressing.

They may be combined with various other vegetables, as radishes, tomatoes, celery, and others in making salads.

Okra

FOOD VALUE IN CALORIES PER OUNCE

PROTEIN	FAT	CARBOHYDRATE	TOTAL
1.8	.5	8.6	10.9

"Okra is a herbaceous, hairy, annual plant, a native of the Old World, and naturalized and cultivated in all tropical countries. . . . The fruit or pod is a tapering, ten-angled, loculicidal capsule four to ten inches in length, except in the dwarf varieties of the plant, and contains numerous oval, dark-coloured seeds, hairy at the base. . . . It is an ingredient in various dishes, e. g., the *gumbo* of the Southern United States, and the *calalou* of Jamaica, and on account of the large amount of mucilage it contains, it is extensively consumed, both fresh and in the form of powder, for the thickening of broths and soups."

Okra and Tomatoes

Peel and slice four tomatoes and stew them one-half hour. Wash the okra, cut off the stems and ends of the pods, and thinly slice enough to make one quart. Add the okra to the stewed tomatoes and stew for one-half hour longer. Season with salt and cream or butter.

Scalloped Okra and Tomatoes

Put alternate layers of sliced stewed okra and tomatoes into a baking-dish, sprinkling each layer with salt. Cover each layer with boiled rice, adding a few drops butter or cooking-oil to each layer. Strew bread crumbs over the top. Bake fifteen minuets.

TEMPERANCE

The Poster Campaign

BY A. B. OLSEN, M. D.

Far-seeing men in all the warring countries realize that the war will be decided by national efficiency; that national efficiency is nothing more than the personal efficiency of the men and women who make the nation; and that alcohol is a chief destroyer of personal efficiency. In France, in Russia, in Germany, those at the head have realized that the consumption of alcohol must be diminished in order to win the war. In England there has been drastic legislation to restrict drinking, especially in the neighbourhood of munitions plants. Meanwhile the temperance and total abstinence societies continue their campaign of education by poster. Dr. A. B. Olsen, of Caterham, England, has kindly copied a number of such posters for the benefit of our readers.

THE following statement by the late Lord Kitchener made, in our opinion, one of the most effective poster bills that we have seen:—

"Your duty to your country can only be achieved by hard work and strict sobriety."

Another poster reads:—

"The sober workman fights for Britain. The unsteady workman fights for Germany."

IMPAIRS EFFICIENCY

Philip Snowden, M. P., has summed up with great brevity, the effect of alcohol upon physical efficiency. He states:—

"Drink enfeebles the physical strength of the workers."

Sir Thomas Barlow, Bt., M. D., F. R. C. S., has made a still broader and terser statement. According to this eminent authority—

"Alcohol makes a man less effective."

Field Marshal Lord Methuen was a stanch abstainer, and no one recognized better than he the disastrous effect of alcohol upon the human system. He said:

"Drink ruins body and mind alike, besides being intensely degrading."

And then we have the striking statement of Dr. Forbes Winslow, M B., D. C. L:—

"Drink, crime, and lunacy go hand in hand."

DRINK AND SUBMARINES

It was the late Chancellor of the Exchequer who made the following statement about he damage of drink:—

"Drink is doing more damage than all the German submarines put together."

The Irish Temperance League of Belfast is responsible for the following statement:—

"Drink is a greater enemy than Germany and Austria."

Minister of Munitions Lloyd George, in his famous speech more than a year ago, said:—

"We are fighting Germany, Austria, and drink, and as far as I can see, the greatest of these three deadly foes is drink."

We may well summarize these statements by the following from M. Emile Vandervelde, M.P., the famous Belgian statesman:—

"It is our bounden duty to declare war against alcohol."

THE "BLACK SPOT"

The late Sir George White, M. P., made the following terrible, but none the less true, indictment against alcohol:—

"Drink is the greatest black spot on our civilization."

The Bishop of Lincoln has said:—

"Drink is a universal mischief-maker."

Dr. Legrain, a famous Paris physician, also has a grave indictment against alcohol. He has said:—

"Alcohol is the brain poison most to be feared."

And at this point we might add a statement from Mr. John Burns, late president of

the Local Government Board. He has said:—

"Seventy-five or eighty per cent of our pauperism is directly or indirectly due to drink."

The following poster appeal is quoted from the *Westminster Gazette*:—

"The human wreckage wrought through strong drink is sufficiently appaling to justify almost any attempt to reduce it."

BRINGS DISEASE

Some of the posters emphasize the pernicious effect of alcohol in rendering the body more liable to sickness and disease. The following is a statement from Mr. E. Brown, M. R. C. S., L. R. C. P.:—

"Alcohol renders a man more liable to the inroads of disease."

The Glasgow municipal poster emphasizes the danger of alcohol with regard to the great white plague in the following statement:—

"Alcohol increases the risk of consumption."

TREATING

We have again and again been counseled by the higher authorities not to treat our soldiers with alcoholic beverages. One poster reads:—

The duty of civilians is to abstain from treating soldiers and sailors with intoxicating drinks"

Mr. Arthur Henderson, M. P., member of cabinet and labour adviser to the government, makes the following exhortation:—

"Let the workers free themselves from the drink, and they will soon cure the social and economic evils of which they have been the victims."

The advice of Sir Arthur Conan Doyle, M. D., is:—

"Don't drink alcohol!

"You will be happier without it!

"Healthier without it!

"Richer without it!"

And then we have the excellent advice of Prof. G. Sims Woodhead, M. A., M. D., LL. D., F. R. S., of Cambridge University:—

"The best advice to those men who think of taking alcohol is, Don't."

Finally we quote from the most lengthy poster of all, statements which summarize a good many, but not by any means all, of the evils of alcohol:—

"There is nothing to be said in favour of alcohol.

"It is a drug; it is not a food; it is not even a stimulant.

"It impairs the action of the heart, the liver, the stomach, and the kidneys.

"It congests the blood vessels.

"It lowers the temperature.

"It aggravates the effect of shock.

"It spoils brain control.

"It retards the rapidity of mental action.

"It plays havoc with the muscles and with the nerve centers. In the emotions it destroys ideals.

"It produces callousness to moral obligations, and—

"It multiplies lunacy and crime."

Lastly:—

"It gives an entirely delusive sensation of increased efficiency. These statements are not arguable. They cannot be challenged. Its results on the conduct of the war are notorious."—*Arnold Bennett.*

The Mosquito and Disease

(Concluded from page 52)

kerosene oil at intervals of less than ten days of water holes which cannot be drained.

Each householder is largely responsible for his own mosquitoes. Their breeding-places should be destroyed as far as practicable or possible, and it should be borne in mind that anything that will hold water in an undisturbed state for a period of eight days or longer may serve as a breeding-place for mosquitoes. Thus broken bottles, old tins, hollow stumps, and open receptacles of all sorts containing water, or capable of catching water during a shower, may be utilised by the ubiquitous mosquito as a nursery for her young.

The Prevention of Mosquito-Borne Diseases

The prevention of mosquito borne diseases lies in the destruction of this insect pest. Destroy the malaria and yellow-fever mosquitoes, and these diseases will cease to exist. Destroy the domestic mosquito and dengue fever will cease to disturb trade and render miserable millions of dwellers in warm climates. Many instances might be cited to show how quickly and simultaneously these diseases disappear with the vanishing mosquito. Thus by the destruction of the mosquito yellow fever a which for, century was the scourge of New Orleans and other American cities, has been entirely banished. In a similar way the Panama Canal Zone, the Roman Campagna, and other places, have been freed of malarial fever. With the intelligent cooperation of the people equally good results may be achieved in other places. An interesting example of the ease with which a district may be freed of disease due to mosquitoes is furnished by the Medical Officer of Health at Port Said, Egypt. He writes:—

"Egypt has always been subject to periodical epidemics of dengue or dandy fever. In some of the towns the disease seems to be endemic, but sudden outbursts occur which spread all over the country. The disease presents the same characteristics as in other parts of the world, and rarely gives rise to much difficulty in diagnosis. During epidemics the classical symptoms are very evident, including the pains, the apyretic period, and the rashes, which are sufficient to differentiate it from influenza. When pandemics of the disease occur in Egypt, every town is invariably attacked, and few people escape. The death-rate, however, is very small, though the debility and cardiac depression following an attack occasionally account for the sudden deaths of a few individuals who before were healthy. Since the discovery of the means of the transmission of malarial fever, it has been suggested by various writers that dengue fever is also conveyed from the sick to the healthy by the mosquito. Apparently Graham, of Beyrout, was the first to bring forward strong evidence of this, and he named *Culex fatigans* as the culprit. Since that date, further and conclusive evidence has been brought forward to support this statement.

"Dengue fever used to be as prevalent in Port Said as in other parts of Egypt, up to the year 1905. An epidemic of the disease occurred in this town during the summer of 1904, and in the spring of 1905. This epidemic spread through all the towns of Egypt, and was most severe. The hospitals were full of cases, and other patients actually contracted the disease during their stay in the institutions. In Port Said almost everyone suffered from an attack, and the place was regarded as fever-stricken and unhealthful. The town was full of mosquitoes, including two species of *Anopheles*, *Culex fatigans* and *Stegomyia*, in abundance. These mosquitoes were breeding in cesspools under the houses, in basement-cellars flooded with sewage, garden-fountains, barrels containing water, etc., and were a veritable pest day and night, summer and winter.

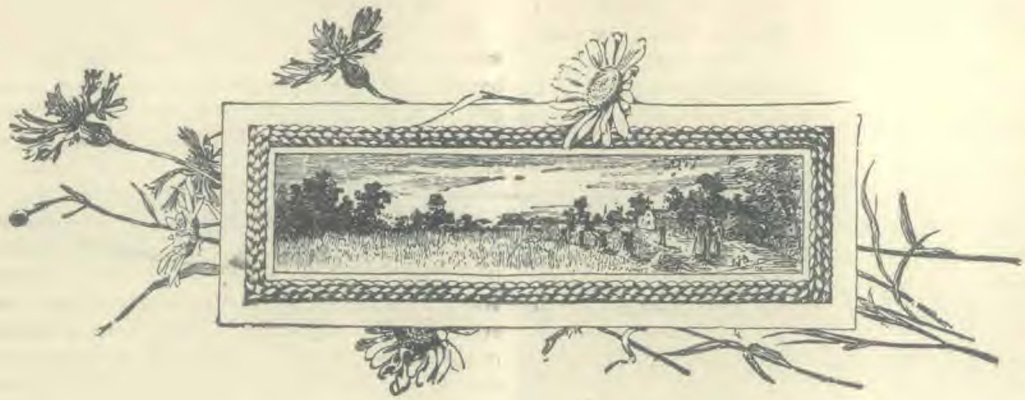
"In May, 1906, a campaign against mosquitoes was instituted in the town as a general sanitary measure, with funds subscribed by the Egyptian Government and the Suez Canal Company; the support of Prince d'Arenberg, president of the Canal Company, and Sir Horace Pinching, late director-general of the Egyptian Public Health Department, having been obtained, two mosquito brigades were formed—one for the European, and one for the native quarters of the town; and the oiling of all stagnant water was practised once every week. Cesspools were rebuilt and cellars filled up, with the result that within three months the mosquitoes were reduced to a negligible quantity, and mosquito nets largely dispensed with. Now, after two years, mosquitoes have become

so rare in the town that they can be ignored; and malaria, though never very prevalent, has completely disappeared. But dengue fever has disappeared also, no case having been treated in Port Said since July, 1906. During the early part of that year, before the mosquito extermination work began, dengue fever appeard as usual. Thirteen hundred cases were treated in the hospital alone during April and May; and then as the mosquitoes disappeared the disease stopped, and has not recurred since. In September, 1906, a severe epidemic raged throughout Egypt, beginning at Assuan, and running rife in Cairo and Alexandria. It appeared in all the other towns, but Port Said and Ismailia remained free from it, no case occurring in either place. During the autumn of 1907, it again passed through Cairo and other parts of Egypt, but again Ismailia and Port Said escaped. Formerly the wards of the hospital in this town were full of cases of 'fever' during the summer months, but now the beds are used for other cases, which no longer contract fever, although the mosquito nets have been removed. The extinction of the mosquito is greatly simplified in Egyptian towns owing to the dry summers, and the result can easily be watched. Port Said has a population of fifty-six thousand, and Ismailia ten thousand. The cost of the mosquito work in the former town is 1s. 6d. per head of population per year, while in the latter it is nearly 1s. 6d. per head, owing to extensive irrigation works which have to be regularly dealt with.

8 "I would seem, then, that the extermination of the domestic mosquito means the prevention of dengue fever, which, although not a very fatal disease, is one which causes endless misery in warm climates, besides being a great hindrance to trade."

Individual protection consists in keeping away from the mosquito. One may live in a malarious swamp without contracting malaria, provided the nights from sunset to daylight are spent inside a tightly screened house. This was done in the Roman Campagna by Doctors Sambon and Low, of the London School of Tropical Medicine. A better method consists in living, or spending the nights, above the mosquito level.

In the case of yellow fever, in order to transmit the disease, the mosquito must bite a yellow-fever patient during the first four days of the disease. Twelve days must elapse from the time of biting before the mosquito can transmit the disease to another person. The prevention of yellow fever, therefore, consists in the careful screening of the patient during the first four days of the disease, and the destruction of all mosquitoes that have been in the room with the patient during this period.



CONDUCTED BY DR. H. C. MENKEL, OF THE "SIMLA HYDRO," SIMLA

Grey Hair and Hair Dyes.—I find a number of patent medicines advertised for making grey hairs black. Is it safe to use them? Will any permanent injury to the scalp or hair result from the continued use of such medicines? Can you advise any method or preparation which will prevent or at least retard the process by which black hair becomes grey?—U.G.P.

No hair dye is safe to use. The majority of them contain sulphur which eventually bleaches the hair out a dirty yellow. The chemicals they contain are injurious to the scalp. The only method by which the hair can be kept in a healthful condition is to keep it clean and shampoo it occasionally with pure soap. If the hair is naturally dry, a little vaseline should be rubbed into the scalp after the shampoo. A solution of salt and water rubbed into the roots of the hair with the finger-tips each night before retiring is also beneficial in some cases. A celebrated physician once said that the best thing to do when the hair turns grey is to admire it. The good Book says, "The hoary head is a crown of glory, if it be found in the way of righteousness."

Warts.—What causes warts? and how may they be removed?—A.C.

Warts are little excrescences or overgrowths of the epithelial cells, which frequently come on young persons, and after a time disappear of themselves, though they may sometimes persist. There are many superstitions regarding the cause of warts, and the remedies to be used for their removal. Warts may often be removed by the use of some caustic application; for instance, a corrosive collodion may be prepared by dissolving one part mercuric chloride in twenty parts of collodion. The wart should be painted with this twice a day, care being taken not to touch the healthy skin. Sometimes warts may be removed by the simple use of nitric acid or strong acetic acid, first protecting the skin around by rubbing on a little vaseline so as to prevent the acid from spreading. Then by means of a glass rod or a glass stopper, apply carefully a small drop of the acid to the wart, and repeat occasionally.

Varicose Veins.—What is the cause of and best treatment for varicose veins?—B.R.

The cause is some impairment to the strength of the vessel walls by long standing. For relief, stand as little as possible. Give the vessels support by wearing an elastic stocking. Skilful bandaging from the feet up with a flannel bandage is good, but the elastic stocking gives less trouble. In very bad cases surgery must be resorted to.

Bad Teeth and Bad Health.—Do you not believe that bad or defective teeth generally are associated with a weak constitution, as the same mineral elements necessary for the making of good teeth are also necessary for the bones? Do you believe that those who have perfect teeth generally have robust health?—F. A.

Bad teeth are certainly associated with a weak constitutional condition, and with fragile bones. Bad teeth cause poor nutrition, and poor nutrition in turn causes bad teeth. They work in a circle. People with perfect teeth are more apt to be in good health.

It is gratifying to note that steps are being taken by Government to put an end to the cruel practice of skinning goats alive which prevails in some sections of India. It is bad enough to kill them for any purpose, or any other harmless animal for that matter, but such cruelty is beyond conception.

Some time ago we were pleased to receive a clipping from *The Message* of Bombay, containing a review of the editorial in the December HERALD OF HEALTH on Railway Sanitation, by Mr. Keshavlal L. Oza. Let us hear from others.

The Editor will be pleased to receive items of general interest regarding health topics, sanitation, diet, etc. etc., from any of our readers. We desire this magazine to be up-to-date in every respect regarding progress healthwise in the Indian Empire. It cannot be made exclusively Indian or English, but our message of health is for all who can read the English language, and by them we trust the principles of health and happiness will be freely and widely desseminated to all who cannot read our magazine for themselves.

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A Perfectly Simple (?) Explanation

This paragraph from a manual of infantile paralysis is quoted by *American Medicine* (New York) to show that the authors' assertion that their work "is as free from technical terms as possible" must not be taken literally:

"From the foregoing it may be deduced that the etiologic factor of acute poliomyelitis is a pleomorphic, motile, anerobic, pathogenic, obligative hemoprotozoon; with a developmental cycle consisting of a resisting, motile, dividing, and resistant spore stage; which elaborates a virus having a destructive affinity for myelin and susceptible to great augmentation and modification; capable of pure culture in an anerobic preparation of a solid or fluid, sterile, living body tissue; reacting specifically to the azure carbonate dye; bearing a strong clinical and histologic analogy to rabies; pathogenic to man and domestic to animals; endemic in the tropics; epidemic in the tropics and in the temperate zone during the summer season; pandemic under conditions of prolonged heat and drought and other unknown factors most favourable for its wide diffusion."

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