PREVENTION NUMBER.

Life & Health

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WASHINGTON, D. C.

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ANNEX

LIFE AND HEALTH

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CONTENTS OF THIS ISSUE

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THE WHITE HOUSE
THE OLD SMITHSONIAN INSTITUTE

IN AND AROUND BEAUTIFUL WASHINGTON

EDITORIAL

CAUSE AND EFFECT

THE development of science is based on the increasing knowledge of the relation of cause and effect. Every substance, power, or force has certain definite characteristics. Radium, for instance, is noteworthy, owing to the fact that it emits rays which are capable of penetrating deeply into the tissues. Other objects or substances have other properties. Iron, for instance, will sink when placed in water. Such effects are evidence of the presence of certain forces in nature, and call to mind the fact that behind each phenomenon there is a definite cause.

Men of science and members of the medical profession are acquainted with the effect of many of the disease-producing substances, and see in the deterioration of the race an evidence of the operation of many causes, some known and some unknown. Without some knowledge of the cause of an illness, it is impossible to work intelligently for the cure of the sufferer. Before any progress can be made, the cause must be discovered. And when the cause is discovered, the first essential is to remove it. When it was determined that a certain microscopic blood parasite is the cause of malaria, and that a certain type of mosquito is the medium by which this parasite is transmitted to human beings, it was possible to formulate a method for the successful eradication of malaria; namely, the destruction of the mosquito which acts as carrier of the disease.

As a result of the investigations which have led to the discovery of their respective causes, such depopulating epidemic diseases as typhoid, yellow fever, smallpox, bubonic plague, and cholera have been brought practically under control. The opinion is growing stronger among medical men that disease is almost invariably the result of conditions that to a very large extent are entirely preventable, and that health is the result of living a natural life in a wholesome environment. Owing to the fact that epidemics are brought under control before they become widely distributed, thou-

sands of lives such as formerly would have succumbed to widespread epidemics, are now prolonged year after year.

In the treatment of the sick the most satisfactory results follow when the cause of the disease is readily recognized and can be easily removed. Even better results would be obtained could we remove conditions that predispose to disease, as well as those that cause infection. Owing to the fact that those who are not endowed by nature with robust constitutions are the most likely to give heed to the known causes of disease, and by avoiding them, to be preserved to advanced age, the saying, " To live long, one should early get something the matter with him," has become almost proverbial among physicians. Those who recognize their limitations, who have made careful estimate of their power to resist infection, and of their susceptibilities, and who have such respect for nature's laws that they fear to live contrary to them, reap the greatest physical blessings of this life.

Authorities assert that as high as nine tenths of the disease prevalent in the human race is due to dietary error, or has its origin in the gastrointestinal tract. This would mean that nine tenths of the diseases of the race might be eliminated by removing the causes of diseases which are brought about by dietary errors.

The value to the community of boards of health depends on the extent of the knowledge these boards possess regarding the cause of disease. Their power to lower the mortality rates depends on the degree of thoroughness characterizing their campaign of educating the community regarding the means of prevention. The fact that by efficient public health administration, certain previously unhealthful sections of the country have been changed into most healthful sections, with low death rates, serves as an illustration of the importance of preventive measures both to the individual and to the community.

Harry W. Miller

SYMPOSIUM -- *Prevention*

If the rules for the prevention of accident, disease, poverty, and mental disease, and of drug and other evil habits, were intelligently, faithfully, and universally carried out, there would be little need for less efficient and less satisfactory curative methods. If, for instance, all buildings were of absolute fireproof construction, and all precautions were taken to avoid fires, we might do away with our terrific fire losses, and avoid the expense of fire departments and of fire insurance,— a total vast enough to finance a war.

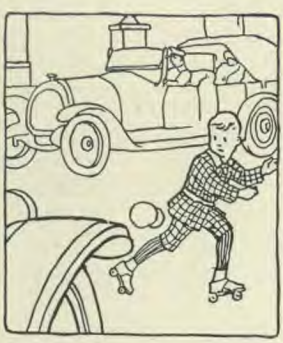
The present symposium can deal with only a few of the more important lines in which prevention is important. The fact is, a magazine devoted to the one topic — PREVENTION — would find ample material to fill its pages for months.

Accident Prevention

L. A. Hansen

THAT accidents are largely preventable has been demonstrated in a striking manner by the " Safety First " campaign, in which many industrial bodies and various associations have joined. One large manufacturing concern gives definite and carefully kept statistics showing a saving of sixty-four per cent in accidents in the ten years since it adopted its methods of accident prevention. A conservative estimate, based on reliable reports from many sources, places the preventable industrial accidents at fifty per cent of the total.

Systematic efforts in accident prevention by organized movements among associated manufacturers and by legislation standards date back only about ten or twelve years. The results already gained show the inestimable value of prevention, and point to the importance of educating the average individual to be careful. About half of the saving in industrial accidents is secured by the use of safeguard devices, while the other half is effected by education in carefulness.



PREVENTION IS BETTER THAN CURE

When it comes to the question of accidents, prevention is everything. The familiar value standard of an ounce of prevention being worth a pound of cure does not apply. The ratio is all out of proportion. A bit of prevention goes a long way, and few indeed are the accidents that can be cured.

Forethought is cheaper by far than afterthought. Having to endure what can't be cured makes many people realize too late the value of caution. Witnesses to this are those who have lost a finger or two, an eye, a hand, an arm, a foot, or a leg.

The payment of indemnity may help a little, but it does not restore the lost member. Accident insurance is good as far as it goes; no accident is better, and goes farther.

Could the young be trained to be cautious — neither cowardly nor reckless, but level headed, and cool — the saving in life and property would be astounding.

ACCIDENTS ARE COSTLY

Accidents are terribly costly. In dollars they run into hundreds of millions every year in the destruction of property. The cost in loss of wages, in loss of product, in disorganization of working forces, in the maintenance of hospitals and other charitable institutions, all add materially to the country's bill of expense in accidents.

And there are losses that are not covered by money values. The list of annual fatalities grows long. The suffering to individuals caused by injuries is more than can be told. The distress and disaster to families and individuals increase the awful toll. Persons dependent on the killed or injured feel the high cost of accidents. A large per cent of children in charitable institutions are there because of them. An army of maimed and crippled tell further the dreadful story.

PERSONAL CAUTION THE GREATEST SAFEGUARD

The activity shown on the part of industrial bodies and other organizations to safeguard the individual worker and the general public, is a splendid thing. But what others are doing may not count so much for you as what you can do for yourself. Don't depend on others, look to your own safety.

Many accidents occur because of the other man's carelessness. You not only have to watch what you are doing, but be on the lookout for what he may do. It is everybody's business to be careful, but it is your particular business to see that you are careful.

The habit of carefulness, even when there is no apparent danger, is a good one to cultivate. In times of emergency we are more likely to do those things which have become a habit.

TAKE TIME TO BE CAREFUL

We more often hear, "I didn't think," or, "I forgot," than, "I didn't know." We do not need to know more so much as we need to think more. Take time to think. Never be in too big a hurry to be careful. Better spend a little time in thought than a long time in a hospital.

Careless habits are not overcome at once. Cultivate the "safety first" habit. Safety at first means safety at last — and all the time. Better be a long time safe than a short time in getting injured.

Don't take a chance where there is a question of safety. The one time in a hundred getting hurt is one time too many. Better be careful a thousand times than crippled once. The man who takes chances, usually takes one too many. "Be sure you are right, then go ahead," is a motto whose practice makes for safety.

STOP! LOOK! LISTEN!

Has it occurred to you that it is only in rare instances that people are injured by an act of the railroad company or its employees? Many accidents happen because the signal of the crossing man is disregarded.

Going around or under the crossing gate means danger.

Boarding or leaving a train on the opposite side from the station, especially a suburban train, has a big element of risk.

Standing too close to a moving train exposes one to danger.

Riding on the open platform of coaches is unsafe.

Putting arms or head out of the car window is positively dangerous.

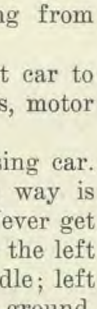
Placing hand bags or parcels in aisles for others to stumble over should not be

done. Placing them insecurely in the rack overhead so they will fall on you, should be guarded against.

LOOK BOTH WAYS

Cross streets only at regular crossing places. At street intersections do not "cut across" diagonally like this: ☞

By doing so the danger element is doubled. Looking both ways, cross at right angles like this: ☞



Always in passing behind a street car, or large vehicle, look to see if another car, automobile, or wagon is coming from the opposite direction.

Never fail on leaving a street car to look out for passing automobiles, motor cycles, wagons, etc.

Never run in front of a passing car.

Getting off a car the wrong way is a frequent cause of accident. Never get off a car facing the rear. With the left hand, take hold of the grip handle; left foot to the step, right foot to the ground, facing forward.

ALL FIRES ARE SMALL AT FIRST

The crucial point of every fire is at its beginning. A cool head and a little water may prevent a big blaze. A pail of water should be kept close by where there seems special risk. Hand extinguishers in the home are highly desirable.

Have a receptacle for burnt matches. Use safety matches, which will light only on the box. Carelessness with the disposition of lighted matches starts many a destructive fire.

Accumulated rubbish in cellar or garret is conducive to fire. Inflammable material near the stove or furnace should not be allowed. Waste paper waiting to be burned should be kept elsewhere. Oily rags or waste develops heat; spontaneous combustion is to be feared after twenty-four hours.

Put hot ashes and clinkers in a closed metal receptacle, or far enough away from any building to be wholly safe.

Watch burning brush or trash until all danger of fire is over.

Do not use an open-flame light in a clothes closet. An electric flash light is the best light to use in dark places.

If you wear outing flannel garments, be careful when striking a match, turning on or off the gas, or working about the stove, as the nap catches fire easily.

Inspect chimneys and fireplaces before the season for building fires. Disused fireplaces should not be closed with inflammable material. Falling soot may set fire to the material.

In building a house, place no weight on the chimney. The settling of the house may make openings in the chimney, and a defective flue is the cause of many a fire.

Use asbestos where necessary to protect the furnace or stove. Pay special attention to woodwork near a stove.

Clothes should not be hung near a fire to dry.

Electric flatirons left standing without shutting off the current are causing many fires.

Inflammable Christmas-tree decorations, such as cotton for snow, often turn the occasion into one of sorrow. The lighted candles play their part. Sometimes Santa catches afire by the same means. Use electric bulbs for lighting trees.

Gaslight brackets should not be of the swinging kind. They should not be placed near the window where lace curtains may be blown against them; nor where a door will come in contact with the burning gas. Lights should be at least thirty inches below the ceiling.

Where flexible rubber tubing is used with a gas jet, place the valve near the gas pipe, and not at the burner.

Small gas stoves should not be used on a wooden surface.

Do not use gasoline, naphtha, or benzine to clean clothes near an open flame.

Gas from gasoline is many times more dangerous than gunpowder. The vapor from one pint of gasoline will make two hundred cubic feet of air explosive.

Properly mark the gasoline can, to distinguish it from the kerosene can, so as not to mix and use the wrong thing in lamps.

Fill lamps in the daytime, and never when lighted.

Lamps with small bases should never be used, especially where there are children in the house; for they are upset too easily.

Keep kerosene lamps clean; then there is little danger of their exploding. The little flat tube alongside the wick tube is to allow the escape of vapors from the oil. These vapors are consumed in the blaze of the burning wick. If the tube is not kept clear and clean, the vapors will be confined and may cause explosion.

Dirty metal retains heat, and adds to the danger of explosion.

Use only high-test oils in lamps.

Lamp shades made of paper or cloth should never be used.

Lanterns with removable bottoms for filling, should be carefully watched, lest the bottoms drop out.

Familiarize yourself with the location of your nearest fire alarm box and how to reach it.

Post the telephone number of your fire department at the head of the list or in a convenient place.

When staying in a building where there is a fire escape, learn its location and see that the way thereto is not obstructed.

ALWAYS GIVE SAFETY FIRST CONSIDERATION

Don't go about machinery with loose or flowing sleeves, necktie, or other wearing apparel.

Wear goggles when exposed to flying chips or particles.

Keep out from under heavy moving objects.

Bend nails down when throwing boards aside. Turn over boards which you find with nails pointing up.

Projecting nails in walls up to the height of six feet, especially on a level with the eyes, should not be allowed where people pass.

Pile lumber or wood in such a way that it will not readily fall.

In piling bricks see that they are properly tied at the corners, and that the pile tapers in if it is more than four feet high.

Place all heavy materials low down and in such a position that they will not be liable to fall.

In going downstairs keep the hands out of the pockets. If carrying something, watch against stumbling.

Never leave a box or bucket on a stairway for some one to fall over.

Let swinging wires alone; they may be "live" wires, or be in contact with electricity.

A surprisingly large number of people are hurt by falling from ladders. See that the ladder is securely placed, top and bottom, and not slanting too much. Ground-gripping "shoes" for ladders may be had. Look to the rungs, that they are all sound.

If working with tools, a hammer, wrench, screw driver, etc., don't leave them on the top of a stepladder, to fall on you or somebody else when you move the ladder.

Remember, when on an elevation, as a ladder or platform, that you may fall.

(*Concluded on page 175*)

COLDS

A. B. OLSEN, M. D., D. P. H.
Superintendent Caterham, England, Sanitarium

SOUND teeth, whether there are few or many left, and a clean mouth are essentials to good health and among the best preventives against colds, influenza, and other respiratory disorders. Fashion demands that the face should be washed at least once a day, a procedure which is valuable alike for cosmetic and hygienic reasons. The laws of hygiene demand even more emphatically that the mouth and the various organs of the mouth, including the teeth and tongue, should also be thoroughly cleansed at least once a day. Particles of food that remain behind among the interstices and crevices of the teeth ought to be removed after each meal, a necessary procedure for keeping the teeth in a healthy state. Use a medium soft toothbrush, and also dental floss to remove food particles from between the teeth.

One of the best means for the prevention of colds, coughs, and influenza, and also such dangerous diseases as pleurisy, bronchitis, and pneumonia, which are liable to follow a neglected cold or influenza, is to keep the mouth and teeth scrupulously clean.

But most people are more keen about cleansing the outside of the platter (the face) than the inside (the mouth), which in the case of the vast majority of people is reeking with microbes, more or less dangerous — enemies simply waiting an opportunity to pounce upon the victim at the slightest provocation, which is often a chill. Anything which materially reduces the vitality or the resistive forces of the body, gives these germs their chance, and usually they are not slow in multiplying and causing mischief.

1. The dress is an important matter in the prevention of colds, and most people find it necessary to dress according to the weather. While coddling and overclothing oneself is unwise, still it is necessary to dress sufficiently warm to allow an abundance of fresh air in the working- or sleeping-rooms, which of course means an open window. Most people appear to thrive best with a soft woolen garment next to the skin, but there are those who find cotton or linen mesh equally or even more satisfactory. This is a matter for personal consideration. It is wise to wear a suitable topcoat on going out of doors, although usually, when taking a vigorous walk an extra coat is not necessary.

2. But do not overlook the footgear. As a rule, men's footwear is far more satisfactory than that supplied for women. Broad, low heels and thick soles are in order, and half-inch soles are desirable in wet weather. Thick soles, although they do add to the weight of the boots and shoes, nevertheless make for comfort in walking. It is a common observation that women who wear thin soles are poor walkers. There is no objection to thin soles indoors, but the walking boots and shoes should always be provided with strong, thick soles, and if possible with soles that are impervious to moisture. A layer of cork immediately under the insole will make the soles impervious to wet, and will add very little to the weight of the boots.

3. Whenever the feet get cold or damp it is wise to change both the hose and the shoes. It is a good practice to wear rubbers when going out in the rain or when the ground is wet; but never retain them indoors. This is far preferable to toasting the feet before the fire. Woolen

bedroom slippers are useful indoors and especially so after one has been out and got the feet wet. A good way to dry boots and shoes is to stuff them for a while with newspapers that have been warmed in the oven.

4. Bedroom hygiene is of the greatest importance in the maintenance of health and the prevention of colds and coughs. While there is no objection to a fire during the day, which helps to dry the room, it is not necessary, and a cold bedroom makes for sound, refreshing sleep. The windows should always be open, both day and night, but plenty of warm woolen blankets should be supplied and a hot bottle placed in the bed for two or three hours before retiring, to insure the absence of any dampness. If the feet are cold, it is a good protection to wear bed socks or to warm the feet by the use of a hot-water bottle for a few minutes, after which remove the bottle from the bed.

The circulation of the blood to the lower extremities is most satisfactory when the limbs are straight, so do not curl up in bed if you want to get warm and sleep in comfort. See that the shoulders are covered. If they are liable to exposure during the night it is desirable to wear a warm woolen pyjama coat or even an extra coat. This is often necessary for those who sleep out of doors in winter. Sleeping out of doors on the balcony or veranda is ideal and brings the best and most refreshing rest. All the new houses that are built should be provided with sleeping verandas communicating with the bedrooms, where one can dress and undress. The bedding should be aired and warmed daily to prevent dampness, and a mackintosh sheet should be supplied at the foot of the bed to be drawn up when there is driving rain. Outdoor sleeping is one of the finest and most effective of general tonics, as well as a valuable protection against colds and influenza.

5. One of the best means of preventing colds, coughs, and influenza, and also such dangerous diseases as pleurisy, bronchitis, and pneumonia, which are liable to follow a neglected cold or influenza, is to keep the mouth and teeth scrupulously clean, and also to adopt some regular procedure, such as the following, for checking incipient colds before they have developed. A slight irritation of the throat or congestion of the nostrils, a feeling of chilliness, sneezing, etc., are warning signals that a cold is about to develop, and the proper time to treat it is at the outset.

6. As soon as there is the slightest symptom of a cold, gargle the mouth with a dilute warm solution of carbolic acid, and repeat the gargling every two hours. A stock solution is made by adding one teaspoonful of the antiseptic to twelve ounces of water (three fourths of a pint). It is well to know that a tablespoonful of water is equivalent to half an ounce. To prepare the gargle add an equal quantity of hot water. The gargle is an antiseptic and therefore a poison, and should not be swallowed.

7. If the teeth have not already been cleaned, cleanse them thoroughly with a medium soft brush, using a good tooth paste, and see that they are cleansed regularly after each meal. To keep the toothbrush clean, soak it in the gargle solution a few minutes once or twice a week, then rinse in clean water and dry.

8. If the tongue is dirty, scrape it with a tongue scraper or some suitable instrument to remove the fur, which consists chiefly of microbes. A whalebone tongue scraper is a very useful instrument for the toilet table. It is also sometimes desirable to brush the coated surface of the tongue with tooth paste and then rinse with warm water or with the warm gargle solution. *Remember that a furred tongue is dirty as well as unhealthy.*

9. To cleanse the nostrils, which also require attention, snuff up warm salt solution (a teaspoonful of common table salt to a pint of warm water); or better still, use the gargle solution after adding three parts of warm water to it. After washing out both nostrils, snuff up medicinal paraffin, so as to line the mucous membrane with the oil, which acts as a protective and also has a soothing effect. This treatment of the nostrils should be repeated morning and evening until the cold has been aborted. To snuff up fluid into the nose, close one nostril by pressing the first finger of the corresponding hand against it and dip the other nostril into the tablespoon or small basin or cup containing the fluid and then draw in the fluid by vigorous inspirations until it appears in the mouth. Repeat two or three times. The gargle must not be swallowed, but there is no objection to swallowing the paraffin.

10. Beware of those suffering from colds or influenza, for both are contagious, or "catching." Sneezing is a prolific way of spreading colds, for it throws numberless particles of germ-laden saliva and phlegm into the air to contaminate others. Coughing is an almost equally dangerous operation in the presence of well persons. Always sneeze and cough into a handkerchief, and thus prevent the cold from spreading to others. Both colds and influenza, as well as measles and similar catarrhal affections, are most contagious in the early, or sneezing, stage.

11. As regards diet the person threatened with a cold should be very abstemious and may even skip a meal or two or take fruit meals in place of the ordinary fare. The old saying, "Stuff a cold and starve a fever," is sheer nonsense, for all colds are accompanied by a rise of temperature, if not actual fever, and eating freely only serves to aggravate the symptoms and prolong the illness. Fruit, either fresh or stewed, is the natural medicine of the body and should be partaken of freely at this time, while meat and other flesh foods should be strictly avoided. But it is not wise for a weak or frail person to starve completely, although a strong, robust, well-nourished person can oftentimes do so for a day or two to advantage. Drink freshly made lemonade or orangeade freely, or plain hot water, taking from two to four pints or more during the day, but drop the tea and coffee, which are injurious stimulants and more likely to do harm than good.

12. One of the first steps to take in aborting a cold is to cleanse the bowels. It is also well to take a tepid (80° to 90° F.) soap enema, using about three pints of water. To prepare the enema, dissolve in the three pints of water a generous tablespoonful of thin shavings of McClinton's or other pure soap.

13. If a cold still threatens, soak the feet in very hot water for ten to fifteen minutes and at the same time sip a pint of hot water. This can be done by merely removing the shoes and stockings, or by disrobing entirely in a warm room and then wrapping up well in woolen blankets so as to prevent a further chill. A cold compress should be applied to the head, especially if there is any fever, and it should be frequently renewed during the hot bath. This treatment will help to equalize the circulation, and there will be perspiration. The treatment is followed by a tepid sponge or, if available, a needle spray, beginning hot and ending with cold water, and after the body is thoroughly dried it is well to administer an oil rub. To give an oil rub, olive or nut oil, refined paraffin, vaseline, or any similar oil, or even fresh butter, may be employed. Use but very little, so as not to leave the skin greasy, and rub it well

(Concluded on page 175)

Mosquitoes and Malaria

G. H. Heald, M. D.

THE name "malaria," borrowed from the Italian in 1827 and meaning "bad air," records one stage of belief concerning the etiology, or causation, of malarial fever. That the disease usually occurs in low-lying regions where the air is marshy, is undoubtedly true; but a mere association does not always point to the true cause. Later it was generally accepted that not bad air but bad water caused malaria; that malaria was a germ, or bacterial, disease, caused by drinking infected water. For some years after the discovery of the true malarial organism, this view was still held by many scientists. "Boil your water" was a slogan for malarial regions, which now we know is useless, so far as malaria is concerned.

It was in 1880 that Laveran, with a microscope, first observed in human blood the malarial parasite, which he found to be a protozoan, a member of the animal kingdom, and not a "germ." His observations were confirmed by other scientists, principally Italian; but many scientists hesitated for a time to accept the new view. Subsequent work demonstrated the three kinds of malarial organism,— the tertian, the quartan, and the estivo-autumnal type,— each corresponding to a different type of malarial fever; but thus far there was no clue as to how the human body became infected with the parasites.

Figs. 1 and 2. Malarial mosquito.
Fig. 3. Culex, a harmless mosquito.

In 1894 Patrick Manson, who had worked out the cause of filariasis and had shown the agency of the mosquito in the transmission of that disease, suggested that there must be a similar intermediate host for the transmission of malaria, and that some sucking insect, probably some form of mosquito, would be found to be the infecting agent. Acting on Manson's suggestion, Major Ronald Ross in 1895 demonstrated that if a mosquito sucks blood containing malarial parasites, these parasites go through certain developmental forms in the body of the mosquito. It was afterward proved that an infected mosquito biting a well person, even in a nonmalarious country, can produce the disease; and on the other hand, that persons can live on the most malignant of malarial marshes without contracting the disease, provided they are properly screened from mosquitoes. Eventually the life history of the malarial parasites was worked out in all its details, so that the cause of malaria was fully established to be the presence in the body of malarial parasites deposited by a mosquito (a certain variety of anopheline) [1] which has itself been infected by sucking the blood of a malarial patient. Thus it became patent that in order for a certain region to be malarious, there must be mosquitoes of the malarial type, and at least one malarial patient or malarial "carrier" [2] to start the game. Some have wondered how it is that a region supposed to be healthy suddenly becomes malarious. The probability is that in such a case the malarial mosquitoes were there, but their bite could convey no disease until the ad-

[1] Or anopheles. A large proportion of mosquitoes are incapable of transmitting malaria.

[2] An individual supposed to be cured of the disease, but whose blood still harbors a few of the parasites. There are many such carriers, and they are a source of danger when they go to a region harboring the anopheline mosquitoes.

vent of some human carrier of the malarial organism.

These facts point to two methods of preventing the presence of infected mosquitoes. One is to destroy all breeding places for mosquitoes. If this is effectually done, there can be no mosquitoes. The other is to treat so thoroughly the malarial patients that the parasites in their blood are all destroyed.

For personal protection, two courses are feasible: (1) To screen the houses so carefully as to afford absolute protection against mosquitoes,[3] and move indoors at night when the mosquitoes are active; and (2) to take preventive doses of quinine. It should be understood that the latter course is not by any means harmless; and if infection can be prevented in any other way, it is to be preferred.

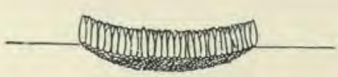
Some additional facts regarding the anopheline, or malarial, mosquito may be of interest to our readers. First, its distinguishing characteristic: The ordinary mosquito stands with its body parallel to the surface on which it is standing; the malarial mosquito stands with its body at an incline so that the head and antennæ, or "feelers," are pointing obliquely toward the surface on which it stands. If there are mosquitoes of this latter type in the vicinity, they are potential transmitters of malarial infection.

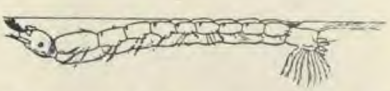
One peculiarity of the anopheline mosquito is that it may "bite" several persons successively. Therein lies the danger. Mosquitoes that "fill up," as it were, at one sucking are not dangerous. As the anopheline may retain its power for infecting for a period of twenty-five days, there is a possibility that one mosquito may infect several persons. It is estimated that perhaps one out of every hundred female malarial mosquitoes in an infected district is infected.

It has been demonstrated that the bite of a single malarial mosquito can cause

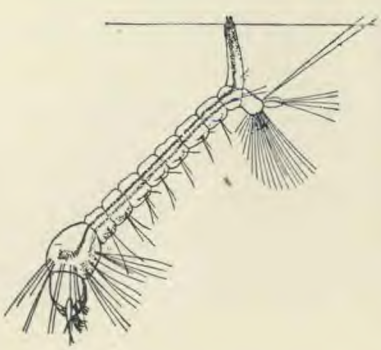
[3] The anopheline mosquitoes are more likely to infest privies than dwelling houses. This is an important point for consideration in a campaign of prevention.

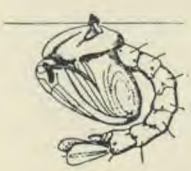
The upper pictures represent mosquito eggs as laid on the surface of the water. To the left, malarial mosquito eggs, as seen from above. To the right, a raft of eggs of culex, a harmless mosquito, seen from the side.





The two central pictures represent the second, or larval, stage of the mosquito; the malarial larva (to the left) lying horizontally, just under the surface of the water, the culex larva (to the right), having only its breathing siphon at the surface. When the surface of a pond is covered with petroleum, or kerosene, it prevents the breathing of the larvæ, and they die.



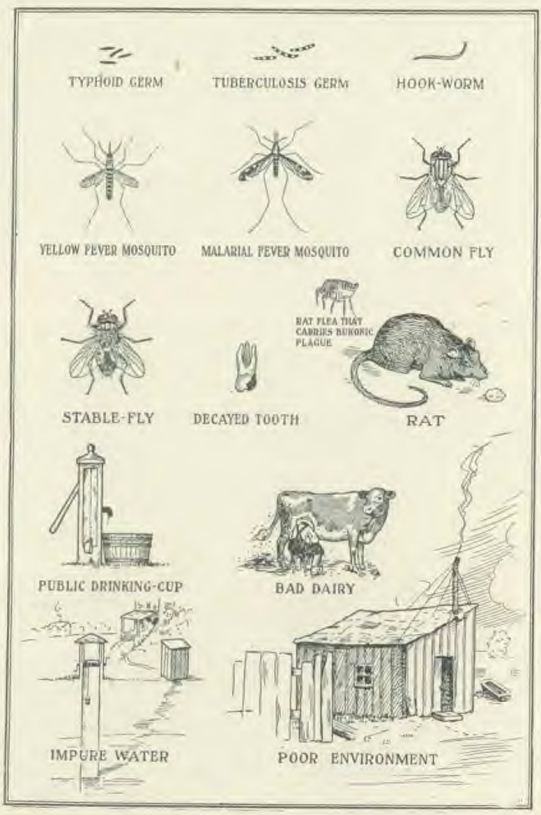


The lower pictures represent the pupa stage a short time before the hatching of the adult mosquito. The malarial pupa to the left.

malarial fever. This shows the danger that may lurk in an unnoticed corner of the dwelling house or of the privy in the shape of an anopheline mosquito that has bitten a malarial patient or a malaria carrier.

Inasmuch as malaria is a malignant disease, sapping the lifeblood, no precaution that can be taken to prevent the spread of infection can be considered too costly.

Where malaria is prevalent, there are two factors acting together to perpetuate the disease, — the human carrier and the mosquito carrier. Without the presence of both these factors the disease would soon die out. If either factor is removed the disease cannot be further propagated. There are, then, two ways in which the mosquito problem can be attacked.



Some Important Causes of Disease

1. By curing all the malarial "patients" and "carriers" (who are really suffering from malaria in a chronic form).

2. By destroying the breeding places of all mosquitoes, especially malarial mosquitoes.

In view of the fact that it is not easy to be certain that either one of these measures has been carried out perfectly, it is safest to apply both methods simultaneously. And as these measures require some time for their successful accomplishment, two other methods are of value; namely,

3. To screen houses and outhouses so as effectually to exclude mosquitoes, and to remain within doors at night when the anopheles are most liable to "bite;" and,

4. To be particularly careful that malarial patients are so screened that no mosquitoes can bite them and thus become infected. It is hardly necessary to say that the first and second measures are those of greatest importance.

The method of mosquito destruction is based on the fact that the mosquito develops in water. The eggs laid on the surface of the water develop into larvæ, or "wigglers," then into pupæ, then into the mosquito stage. As larvæ and pupæ, they must breathe. Any substance, such as petroleum or even kerosene, which coats the water, destroys them. They are also destroyed by goldfish, tadpoles, and other aquatic animals; but the most successful methods of dealing with mosquitoes is to drain all bodies of stagnant water. Rain barrels, tin cans, hollow stumps, and other receptacles which can hold water for a week, may be breeding places for thousands of these creatures. In streams, the weeds and grass at the edge may afford a shelter for mosquito larvæ, and all such

vegetation should be removed. If it is necessary to have cisterns or rain barrels, they should be made mosquito tight by means of fine wire netting.

One living in a malarial region will find the following suggestions valuable, in addition to the destruction of the mosquito:

1. Screen the house thoroughly with a fine wire mesh, and be sure that there are no holes in the screens and no imperfect joints. If there is a means of ingress, the mosquitoes will find it.

2. Be sure that all mosquitoes in the house at time of screening are destroyed. The bite of one infected mosquito may cause an attack of malaria.

3. Screen all persons who have malaria in the acute or chronic form, so that mosquitoes may not get infection from them.

4. In order to destroy the parasites, give the malarial patient full doses of quinine, under the physician's direction.

Accident Prevention

(*Concluded from page 168*)

and that if you do, it is pretty certain you will get hurt.

If you are in doubt whether a horse will kick, give him the benefit of the doubt, and watch out.

Better not poke your finger at a caged animal to see if it will bite. It may.

If you fool with an insect to see if it will sting, you may find out to your discomforture that it does.

Keep obstructions out of passageways.

Protect any pit or opening against others' falling into it. You may yourself remember in the dark where it is, and again you may not. Others may not know of it at all.

Teach children not to "show off" or take dares.

Help foolish people to learn not to shake a ladder with some one on it, "just for fun," or to tickle another when he is busy.

Instil a spirit of caution.

Colds

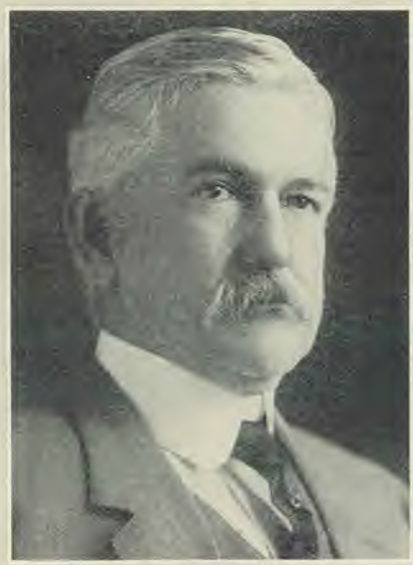
(*Concluded from page 171*)

into the skin over the entire body except the head and face. Such a rub, properly administered, will require from ten to fifteen minutes. After the treatment the patient should retire to a warm, well-aired bed in a well-ventilated room where the windows are wide open. A further glass of hot water may be sipped every hour.

14. But do not on any account take a hot whisky, brandy, or rum. Spirits, or indeed any other form of alcohol, do not bring warmth or conserve the heat of the body, but on the contrary help to rob the vital internal organs of their blood supply, draw the blood into the skin, and consequently disperse it more rapidly, thus lowering the temperature of the body. It is the greatest fallacy to argue that alcoholic beverages protect against cold or "colds," for their influence is the exact reverse.

FATHERS *of*

BY making the Canal Zone, once known a the "white man's grave," more healthfu than many places in the United States, Col (now Surgeon General U. S. A.) Wm. C Gorgas proved to the world that it is possibl for civilized man to live safely and health fully in the tropics.



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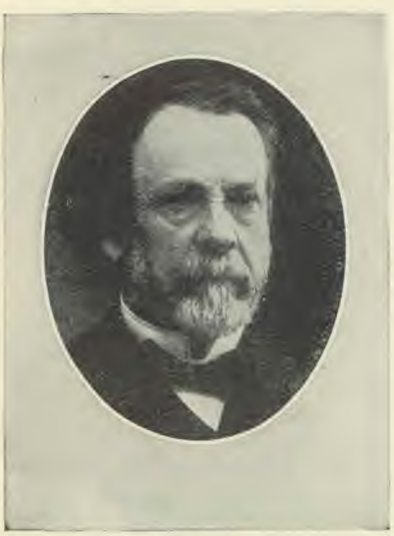
Surg. Gen. W. C. Gorgas

Canal Zone, Panama

A SCENE in Gorgona, one of the cities of the Canal Zone. Had these cities been administered as carelessly as some American cities, the laborers would have died off like rats, from malaria and yellow fever.

Dr. Walter Reed

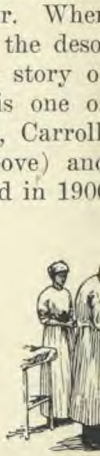
Dr. Jess



Prof. Louis Pasteur

ONE of the most important advances in preventiv medicine was the conquest of yellow fever. Whe once the means of transmission was known, the deso lating power of the disease was gone. The story o the U. S. Army yellow fever commission is one o heroism rarely exceeded in war. Drs. Reed, Carroll and Lazear of the United States (shown above) an Dr. A. Agramonte of Cuba were commissioned in 190

LOUIS PASTEUR (1822-95) was a noted French chemist who demonstrated that bacteria cause disease. He worked particularly with diseases of cattle and vines, but gave us the treatment for rabies, or hydrophobia, still in successful use, and the method of destroying disease germs by heat, called Pasteurization.



REVENTION

'O Dr. Harvey W. Wiley (b. 1844), chem- ist, teacher, physician, lecturer, and au- or, perhaps, more than to any other person due the fact that we have an efficient food d drugs act. In his efforts to protect the ople against fraud he met the most deter- ned opposition.

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Dr. Harvey W. Wiley

azear **Dr. James Carroll**

Yellow Fever Test

THIS picture shows a room in which healthy persons slept in soiled bedding in which yellow fever patients had died. It required rare courage to face what had been supposed to be sure death, to establish a scientific fact.

make a careful study of the cause of yellow fever. s a result of their work, in which a number of men ho permitted themselves to be bitten by infected mos- uitoes took the fever, and some died, the commission as enabled to report that yellow fever is caused by e bite of an infected mosquito, the *Stegomyia fasciata*. rom that time yellow-fever control resolved itself into ntrol of the mosquitoes.

BARON JOSEPH LISTER (1827-1912) introduced the use of antiseptics in surgery. Previous to this, the suppuration of surgical wounds was common, and the mortality for any but minor operations was great. Lister's work revolutionized surgery. He modestly stated that he had only applied Pasteur's discoveries to surgery.

Baron Joseph Lister

TUBERCULOSIS

J. W. Hopkins, M. D.
Washington (D. C.) Sanitarium

WE have recently learned valuable lessons from the study of two terrible diseases — diabetes and tuberculosis. By the use of fasting and exercise in the treatment of diabetes we have had thoroughly impressed upon our minds the important rôle that sedentary habits and overeating, especially of protein foods, play in the production of disease. Tuberculosis has taught thousands the great need of fresh air, sleep, and sunshine. So our wise and beneficent heavenly Father allows disease to come, that we may be taught to obey his laws and receive greater fulness of life and health. Ps. 119:67, 71, 72, 92, 93. It may be said that a man who has contracted a chronic disease and cured himself of it, thereby becomes a more valuable and efficient member of society; but it would be much better if he could learn and be educated without this experience.

In considering tuberculosis, we are forcibly impressed with the importance of being well born. Some one has said that to be healthy, we should be able to choose our own ancestors. We should live not simply to be healthier, happier, and to do more efficient work ourselves, but also to ensure a stronger and more rugged race in the next generation. We must avoid every dissipation, indulgence, and extravagance that will find its fruition in a weaker progeny.

The rush and hurry of the age is a great factor in producing tuberculosis. We spend a large part of our time in a mad scramble for more wealth, fashionable clothing, rich food, etc.— things that do not proportionately add to our value as world workers, things which must be left behind. We forget that "they that wait upon the Lord shall renew their strength." Isa. 40:26-31. In doing this we sow and reap sickness for ourselves and our children. We must balance our program better, and thus make ourselves gainers,— turn off more work, of better quality, and avoid home-made diseases, such as tuberculosis, heart disease, and kidney trouble.

Our children will also be more vigorous, and it is with the children that the work of prevention must begin. Strong boys and girls must be developed who will understand the laws of their being, and respect and treasure the wonderful gift that has been committed to them in the possession of body and mind. Deut. 6:5-9.

Proper clothing is one of the first essentials in rearing healthy children and preventing tuberculosis. The extremities are too often insufficiently clothed with thin stockings and shoes. This produces chilling of these parts, with congestion of the blood in the internal organs, causing poor digestion and catarrh of the nose and throat, and paving the way for weak lungs and tuberculosis. The child should have heavier shoes, thicker stockings, and the underclothing should come down to the shoe tops. Hoods, caps, and coats of the proper quality should be provided. The circulation will then be well balanced, and will continue normal.

Given the proper clothing, the child must be put in the fresh air to sleep, eat, study, play, and work,— in school, home, and church,— in short, to live in fresh air and all possible sunshine, with due regard to the care of the eyes and to proper study. The windows must be kept open in the schoolroom and in the home; but this is not often sufficient. There must be open-air schoolrooms and living-rooms provided, and the family should be educated to sleep out of doors.

The feeding of children is also of vital importance in the prevention of the

great white plague. People have been educated to believe that the proper diet must include flesh foods, with coffee and tea. These articles are not true foods. Meat contains great quantities of waste matters, and stimulants, which wear out the eliminative organs and irritate the nervous system. Flesh foods contain excessive amounts of waste matter and extracts, acting as stimuli to the nervous system. Disease is also directly communicated by flesh eating. The lungs are thus weakened, and the whole body drops below par.

Coffee and tea should never be given to growing children, and even the adult should not partake of them without first understanding that they are medicines only, and that their continued use is a menace to health. As Dr. Harvey Wiley says, "Fatigue is the danger signal. Caffeine (the active principle of coffee and tea) extinguishes the red light, but does not throw the switch." The growing child who uses these drugs as beverages, is stimulated to overexertion, does not have the proper rest, and develops a diseased nervous system.

The use of milk, cream, and butter must also be considered. Ten per cent of the children who die of tuberculosis die of the bovine form, contracted most likely from milk. The dairies should therefore be systematically inspected, and the cows tested, disposing of those that are tubercular. Cream should be sterilized before being made into butter.

Child labor is probably the most active predisposing cause of tuberculosis. In the factory and in the home it is the most cruel and criminal thing of our time. If human beings will insist upon spending their whole time in the struggle for wealth, they should not insist on forcing their children to enslave themselves at the same task.

We must give more careful and definite supervision to those who have tuberculosis, especially to those who have it in the incipient form, as they are more dangerous than those who are confined to their homes. The consumptive who walks around, expectorating on the sidewalk and street, is a dangerous individual, and should be restricted, or educated and trained so that he will not spread the disease by his careless habits. Anti-spitting laws must be enforced. It is not necessary to go from one State to another to be cured of tuberculosis. This is a means of spreading the disease. The better way is to stay at home and obtain all the rest and comfort possible. The tuberculous patient should be under the care and supervision of a physician. Those who have tuberculosis or who at a previous time have had a severe tubercular infection, should not marry.

We must give greater consideration to the importance of the problem of tuberculosis. Those who suffer with the disease do not properly sense their danger. They make light of their condition, and

(*Concluded on page 188*)

"Every effort must be made to arouse these individuals from this condition, and to insist that they put themselves under the proper care, preferably in a sanitarium maintained for that purpose."

PELLAGRA

H. W. Miller, M. D.
Superintendent Washington (D. C.) Sanitarium

THIS is a disease which is very widely distributed. Though more prevalent in certain sections of the country than in others, yet nearly every known habitable portion of the earth has recorded sporadic cases of this malady. Its victims are found almost equally among male and female, and there is no period from youth to senility that is exempt from the disease. While it is generally regarded as being most prevalent among the poor, where the dietary is limited and the home surroundings are often unhygienic, pellagra does sometimes enter the mansions of the rich, and pays no respect to vocations.

Though particularly interested in the prevention of this disease, we will pause to note some of its characteristic manifestations. Whatever its cause, or whatever its characteristics, the poison of the disease affects those tissues of the body that are of epithelial origin,— the skin, the organs of special sense, the brain and nervous tissues, and the lining of the entire intestinal tract, including the glandular tissues associated with the alimentary tract, and also the urinary passages. The skin of the hands becomes dry, red, and wrinkled, and exfoliates. The hands, arms, and other exposed parts of the body are most frequently attacked. There is often marked affection of the organs of special sense, such as fulness in the ears, incoördination, a sensation of dizziness, some deafness, and dimness, with occasional distortion, of the vision. Frequently there is a sensation of numbness of the body, tingling of the extremities, and anesthesia of certain areas of the skin.

"The writer has observed this malady very frequently among foreigners residing in the Orient."

The effects on the nervous system are first shown in increased irritability. Following this there is an apathetic state,— failing memory, slow comprehension, and dulness,— which tends more and more toward coma, and may result in complete unconsciousness.

The intestinal symptoms are distention of the abdomen; ulcers of the mouth, especially on the lining of the cheeks and under the tongue; burning in the chest; soreness and pain in the region of the stomach, and at times sudden expulsive vomiting of sour material; also periods of diarrhea, alternating with constipation. The stools are often watery, sometimes yeasty and very copious, being most frequent in the morn-

ing. The feeling of exhaustion is more marked in the early hours of the day. There is progressive loss of weight, with corresponding loss in strength. The disease is one of only relative discomfort, so that its seriousness is many times minimized by those who are afflicted.

"Whereas the natives . . . never have a case of pellagra."

Pellagra has not been definitely proved to be either infectious or hereditary, though sufficient suspicion has been attached to its infectious character to influence certain boards of health to isolate these patients and enact quarantine regulations for their control.

The disease may be of short duration, followed by almost spontaneous cure, or it may be of a more malignant character, the patient soon dying from inanition (food starvation), owing to the inability of the inflamed intestinal tract to secrete digestive fluids for the digestion and absorption of the food eaten. The usual course of the disease, however, is recurrent periods of quiescence, during which the strength is either maintained or improved, followed by periods of exaggeration of the symptoms; or the disease may run over prolonged periods of time, when, if untreated, it resolves itself into an incurable malady.

It is therefore important to make an early diagnosis of pellagra, to enlist the fullest coöperation on the part of the patient in carrying out a system of treatment, and to subject him to a strict program until the disease is known to be abated. Failure in the treatment of pellagra has usually resulted from not recognizing the dietetic causes of the disease and not getting the patient under treatment at an early date. From experience in the treatment of this disease and from the fact that no specific remedy has been found for it, it would appear that the solution of the pellagra problem depends upon the adoption of general hygienic measures. These we will now discuss.

The views in regard to the cause of pellagra are more or less conflicting. The theories of one investigator are no more than printed when they are disproved by the circumstances surrounding cases of other investigators. Certain men claim that a toxin is produced in certain grains which when injected, acts as an irritant to the epithelial tissues, and that therefore decomposed grains and stale foods are the cause of pellagra. Others, having found upon certain articles of diet certain microscopic organisms (classed as bacteria and protozoa) which they have also frequently recovered from the stools of pellagra patients, have been led to believe that the disease is caused by some infective toxic material produced by these organisms.

That the cause of this disease is dietetic and that patients are cured as a result of dietetic reform, agree fairly well with the theory of all investigators. I will quote herewith two statements made by Dr. Riddon of the United States Public Health Service, July 28, 1916:

"There is no evidence that any of these drugs exerted any appreciable effect upon the duration of the disease, and their use did not lead to any very marked improvement in individual symptoms."

He also states, after a study of fifty-one cases of pellagra, in which all but three improved, one of these three dying, and two showing no improvement:

"A study of these cases allows us to conclude that in pellagra the dietetic treatment is of paramount importance, and that in this series success has followed the use of a diet in which the animal and leguminous protein component has been relatively increased and the nonleguminous vegetable component relatively decreased."

We therefore regard the question of the prevention of pellagra to be one dependent upon the attention given to diet. For years we have recognized that diets deficient in mineral elements, improperly balanced, or made up of stale foods, preserved in tin cans, or of foods that have undergone decomposition, as store cheese or rapidly decaying animal products, as fish and meats, or of foods preserved by chemical means, bring about certain intestinal, skin, and nervous disorders, such as rickets, scurvy, scrofula, and explorer's scurvy,— diseases that in some ways bear a strong resemblance to pellagra. The basic elements of diet that correct pellagra are fresh foods, such as green garden vegetables, fruits, fresh milk, butter, eggs, and a choice of nuts, cereals, and other food products freshly prepared from the unpreserved foods, exclusive of all irritants, as canned foods, stale foods, alcohol, tobacco, and most of the soft drinks.

The writer has observed this malady very frequently among foreigners residing in the Orient, who, because of prejudice against the native foods, subsist on foods that have been retained in cans for months; whereas the natives, who live from their vegetable gardens, notwithstanding that they are subjected to many insanitary conditions, never have a case of pellagra.

Pellagra ought to be completely eradicated from all modern civilized nations, because of the abundant opportunity to secure the classes of food best adapted for nutrition and to completely satisfy all the needs of the body. These will be found among the unpreserved products of the soil. Freedom from this disease will be secured by a better understanding of how to combine foods so as to provide a complete and nutritious diet.

"The basic elements of diet that correct pellagra are fresh foods, such as green garden vegetables, fruits, fresh milk, butter, eggs."

AS WE SEE IT

FLY-TIME PREPAREDNESS

IN this, the Prevention Number, we had almost forgotten the fly. Not that the little fellow did not trouble us last summer. With all our efforts to clean up his — or *her* — breeding places, we needed screens for protection. And with every door and window screened, we found it necessary before each meal to swat two or three intruders that had accompanied us in (never out!) through the screen door. We remember her.

But as we are preparing the copy for the June issue (it is now the first of April), the hum of the house pest is not heard, our screens have been in the attic for some months, and the swat is rusting in the cellar.

On the principle that one hour's enjoyment of the blissful present is worth two hours' anticipation of a dismal future, we had forgotten — or ignored — the fly until there came to our desk a leaflet bearing the caption —

BEWARE OF THE DANGEROUS HOUSE FLY

which reminded us that if an optimistic refusal to contemplate evil is conducive to present peace of mind, preparedness to meet evil is conducive to future safety.

The intelligent readers of LIFE AND HEALTH need no proof that the fly is a vicious beast going about seeking whom she may devour! In flydom, remember, it is the female of the species that counts; for the vote deposited by the female counts a billion. Don't forget her.

As measures of antifly preparedness the following are important: Destroy all filth. If it is necessary to have manure about, it should either be kept in fly-tight containers or be treated with chemicals. The best chemical is borax. One pound of borax to twelve bushels of manure, spread over the surface, destroys fly larvæ without injuring the fertility of the manure. Screen your house fly-tight. Have a swat handy. Also have fly poison. The following are recommended by the United States government:

Recipes for Killing Flies

Formaldehyde and sodium salicylate are the two best fly poisons. They are not a poison to children; they are convenient to handle, their dilutions are simple, and they attract the flies.

A formaldehyde solution of approximately the correct strength may be made by adding three teaspoonfuls of the concentrated formaldehyde solution, commercially known as formalin, to a pint of water. Similarly, the proper

concentration of sodium salicylate may be obtained by dissolving three teaspoonfuls of the pure chemical (a powder) in a pint of water.

Container for Solutions

A container such as is shown above has been found convenient for automatically keeping the solution always available for flies to drink. An ordinary thin-walled drinking glass is filled or partially filled with the solution. A saucer, or small plate, in which is placed a piece of *white* blotting paper cut the size of the dish, is put bottom up over the glass. The whole is then quickly inverted, a match placed under the edge of the glass, and the container is ready for use. As the solution dries out of the saucer, the liquid seal at the edge of the glass is broken and more liquid flows into the lower receptacle. Thus the paper is always kept moist.

BIOLOGY AND THE NATION'S FOOD

IN the *Scientific Monthly* for March, 1917, Dr. W. J. Spillman, of the U. S. Department of Agriculture, considers the causes of the rise in prices of food. Among these causes he finds prominent the increase of population, and increase

in price of farm lands. Discussing the effect of these changes in conditions on our consumption of flesh food, he says:

"There was a time when the American people were probably the equal of any people in the world as consumers of meat. That was when we had an excess of good agricultural land. For the Caucasian race the per-capita consumption of meat is closely related to the surplus of available farm land. At present we stand third in this respect, being exceeded by Australia and New Zealand, and closely followed by Argentina and Canada. The per-capita figures for the five countries are 262, 211, 171, 140, and 137 pounds respectively. At the present time the Australians eat fifty per cent more meat than we do. As already intimated, the per-capita consumption of meat in this country is decreasing. For the year 1900 it was 182 and for 1909 it was 171 pounds, a decrease of 11 pounds in nine years. That this decrease will continue seems highly probable, though not necessarily at this rate."

That is, the tendency of the Caucasian race is to eat all the meat that the "traffic will bear;" in other words, they eat all that the land will produce. This is on the theory, generally accepted, that meat, being animal tissue, is more nearly a perfect food than anything from the vegetable kingdom. The notion seems to be fairly well established that the vegetable products are only food accessories, eaten more as luxuries than as necessities, and that meat is the real food.

Nothing could be farther from the fact. All that is in the meat has come from the vegetable kingdom, and the human being is as well capable of turning suitable vegetable foods into flesh as are any of the animals. A large proportion of the human race is of necessity largely vegetarian. Many persons are vegetarians from choice. There is nothing in the comparative health of those who live intelligently on a non-meat diet, to indicate that these individuals suffer from a lack of meat, and there has never been any scientific reason given why a vegetarian diet cannot be selected that is completely adequate for every human need. G. H. H.

THE SUNLIGHT CURE FOR TUBERCULOSIS

THE *New York Medical Journal* of Jan. 6, 1917, has an illustrated article on the Rollier treatment of tuberculosis by sunlight, as practiced at the J. N. Adam Memorial Hospital of Perrysburg, N. Y.

Some of our readers will remember that in 1903 Rollier first began the treatment of bone and joint tuberculosis in the mountains of Switzerland, where he established a sanitarium for this purpose. His treatment was very successful, and he at the time recommended that the method be adopted in all altitudes and climates.

In November, 1913, the method was introduced into the J. N. Adam Memorial Hospital, and proved a great success. Physicians from all over the country have visited the place to take notes, and no doubt many of them have introduced the method in their private practice, and also in institutions. The article referred to gives careful description of the method employed, and reports the result of treatments which are certainly remarkable.

According to this description the sunlight treatment is not begun for from three to ten days after the admission of the patient, who is being gradually accustomed to outdoor life and to sleeping in an open-window room. The treatment is begun by exposing the feet the first day to the direct rays of the sun for five minutes. The next day the feet are exposed ten minutes, and the legs five minutes, and the insolation is gradually increased from day to day at the rate of five minutes, for fifteen days, in accordance with the accompanying table:

Day	1	2	3	4	5	6	7	8	9	10
Thorax					5	10	15	20	25	30
Abdomen				5	10	15	20	25	30	35
Thighs			5	10	15	20	25	30	35	40
Legs		5	10	15	20	25	30	35	40	45
Feet	5	10	15	20	25	30	35	40	45	50

After the fifteenth day the entire body is exposed to the direct rays of the sun from the beginning of the bath, the duration of the bath being from three to six hours. No treatment under any circumstances is permitted to continue within half an hour before a meal nor to begin for two hours afterward.

The *New York Medical Journal* comments editorially as follows: —

"It is undoubtedly true that physicians do not pay deserved attention to sunlight as a therapeutic agent. Its disinfecting properties and its vitalizing action are thoroughly recognized, but advantage is not sufficiently taken of them in actual practice. With the increasing rôle assumed by sunlight in the treatment of tuberculosis, it is worth while for the general practitioner to take to heart the lesson to be learned. In nonpulmonary tuberculosis particularly has heliotherapy won a richly deserved position as a powerful remedial agent."

G. H. H.

HOW IT HAPPENED NOT ONCE, BUT MANY TIMES

THE incident to be related occurred in Indiana. It, or something very similar, occurs in many places, in other States, where epidemics of dangerous and fatal diseases are started because, through ignorance or indifference, the first cases are not properly treated and isolated. As a result of such an epidemic there are usually a number of funerals and several bereaved families, and the neighborhood is robbed of prospective producers.

"'James, breakfast is ready, get up.'

"'But I'm not hungry, mother. My head aches, my throat's sore, my skin is hot, and I itch all over. I guess I'm sick, and on Saturday too.'

"Greatly frightened at her son's flushed face and evident fever, the mother seeks advice from the corner drug store.

"'It's only indigestion and a stomach rash,' says the druggist. 'Give him some of this medicine and he'll be all right in a day or two.'

"Twenty-five children sick of scarlet fever in two weeks! The neighborhood is now thoroughly aroused. Scores of parents, alarmed at the wide prevalence of the disease, urge and even demand that the school be closed and fumigated. The untrained health officer is not informed in methods employed by sanitarians for suppressing epidemics, and appeals for aid to the State health department."

If a man owns a dog which is proved to have destroyed a neighbor's sheep, he of right is forced by law to pay the damages. Who should pay the damages, — the doctor's fees, the undertaker's fees, and the loss to the families which result from the carelessness in the Indiana case,— the mother, the druggist who gave such abominable advice, or the teacher who permitted the child with fever and rash to remain in school?

G. H. H.

THE PIG AS A FOOD MIDDLEMAN

IN England, owing to the scarcity of food, it has been proposed to increase the food products of the country by the development of pig, poultry, and rabbit breeding. The *Lancet*, commenting on this proposal, while admitting that pigs may be kept cleanly, makes criticism on the basis of food waste. Stating that it is the confined pig that is offensive, the *Lancet* continues:

"On the dietetic side, in recommending pig culture as an economical pastime, the fact must not be lost sight of that the alimentary canal of the pig is adapted for much the same kind of food as the human child's. The pig has no highly developed cæcum to deal with the conversion of cellulose into digestible carbohydrates. The growing pig is a typical omnivore, and ordinarily receives a large amount of nutritive material, some of which the growing child could digest.

"Experiments have shown that via the pig as middleman, only some 25 per cent of the protein and some 45 per cent of the total energy value of the food supplied to him is ultimately returned to the consumer as pork or bacon. Brokerage of at least 55 per cent, which may well be largely exceeded, is charged by the pig. Pig culture can offer no excuse for wasteful housekeeping, and the presence in the pig bucket of food which the family could have consumed, is a disgrace to any patriotic housekeeper.

The use of any flesh food (except game or fish) involves a waste that in a case of stress like the present in Europe, or where population becomes congested, means gross improvidence. G. H. H.

SOME BOOKS

Outlines of Nursing History

by Minnie Goodnow, R. N. 370 pages; cloth, $2 net. W. B. Saunders Company, Philadelphia.

Nursing is a great vocation, involving so much of self-sacrifice that it now appeals ordinarily only to the more serious minded. Women of this type naturally desire to know more regarding the history of their chosen profession.

In response to such a demand, the present volume has been prepared. The design has been to give the main facts in the history of nursing from the earliest times.

In tracing the history of nursing we can go back to ancient times, to the present savage tribes, and even to the lower animals. Among the latter have been noted some examples of minor surgery or dressing of wounds, which show extraordinary sagacity — or is it instinct? Even the lowest savages practice some nursing in a crude form.

Perhaps there is no nurse, enthusiastic in her calling, who would not be glad to have the opportunity to read a history of the development of her chosen profession.

Studies in Ethics for Nurses

by Charlotte A. Aikens. 320 pages; cloth, $1.75 net. W. B. Saunders Company, Philadelphia.

No less than the medical profession, that of nursing is one of high ideals. To be a first-class nurse one must not only be skilled in the technic of nursing, but must have before her the ideal of true and elevated service. It is the purpose of this volume to emphasize the importance of the ethical training of nurses. It has been prepared for use in class work, and is especially adapted for a combination of the recitation and discussion methods of teaching.

It is difficult to characterize a book in a few words. It suffices in this case to say that opening the book at random, here and there, and reading, reveals that the author is superbly qualified for her task of instructing nurses in the ethics and ideals of their profession.

Zone Therapy, or Relieving Pain at Home

by Wm. H. Fitzgerald, M. D., and Edwin F. Bowers, M. D. 191 pages, illustrated. I. W. Long, publisher, Columbus, Ohio.

The claims made in this book are nothing less than astounding. That lumbago can be cured by pressing the teeth of a comb in the hand, or that an earache can be relieved by manipulating a joint of one of the fingers, seems absurd, and one wonders whether the authors are having hallucinations, or whether they are trying to see how credulous the people are, anyway. Drs. Fitzgerald and Bowers, however, claim in sober earnestness that they get such results as relief of pain in various parts of the body, cure of deafness, cough, inflamed eyes, tumor and a number of other conditions, entirely by the practice of zone therapy. The wild heresies of today become the accepted axioms of tomorrow; and who knows but the formulæ in this book may yet gain respectful attention from those who now ridicule them?

Applied Bacteriology for Nurses

by Charles F. Bolduan, M. D., and Marie Grund, M. D. Second edition, thoroughly revised. 188 pages; cloth, $1.50 net. W. B. Saunders Company, Philadelphia.

Scarcely less than the physician and surgeon, the modern nurse, in order to work intelligently, requires an adequate knowledge of bacteriology in its relation to the cause, prevention, and treatment of disease.

The aim in this work has evidently been to omit the nonessentials, and ground the nurse on so much of the science of bacteriology as will be of practical advantage to her in her work.

The present, or revised, edition includes recent advances in medical bacteriology.

How to Avoid Infection

by Charles V. Chapin, M. D., Sc. D. Cloth, 50 cents. Harvard University Press, Cambridge, Mass.

This is another of the Harvard Health Talks series, every one of which has been prepared by a master. Dr. Chapin, for instance, is superintendent of health for Providence, R. I., and was formerly lecturer on hygiene at the Harvard Medical School.

His intimate acquaintance with the subject has enabled Dr. Chapin to compress within very brief space all that is essential of present knowledge regarding the prevention of infection, and he has done it in simple language that will be readily understood by all.

Personal Hygiene and Physical Training for Women

by Anna M. Galbraith, M. D., New York City. Second edition, 393 pages, illustrated. Cloth, $2.26 net. W. B. Saunders Company, Philadelphia.

The purpose of Dr. Galbraith in preparing this book was to give to women a book of instruction on physiology, hygiene, and physical culture, especially adapted to their needs. Particularly commendable are the illustrative exercises for development of the various regions of the body. The entire subject of digestion having been revised since the publication of the first edition six years ago, the chapter devoted to the subject has been entirely rewritten. As Dr. Galbraith's "Four Epochs of Woman's Life" deals particularly with the physiology and hygiene of the pelvic organs, comparatively little space has been devoted to this subject in the present volume.

QUESTIONS AND ANSWERS

Conducted by J. W. Hopkins, M. D.
Washington (D. C.) Sanitarium

This is a service for subscribers to LIFE AND HEALTH.
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Remember that it is not the purpose of this service to attempt to treat serious diseases by mail. Those who are sick need the personal examination and attention of a physician.
State your questions as briefly as possible, consistent with clearness, and on a sheet separate from all business matters. Otherwise they may be overlooked.

For prompt attention, questions should be addressed to J. W. Hopkins, M. D., Takoma Park, D. C.

Drowsiness after Meals

"What causes drowsiness after meals?"

Drowsiness after meals usually accompanies slow digestion; perhaps, also, a lack of sufficient sleep at night. Sometimes you can avoid a tendency to drowsiness by reading in a standing position; sometimes by reading for a short period at a time, then standing and taking some vigorous arm exercises for a minute, and then reading for a few minutes more, taking exercise every time you become sleepy.

Continued drowsiness, however, indicates some digestive or nutritive disturbance, for which you should have personal medical advice before the condition has gone beyond remedy.

Constipation in Children

"Give the treatment for constipation in children."

In the treatment of constipation in infants, it is important to have regular hours for feeding. If the child nurses the breast, the mother's diet should be carefully planned, and she should be free from constipation. It is a good plan to give orange juice two or three times a day. Prune juice is also good, and may be given in place of the orange juice once or twice a day. Gentle massage of the abdomen, rubbing from the right groin upward and to the left in the direction of the colon, will also be of service. You will probably begin to feed him soon, when you can use Graham bread, corn flakes, shredded wheat biscuit, and other laxative foods. If you will get some mineral oil, and give one or two teaspoonfuls at night, he will get relief. This oil should be well refined.

Dandruff — Falling Hair

"I am fifty-three years old, and for ten years my hair has been gradually falling out. The last few years I have had a dry, dandruffy scalp, sometimes very irritating. Shampoos never entirely eradicate the dandruff. Lately, at night I have rubbed olive oil into the scalp, and the next day shampooed with ivory soap and hot water, and then rubbed in vaseline. In spite of this treatment, dry, hard dandruff remains, even to the eyelids."

The soap you are using is too strong and irritating for your scalp. A very mild soap should be used, as a tar soap or resinol soap. A mild salt glow to the scalp is good, and will remove the dandruff. The use of a tonic composed of ten grains of resorcin and fifteen drops of olive oil to an ounce of pure alcohol will soften your scalp and remove the dandruff. This should be used twice a week, after the head shampoo. Use a medicine dropper to apply it, and then rub the tonic well into the scalp. Sterilize your comb and brush occasionally, or else get new ones.

Another ointment which is fully as effective, and perhaps not quite so expensive, is recommended in a recent number of the *Journal A. M. A.*, and consists of —

Salicylic acid	20 gr.
Benzoin	30 gr.
Precipitated sulphur	40 gr.
Petrolatum	1 oz.

This is applied once a week, and is followed by a head shampoo in one or two days.

Cold Feet

"Give the cause of cold feet, and the treatment."

To remedy the condition known as "cold feet," you should first of all bring the general health to a higher level. To do this, observe all the rules of general hygiene. Go to bed in time to secure a good night's rest. Take plenty of exercise daily in the open air. Masticate your food thoroughly, and do not overeat. Keep the bowels regular. Your trouble may be due to an irritation of the sympathetic nerves of the abdomen, due to constipation or indigestion. If so, this condition should be relieved. It is possible that the trouble is due to a weakness in the circulation. You should have your heart examined and your blood pressure taken. It would be a good plan for you to take a short rest in the middle of each day. Try to get half or three quarters of an hour's rest after the midday meal, and endeavor to get a half day's vacation in the middle of the week, as well as the full Sabbath day's rest.

In addition to alternate hot and cold foot baths, it will be well for you to take fomentations to the abdomen, and hot and cold to the spine, on alternative days. The treatments should be short. A warm full bath three times a week is also very effective.

Water-Glass as an Egg Preservative

"What is water-glass? and how is it used in preserving eggs?"

Water-glass is a preparation of potassium, sodium, and silicon — the silicate of potassium and sodium. You can get it in the form of a powder, which, when dissolved in water, will make a satisfactory coating for eggs, and preserve them for several months. It is prepared by dissolving in water that has been boiled and allowed to cool. It should be strong enough so the eggs will sink slowly to the bottom. The eggs should be placed carefully in it as they come fresh and clean from the nests. Sterile eggs are said to keep longest.

Water-glass may be obtained in the liquid form also. In this form the proportion of water-glass to boiled and cooled water is about six parts of glass to ten of water. Test the strength as with the powder.

Cardiac Asthma

"Give the treatment for cardiac asthma [asthma due to heart failure]."

The essential treatment in this case is rest. The patient should obtain plenty of sleep at night, with rest at stated periods during the day. The food should be easily digested. If there is any indigestion or constipation, that should be relieved, as these conditions increase the disturbance of the heart. The bowels should move thoroughly two or three times a day. Afterward, some light massage treatments will be beneficial. The kidneys should be kept freely working, and the skin also, by means of warm baths, or short fomentations to the spine or abdomen, followed by tepid or cool sponge baths. The treatment should not be long enough to tire out the patient. Tobacco, alcohol, and flesh foods must be discarded, also tea and coffee. As far as climate is concerned, a dry, sunshiny climate is to be preferred, but the altitude should not be too high.

Articular Rheumatism

"Give the diet and treatment for articular rheumatism."

Use plenty of fresh and stewed fruits, also green vegetables, as spinach and celery. Potatoes, baked, or boiled with the jackets on, will also furnish alkaline salts. These salts found in fruits and vegetables, increase the alkalinity of the blood, and remove many of the waste products. There is a general prejudice against the use of citrus fruits, as oranges, grapefruit, lemons, and limes, but these fruits are valuable in the treatment of rheumatism. Tomatoes also contain citric acid, and are not harmful in rheumatism, unless the individual has a particular idiosyncrasy. The patient should keep quiet during the fever, if there is any. Flesh foods, especially fish, either salt or fresh, must not be used. Tea and coffee are harmful. Keep the bowels regular by the use of a laxative diet, and if necessary a mild laxative, as cascara, senna, mineral oil, and Epsom salts. The medicines used are sodium bicarbonate and the salicylates, in doses of from five to fifteen grains each, every four to six hours. These should be taken under the direction of a physician. Mild hydropathic treatments, as warm baths, electric light baths, hip and leg packs, cold mitten friction, and massage, will prove beneficial.

Effect of Veronal

"What effect does a five-grain tablet of veronal have on a person if taken too often? Does it affect the eyes, or cause headache and nervousness?"

This drug is used to produce sleep. It acts by producing a dilatation of the abdominal blood vessels, thus relieving congestion of the brain and causing sleep. The dose is from five to fifteen grains, and may be increased up to thirty grains; five grains is a moderate dose. It is, however, eliminated slowly, and therefore accumulates in the body. If used over a long period of time, veronal lowers the general blood pressure and to some extent deranges the digestion. In some cases it produces a dazed condition, and disturbances of the vision follow its use. The *Journal of the American Medical Association*, Jan. 20, 1912, warns against the abuse of veronal, in view of its slow elimination. It is probably one of the safest drugs to use for sleeplessness. But it is much better to relieve this condition by removing the cause, as indigestion, constipation, or pain; by rational measures for sleeplessness, as neutral or warm baths, fomentations to the spine or abdomen, sleeping out of doors; and by avoiding gray-matter stimulants, as tea, coffee, tobacco, alcohol, and flesh meats.

Tuberculosis

(*Concluded from page 179*)

do not take the necessary steps to become cured of the trouble. This mental attitude is indeed deplorable. The patient allows himself to maintain a false sense of security. Every effort must be made to arouse these individuals from this condition, and to insist that they put themselves under the proper care, preferably in a sanatorium maintained for that purpose, or make the home into a miniature sanatorium. The disease will thus be cured in the individual, and its spread will be prevented. We must remember that consumption is catching, that it can be prevented, and that it is curable.

NEWS NOTES

Sargol Concern Fined

On February 17 the promoters of Sargol were convicted of fraud and fined $30,000. They waived appeal, paid the fine, and agreed to have the Sargol Company go out of business. As they had a narrow escape from the federal penitentiary, these men may decide to go into some more legitimate business.

Why Not?

If the following is not true, it illustrates a truth. A nervous individual in an audience kept looking back and moving uncomfortably. Finally he stood up and in a penetrating voice asked, "Is there a Christian Scientist in the room?" A woman across the room stood up and replied, "I am a Christian Scientist." "Will you be so kind as to exchange seats with me?" responded the man, "I am in a draft here."

Americans Coffee Drinkers

The American people, long known as the world's coffee drinkers, actually consume forty per cent of the amount sold in the international markets, according to figures issued by the Bureau of Foreign and Domestic Commerce. More than 1,000,000,000 pounds of coffee came to this country last year. Imports show that the approximate per-capita consumption of coffee in the United States is ten pounds, of tea seven pounds, and cocoa one and two-thirds pounds.— *Public Health.*

Health Officers Ban Drink

At the annual convention of the Health Officers' Association of New Jersey, held recently in Newark, the following resolution was adopted: "WHEREAS, Alcoholic beverages are detrimental to health and indirectly the cause of disease; *Resolved,* That the Health Officers' Association recommend that a campaign of publicity be inaugurated by the State and local departments of health for the purpose of informing the public of the dangers to life and health which attend the use of such beverages."

A Fish Disease

The prosperity of the halibut fishing industry on the northwest coast is menaced by a disease, "mushy halibut," that begins early in summer and increases in severity until a large proportion of the fish caught are unmarketable. A specialist of the U. S. Bureau of Fisheries has discovered that the mushy condition is caused by a minute animal parasite,— a protozoan,— which multiplies rapidly and causes degeneration of the muscular tissue. Doubtless many halibut with the disease only beginning get into the market. Whether this parasite can produce disease in man has not been determined. It would, of course, be killed if the fish were thoroughly cooked; but fish are sometimes served in an underdone condition.

Bread as Food

Owing to a misinterpretation of some statement made regarding white flour, in the *Public Health Reports,* of April 14, 1916, the issue of Aug. 18, 1916, made the following statement: "From the broad view of nutrition, it is very probably immaterial what kind of flour is used in making bread, provided that an adequate mixed diet is consumed which will supply sufficient of the essential dietary components outside of the cereals contained in the diet. It may be added that the great majority of the people in this country live on a well-balanced, sufficient, mixed diet."

The Most Important Work

The most important work of the press has been in the battle for good health against alcohol. Where former traditions had it that liquor was good for every ailment that flesh is heir to, the papers have brought the people to the understanding that it is good for none. In the creation of a prejudice against alcohol as a medicine, the papers have laid a foundation upon which the doctors have easy work to build, for, with alcohol banished, the most common and the most insidious enemy to public health disappears.— *North Carolina Health Bulletin.*

Human Milk and Cow's Milk

In human milk the total solids are 12.6 per cent, and in cow's milk 12.8 per cent. In human milk the total protein is 2 per cent, two fifths being casein and three fifths albumin; cow's milk consisting of about 3.4 per cent of protein, more than five sixths of which is casein. The fats are practically the same in both cow's milk and human milk, being 3.7 per cent. Human milk has a greater percentage of milk sugar; viz., 6.4 per cent, while cow's milk has nearly 5 per cent. The mineral matters of cow's milk are 0.7 per cent, and in human milk 0.3 per cent.— *Dr. John Waddell, in Scientific Monthly, Feb. 7, 1917.*

Certified Milk

About one half of one per cent of the milk supplied in the United States is certified, according to Waddell (*Sci. Monthly*); that is, of every twenty-five gallons of milk produced, one pint is clean, the rest varying from moderately clean to filthy. The cost of certified milk is approximately double that of ordinary milk, for which reason it is not in much demand by the general consumer. However, as compared with the danger of the use of insanitary milk, it is well worth the difference in price for infant feeding. Certified milk is not Pasteurized milk, but clean milk from healthy cows, chilled immediately after milking and kept cold. Few dairies are prepared to produce milk that even approaches the conditions required for certified milk.

Diet and Beriberi

Vedder, in the *Journal A. M. A.*, gives the results of experiments, from which he summarizes certain dietetic rules for the prevention of beriberi. In an institution where bread is a staple article of diet, it should be made from whole-wheat flour. When rice is used in quantity, it should be of the brown or undermilled kind. Beans should be served at least once a week. Canned foods should not be used. Some fresh vegetable should be used at least once a week, preferably twice a week or oftener. Barley, being a preventive of beriberi, should be used in all soups. If cornmeal is a staple article of diet, it should be the yellow or water-ground meal, made from the whole grain.

Prohibition and "Patents"

In a Virginia town, so it is related, there was so great a demand for a certain alcoholic "patent medicine" (Hostetter's Bitters) that the police had to deal with more drunks in one week in February than during the entire month of January. Just why a concern should be allowed to put a few bitter herbs in twenty-five-per-cent alcohol and pass it over into dry territory for medicine, is a problem for the temperance people to solve. Hostetter's Bitters, in plain idiomatic English, is "booze."

Boiled Milk Again in Favor

At one time it was the rule to boil milk as a preventive of infection by tuberculosis and other diseases. Later it was asserted that boiling injured the milk,—that the use of such milk caused scurvy in children,—and Pasteurizing became popular. It may be stated that there was never the prejudice among British physicians against boiled milk that obtained in this country. Now there is again a growing tendency to regard boiled milk as comparatively harmless. The writer of this note has never shared the general prejudice against boiled milk,—"milk brought to a boil,"—as may be verified by looking over old files of LIFE AND HEALTH.

The Critical Age

Mortality statistics show that while the death rate for those under forty-five is decreasing, it is increasing for those who have reached the age of forty-five or over. Some Swedish tables seem to indicate that marriage tends to diminish in a marked manner, the number of deaths at the critical age. According to these figures, which relate to deaths in Sweden between 1881 and 1890, the deaths from single men at the forty and forty-five age periods is just about twice that of the married men:

	DEATHS PER THOUSAND	
	Single	Married
40 age period	14.67	7.42
45 age period	19.07	9.22

Among women the difference is not so great, but is in favor of the married. The inference is, that notwithstanding the very imperfect hygienic conditions in many families, the married state is more favorable to longevity than the unmarried state. Probably a similar difference would be found to exist in this and all civilized countries.

Rice and Malaria

According to Alice Hamilton, in the *Survey*, the development of the rice industry in California, necessitating the flooding of the rice fields with water, has greatly increased the prevalence, in the valleys of that State, of the malarial mosquito and malaria. This necessitates the study of a new health problem: How may rice be cultivated without at the same time furnishing a favorable culture bed for mosquito larvæ.

Boric Acid Poison

McGuire, in *Practitioner*, December, 1916, reports a case of crushed leg treated with surgical technique and aseptic dressing for eighteen days until the wound was completely covered with granulations. The treatment was changed to fomentations with lint wrung out of saturated boric acid solution. The patient had a slight headache, then a rash, depression, vomiting, and rise of temperature, followed by death about the fourth day. Autopsy showed all organs normal except the brain, which was congested and covered with plastic lymph. No septic focus was found. There was suspicion that the poisoning was caused by the boric acid. Other cases of poisoning from boric acid are reported, but none which proved fatal.

Electric-Light Treatment

According to A. B. Cottell, in the *British Medical Journal*, sinuses and indolent ulcers caused by frostbite, and other forms of resistant lesions, have invariably responded favorably to treatment by the tungsten lamp. They have healed much more rapidly than under other methods of treatment, and the resulting scar was soft, closely resembling the normal skin. Lupus and other forms of tuberculous ulceration also healed with soft scars. Other things benefited were phagedenic ulcer, asthma, and stiff joints. The first exposure to the light should be only one minute, the time being increased gradually to two or five minutes, depending upon the local reaction. No subsequent exposure should be made until the reaction from the previous one has passed off. Evidently Cottell was using a very strong light.

A Remedy for Sleeplessness

A Continental doctor suggests a remedy for sleeplessness which consists in raising the arms so as to grasp the rail at the head of the bed. Arms and shoulders grow tired, but the attitude should be persevered in until sleep is induced. The scientific explanation is that sleeplessness is frequently a result of irregularity in the circulation of the blood, and this position of the arms promotes the flow of the blood from the head and arms downward to the heart. Anemia of the brain may be the result of poor circulation just as much as of deficiency in the blood itself, and in this as well as in heart weakness it is helpful to promote the flow from brain to heart. Apart from the question of circulation, the position necessitates concentration of thought and will in order to persevere in the effort of holding the arms up after muscles and nerves are tired.—*Trained Nurse and Hospital Review, February, 1917.*

Feeding Belgian Children

A committee has been formed in Philadelphia which proposes for six months, beginning April 1, to provide for one meal a day for 100,000 Belgian children.

New Tuberculosis Journal

A new tuberculosis journal, the *American Review of Tuberculosis*, has just appeared. It is the organ of the National Association for the Study and Prevention of Tuberculosis.

Carrel Surgery

On the grounds of the Rockefeller Institute for Medical Research, New York, a hospital for the instruction of surgeons in the methods worked out in the military hospital at Compeigne, France, by Drs. Alexis Carrel and H. D. Dakin, is to be established. It is said that the Rockefeller Foundation has appropriated $200,000 to defray the expenses of this instruction, the fund to be under the control of Dr. Carrel.

Milk from the Soy Bean

At Changsha, China, milk is manufactured from the soy bean, a legume very rich in protein, from which the Chinese also make bean curd or bean cheese. The beans are soaked, and then crushed between stones, the resulting mass being strained, diluted with water, and boiled. The white fluid which is strained off has a specific gravity of 1.02 and a fat content of 3.125. It is also, doubtless, rich in legumin, a substance similar in composition to casein, the chief protein in milk. At night this vegetable milk is prepared; in the morning it is bottled and delivered fresh to the customers.

Pellagra and Nutrition

The application of the knowledge regarding the relation of poor nutrition to pellagra resulted, in 1916, in greatly lessening the number of pellagra cases. Officers of the U. S. Public Health Service fear, however, that on account of the greatly increased cost of living, there will be a marked increase in pellagra in 1917. The great increase in cost of cottonseed forage and hulls is causing many families to sell their cows, and a large number will thus be deprived of milk, one of the best of pellagra preventives. The high cost of eggs and other foods, which might prevent pellagra, will work to the same end.

Bread Versus Beer

The British government has issued an order reducing the quantity of beer to be brewed to 70 per cent of the output of the preceding year. This means a reduction to one half that of the year preceding the war. There is to be a corresponding restriction in the release of wine spirits in bond. These steps are in no way to be deemed measures of temperance or social reform, according to the food comptroller, Lord Devonport. The barley, sugar, and other ingredients used in brewing are required for food. It is a question of bread versus beer. It is well to keep in mind that whether in times of war or of peace, every gallon of beer that is made destroys that much bread.

Costly Liquor Prescriptions

A number of London (Ontario) physicians have been heavily fined ($200) for having prescribed liquor in violation of the provincial temperance act. One physician had made out 718 prescriptions for liquor since the act went into effect.

New Dry States

Prohibition made a decided forward step. Michigan has voted for State-wide prohibition by 75,000 majority, Nebraska by 35,000, Montana by 20,000, and South Dakota by 25,000. Idaho has adopted a prohibition constitutional amendment by a majority of three to one. Twenty-four of the forty-eight States have now declared for State-wide prohibition, and more than 60 per cent of the population and 85 per cent of the area of the country is dry.

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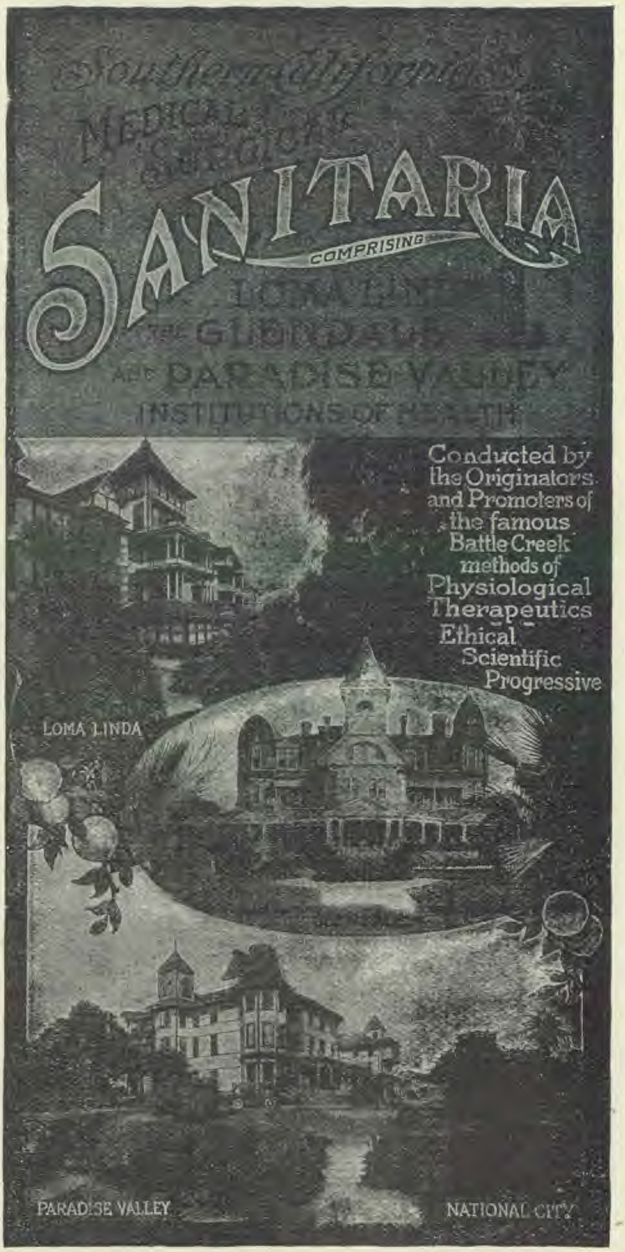

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Scientific System of Dietetics Specialized for Each Patient

The Sanitarium system requires, on the part of the physician, a thorough knowledge of the condition of each patient; and on the part of the patient, intelligent coöperation. The patient is carefully advised as to choice and combination of foods, and the regulation of his daily program, including rest, exercise, and recreation, and receives instruction by means of lectures on hygiene, scientific cooking, etc.

A Modern Gymnasium — Physical Culture Drills
Outdoor Exercise and Recreation
An Inclosed Swimming Pool, Summer and Winter

A homelike atmosphere is maintained, and to this end patients of a disturbing character, and those having contageous or other diseases of an objectionable nature, are not received.

The Sanitarium may be reached by Baltimore & Ohio Railway, or by trolley lines. Phone, Columbia 1097.

For further particulars address

Washington Sanitarium, Takoma Park, D. C.