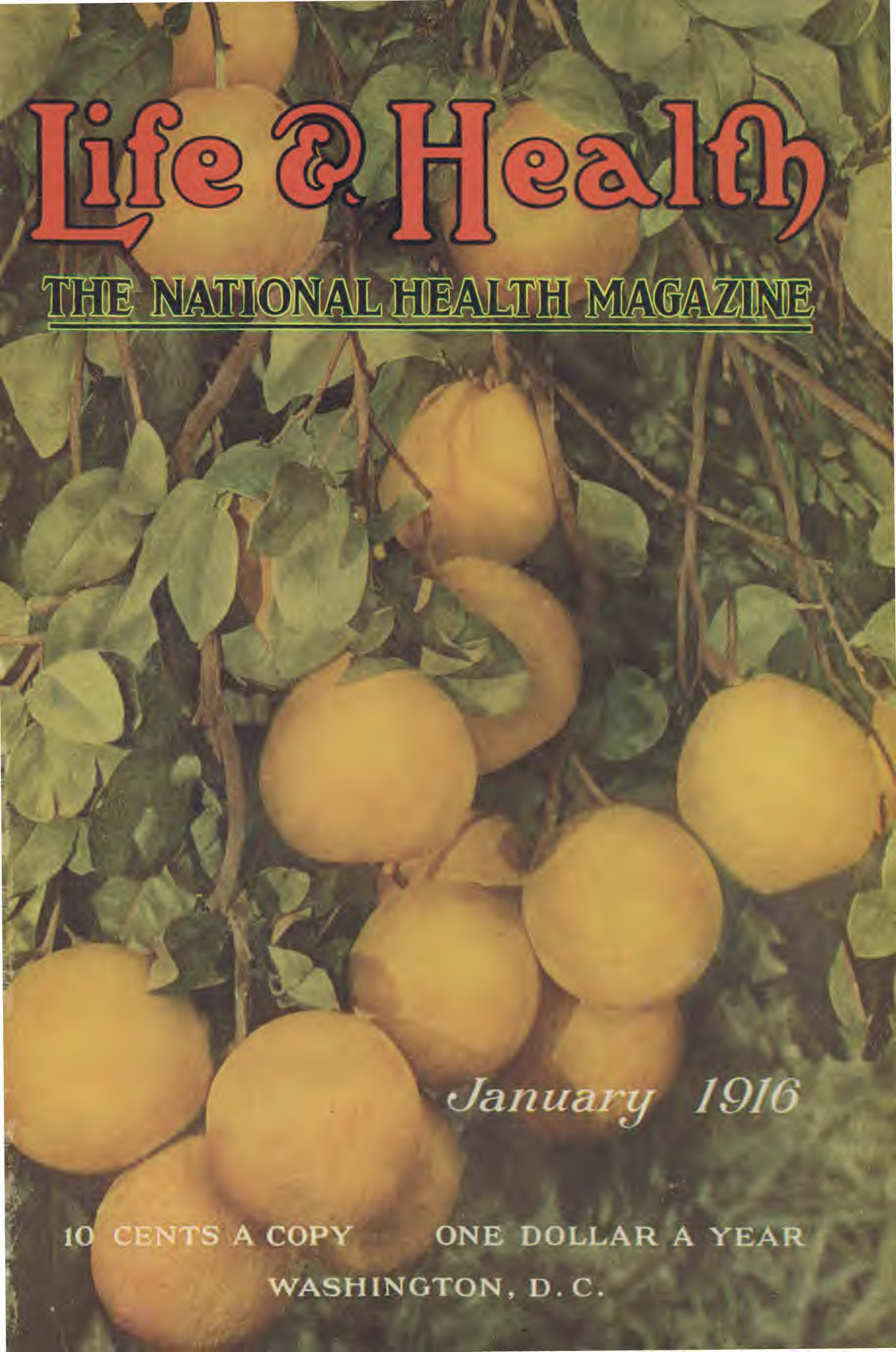
Life & Health

THE NATIONAL HEALTH MAGAZINE



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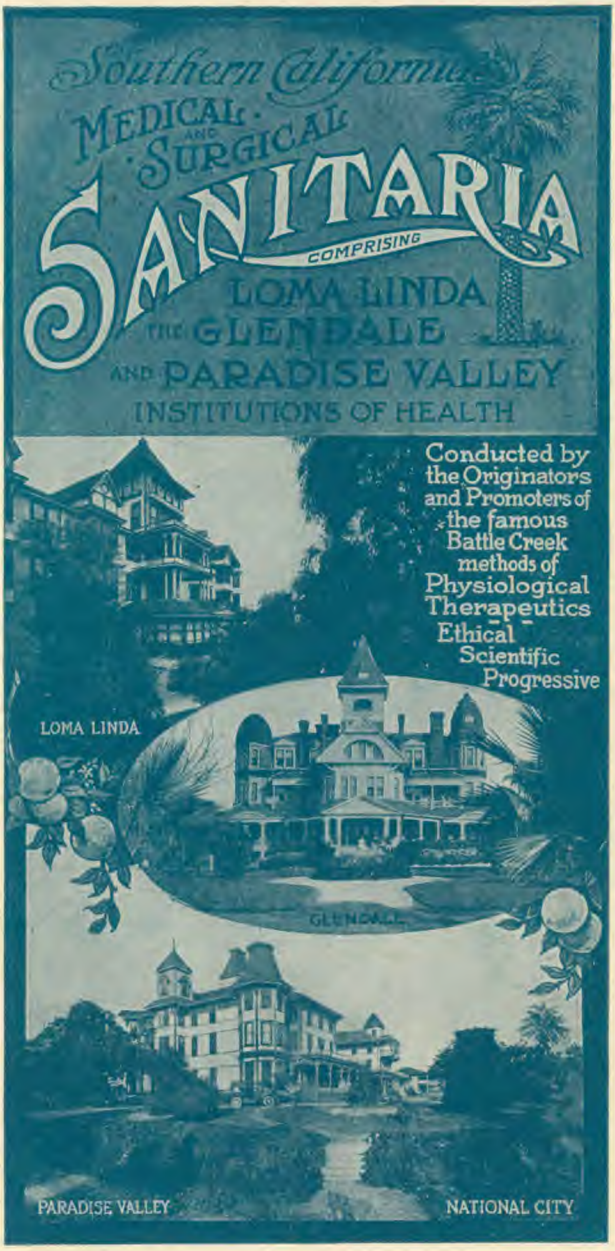

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LIFE AND HEALTH — WASHINGTON, D. C.

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Life and Health for 1916

SHOWING how the magazine touches the home life at various points, the table of contents, opposite, is a promise of what is to follow in the succeeding issues of the year. Every issue will contain practical information regarding the prevention or treatment of disease, the sanitation of the home, the building up of a strong, healthy family life as a basis for a strong national life.

Opinions of Those Who Know

The Instructor of Gymnastics, University of Pennsylvania: —

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LIFE AND HEALTH

JANUARY, 1916

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Alcohol a Poor Kind of Food.

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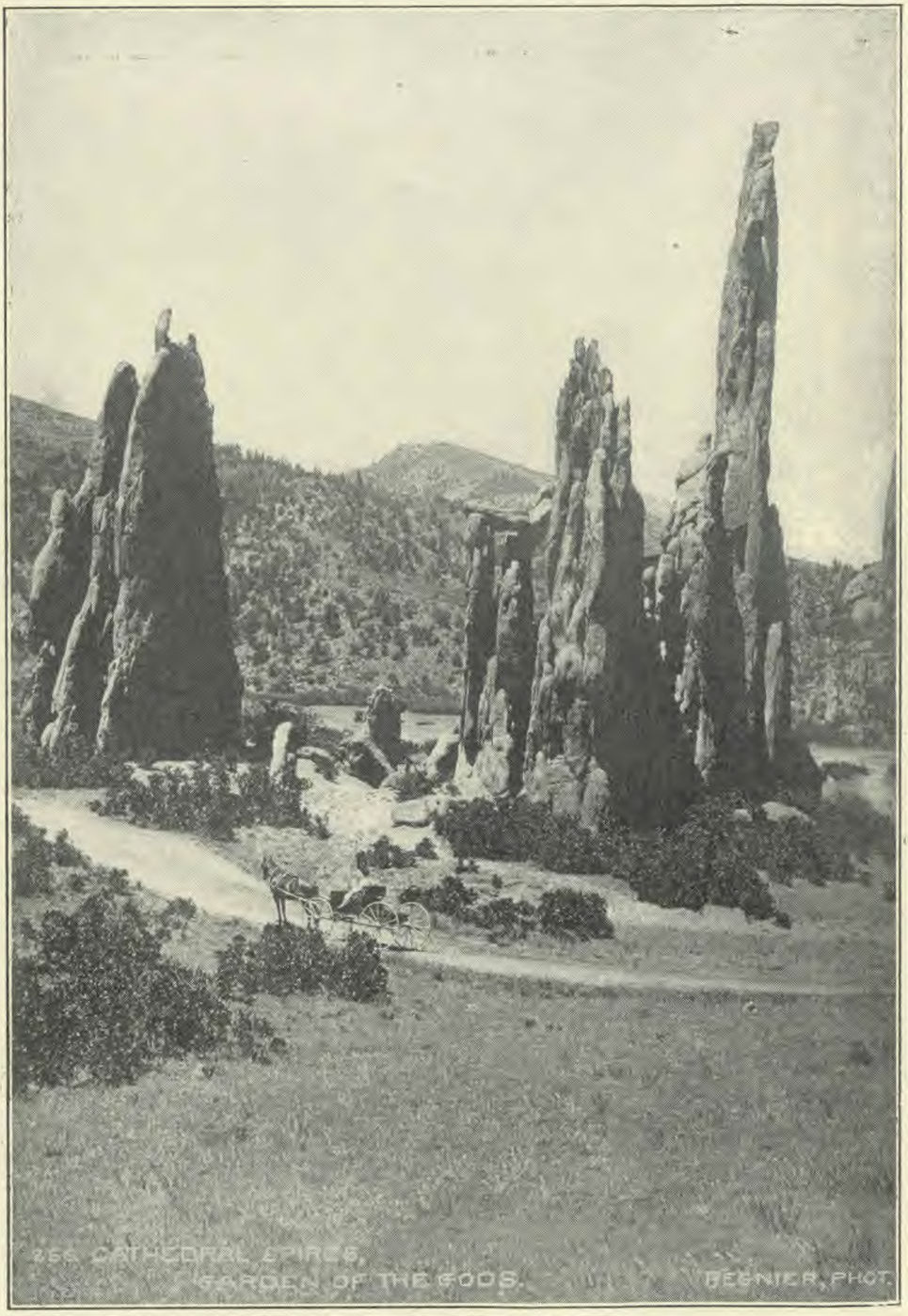


"SEE AMERICA FIRST"

At least while the war lasts.

VOL. XXXI
No. 1

Life & Health
THE NATIONAL HEALTH MAGAZINE

JANUARY
1916

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

G. H. HEALD, M. D., Editor — L. A. HANSEN, Associate Editor

TO OUR FRIENDS

MANY friends will be agreeably surprised to receive this issue with its old familiar name, LIFE AND HEALTH.

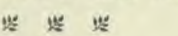
The effort on the part of the publishers to indicate more definitely in the name the scope of the magazine has not met with general approval. In fact, the protest of friends and patrons of the magazine against the change has been so pronounced and cumulative that it has been decided to return to the old name.

The volume being twelve months and not six, as is often the case, "Vol. XXXI" means the thirty-first year, and not the sixteenth year. While scores of health magazines have started, led a brief career, and suspended, this magazine has never missed a monthly issue in the thirty years of its existence.

It was established at St. Helena, Cal., in connection with a newly opened health institution, the Crystal Springs Rural Health Retreat, which afterwards developed into the well-known St. Helena Sanitarium, the first and largest of the sisterhood now known as the Associated Sanitariums. The original name of the magazine was *Pacific Health Journal and Temperance Advocate,* later abbreviated to *Pacific Health Journal.* Though it was owned by the sanitarium, and used to advertise the sanitarium, its function was primarily educational. The associated sanitariums are, in fact, conducted on a nonprofit basis, as philanthropic institutions. No dividends are declared, and the employees work for a "missionary wage," the profits of the institutions going to build up the work in this country or elsewhere.

In 1904 the magazine was transferred to Washington, D. C., and the first issue published here had the name LIFE AND HEALTH, which name was continued until June, 1914, when the name was changed to *Health and Temperance.*

The magazine has been established and published in the belief that there is need for a clean monthly periodical giving in simple language instruction regarding the prevention of disease, the development of bodily vigor, and the improvement of the home. The publishers, holding that a periodical is as responsible for what appears on its advertising pages as on its editorial pages, and appreciating the confidence bestowed on them by subscribers, believe that it would be a betrayal of a trust to sell their space to advertise anything that might prove injurious or disappointing to the readers. For this reason a large amount of advertising which would have paid well in cash has been refused.



Next Month: The King of Winter Sports — Food Combinations — The Teeth of School Children — The Abused Stomach — Learning Surgery From the Animals, Etc.

Courtesy Illuminating Engineering Society, New York

VERY POOR LIGHTING

This man faces the direct light of the unshaded lamp and the glare from the paper and table top.

EFFICIENT ARTIFICIAL LIGHTING

G. H. Heald, M. D.

THE purpose of this article, based upon the pamphlet of the Illuminating Engineering Society of New York, is to instruct those who use artificial lights, whether of oil, city gas, gasoline, acetylene, electric bulbs, electric arc, or what not, how to make their lighting most effective; that is, how to obtain the best results in reading or other work with the greatest comfort and the least wear on the eyes. It should be stated to begin with that no artificial light can be made quite so efficient and so restful to the eyes as properly diffused daylight; but we should make our lights as nearly like the natural light as possible.

For efficient, comfortable illumination, fixtures must be selected and arranged to suit the particular conditions to be met, such as size and shape of room, character of work to be performed in the room, and the like. But there are certain principles that are applicable under all conditions.

In general, lights against the walls of rooms are not so efficient as those in the center, particularly if the wall is dark-colored. It is well to remember that the brightest illumination is not necessarily the best. One would hardly care, for example, to have a searchlight or a locomotive headlight in the drawing room. Such a light would give a small area of

Courtesy Illuminating Engineering Society, New York

A BAD READING POSITION

Notwithstanding the fact that the lamp is shaded, the glare from the book, when held in this position, is a strain on the eyes.

intense light, and leave the rest of the room in comparative shadow. And an unprotected or unshaded light of such intensity in a room would be unbearable.

If a light is so located that it shines in the eyes rather than on the work, the effect is blinding, to use a common expression. It is unpleasant and harmful to the eyesight. An open light is agreeable when out of the range of vision, but as people move about the room this is impracticable. To avoid the unpleasant effect, shades are used. A well-shaded lamp may apparently give less light than an open or unshaded lamp, and yet be more effective and restful.

Courtesy Illuminating Engineering Society, New York

A GOOD READING POSITION

The eye is not inconvenienced with light direct from the lamp, nor with glare from the book.

Even in the use of a shaded lamp one who is reading or working may sit facing the light in such a way that the eye receives the unpleasant glare from the glossy paper. The paper or book should be held in such a position that it will obviate the glare. It is some advantage, but not very much, to have unshaded lights hang from the ceiling, out of the direct line of vision. But any source of light, if it is much brighter than surrounding areas, will cause eyestrain when it is in such a position that its direct rays enter the eye, even though the source is not in the center of vision. That is, the light is injurious if you see it "out of the corner of your eye," even though you are not looking directly at it. The amount of light that enters the eye is controlled by the muscles which close and open the pupil. In bright light the pupil contracts. In the dark, it enlarges. When there is a bright light surrounded by comparative darkness, there is a tendency for the iris (the colored part of the eye, the curtain that closes the pupil) to contract in order to shut out the bright light, and to open in order to admit the fainter light from the shaded areas. These conflicting reflexes set up a strain in the eye. One can hardly enter a room having one or more unshaded brilliant lights without experiencing an unpleasant sensation. And more serious than the temporary unpleasant effect is the permanent damage to the eyesight and to the nervous system that may follow the continued use of such lights.

The unshaded lamp should be relegated to ancient history or museums of antiq-

Courtesy Illuminating Engineering Society, New York

DIRECT LIGHTING OF OFFICE INTERIOR

This form of lighting has the advantage of economy, as it requires less current or fuel for a given amount of illumination than the indirect or even the semi-indirect. But it is not the best nor the most comfortable for the eyes.

uity. The soft glow of the shaded lamp is more pleasing and more restful to the eyes and nerves than the bright glare of an unshaded lamp. Such a light, however, unless accompanied by other illumination, leaves walls and ceiling in a rather gloomy shadow. Moreover, when the shade is a "dome" over the dining table, the eyes of those around the table receive the direct dazzling light, and everything in the room except in the immediate vicinity of the table is in the shadow.

Better than the direct light is the indirect or the semi-indirect light. In the former the lamp is completely hidden by a kind of inverted opaque shade, under the lamp, which permits no rays to pass directly downward, but with a specially shaped reflector reflects them strongly to the ceiling to be diffused softly and evenly over the room. This diffused, indirect light, though not so brilliant as a direct light of the same power, gives better results even when there is not the same quantity of illumination below, for the reason that there is no bright point of light to confuse and irritate the eye. But in order to get the best results from indirect lighting, a stronger light should be used than is ordinarily used for direct lighting. To get the greatest efficiency from the light, the ceiling should be white or nearly white, and should not be glossy. Light falling on any glossy surface makes at certain angles an unpleasant glare which is trying to the eyes.

Next to diffused daylight, indirect light with the source entirely hidden, is the most desirable form of illumination. It is somewhat more expensive for original installation and maintenance. It is used most commonly with electric lighting, but

Courtesy Illuminating Engineering Society, New York

INDIRECT LIGHTING OF OFFICE INTERIOR

All the light is reflected to the ceiling, and from there is diffused in a soft glow that is more like diffused daylight than are more direct forms of artificial light.

there is no good reason why gas (open or mantle), acetylene, or even oil should not be used for indirect lighting.

Next to indirect lighting in point of softness, is the semi-indirect lighting where the shade is made of some translucent material, so that part of the rays pass directly downward through the shade, and part go to the ceiling to be reflected down. A smaller quantity of light is needed for this installation than for the indirect; and though it is inferior to the indirect as a substitute for daylight, it is superior to any form of direct light. Even where a shaded lamp is used on the table for reading and close work, the room is rendered more cheerful by having a semi-indirect light hung from the ceiling.

Where direct lighting is used, the effect is somewhat mitigated by using opal glass globes, so that the source of light is not a small, very bright spot, but a large area less bright. In point of desirability the different methods of lighting may be graded as follows, beginning with the best: (1) Indirect lighting; (2) semi-indirect lighting; (3) direct lighting with well-shaded lamps; (4) direct lighting, lights cased in opal globes overhead; (5) direct lighting, open lights in full vision overhead; (6) direct lighting, with open lights on the table. The latter are not so bad if the worker can sit so that the light shines on the work and not in his eyes. The best arrangement, especially for lighting, is to have the light come over the left shoulder. If it comes over the right shoulder, the writing is in the shadow of the right hand.

Courtesy Illuminating Engineering Society, New York

ILLUMINATION BY SEMI-INDIRECT LIGHTING

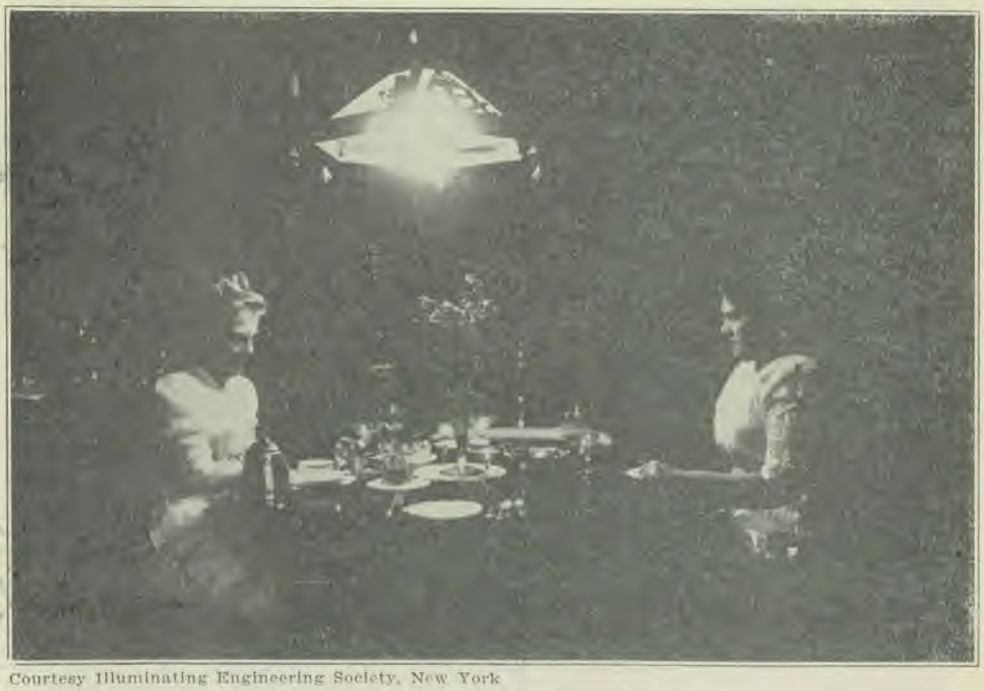
Part of the light is thrown to the ceiling and diffused as in indirect lighting, but part passes through the diffusing bowl. The general effect approximates that of indirect illumination, and the cost for current or fuel is less.

The color of the walls has a marked effect on the efficiency of the lighting. If the walls are dark, much of the light is absorbed. The illumination is always better in a white or lightly tinted room.

In using oil or gas, mantle lamps are more economical than open lamps; and in using electricity, mazda bulbs are far more economical than carbon filament bulbs, as they consume only about one-third the current for the same amount of light.

The illustrations on pages 6-14 inclusive are intended to show, as well as can be done by means of pictures, the advantage of good over poor illumination. They cannot visualize to the reader the eyestrain and the gradual failure in nerve control and in visual power that may follow the continued use, by those who have to do much close work at night, of faulty systems of lighting or of faulty methods of using lights.

The modern tendency is toward increased use of the eyes for close work at night. Moreover, modern customs seem to produce too often an irritable condition of the nervous system that magnifies any local irritation, such as eyestrain. To ignore these conditions, and attempt to accomplish with the aid of the flickering pine knot or tallow dip of our grandfathers, or the open oil lamp of our fathers, the night work required of us by modern civilization, is to court nervous disaster. In proportion as we do at night, work requiring close use of the eyes, we find the necessity and the importance of giving the eyes the advantage of the best illumination possible.



Courtesy Illuminating Engineering Society, New York

FAULTY ILLUMINATION OF DINING ROOM

The light shines full in the faces of those around the table, and the rest of the room is in a shadow of gloom, the contrast increasing the strain on the eyes.

WET CLOTHING

James Frederick Rogers, M. D.

IT is generally known that wet clothing, especially wet footwear, is a menace to health. Like some other facts in hygiene, the lesson is not so well learned but that we frequently forget or ignore it, much to our regret. One reason, and a good one, for this failure to live up to our learning, is that damp clothing causes so little serious inconvenience at the time. It does not seem possible that any harm can come of it, and we feel amply excused for quieting the health conscience in the matter, while we look after other affairs, which we assure that conscience cannot wait until we have donned dry apparel.

The more robust the person, the less attention he pays to a slight wetting. George Washington's last and very brief illness, strong and resistant as he was, was contracted by getting wet while directing some work on his farm. No man should coddle himself, but it behooves all to beware of the powers, which, though apparently beneath our notice, are worthy of our respect.

It is one of the chief occupations of this body of ours to make and maintain constantly a certain degree of heat. Though that temperature may vary from 97° to 99° F. in the twenty-four hours, it seldom falls lower or rises higher. If it goes above 99°, there is something wrong, and we are said to have a fever. If it falls below 97°, the means of heat production are exhausted, cannot keep up the normal supply, and the body machine is in a serious condition.

If a pan of water, or water in a sealed container, is brought to a temperature of 100° and then removed from the fire, we know that it soon loses much of its heat and comes to be of the same temperature as that of the surrounding air. If the air is at 50°, the loss is more rapid and greater than if the air were warmer.

Courtesy General Electric Company

DIRECT ILLUMINATION IN A FACTORY

Comparatively inexpensive, but very trying to the eyes, and tending to bring on eyestrain.

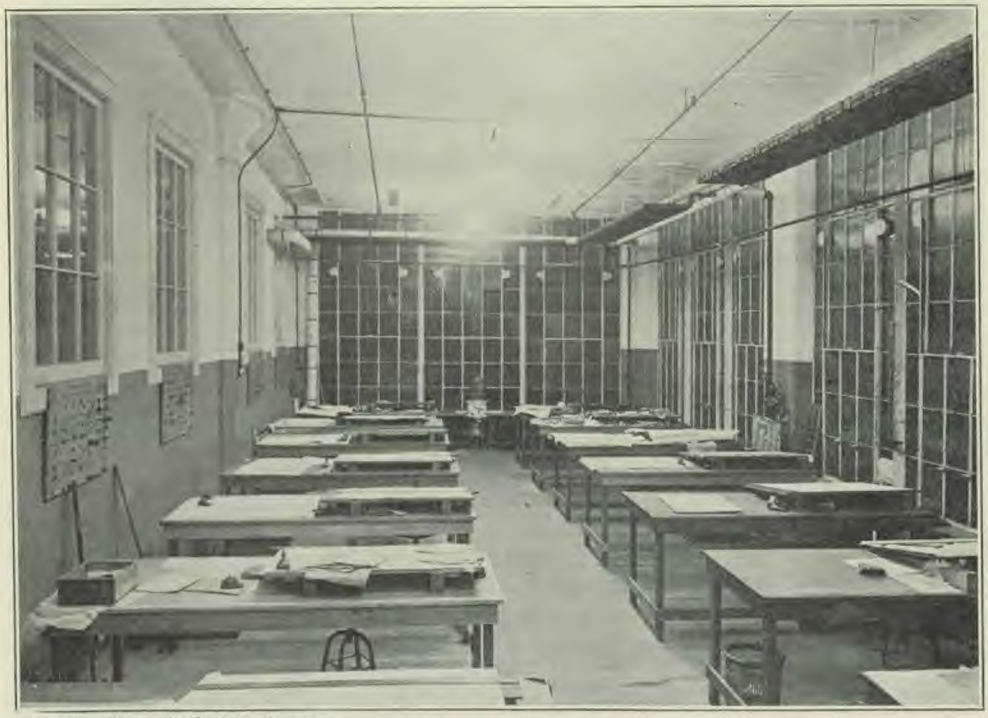
say at 70°. The human body consists largely of water, and its heat is maintained by its internal fires. The lower the temperature of the atmosphere, the greater and more rapid the loss of heat; and the normal temperature of the body can be maintained only by the taking in and burning of more fuel in the way of food, and this means more work for the digestive, circulative, and respiratory organs. Even when the air is at 70°, the difference between its temperature and that of the body is so great that we must keep up pretty active internal fires. To reduce this burden of heat making to a minimum, we put on clothing, seek shelter, and if necessary build fires.

The loss of heat we have mentioned is by radiation into the surrounding air. When water is placed on a warm surface, it evaporates, and the evaporation extracts heat at a rapid rate. The drier the air, the faster the evaporation and the greater the loss of heat from the surface.

Because in the extremities the ratio of surface to volume is greater than in the trunk, much of the heat of the body is lost from the extremities. In the arctics, even though protected with heavy fur, one of the first things a tenderfoot must learn is to keep his arms close to his body in order to reduce the exposed surface from which the body's heat will be lost into the air.

If the body is losing too much heat, our consciousness is at once informed that something is wrong. We feel chilly and uncomfortable, and an attempt is made to check further loss by withdrawing the blood from the surface, especially in the extremities. If we do not obey the warning and seek a shelter or a fire or begin active muscular movements, there will probably be a very serious penalty to pay, the paying of which may cost days of discomfort, loss of time and money, or perhaps even of life.

At summer temperatures the body,



Courtesy General Electric Company

GENERAL ILLUMINATION BY THE SEMI-INDIRECT METHOD

A trifle more expensive for maintenance than direct illumination, but the expense is insignificant compared to the saving of the eyes.

with the help of a little clothing, manages very well in maintaining its heat, and in keeping all parts well supplied with it through the circulation of the blood. It may even have heat to spare on hot days or after severe exercise; and to hasten the loss of heat and so to keep the body below 99°, it often brings the blood to the surface in large amount, or even, as a last and most potent means, pours out from itself water upon the skin in the form of sweat, in order, by its evaporation, to reduce the more rapidly its rising internal heat. The moment the balance of temperature is restored, or when the loss by the usual means — by radiation — is equal to the production of heat, the sweat laboratories are closed. The skin will dry at once if the clothing — our artificial skin — has not become saturated. It may take some time for this moisture to evaporate, and there follows an unneeded and undesired and undesirable extraction of heat, for which the body cannot compensate.

While we have all experienced the uncomfortable feeling — half warm, half cold, if not actually chilly — which comes from this evaporation, we can best appreciate our actual loss of heat at the time by a simple experiment. Take two thermometers registering alike (cheap thermometers do not always do so), and wrap the bulb of one in cotton, gauze, or any bit of cloth, and then dip it in water.

If the water is warmer than the air, the mercury in this "wet bulb" thermometer will rise for a moment, and then will rapidly sink below the level of the thermometer with the dry bulb. The mercury descends because the evaporation of the water extracts the heat in the bulb and its contained fluid. The drier and warmer the air, the greater the evaporation and the lower the mercury descends.

Courtesy General Electric Company

GENERAL ILLUMINATION BY THE INDIRECT METHOD

More expensive for maintenance than the semi-indirect method, but the effect is more nearly like diffused daylight than the more direct forms of lighting. A perfectly restful form of light.

Not only does the mercury fall, but it stays down as long as the bulb remains wet, which may be from a few minutes to hours, according to the thickness of the covering and the rapidity of the process of evaporation.

The experiment can be made still more striking and useful by keeping the air in motion over the thermometer, as by a breeze. The dry bulb will be unaffected, but the mercury of the wet bulb will go still lower. After watching the two thermometers in this experiment, one begins to appreciate the great amount of heat which is being extracted from the large surface of the body when the clothing is wet, even though the temperature of the air may be high. And being in a draft increases that loss greatly. It is no wonder that the signal of "chilly feelings" is sent to consciousness to warn us to change to dry clothing, or at least get out of the draft and put on some dry overgarment to check the rapidity of the loss of heat.

If the clothing has become wet through, as from a rain, or merely damp on the surface, the effect is much the same, and lasts until the clothing is dry.

Perhaps more dangerous than wet clothing, because more often considered of less moment, are wet shoes and stockings, or even damp shoes. In the preceding experiment heat is constantly passing down the tube of the thermometer to the bulb, and with wet foot coverings there is a constant drain of heat from the whole body through the blood constantly flowing to and through the extremities. The loss of heat is a loss to the whole body, and must be compensated somewhere, or the temperature of the whole body will fall.

If, when the wet bulb in the first ex-

EXTERMINATING MOSQUITOES IN ENGLAND

Spraying pool with petroleum, in order to prevent the hatching of mosquitoes. The nozzle at the end of the bamboo pole converts the petroleum into a fine fog, thus distributing it economically over the surface of the water.

periment has become dry and the two thermometers again register alike, we wrap a cloth about the bulb, cover it with a layer of leather, and moisten the leather only, we get the same results as in the previous test. The leather does not need to be soaked, and indeed, there may be a layer of dry leather under the outer wet one. The extraction of heat goes on much the same whether our shoes and stockings are soaked with water or merely the outer surface of the soles is wet.

The loss of heat from the feet is more dangerous because from long coddling with artificial coverings they have become unused to sudden temperature changes.

Few of us would tolerate the discomfort of wet mittens or gloves, but the effect of such a condition for the feet is worse. We tolerate the latter because it is too much trouble to change to dry shoes and stockings.

With the feeling of discomfort, of chilliness, which comes on with the damp or wet clothing, there is going on within the body a change in the circulation of the blood which may result in dire trouble later. When the body finds it impossible to keep the surface of the extremities up to normal heat, it withdraws the blood as far as possible, in order to save

MEXICO'S PLIGHT

Distributing frijoles (black beans) to the poor in Vera Cruz.

what heat it has, and sends it toward internal regions. We know all too little about the details of what takes place, but we do know that with this change the protective powers of the body are lowered, and bacteria, always present, have the chance of a lifetime to thrive and multiply and produce for us a cold, tonsillitis, bronchitis, pneumonia, grippe, rheumatism, or what not. The beginnings are insignificant, but the end may be a first-class funeral.

To prevent all this trouble, the only thing to do is to keep the feet dry. A hunter in the Canadian wilderness asked his Indian guide how to cure a cold. "Keep your feet dry five days," was the laconic reply.

In order to *prevent* a cold the feet should be kept dry and warm all the time. Rubber overshoes have prevented more colds than all the medicines in the world have ever actually cured. They *must not,* however, be kept on in the house or when not actually needed, as they cause an accumulation of sweat, and consequently damp stockings and shoes — just what they are intended to prevent. For those who must be out in all weathers, a raincoat may save its weight in gold, and an umbrella is not to be used merely "to save the clothing."

TYPICAL NOON-HOUR SCENE IN VERA CRUZ

Many of the poorer families suffer severely on account of lack of food and other necessities.

THE MODERN MOUTH

Eugene Lyman Fiske, M. D.

The Physician-Dentist number of the *New York Medical Journal* (August 7) contains a symposium by physicians and dentists on the mouth and teeth and their relation to systemic disease. From the first article, "Mouth Hygiene," by Dr. Fiske, who is director of hygiene of the Life Extension Institute, the following is abbreviated:—

THE modern mouth is out of adjustment with modern conditions and customs. It is not up to its task; that is an entrance port for receiving and preparing for digestion the nutriment of man. It may be long on talk, but it is short on millwork. It too often does the work in a slovenly and uncleanly way, which is a heavy indictment against a mill, especially a food mill. We are making great progress in securing pure food, but how many mouths are really fit to receive it?

There is a man who has written a book on the microorganisms of the mouth. His name, by the way, is Miller. He has found as many as three billion bacteria in a single mouth, and I believe they do not fall far short of fifty-seven varieties.

Do not misunderstand me. It is not so much the teeth that are at fault, as it is our dietetic customs and the mouth as a whole — the gums, the tooth sockets, the root of the tongue, and tonsils. It is the environment of the teeth and the mouth secretions that are chiefly at fault.

Where such vast numbers of bacteria and infective organisms gain entrance, there should be a sturdy resistance and proper war machine to keep them out or hold them safe.

The teeth themselves are not unduly soft. They are not lacking in lime salts, and there is no evidence that variation in hardness has anything to do with dental decay. An elephant's tusk, which is pretty hard, thank you, has twenty per cent less lime than the human tooth. This applies, of course, to teeth that are already matured.

Serious faults which may occur in the diet during infancy may result in deformed and pitted teeth that readily decay, but this feature is not usually a factor in dental decay. The general conditions of the mouth and the dietetic habits must be held responsible for tooth cavities. Wild animals are not subject to cavities; neither is man in a state of nature. Civilization seems to have evolved inefficient jaws as well as habits that menace our teeth, and through them our health. Savage man has more powerful jaws, more regular teeth, and better formed teeth than civilized man. And — the strange paradox — lacking wisdom, he has large, efficient wisdom teeth, while in his civilized brother these structures are degenerate and of little use.

There are two forms of mouth infection that we have to combat: dental caries, leading to infection of the root and to root abscess; and pyorrhea, or infection of the gums and tooth sockets.

> The modern mouth is not up to its task; it is long on talk but short on millwork.

Dental Caries

In caries or dental decay, plaques or films of mucin, a viscid substance derived from the saliva, form on the tooth surface and inclose bacteria and particles of sugary and starchy food, which decompose with the formation of lactic acid. This acid dissolves the lime salts of the enamel, leaving the organic matter, which is then attacked by putrefactive bacteria. These bacteria penetrate the canals of the dentine, and cavities soon result. If the process is not checked, the root canal may be involved, and an abscess form at the root tip. A blind alveolar abscess of this type, one that does not drain out through an opening, is one of the most serious forms of focal infection, as the pus bacteria find their way into the blood stream and lymph channels, and seek some favorable location to live at man's expense.

Pyorrhea Alveolaris

A root is held in its socket by a membrane (peridental membrane), which is interlaced with the periosteum or skin of the bone forming the tooth socket. When the gums are injured, especially if the gums are ill-nourished and lacking in resistance, infection takes place at the margins, and they begin to recede. This is termed pyorrhea dentalis. Later the membranes attaching the tooth to the bone are destroyed, a pocket forms around the tooth in the socket, and then we have an ideal culture tube for the bacteria and microorganisms. This process is accelerated by depositions of tartar, especially around the roots. The end result is of course loosening and loss of the teeth, which is really the best thing that can happen if proper artificial aid is not forthcoming.

Other Sources of Infection

Tartar often forms on the horny projections on the root of the tongue, and a condition of sepsis develops in this region, which is often responsible for foul breath. Foul breath is seldom due to stomach conditions, as so many people imagine. It usually arises from some putrefying condition in the mouth and throat or nasal cavities, especially the accessory sinuses in the head which communicate with the nasal cavities.

The tonsil, supposed to be a defender of the body from infection, is, as a matter of fact, in most cases a menace, because it is seldom in a sound physiological condition. The endamebas, supposed to be a feature in pyorrhea, have been found in the recesses of the tonsils, and streptococci frequently settle there and give rise to acute rheumatism and other troubles at distant points.

There are three billion bacteria in every mouth, and they do not fall far short of fifty-seven varieties.

The lesson from these facts is obvious, and the lines of prevention are well defined: —

1. Beginning in infancy, a thorough physical examination at regular intervals, in order to detect any possible focus of infection or any physical impairment that might lead to the formation of such a focus.

2. The practice of personal hygiene all along the line, in order that the general resistance to infection may be raised to the highest power.

3. Proper diet in infancy, which means, wherever possible, mother's milk, in order that there may be a regular and healthy development of teeth and jaws. As the child grows older, the cultivation of normal eating habits, especially vigorous use of the jaws by thorough mastication and eating of hard, resistant, crusty foods every day.

4. The use of fruit in the diet between meals, especially apples, which mechanically cleans the teeth, and which by the action of the fruit acids removes the mucin plaques which favor decay.

5. The thorough mechanical cleansing

of the teeth with clean water and stiff brush, used with rotary motion, not forgetting the tongue.

6. Thorough dental cleansing of the teeth at least every six months.

7. If unfortunately dental decay has taken place, care on the part of the dentist thoroughly to treat infected roots so that a septic focus may not be sealed in by a filling; in all cases of doubt, the use of the X ray, in order to determine the condition of the roots. It is said that few people arrive at maturity without a chronic alveolar abscess. An X ray of the jaws as a starter in mouth hygiene would be a wise precaution for every one.

8. The development of the teeth should be closely watched, and irregularities interfering with proper contact between the upper and lower teeth corrected or prevented. The earlier this is done the better will it be for the patient.

9. Bearing in mind that the endamebas are possible factors in pyorrhea, a simple, harmless preventive is available in a mouth wash made by adding two drops of fluid extract of ipecac to half a glass of water, used before retiring. This will not be of any service in well-established cases of pyorrhea, but in the earliest stages it may check the condition.

10. When pyorrhea has become fully established, no pains or expense should be spared in curing the condition, as it is a constant menace to life and health. Experience has shown that this disease can be cured by thorough and persistent treatment, if there has not been too much destruction of the tooth sockets. Where the teeth are hopelessly loosened and the sockets destroyed, it is far better to remove the teeth. It is better to lose a tooth than to lose a heart or a kidney.

Boston Photo News Co., Boston, Mass.

THE JAPANESE ARMORED CRUISER "IBUKI"

THE CARE OF THE EYES

IF we realized that the eyes are commercially important, that a person's earning capacity depends largely upon his having good eyesight, and if we appreciated how easy it is to ruin the eyesight in childhood by a little carelessness on the part of parents or teachers, we should be more careful regarding the eyes of our children. It ought to be known, though perhaps it is unknown to many parents, that from one fourth to one third of all cases of blindness are due to the neglect of physicians or nurses to instill a drop of medicine in the eyes of the baby at birth. If this simple procedure were practiced in connection with every birth, the number of blind children would diminish to a minimum in a short time.

Poor Eyes in School

Many so-called stupid children are so because of poor eyesight, and they do better work as soon as their eyes are restored to the normal by properly fitted glasses. Very rarely is the eye difficulty manifest. Quite frequently the child can see perfectly; and in case he cannot see perfectly, he may not know but that he sees just as well as others around him. He has nothing with which to compare his eyesight, and may think it is normal.

Among some of the signs of eye trouble may be mentioned crusts between the lids, twitching lids, reddened eyeballs, the book held very close to the eyes, a frown on the face when the child is attempting to read, headache after close work. In some cases the child may complain of blur. All these symptoms indicate eye trouble and the necessity of a visit to an oculist. Migraine, that is, headache on one side of the head, nervous troubles, stomach troubles, and the like, may be caused by the eye. And at the same time the child himself may not realize that he has eye trouble at all.

Sometimes eye trouble which has been present in a latent form will manifest itself when a person is exhausted, or after some weakening disease, such as measles.

Cross-eyes can generally be corrected before the age of seven. After that, cure is not so easy. The correction of such difficulty should not be postponed. The belief that cross-eyes will correct themselves later in life has no foundation in fact. Many eyes, if properly treated while the child is young, would be prevented from serious and perhaps incurable troubles later. If the eyesight is blurred, it may be due to faulty refraction,— something that may be corrected by proper glasses,— or it may be something more serious. Though an eye sees perfectly, it may be on a strain that is causing headache, stomach trouble, or other disturbances of the body.

In case of headache and nausea, the eyes may need attention. Not infrequently there is eyestrain which is not recognized as such by the patient, but which manifests itself in headache or disturbances of digestion or of some other function of the body, apparently not at all connected with the eyesight; and sometimes it is impossible to obtain any relief until the eyes are corrected.

Be careful not to rub the eyes after handling infected objects, like the street car straps, which are handled by perhaps many immigrants; otherwise one may contract such a grave disease as trachoma, or granular lids.

In case sand or dust gets in the eye, do not rub it, but keep it closed with a bandage or handkerchief until it can be washed out with boracic acid.

Never under any circumstances make use of drops prepared for the eyes of some one else. Great injury has been caused in this way.

For black eye the best treatment is fomentations or hot bathing.

If the eye is cut, apply a bandage or handkerchief, and go immediately to the surgeon or physician.

Never under any circumstances gaze at the sun.

In case the light is too bright or the eyes are sensitive to light, use amber glasses, which are better than green, blue, or smoked glass.

During illness, when the body resistance is low, it is well to prohibit reading, especially if reading is at all painful, or if followed by any disagreeable consequences. During convalescence have glasses fitted if the eyes appear to have become weakened during the course of the disease.

Excessive reading in bed or on the cars sometimes strains the eyes unduly.

The best light for reading is produced by a kerosene lamp fitted with an Argand burner, placed to the back and to the left of the reader. If an electric globe is used, it should be concealed from the eye, and so placed that the light striking the object will not reflect into the eye.

For children the print should be large and clear, ten point or long primer; and the desks should be adjustable and portable, and should not reflect the light. The schoolrooms should be lighted from the back and left. The walls should be light green, buff, or gray, with light woodwork. White walls are very trying to the eyes. There should be no blackboards between windows.

EYESTRAIN

William T. Powers, A. M., M. D.

Dr. Powers, who is a lecturer on diseases and disorders of the eye, prepared the following article for the benefit of the children of New York State. It first appeared in *Health News*, published by the New York State Department of Health. In order that it may have a larger circle of readers than it is likely to find through the departmental bulletin, it is given in part here.

OF all the physical defects which militate against the comfort, welfare, and mental advancement of school children, none is of greater importance than ocular deficiency [weak eyes].

Defects of vision, which may have given no evidence of their presence before the beginning of school life, upon the entrance of the child into school often become a serious menace to his well-being and his mental and even moral advancement, since the new conditions of school life which demand an unaccustomed use of the eyes for accurate near and distant vision may bring on eyestrain, in some one or other of its various forms.

The manifestations of eyestrain are numerous. They range from simple conjunctivitis to squint, and from headache to severe nervous conditions and mental disturbance. At first, eyestrain may cause simply fatigue after a short time at reading, sewing, writing, or other use of the eyes at short range. It may cause drowsiness, or simply disinclination for further near work. It may cause a watering of the eyes, redness of eyeball or edges of the eyelids. It may give rise to headache of almost any character. Many

(*Concluded on page 42*)

HOME COOKING SCHOOL

THE MINERAL FOOD ELEMENTS AND THEIR IMPORTANCE

George E. Cornforth

IN our last article we divided the food elements into two groups, one group including the substances the body uses in building itself and keeping itself in repair and in producing heat and energy,— namely, the starch, sugar, fat, and protein,— the other group including those substances that keep the body in health and give it the power to use the materials included in the first group; namely, cellulose and mineral elements. And in that article we considered all these food elements except the mineral elements. We shall now take up a study of these.

The mineral elements may be called nature's medicines. They are necessary not only for the building of bones, skin, hair, teeth, and finger nails, but to keep the body in health. Without the mineral elements the body cannot carry on its activities, it cannot keep itself in repair, neither can it eleminate the waste products of its own life activities, nor has it the power to fight disease germs. The experiment has been tried of feeding animals a sufficient quantity of food from which the mineral elements have been removed, and invariably the animals die within about thirty days. One writer makes the statement that "a diet consisting of pure protein, fat, and carbohydrate would cause starvation even more quickly than if all food were withheld."

We see then that —

Cellulose, Mineral elements } keep { the body clean, the blood pure

These important elements are taken from food in the milling of flour, removing the bran and germ; in the refining of sugar, removing from the sugar all the cellulose and mineral elements that grew with it, and leaving nothing but pure sugar; and in throwing away the water in which vegetables are cooked, which often contains much that is valuable to the body. The body is also deprived of mineral elements by making flesh food a large part of the diet, for the mineral elements in the animal's body largely form the bones and other hard parts, while only the flesh is eaten. If we eat meat, we ought to eat it as cats and dogs do,— bones, hair, feathers, and all,— then we should get all the necessary body-building material.

A Boston physician who for many years has made a special study of the mineral elements in the diet, said, while talking with me, that if animals are fed on grain from which the germ has been removed, they will die, and that if the diet consists too largely of sugar, the sugar will take the lime right out of the inside of the teeth. With the exception of a few special flours, the germ of the wheat is always removed in making not only white flour but whole wheat and Graham. The germ is the heart of the wheat, a very important and nutritious part. That weevils know what is good for them is shown by the fact that when they attack wheat, they eat the germ out of it and leave the rest.

It is recognized that tooth decay, rickets, scurvy, and beriberi may follow a diet lacking in mineral elements, and

there are physicians who believe that the body is allowed to succumb to skin diseases, cancer, and tuberculosis by a lack of certain mineral elements. It seems that a condition of general lowered vitality results from mineral starvation.

If we were to eat bread made from whole cereals, eat an abundance of fresh fruit and vegetables, and see that valuable elements are not removed from our vegetables in the cooking, and be careful not to eat too much confectionery and sweetened foods, we should not suffer from mineral starvation. Making candy and sweetened foods too large a part of the diet is an increasingly common dietetic error, which deprives the body of needed elements. If we were to get our sugar by eating sweet fruits, chewing sugar cane, drinking maple sap, and eating beets, we should not eat too much sugar, nor deprive ourselves of needed elements that naturally grow with sugar. A young man who has lived where sugar cane grows and where sugar and molasses are made, tells me that puny babies are sometimes allowed to drink all the sugar cane juice they want, and that they soon become plump and healthy. This result is, no doubt, not only on account of the sugar taken, which is a fattening food, but on account of the needed mineral elements that are supplied by the sugar cane juice.

Now perhaps we ought to give a list of the mineral elements needed by the body, and tell what foods supply them and for what the body needs them.

Mineral Elements

Iron — spinach, watercress, egg yolk, legumes, strawberries
Phosphorus — whole cereals, legumes, milk, egg yolk
Potassium — potato, turnip, parsnip, cabbage, plums, cherries
Calcium — milk, egg, whole cereals, nuts, legumes, celery, cabbage, citrous fruits
Magnesium — whole cereals, spinach, legumes, apples, cherries
Sodium — salt, spinach, asparagus, cauliflower, apples, strawberries
Chlorine — salt, spinach, cabbage, cauliflower, turnip
Sulphur — egg yolk, spinach, cauliflower, cabbage
Fluorine — vegetables
Silica — oats, barley, onion, cabbage

Iron is necessary to make red blood. Red blood is impossible without it. Spinach contains more iron than does any other food. Milk is deficient in iron; so if milk makes a large part of the diet, care should be taken to include other foods that are rich in iron.

Phosphorus is necessary for the building of bones, brain, and nerves. Thought would be impossible without phosphorus. The evidence of experiments goes to show that the disease beriberi results from living on foods from which the phosphorus has been removed, such as white rice and white bread. Phosphorus is perhaps best supplied by the bran of cereals.

Calcium is necessary for building bones and teeth. The teeth of children fed largely on white bread, meat, cake, and candy, decay early, and such children are liable to contract bone diseases. Calcium is contained in considerable quantity in whole cereals, but not in sufficient amount to supply the needs of the system. Milk contains more calcium than does any other food. According to a statement made by Dr. Robert Hutchison in his "Food and Dietetics," milk contains more lime than lime water. Nuts also contain an abundance of lime. It is said that peanuts contain too much lime. Therefore the lack of lime in cereals may be balanced by milk or nuts, just as milk and nuts balance cereals by supplying a large proportion of fat and protein, in which cereals are deficient. If the system lacks lime, the natural way to supply it is to drink milk rather than lime water, because the lime in lime water is not organized lime. If the person fears he will become too fat, skim milk may be used; and if even then there is fear of taking too much nourishment, whey may be drunk, because the whey contains lime.

There are physicians who believe that tuberculosis is made possible because of a lack of lime in the diet. Professor Sherman of Columbia University expresses the opinion that half the people of the United States are suffering from lime starvation. This, of course, is the

result of living so largely on meat and on white flour and sugar products. Then, if there is a connection between a deficiency of lime and tuberculosis, is it any wonder that tuberculosis is so common? This theory would also explain why milk and eggs, being so rich in lime, are a good diet for tuberculosis patients; and perhaps tuberculosis might be treated with even more success by using foods rich in lime that do not contain such an excess of protein, to burden the system; such as nuts, whole cereals, celery, cabbage, and citrous fruits, and broths made from cereals and from lime-containing vegetables in such a way as to extract as large an amount as possible of the mineral elements in the vegetables.

Potassium is necessary for the construction of the cells of the body. Scurvy has been attributed to a lack of potassium, and men who have studied cancer and skin diseases for many years, suspect that these are made possible by a deficiency of potassium in the diet. Potatoes contain a large amount of potassium. Potatoes, then, may possibly act as a preventive of cancer.

Sodium is necessary for the proper constitution of the fluids of the body. It is supplied by common salt and by many vegetables and fruits.

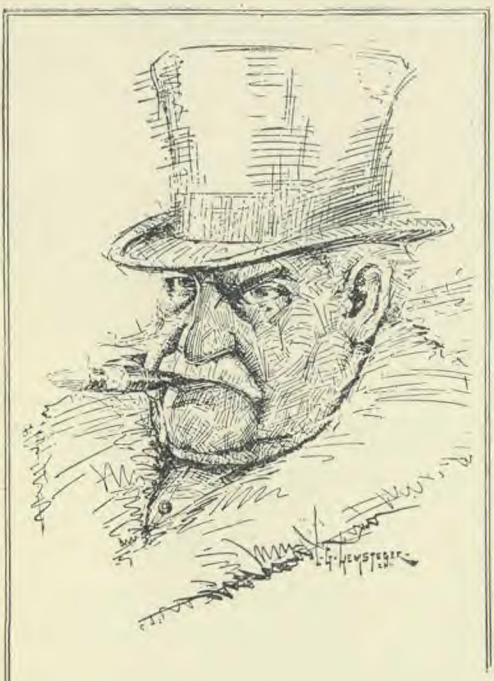
Sulphur is one of the constituents of proteins, and therefore is necessary for the construction of the living tissues of the body.

Fluorine and silica are needed for the teeth and bones.

We have said nothing thus far about the value of raw foods as compared with cooked foods. But it is being discovered that raw foods contain substances very necessary for health which are destroyed by cooking. These substances seem not only to have a beneficial effect upon the general health, but to arouse or increase the activity of the digestive juices. For this reason some raw food should be eaten every day, if not at every meal. It is well to eat raw all food that nature has made to be eaten raw, such as celery, lettuce, cabbage, nuts, and fruits; and even raw carrots and turnips, chopped fine, make a very appetizing salad, and are more easily digested than the cooked vegetables.

A moment's thought will lead one to perceive that something valuable must be destroyed by cooking. Just think for a moment of crisp, fragrant, appetizing, delicious celery, then think of stewed celery. Cooking destroys all the characteristic flavors of celery, so that cooked celery seems like a different thing. Compare in the same way fresh and cooked strawberries, raw apples and apple sauce. These comparisons suggest to us the suspicion that some decided change, or loss, must be occasioned by the cooking process.

We are ready now, having in mind the principles set forth in this and the preceding article, intelligently to choose balanced meals. An explanation of just how this is done will be given in the next article, along with sample meals.



HAVE YOU EVER NOTICED

That this man's automobile cost $5000,
That this man is a power,
That this man is never a Prohibitionist,

While this man's only cost $500;
While this man is not;
While this man generally is?

WHY IS IT?

"From the Wholesalers and Retailers' Review

"Yes, we had noticed it, but we thank the *Review* for calling attention to it nevertheless. The two faces are very different, and we like the old fellow in the Ford. He looks like the common people. And where did the other fellow get his four-bit cigar, and his fur-lined coat, and his jowl, and his silk hat, and his brutal eye, and his bulldog mug, and his five-thousand-dollar automobile?

"Perhaps the answer to this question would explain why it is that he is 'never a prohibitionist.' Somehow that big diamond smells like a barroom. Anyhow, we climb into the Ford with the common people." — *The Searchlight.*

Take another good look at that face. Does it please you? You instinctively shrink, do you not? from contact with the man. If you were in trouble, he is the last man you would think of appealing to for help. If your place were mortgaged, and this man held the mortgage, you would expect to know sooner or later the bitterness of an eviction. He is not the man you would like to meet in a lonely street on a dark night. Should a young lady of your acquaintance accept his invitation to ride in his big five-thousand-dollar automobile, you would be sore distressed; for that eye is a prophecy of what her fate would be. Yes, that man is opposed to prohibition of the liquor traffic, opposed to prohibition of the white slave traffic, opposed to prohibition of gambling; he is in favor of having everything wide open without any restrictions, or at least with the police force winking at open violation of the law. Not all who are opposed to prohibition are to be classed with this man in all respects; but he is typical of a large proportion of that fraternity, and we thank the liquor paper for the portrait.

The TEMPERANCE MOVEMENT

SOME PHASES OF THE TEMPERANCE MOVEMENT

THE first men who dared to assert, nearly a century ago, that a man could work as well without liquor as with it were rated as wild fanatics. Even the life insurance men, interested in anything that might prolong life, but under the spell of old prejudice, hesitated to accept as good risks men who used no liquor. Nearly everybody belonged to the church, and nearly everybody drank liquor in some form; and some very respectable church members were not ashamed to indulge heavily at times. Those were unpopular times for the temperance movement, and the temperance pioneers were necessarily men having the courage of their convictions, who were willing to stand against the almost universal testimony of doctors, clergymen, and other leaders of thought.

Marion (Ohio) Tribune

THE PRISONER AT THE BAR

Mr. Voter, you are responsible for this condition.

From this very small beginning the temperance movement grew, very slowly at first, but surely. It was a lump of leaven hidden in a measure of meal, destined by a gradually increasing permeation to leaven the whole lump. Lodges and other temperance bodies were organized, and gradually increased the number of declared abstainers; temperance orators lectured to great audiences, and obtained thousands of signers to the pledge; the praying bands of women crusaders went right into the saloons, and there bore testimony against the iniquitous traffic, and out of this grew the great W. C. T. U. movement; and parallel with these movements was a political movement which has attempted at the ballot box to oust the open saloon from our land. This movement has met with partial success, and the conviction is growing that the licensed saloon must go. This work against drink and the saloon was conducted largely as a moral reform.

The next movement against the liquor evil was one of expediency. It had become apparent to leaders in the industries and in the great transportation organizations that drink causes a loss of efficiency in the men, and in consequence an economic loss to the employers. Men who caroused Sunday were missing Monday morning, and when they did come, their work was inferior. It was not difficult to show that a large proportion of the accidents to life, limb, and property in factories, on railways, and wherever companies of men are working, are due, directly or indirectly, to the use of alcohol, and that capital eventually pays a heavy toll for liquor. The result has been that many large corporations have forbidden the use of alcohol in connection with their plants; and this is becoming the universal custom on the railroads; and in general the tendency

of the industries is now to weed out the intemperate as inefficient and unprofitable. Life insurance companies are learning that abstinence not only does not shorten life, but actually lengthens life; that there is a marked difference in favor of the total abstainer as against even the very moderate drinker in this respect.

Finally the liquor question has become a public health problem. For a long time physicians here and there, in gradually increasing numbers, have been convicted that alcohol is a poison which is apt to do more harm than good, even when taken as a medicine; and physiologists have added proof to proof, through animal experiment, through the study of human groups, and in other ways, that the general effect of alcohol when taken internally by man is evil, and only evil. The gradual accumulation of all this material has convinced public health men that they are not doing their entire duty when they look after flies and mosquitoes, dirt, spoiled foods, and bad housing, if they do nothing to lessen the greatest of the public health menaces, the drink evil. So we see Dr. Goldwater, health officer of the Greater City of New York, using the departmental bulletin for the publication of information regarding the harmfulness of alcoholic drinks. That he is destined to be followed by other health officers is evident from opinions which were expressed in various localities, a few of which we quote.

Youngstown (Ohio) Telegram

WHAT BOOZE COSTS

Dr. J. N. Hurty, secretary of the Indiana State Board of Health, said in a letter to Dr. Goldwater: —

"Permit me to offer my commendations and congratulations on account of the stand which you have taken against liquor. I have seen a good many newspaper comments among my clippings, and not one of them adverse — all were more or less commendatory. I shall make an effort to secure like action from the Indiana State Board of Health."

From the Nova Scotia Department of Health came this testimony: —

"The part which alcohol plays in the causation of disease and degeneracy is of such pressing moment that it deserves the fullest

East Liverpool (Ohio) Tribune

TEN MILLION MEN SAY, "I CAN QUIT"

They all quit — sometime — but unfortunately it is usually too late.

consideration of every worker in behalf of the public health. While opinion may differ as to the most efficient means of controlling the drink evil, there can be no doubt as to the need for an intelligent understanding by every one of the limitations of the uses which may reasonably and legitimately be made of a drug, which, however useful, is so liable to abuse and so potent for harm."

Dr. William H. Welch, one of the most prominent men in the Johns Hopkins University Medical School, comments: —

"It is universally recognized that alcoholic intemperance is the direct or contributory cause of an immense amount of sickness and disability and of a very large number of deaths."

Dr. Harvey Wiley expressed himself as follows in a special article in the New York *Tribune:* —

"The fight against alcohol certainly belongs to the province of the health department, and the mere fact that it has never before been undertaken by this branch of the municipal government should only convince us that these are very valuable opportunities for good which we are constantly overlooking. The commissioner of health appears to have hit upon the right solution of the problem of dealing with alcohol. The people must be educated up to an understanding of the harm which the intoxicant inflicts upon them."

We give, on page 47 of this issue, one of Dr. Goldwater's articles, which appeared in the Weekly Bulletin of the Department of Health, City of New York, Aug. 7, 1915.

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Indian Lands Dry.— By order of the Indian Commissioner, all saloons in the territory covered by the treaty of 1855, including the town of Hibbing, Minn., were ordered closed by November 1.

Ohio Again Votes Wet.— The home State of the Anti-Saloon League has again decided at the polls that it prefers the open saloon to decency. But the wet majority was less than in the previous election.

"John Doe" in the Limelight.— November 8 the supreme court of Kansas handed down a decision to the effect that the names of persons who receive shipments of liquor in prohibition Kansas may be published. By the way, what is it about the receiving of liquor that makes these persons desirous of keeping the fact secret? It is lawful to receive liquor for personal use. The fact is that the use of liquor even in moderate amounts is becoming less respectable than formerly.

Prohibition Brings Prosperity.— Judge Charles A. Pollock, who has practically grown up with the State, and who has been for nineteen years presiding judge of the district court, says, in the *Christian Advocate:* "When prohibition was adopted in North Dakota we had a population of about 180,000. It was urged that if the prohibitory system was ingrafted upon our statute books, the State would not develop. This statement, like others from the saloon source, has been shown to be untrue. We now have a population of about 700,000, and the per capita wealth of our people is approximately $2,000 — the highest of any State in the Union. South Dakota, when admitted to the Union, had something like 250,000 inhabitants. After having had prohibition for four or five years it returned to the license system. That State now has a population of less than 600,000." His article is full of convincing facts showing that prohibition brings prosperity.

Liquor Advertisements Barred.— By the unanimous vote of delegates of the Associated College Newspaper Publishers, liquor advertisements have been barred from all college papers in the United States.

Steel Mill Against Drink.— The Wisconsin Steel Company uses a poster urging employees to abstain from liquor, and notifying them that the "nondrinking man will be given the preference in promotion and continuous employment," and forbidding men to leave the plant for liquor. They find the poster campaign very efficient.

No License Helps Business.— Through fear that prohibition would hurt business, the proprietors of two department stores in Luverne, Minn., voted license at the last election. Now they say that under no license, their trade has been better than it ever was during a corresponding period before the saloons were closed.

Brewery in Distress.— The plant of the Anheuser-Busch Brewing Association is operating only three days a week, and working only part of the force when operating. It is said that an officer of the association, when questioned as to the cause of this slump in business, attributed it in part at least to the spread of prohibition over the country.

Industry Versus Alcohol.— More than fifty big business concerns have made a study of the effect of alcohol on the efficiency of employees, and have reported unanimously that the effect of indulgence in alcoholic beverages by employees is detrimental to the interests of the work. Eighty-three large industrial concerns discriminate against drinkers, and ten establishments prohibit all use of liquor by their employees. The men whose success depends upon the efficiency of their force of workers have learned that the use of even moderate amounts of liquor, including wine and beer, lessens efficiency.

IS MAN A RATIONAL EATER?

MAN, it is conceded, is endowed with intellectual powers that place him above the brute; but is it certain that the exercise of this reasoning power has given to the human race a more appropriate or more rational dietary than that which instinct directs for the lower animals? Leaving out of the discussion the uncultured savage, has civilized man, with all his splendid and marvelous inventions, learned to eat so as not to injure his health and shorten his days?

A candid study of this question by any observing and thinking person will result in a negative answer. Man, taking the average as found in this country, — the average banker, the average preacher, the average doctor, the average journalist, the average stenographer, the average farmer, the average miner, the average day laborer, the average man or woman of whatever occupation or no occupation,— does not eat rationally, does not eat with a view to the conservation of his forces and the increase of the span of his life. Possibly the reader is ready to make an indignant denial of this bold statement. If so, kindly reserve your judgment until you have read this entire article.

* * *

This is no defense of asceticism. Appetite is implanted in animals and man in order to preserve the species; and the incentive to supply the nutritive needs of the body is the pleasure it affords. Unfortunately man has devised ways of ministering to the pleasures of the appetite far beyond the requirements of his organism.

The expert cook or chef who knows how to cater to the discriminating taste of the dietetic connoisseur — who has learned the art of augmenting to the utmost the pleasures of the table — commands a princely salary. The wealthy are willing to pay lavishly those who are masters of the art of pleasing the palate. And with those who cannot afford the luxury of extravagant cooking, the main consideration is still that the food shall be pleasing to the palate. And is the palate, after all, a safe guide?

If the selection of foods was ever determined by instinct, it is now made almost entirely as a result of education and habit. Each nation has its own dietetic customs, the delicacies of one people being disgusting or abhorrent to other peoples. Without first accustoming their palates to the novelty, few Americans would find pleasure in partaking of the titbits in a Chinese chop suey, or of the foods which delight the peoples of the Pacific islands; and the natives of these countries would probably find little to relish in our foods. Even the dietetic habits of two neighboring families may be radically different. If appetite were entirely instinctive, there would be more uniformity in man's desires and in his habits of eating.

Undoubtedly climatic and other conditions do in a measure affect the appetite. Going to a cold climate, one craves foods with a large heating value, and the opposite is true on going to the tropics. It is possible that if man were more eager to pay heed to his natural appetite, it would be a very accurate guide as to his nutritive needs. But in order that a natural appetite may be experienced, there must be real hunger, a luxury in which modern man rarely indulges.

We have learned to enjoy the pleasures of the palate to a greater extent than is necessary to satisfy the wants of the organism; and in order to stimulate the appetite and enhance the pleasures of the palate, various flavors, spices, and condiments are used; and these have so changed the taste that very little of the original instinctive craving for the most appropriate foods is left. We eat certain foods because they taste good to our modified sense organs, not because the cells of the body are calling for them. For instance, to a slice of bread, which already has an excess of carbohydrate or starchy matter, sirup is added, making the excess of carbohydrate still greater; the starchy pancake must be still further unbalanced by the addition of maple sirup; and to the starchy pudding sugar is added, largely increasing the excess of carbohydrate. If our taste were instinctive, it would protest against the addition of sugar to starchy dishes, unless there were an excess of protein or flesh-forming food in some other dish.

Our dietetic tastes are largely a matter of education. As we were taught to eat when we were children, we are apt to eat throughout life. The members of some families add sugar freely to various foods, and perhaps all of them as a result complain of digestive disturbance. Other families may not use sugar, but may have formed the habit of using large quantities of vinegar or an excess of animal food, or of indulging in some other dietary error, with as bad results. Nearly all of us have *acquired* tastes, and it may be set down as axiomatic that acquired dietetic tastes are apt to be harmful. We like certain foods because we have been taught to like them, and not because they are necessarily best for us.

The few persons who escape the diseases of middle life, and round out a life of fourscore or fivescore years, are those who have been fortunate enough to avoid the acquisition of some of the acquired tastes which help to shorten life. Nearly all who live to a great age are simple in their habits of eating.

Not all who are suffering from disordered digestion are careless regarding their dietetic habits. Some such sufferers are extremely conscientious, and would not for the world take food which they consider harmful. The writer frequently receives letters from persons who in their desire to live healthfully seem to have ignored some cravings which represented real wants of their organisms. In other words, they have possibly been starving for some one or more necessary ingredients of the body.

But those who thus err are the exception. The great dietetic sin of the age is overeating, that is, eating for the purpose of sensual gratification. The great variety of food served at the ordinary meal, and the sweets, spices, and condiments, all tend to favor this tendency to overeat. Few persons acknowledge that they overeat; but measurements of what people in the various stations of life

actually eat, compared with the amount which scientific investigation has shown to be sufficient to keep the body in perfect health, demonstrate that, except where the most abject poverty prevents it, people everywhere eat more than they need, and usually more than is good for them; though this overabundant diet, because unbalanced, may be lacking in some necessary ingredients.

We eat too much because of the artificial additions that tempt the appetite, and because of the great variety in the foods. One who confines himself to two or three simple dishes at a meal, provided these are well balanced, and who avoids the free use of sugar, pepper, allspice, and other artificial seasonings, is not likely to overeat, unless he has a dilated stomach as a result of previous habitual overeating.

It will pay every reader of this article to ask himself candidly whether he is eating for strength or for gluttony.

ALBERT MEMORIAL, LONDON

Diet and Pellagra

SURGEON GOLDBERGER and other members of the staff of the U. S. Public Health Service have made a preliminary report [1] on the result of a dietary test among institutional inmates (two orphan asylums and an insane asylum) which is being conducted in order to determine whether pellagra recurrences can be prevented by a change of diet. The experiment, begun in 1914, is to cover a period of two years, but the result of the first year's work was so striking that the doctors have felt justified in publishing a preliminary report.

In 1914, Surgeon Goldberger published an article [2] giving reasons for believing that pellagra is in some way a result of a diet deficient in proteins and excessive in carbohydrates. His advice at that time was to increase the animal proteins in the diet, and in case the means of the family would not permit of that, to increase the amount of beans or other leguminous food.

The present series of experiments seems thus far to confirm Dr. Goldberger's previous work. With no other treatment than the addition of an adequate amount of animal protein to the dietary, the annual recurrences of the disease were prevented in the institutions studied. As stated by Dr. Goldberger in his report: —

"Viewing the foregoing results as a whole, bearing in mind that three different institutions in two widely separated localities are involved, each institution being an endemic focus of the disease, and bearing in mind, also, that the number of individuals considered is fairly large, it seems to the writers that the conclusion is justified that pellagra recurrences may be prevented, and, in view of the conditions of the test, that they may be prevented without the intervention of any other factor than diet."

As remedial measures for the control of pellagra in those regions where it is prevalent, Dr. Goldberger makes the following suggestions: The ownership of a cow, and increase of milk production for home consumption; poultry and egg raising for home consumption; stock raising; cultivation of diversified food crops, including an adequate supply of the pea; and the reduction of starchy foods in the diet.

[1] *Public Health Reports*, Oct. 22, 1915.
[2] *Id.*, June 26, 1914.

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Is Strychnine a Heart Tonic?

THE *Journal A. M. A.* of September 18 asks this question in an editorial article, and answers, in part, as follows: —

"The alleged value of strychnine in surgical 'shock' has no experimental basis to support it, and is, indeed, denied by many competent observers. It is a fact readily demonstrated on animals that cardiac muscle is not only not stimulated, but also decidedly depressed both in amplitude and in rhythm under the influence of strychnine."

At the Massachusetts General Hospital, continues the *Journal*, Newburgh investigated the possible effect of the administration of large doses of strychnine over a period of several days in persons suffering with chronic heart failure. He was attempting to determine whether it is true, as has been suggested, that even though the single dose of strychnine is not of benefit to persons suffering with heart failure, the prolonged use of the drug might be of material aid. None of his patients were benefited by the administration of strychnine. The compensation was not improved in the slightest by the use of the drug, but some of the same patients afterwards recovered

compensation as the result of the administration of digitalis. Newburgh is convinced that neither pharmacologic nor clinical evidence justifies the use of strychnine in the treatment of acute or chronic heart failure.

In this connection a statement made by Dr. Robert N. Willson in a paper read before the College of Physicians, Philadelphia (*Journal A. M. A.*, Sept. 25, 1915), is worthy of notice. Dr. Willson says: —

"It is well to realize that we know only two and perhaps only one true cardiac tonic — oxygen, and perhaps certain forms of sugar."

This is equivalent to saying that diet and deep breathing are the true heart restoratives.

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Insurance Testimony on Alcohol

AT the eighth annual meeting of the Association of Life Insurance Presidents, Mr. Arthur Hunter, chairman of the Central Bureau of Medico-Actuarial Mortality Investigation, stated that investigations had been undertaken by the companies in order to assist them in determining which types of persons could be safely accepted for insurance at the regular rate of premium, which types should be charged an extra premium, and which should be declined. Forty-three companies supplied their records on about two million lives, covering a period of twenty-five years. This is the most comprehensive investigation ever undertaken by insurance companies.

Nothing was more conclusively proved than that a steady, free use of alcoholic beverages, or occasional excess, is detrimental to the individual.

Among the men who admitted that they had taken alcohol occasionally to excess in the past, but whose habits were considered satisfactory when they were insured, *the extra mortality was equivalent to an average reduction of over four years in each life.*

With regard to men who had used alcoholic beverages daily but not to excess, the experience of the companies was divided into two groups: (1) Men who took two glasses of beer or a glass of whisky, or their equivalent, a day; (2) men who took more than the foregoing amount, but were not considered by the companies to drink to excess. *The mortality in the second group was found to be fully fifty per cent greater than in the first.*

The committee did not make a report on the mortality among total abstainers, but *sufficient statistics have been published by individual companies to justify the statement that persons who have always been total abstainers have a mortality during the working years of life of about one half of that among those who use alcohol to the extent of at least two glasses of whisky a day.*

The preceding is taken, not from a temperance journal, but from the Bulletin of the Department of Health of the City of New York. It is much less than a century since life insurance companies refused to accept total abstainers, thinking that they were dangerous risks. Surely the world do move.

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Hygiene for High Blood Pressure

A DISCOVERER of a drug or treatment capable of affording permanent amelioration to the condition known as high blood pressure would deserve a greater monument than any of the heroes of war. But such a drug or process is not likely to be discovered; at least no process that does not seek out the cause and rectify it can be of more than temporary benefit.

At the meeting of the Illinois State Medical Society held in Springfield, May 19, 1915, Dr. Arthur R. Elliott, of Chicago, read a paper (*Journal A. M. A.*, September 18) on "The Treatment of High Blood Pressure," in which he said:

"Without going into detail, it may be said that the most important measure in the management of high blood pressure states is the proper regulation of the personal habits and diet. The gain over excess pressure accomplished by this means is purely net gain, involving no interference with nature.

"It is apt to be otherwise when we attempt to reduce high blood pressure by routine use of drugs. Fortunately, the effect exerted by vascular drugs is evanescent — coterminous

with the physiologic action of the drug employed. It soon becomes obvious that the vasodilator cannot be continued indefinitely, and it may be equally apparent that the patient's condition has been in no real sense improved. With the discontinuance of the medication, blood pressure returns to its former height, and the experiment is ended."

Dr. Elliott is far from believing that drugs are of no use in such cases; but from the preceding quotation, it is evident that he understands that they can be used merely as a temporary expedient, and that the main reliance must be in securing a change in the patient's manner of living.

It is the dietetic and other habits of the patient which have proved to be an interference with nature, and the rational treatment is that which removes this interference. It is the one, however, which is the most unacceptable to the average patient. That to which man has become habituated, whether it be drink, dietetic excess, sexual excess, or other unnatural stimulus, is what he, too often, is willing to suffer and die for, rather than give it up.

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Medical Service for the Soldiers

ONE would suppose that constant contact with the wounded would make men callous. It would seem, however, that this is not necessarily so, from the following, taken from a letter written by a Canadian medical student who was with the British Army medical corps. The letter appeared in the *Journal A. M. A.*, Oct. 9, 1915:—

"The attitude of the surgeons and nurses toward the wounded in the war is commendable in the highest. I have not witnessed in civil hospitals so much tenderness and compassion toward patients as has been exhibited in dealing with these boys from the front.

"If a patient is a bit restless at the approach of anesthesia, the administrator will gently and quietly allay the nervousness by ways and means not often used at home. In the admission and examination tent where the chaps come in fresh from the trenches, disheveled, dirty, and weak, their vitality and nervous energy at a low ebb, the senior surgeons will gain their confidence and good will on the spot by quiet, tactful, and sympathetic questioning, terminating with the inevitable, 'We'll fix you up all right, old man.'

"In the whole wide world of suffering, there is no class of helpless more deserving and more in need of tender ministrations than this broken humanity — the first fruits of war. In this phase of the war, America will have a share in the glory. Recently a British Tommy told me he was in the Chicago Hospital (a British general hospital operated by doctors and nurses from Chicago), 'where they are absolute bricks. After being up there on the line for months, you forget that there is that sort of kindness floating around.' A Harvard unit near by is very popular with British soldiers, too."

In a letter from London we are informed that the Indian wounded are cared for in part by native officers, and that these are careful, even in the hospital, to preserve caste distinctions. There is no female assistance, even the laundry work being done by Indian washermen brought over for the purpose. There are eight different kinds of diet and separate cookhouses for six different classes.

"The Hindu cooks must in all cases be of the same or of a higher caste than the patients for whom they cook. The chief article of diet of all the fighting races of India is a kind of bread made from partially husked grain ground by hand between two slabs of stone. As regards meat, all Mohammedans eat beef, but the practice is very abhorrent to Hindus, who regard the cow as a sacred animal. For this reason no beef is allowed in the hospital. Bacon and similar meat are also strictly prohibited.

OUR WORK AND WORKERS

MEDICAL MISSIONARY WORK IN THE HILLS OF PORTO RICO

Clarence Moon

THESE last few months here in Porto Rico have been months of great blessings from the Lord, both in the church work and in opening up new interests out in the country. We had the privilege of seeing eight persons baptized in the sparkling waters of a brook which dashes down from the hills overlooking Moca.

Some of our workers had made trips out into the country to Barrios Cruz and Burladores, but had met with little success. Most of the people closed their doors against the Lord's messengers.

At one place a Catholic woman told one of our sisters that she did not care to have anything to do with us. The next day her son fell and fractured his left arm near the shoulder. She brought him to us, and we bound up the fracture, and they went their way. In a few days we heard through this sister that the woman had changed her ideas about us, and was now saying, "*Los Adventistas son muy buenos*" (The Adventists are very good). We afterwards went out and gave her studies.

I was called out one night to assist in an operation where a small boy, the son of a Presbyterian elder, was wounded by a falling rock. His head was so badly crushed that part of the brain had been forced from the cranium. The doctor who went out on the case, after making an examination, told me that there was absolutely no hope for the boy. He sewed up the wound on the head, and left the boy to die. I went back the next morning and found him almost dead. The place was in great confusion. These people have a very demonstrative way of manifesting their grief, in shrieks and wails, and one feels quite relieved to get away from such a place, out into the open air.

On this particular morning I was feeling a great burden for these poor people, and so I determined to do what I could to console them and point them to Him who has promised to carry our griefs and sorrows. I found a small New Testament, and read from Heb. 11:1, where it says, "Faith is the substance of things hoped for," etc. I then talked to them on the subject of faith and prayer. They gave the very best attention. After this we had prayer, and I never felt the presence of the Lord more than at this time. The room seemed to be full of light, and we prayed earnestly for the boy, believing the promise, "They shall lay hands on the sick, and they shall recover." We felt that the Lord had heard us, and all seemed in a more hopeful mood. The boy made a speedy recovery, and when I went to his home recently, he came out to meet me. We held several studies with the family, and since that time other doors have opened, until now we are making regular trips there each week, holding cottage meetings and house-to-house Bible studies.

Such instances as these bring to our minds the truth so often enunciated by the Lord's servant: "As a means of overcoming prejudice and gaining access to minds, medical missionary work must be done, not in one or two places only, but in many places where the truth has not yet been proclaimed." "We are to work as gospel-medical missionaries, to heal the sin-sick souls by giving them the message of salvation." It also brings before our minds the fact that when God extends his hand to do a work, he opens closed doors, and leaves nothing undone

which would hinder the advancement of the blessed truth.

We are at times tempted to look at the greatness of the task before us, and say, with the ten spies, "We cannot go up;" but certainly when we think upon the unlimited resources of Omnipotence, we are led to say with Jeremiah, "Ah Lord God! behold, thou hast made the heaven and the earth by thy great power and stretched-out arm, and there is nothing too hard for thee."

THE SANITARIUM QUESTION BOX

R. S. Ingersoll, M. D., Superintendent of Florida Sanitarium

WHAT reasons do you give for not drinking with meals?[1]

In order for digestion to take place to the best advantage, the gastric juice must be of a certain degree of concentration. This concentration can be measured in terms of the hydrochloric acid which is produced in the stomach. Normally, there should be two tenths of one per cent of this ingredient. To dilute the contents of the stomach by drinking large quantities of water with the meal, means that it will take a longer time for the gastric juice to become sufficiently concentrated to take care of digestion properly. This delay makes conditions favorable for fermentation. As a matter of fact, when we take our food we always introduce a large number of bacteria into the stomach, which are normally destroyed by the action of the juice secreted into the stomach. Delay means likelihood of fermentation; and this is why we do not advocate the use of much water with the meal. However, if one is very thirsty, it is better to take a few sips of water at the beginning of the meal or at its close than to subject oneself to the ordeal of taking his food in a way that would make it very unpleasant for him.

Should you object to the use of a small quantity of ice water with the meal?

For one who has comparatively good digestion, the use of a small amount of ice water with the meal, if taken slowly, would not necessarily be harmful; but should one take half a glass or more of very cold water, it would chill the stomach, drive the blood away, and make the conditions unfavorable for secretion of the fluids necessary for digestion. From this, one can readily see that ice water is much more objectionable, so far as the delaying of digestion is concerned, than is the use of ordinary water. For one with slow digestion, it would be far better not to use ice water with the meal. For one whose digestion is too rapid, a small amount of cold water with the meal will do no harm.

Why is it that you do not advocate the use of acid fruits with the dinners served at the sanitarium?

The question of food combinations is one of considerable importance in the treatment of stomach disorders. Digestion begins in the mouth, by the action of the saliva upon the starchy food. At the same time that the saliva begins to flow, the gastric juice is also supposed to begin to be poured out into the stomach. The reaction of the saliva is alkaline. The reaction of the gastric juice must be acid before digestion begins in the stomach upon the albuminous or protein food substances, which are digested in the stomach.

The Creator has arranged it so that the starch digestion may be continued in the stomach for a short time at the beginning of the meal. As a matter of fact, the acid which is poured out into the stomach is neutralized by the saliva which we swallow, and thus the reaction of the stomach is kept alkaline for about half an hour. During this time the starch digestion is continued in the stomach. After that time, foods that are normally digested in the stomach are acted upon. From this, it will be readily seen that it is not desirable for us to take acid fruits at the beginning of the meal, for we should thereby shorten this period during which the starches should be digested in the stomach, and make conditions favorable for starch fermentation. We must not forget that the conditions in the stomach are very favorable for fermentation whenever digestion is not progressing properly. Heat and moisture, together with food material upon which the germs can grow, are the three essentials for fermentation. All three of these conditions exist in the stomach, and the germs accompany our food as we take it, no matter how careful we are in its preparation, in sufficient quantities to produce fermentation unless they are destroyed by the juices of the stomach.

Another reason why we should be careful about the use of fruits with our dinners is the difference in time necessary for the digestion of fruits and of vegetables. Fruit digests quickly and also ferments quickly. Vegetables digest slowly and do not ferment so quickly. As the vegetables digest slowly, and the stomach has not the power to separate these foods from each other, the fruit is retained in the stomach for a long time and is quite likely to ferment. If one uses fruit with the meal, it is better to take it at the close than at the beginning.

Are we to understand that you do not recommend fruit with our meals?

[1] These replies are given in Dr. Ingersoll's words. The editor might answer some of these queries differently.

No, I should not wish you to draw that conclusion. In fact, we should not use it between meals. It is as bad for us to eat at irregular times as it is to make poor combinations. Sweet fruits may be taken with almost any meal, but acid fruits, such as grapefruit, oranges, and sour oranges, should be taken with foods that will digest quickly, and that have had what starch they contain partially digested, so that its digestion will not be interfered with.

Acid fruits are very desirable for keeping the system cleansed from impurities, and it is well to make one meal of the day largely of fruits. If the evening meal is made of fruit, together with some dextrinized food, such as well-toasted bread, with butter, or some flaked food, as corn or rice flakes, they both digest quickly, and the stomach is empty before time for retiring, and sleep is not interfered with.

This arrangement of making one meal consist largely of fruit is of great value in the relief of constipation. The general idea that fruit will relieve constipation is correct when carried out in this way; but when combined with other foods, especially vegetables, it very often causes more trouble than it removes.

SANITARIUM NEWS NOTES

DR. KATE LINDSAY, of the Boulder-Colorado Sanitarium, took a three months' summer vacation.

Dr. Elizabeth Jamieson, of St. Louis, Mo., has connected with the Hinsdale (Ill.) Sanitarium.

Miss Bettie States, head nurse of the Wabash Valley Sanitarium, at La Fayette, Ind., has returned to duty after a short vacation.

Dr. F. C. Dean is house physician at the Madison (Wis.) Sanitarium. Mrs. Dean is rendering good service in charge of the ladies' bathrooms.

Dr. A. I. Lovell has severed his connection as house physician at the Madison (Wis.) Sanitarium, in order to be with his family at College View, Nebr.

Dr. O. H. Hahn, formerly of the Hastings (Nebr.) sanitarium, spent a vacation period in the Rockies in Colorado. Being "treed" by a bear, which he met face to face, is one of the things he tells.

A dozen young ladies were graduated from the Nebraska Sanitarium Training School for Nurses, at College View, recently. The following is the class roll: Alice Adams, Stella Spelder-Weeks, Lily Albrecht, Esther Aalborg, Sadie Anderson, Olga Tullin, Lydia Aalborg, Mabel Gilliland, Winona Engle, Bessie Wiswell-Rich, Amy Foote, Adnell Sorenson.

The Nebraska Sanitarium of Hastings was recently honored with a visit by a committee of members of the board of managers from a near-by new hospital, with the purpose of inquiring into the system of management that makes the work of the sanitarium successful.

From St. Helena we learn that excavations for the new building are well started. The building is to be forty by eighty feet, four stories high, and with concrete walls throughout. The top floor will be devoted to medical offices and special treatment rooms, the second floor to treatment rooms, and the third floor to mechanical gymnasium appliances and special treatment rooms for men.

The following note has been received from Dr. A. J. Hetherington, Ruatan, Honduras: "Our work is quite varied. We cannot tell one day just what will occupy our attention the next. We have considerable emergency work to handle, besides making regular visits to sick patients in their homes. Ruatan Island is thirty miles long. I make calls to any part of it, sometimes on horseback, sometimes by dory or gasoline launch along the shore. Occasionally I am called to some of the neighboring islands, and sometimes to the coast of the mainland. Patients come to us from the different islands and also from the mainland. We have all sorts of conditions to treat. Perhaps at a later time I may be able to write you an outline of what we do some days, and give you a more definite idea of circumstances and conditions as they are here."

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

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

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

Poor Health.—"My health is very poor; my blood is out of order; I have catarrh all through me; I have a catarrhal sore on my leg that will not heal. I have paid out all kinds of money, and nothing seems to do me any good. I should like to know whether pork is good to eat. I crave it. Please tell me of a good kind of medicine that will be good for my blood. Also tell me where I can get a good cookbook."

As your experience has shown, you waste your money when you buy medicines. There is no medicine that will make your blood better. Your poor health is due to some cause; and the first thing will be to find what is the cause of your condition, and then remove the cause. Drugs will not remove it. Your trouble may be due to your diet. I do not advise the use of pork in any case. "A Friend in the Kitchen" (50 cents, cloth, for sale at this office) is a good cookbook for your purpose. It would do you a great deal of good to take a course of treatment at a sanitarium.

To Remove Hair.—"Kindly send me a treatment that will remove hair permanently from the upper lip."

If I knew of a harmless hair remover that would produce permanent results, I could make a fortune. There are pastes that remove the hair, but it returns immediately. And there are some pastes that leave the skin in very bad condition. Such remedies are to be avoided.

Hair may be permanently removed by means of an electric needle — one hair at a time. This is a slow and painful process. A needle connected with a galvanic battery or other galvanic current of proper strength is inserted into the hair follicle, and when the current is closed, the hair is pulled out. If this is properly done, the hair-forming cells are destroyed, and further growth of hair from that follicle is impossible. This work should not be attempted by a novice.

Dairy Butter.—"Butter is one of a very few foods that agree with one member of our family. Is there danger of contracting tuberculosis from using dairy butter? Is it possible to buy butter made from sterilized milk? Is there a coconut preparation that is a good substitute for butter?"

For a while there was a great outcry against butter as a possible cause of human tuberculosis. It has been learned, however, that there is a difference between human and bovine tuberculosis, and that adults rarely, almost never, contract the cattle disease. The tuberculosis of children, such as that which affects the bones and the glands of the neck, may be caused by dairy products. The writer is very doubtful that any considerable number of cases of tuberculosis can be traced to the use of butter, even though the butter as it comes to market may contain a few live tubercle bacilli.

Butter may be made from sterilized milk, and at one time such butter was the only butter used in a certain sanitarium; but I question whether much butter is now made from sterilized milk. Many of the herds are tuberculin-tested at intervals, and butter from such dairies must be practically free from tuberculosis germs. Much of the cream is Pasteurized, and this is sufficient for all practical purposes.

A coconut butter is made in Europe, and is there highly esteemed. I obtained a supply when in England, but found it rancid when I arrived in this country a few days later, so that I doubt that it keeps as well as dairy butter.

Insomnia and Bloating.—"Can you suggest a remedy for chronic insomnia accompanied by formation of gas in the stomach and bowels? I have used no animal food for fifteen years, with the exception of a little milk and butter and an occasional egg."

The presence of gas will often produce wakefulness; and indigestion is an important cause of high blood pressure with tendency to wakefulness. An elderly person with tendency to gaseous fermentation accompanied by sleeplessness would do well to have a course of treatment at a well-conducted sanitarium. There is present a condition that is not likely to be relieved by home treatment.

When a person of fifty begins to have gas with almost any kind of food, and loses sleep frequently, it is an indication that old-age processes have begun, which, if not checked, will hasten the end, meantime lessening the efficiency of the few remaining years.

It is well to avoid an excess of carbohydrates, especially fruits. Ordinarily fruits are more likely to be responsible for the production of gas than are other foods. All foods should be well masticated, and eaten in moderation. It is especially important that the mouth and teeth be put in good condition. If there are decayed or loose teeth or pus pockets, the first indication is to secure the services of a good dentist. With a mouth full of germs infecting all the food, it is impossible to have healthy digestion. Then the mouth should have attention before each meal.

Sometimes when there is a tendency to insomnia, there is a formation of gas several hours after the meal, and the patient is awakened, say, at three or four in the morning. It is possible that if the last heavy meal is eaten at noon, and a light lunch, say of zwieback and hot milk, just before retiring, the formation of gas will be postponed, thus allowing one or two additional hours of sleep.

Best Climate for Consumptive.—"What place in the United States offers the best climate for one with lung trouble in the first stage?"

The best place for one with lung trouble is where there is certainty of careful treatment. If one goes to the West without an abundance of money, he will find expenses high, will have to meet a certain amount of prejudice against "one lungers," and will learn to his dismay that many of the hotels and other institutions do not care to receive tuberculous patients. There is no more abject person in the world than a consumptive landed in the West without a fund on which to draw.

If one has funds to pay all expenses for several months, in addition to his fare, I should suggest the Southwest,—Colorado, New Mexico, or Arizona,—though many do well in Asheville, N. C., and other places in the East. Many patients seem to improve every time they make a change of climate. This, however, may be simply the stimulus of a revived hope.

Goiter; Lead Poisoning.—"A goiter has developed on the left side of my throat. I have lost weight, and my skin has become rough and my memory fickle. May the goiter be due to lead poisoning? I am a printer, working in an unventilated room heated with a kerosene stove, and am compelled to breathe the fumes from a linotype and lead-melting furnace. Is potassium iodide a good remedy?"

I am not aware that lead poisoning causes the symptoms you have mentioned. You are working under unfavorable conditions, however, such as will render your body a more easy prey to disease, and you owe it to yourself and your family to get your work under better conditions. If there is a social service committee in your town, perhaps it can take

the matter up with your employers. The average employer, if convinced that he is lessening the efficiency of his men by insanitary surroundings and conditions of work, will make changes for the better.

I could not tell by correspondence just what is the nature of your trouble, but I suspect that it is a deficiency in the thyroid function, and that it might be remedied by the administration of thyroid extract. This, however, is not a safe procedure except under the direction of a physician.

Iodine or potassium iodide might be a benefit if the case is one of deficiency of the thyroid, but it would be unsafe for you to attempt to treat yourself. Even if you are some distance from the nearest physician, you would do well to make the trip and get advice based on a careful examination.

Pain in Hip.—"For six months I have had spells like a shock of electricity. My hip becomes so painful that I cannot do anything for about three days, and at times I cannot bear to move. In the worst attacks the pain is also in the small of my back. I am fifty-four, just past my change. Have been losing flesh the last month."

I regret that I shall not be able to give advice as to treatment without making a careful study of your case. Probably your home physician can do much more for you than I can, as he can make all the examinations necessary to determine what is the cause of your trouble.

It would be an excellent thing for you to go to your nearest sanitarium. There you would be under the direct observation of the physician and his attendants, and he would be able to learn more about you than is usually possible by the physician who makes an occasional visit, and who does not always have the laboratory equipment to make a thorough study of the patient. Not only do sanitariums have special facilities for studying into a case, but they have facilities for treatment that the physician in private practice does not have.

Ear Trouble.—"For nearly a year my right ear has been much sorer than the left. If air is forced into my ears, they feel as if a pin were pricking the eardrums. Some days they ring, off and on. If I go out into the wind without a cap, my ears ache. Is there any oil that will relieve the soreness? My hearing is not very good. I am seventeen years of age."

You may have some catarrhal difficulty, but I could not be certain as to the exact condition. The only way that you can have treatment that will not be liable to do more harm than good is to go to a reliable ear specialist and have an examination.

Treatment that might be beneficial for one person would not be at all beneficial for another. The first and most important thing before any treatment is attempted, is to know just what is the matter. So I trust you will not attempt to treat yourself, but go to some competent man who can give you a thorough examination and prescribe such treatment as will be exactly suited to your case.

EYESTRAIN

(*Concluded from page 22*)

cases of vertigo, so-called sick headache or "bilious attacks," are caused by eyestrain.

Whenever children show any signs of nervousness or disinclination to read or study, the eyes should be examined as a possible source of the trouble; and it is needless to point out that any obvious abnormality, such as red, inflamed, or watery eyes, or cross-eyes, should at once be investigated and remedied.

Why Tests of Vision Should Be Universal

It is poor policy, however, to confine the examination of the eyes of school children to those cases in which the trouble has gone so far as to produce striking signs of ocular or nervous disease. Many ocular defects are not obvious; in fact, some of the worst sufferers from eyestrain have no readily apparent eye trouble, and many of them have very accurate near and distant vision.

The eye is exceedingly complex in structure, and most intricate and delicate in organization. To secure clear, accurate vision the eye must adapt itself with lightning-like rapidity to the size of the object perceived, its distance, the illumination, and the accuracy with which the object is observed. The power of the eye to adapt itself to all these varying conditions is called the power of accommodation. Not only is the perfectly adjusted, normal eye able to respond by accommodation to the rapidly changing conditions and varied uses to which it is put during waking hours, but it is even possible [with normal accommodation] to overcome considerable errors of refraction, and to force such an adjustment of a defective eye as to bring about clear and in many instances perfectly normal vision.

The healthy, robust individual can frequently accomplish a wide range of such accommodative effort, even successfully compensating for high degrees of refractive error with little or no inconvenience. Yet this forcing of the refractive media of the eyeball to overcome its defects always taxes the delicate ciliary muscle, and in those not sufficiently robust to endure it, eyestrain is the result.

Though we all possess this faculty of accommodation in greater or less degree, its ability to respond to the demands which we make upon it are dependent upon the conditions of our general health and strength; and it is exceedingly unwise to presume upon and abuse it when properly constructed glasses would correct the defects of vision and relieve the ciliary muscle of its abnormal and excessive strain. It is for this reason that all children, even in the absence of any eye symptoms whatever, should upon beginning school life have their eyes examined by an oculist; for by this simple preventive measure many a miserable hour in the future may be forestalled.

The Hygiene of the Eye

Parents and teachers should see that children, in reading, writing, or other work requiring close and accurate vision, assume a proper position, sitting in an erect posture and having the work about fourteen inches from the eyes, and also that there is sufficient light for the task. The light should shine upon the object to be seen, but should not be directly reflected from it to the eyes; and the source of light should be above and behind the person. Daylight is, of course, the best light. If artificial light must be used, it should be even, clear, steady, and sufficiently bright.

An illustrative article on the prevention of blindness will appear in an early issue.

SOME BOOKS

Keeping in Condition — A Handbook of Training for Older Boys, by Harry H. Moore. Cloth, 137 pages, illustrated, 75 cents. The Macmillan Company, publishers, New York.

This is an attempt to set up before youths of fourteen to eighteen years an ideal of clean, vigorous manhood, and to supply them with the information necessary for its achievement.

The essentials involved in training, exercise, fresh air, diet, rest, and the control of the inner force are explained, and the fact is emphasized that all these, not two or three of them, are essential to real success.

The book contains many suggestions for parents and teachers. The question of sex hygiene is given in its natural connection as a phase of physical training.

Peg Along, by George L. Walton, M. D. 197 pages. Cloth, $1 net. J. B. Lippincott Company, publishers, Philadelphia and London.

Under a rather unconventional but very expressive name, the author of the famed "Why Worry?" and "Those Nerves," has given to the public another book of the self-help type.

Those who are familiar with his other books will of course be anxious to read another of the doctor's books, but they may be surprised to read his confession that he himself has been a worrier. He says, "I give no advice to others that I do not need myself," and, "I offer no maxims for the aid of others that I do not have occasion myself to use many times in the day."

It is certainly a relief when one is reading a book showing in little and detail his nervous frailties and habits, to have already read the confession that the author is really describing his own failings. There is, after all, a kind of Masonry created by the knowledge that your neighbor, and especially the one who is trying to correct you, is beset the same way himself.

Some of the topics considered in this worthy successor of "Why Worry?" and "Those Nerves," are: "Managing the Mind," "Overinsistence," "Approbativeness," "Fret," "Fear," "Playing the Martyr," "Living in the Present," "Work and Play," "Emotional Poise," and "The Hypochondriacal Dredger."

"The race is not to the swift,
The prize is not to the strong,
The best of life is always
For the man who 'pegs along.'"

THE GERMAN CRUISER "BREMEN"

Tuberculosis Houses Designated.— For the better protection of the public the Minnesota Health Department has prepared a list of the houses in which tuberculosis patients have lived.

Cholera.— Cholera has been reported to be prevalent in many places in Germany, and it has again reached Italy from the Balkans. The U. S. Public Health Service is making strenuous efforts at ports of entry to keep the infection out of this country.

Free Treatment for Crippled Children.— In accordance with the 1913 Michigan State law which provides for the medical and surgical treatment of children who have curable maladies or deformities and whose parents are unable to pay for treatment, more than seven hundred children have been treated free of charge during the past year at the university hospital, at Ann Arbor, Mich.

Primrose Poisoning.— In the August issue of the *California State Medical Journal*, Drs. Douglass W. Montgomery and George D. Culver call attention to a dermatitis, or skin eruption, caused by the primrose, a fairly common house plant, with handsome flowers and almost continuous bloom. It seems from the descriptions of florists that insects never bother the plant, possibly because of some poisonous substance given off by it.

As a Reminder.— It is reported that the mayor of Atlantic City proposed to have a coffin made for him to sleep in nights when he has been celebrating. He believes that it requires something more than a headache the next morning to serve as an admonition. He says that he will keep the coffin in his apartment, and when he arrives home after one o'clock from some banquet, the coffin will be his sleeping place, so says the Washington *Herald* of Sept. 21, 1915.

Flies and Diarrheal Disease.— The Bureau of Public Health and Hygiene of the New York Association for Improving the Condition of the Poor has issued a special publication entitled "Flies and Diarrheal Disease," descriptive of its three months' study in the homes of over a thousand infants in New York City, on the relation of flies and diarrheal disease. Special attention has been given to such influencing factors as dirt and artificial feeding, and their relative importance. From its study it appears that dirt, flies, and artificial feeding each has an influence in increasing the prevalence of infantile diarrhea. A full description of the study may be obtained by request from Philip S. Platt, 105 East Twenty-second St., New York, N. Y.

Swims Around New York.— Robert W. Dowling, aged eighteen, swam completely around the island of Manhattan (or New York City), a distance of about thirty-five miles, in September, in thirteen hours and forty-five minutes. This is the first time the feat has been accomplished.

Splendid Antityphus Fight.— To reduce in three months an epidemic of 100,000 cases of typhus to 600, and the mortality from 70 per cent to 20 per cent, was the accomplishment of the American Red Cross and the Rockefeller Institute Sanitary Commission, with the aid of the European physicians; but it is recognized that it was the vigorous work of the Americans that stamped out the disease.

Suffrage Defeat in New Jersey.— The fight for woman suffrage in New Jersey was lost by about 50,000 votes. It is said that the organization of the State Liquor Dealers' Association entered the contest against the women. They, of course, had the money necessary for a campaign corruption fund. But why do the liquor dealers fear the women's vote? Is it because they know that wives and mothers are opposed to a traffic that ruins homes?

Open Treatment of Burns.— Herrman, in the *American Journal of Surgery*, describes his method of treating burns. The injured part is left exposed to the air, but well covered with powdered boric acid to prevent the multiplication of putrefactive germs. He gives a sedative, if necessary to relieve the pain. At the end of twenty-four hours, the serum will have covered the ends of the nerves, and there will be but little pain unless the part has been roughly handled.

Liquor Men Believe in "Temperance."— A billboard of the "Ohio Temperance Union," paid for by money supplied by the liquor men, had the slogan, "Temperance is all right, prohibition is all wrong." "There's a reason," as Post would say. Under temperance, breweries and distilleries prospered and increased in numbers; under prohibition, breweries and distilleries are running half time or going out of business. But why is it that the liquor men hide the fact that their "temperance" billboards are financed by the liquor element?

Ask for Dry Indian Territory.— It is said that the Chippewa Indians have asked that the government close the saloons in the Indian territory.

To Fight Mosquitoes.— The mosquitoes were so bad in the vicinity of New York City this year that Health Commissioner Goldberger proposes to form an interstate commission to head an antimosquito campaign in 1916, in New Jersey, Connecticut, and southeastern New York.

Mental Failure From Physical Cause.— The following incident is an illustration of the fact that mental failure may be due to conditions which can be easily remedied: Up to the age of eleven years a New York boy had been normal in his school work; then his mind began to give way, and at the end of the year he knew less than at the beginning of the year. He was placed in an ungraded class, and later became so incorrigible that it was proposed to send him to the children's court, when the teacher advised that he be sent to the Clearing House for Mental Defectives. Here it was discovered that the boy was suffering from an abscess of the frontal sinus. After this had been removed by an operation, he began to improve, and in time was back in his regular classes. The period of the mental failure, and probably of the abscess also, was three years. Had the abscess not been discovered, the boy would probably have gone through life an imbecile.

Flour Substitutes.— The U. S. Bureau of Chemistry is testing a number of flour substitutes, to be used, not in place of wheat flour, but added to wheat flour in the manufacture of bread. Among these are chestnut, banana, peanut, soy bean, pea, corn, barley, oats, and rye. There are thirty such substitutes, which make good bread when not more than 25 per cent is added to 75 per cent of wheat flour.

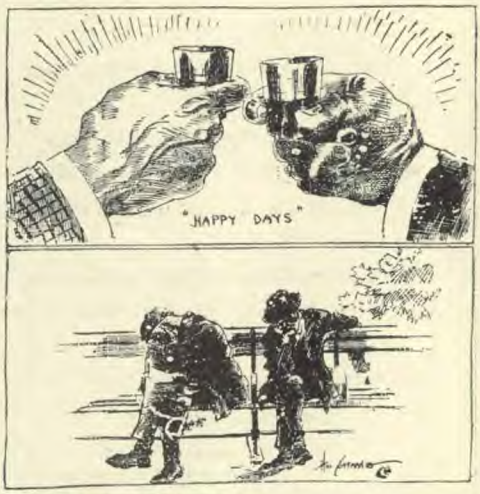
Sunday Closing in Chicago.— Digging up a forgotten law, Mayor Thompson of Chicago, about the first of November, ordered the Chicago police to enforce the Sunday closing of all saloons, and for the first time in forty-four years Chicago was almost as dry as a parchment on Sunday. A few saloon keepers kept their places open in defiance, and were prosecuted. The fight is on in Chicago, the dries being determined to make the city dry every day, and the others protesting in the strongest terms against even a dry Sunday.

Sour Milk Treatment.— Recent investigators seem to confirm the opinion that the germs of sour milk cannot be made to survive in any appreciable numbers in the lower intestine, where they are most needed to counteract the effects of the putrefactive germs. This may be so; but the administration of sour milk is in some cases certainly very effective. Are we to attribute the good effect entirely to autosuggestion? or may we conclude that laboratory workers are not infallible creatures, and that their preachments are to be accepted only when they are confirmed by bedside observation? Doubtless altogether too much has been expected of sour milk therapy by its advocates, especially by those who are commercially interested in the sale of sour milk products, but there is a danger that the pendulum will swing too far the other way. Sour milk has a useful place in the treatment of certain intestinal disorders.

Controlling Cancer in England.— Portsmouth was the first municipality in England to undertake a public educational campaign for the control of cancer, and it would appear that the measures adopted in 1913 are already taking effect. The annual report of the medical officer of health, Dr. A. Mearns Fraser, for the year 1914, which has just been received, states that there were only 197 deaths from cancer in Portsmouth last year, as compared with 230 in 1913. This decrease, which occurs in the face of an increase of population, is hailed with satisfaction by the Portsmouth sanitary authorities, as justifying their efforts to reduce the cancer death rate by persuading persons who are attacked with this disease to avoid delay and to seek treatment before it is too late for more than palliative measures. Dr. Fraser reports that from statements made to him by local medical men, the publication of circulars and newspaper articles by the health department has been instrumental in inducing a number of persons suffering from early operable cancer to secure treatment, the result of which, it is hoped, will be permanent.

Terminal Fumigation Discontinued.— The cities of Providence, New York, Milwaukee, Boston, and some others have ceased the practice of fumigation after the termination of contagious diseases, for the reason that sanitarians have become convinced that such fumigation is no advantage in the prevention of infection. Such diseases as are transmitted from person to person, are transmitted by the live carrier of the germ, and not by clothing, furniture, etc. This has been suspected for some time, and continued observation shows that the suspicion is well founded. Where terminal fumigation is omitted there are no more new cases than where it is continued.

Autolysin Treatment of Cancer.— Some time ago a method of treating cancer by the injection of a secret mixture of herbs was tried out at the General Municipal Hospital, New York City, by a physician who was then connected with the institution, and was given great publicity through the lay press in a way that would suggest that the promoters were possibly influenced by commercial motives. Dr. Beebe, who seemed most prominent in the publicity campaign, has since severed connection with the hospital and with the Cornell University Medical School, so it is said. In the *Journal A. M. A.* of November 6, Dr. Weil, of the hospital staff, published an article in which he showed that the supposed remedy did not accomplish any results whatever in arresting cancer growth in the twenty-three cases in which it was tried. He deplores the fact that on the basis of the sensational articles regarding the virtues of the supposed new remedy, cancer patients who have no money to spare are coming to New York, even from distant States, hoping to be cured.



Youngstown (Ohio) Telegram

PROMISE AND FULFILLMENT

Booze makes a thousand promises to the drinker, and breaks every one of them.

CURRENT COMMENT

Alcohol a Poor Kind of Food

THE question as to whether alcohol is in any sense a food, has given rise to much heated controversy. Much of this has been unscientific and partisan, and has arisen from a loose use of the term "food." It may not be amiss to remind our readers that there are two great classes of foods: those which serve mainly or wholly as fuel, that is, supply heat and energy; and those which serve largely to reconstruct worn-out tissue or to build new tissue (as in growth). Chief among the fuel foods are sugars and starches and fats; chief among the tissue-building foods are proteins and mineral salts.

Physiologists are agreed that moderate quantities of alcohol taken into the body in diluted form, are completely burned, just as sugar is burned. In this process, it undoubtedly serves as a source of heat, and it is probable that under these conditions it can also serve as a source of mechanical energy.

On the other hand, alcohol differs from other fuel foods, such as the sugars, starches, and fats, by not lending itself to storage in the body. Even though physiologists regard alcohol as, under certain conditions, a food, we should be careful to note that they do not class alcohol as at all equal to the other fuel foods mentioned.

But this is not all. Not only does alcohol *lack certain valuable properties* possessed by other fuel foods, but it *possesses injurious qualities* in so high a degree as to make its intemperate use the greatest single menace to health known. The injurious qualities are, (1) the toxic effect on the body tissues; (2) the habit-forming character of alcoholic indulgence.

Inasmuch as small amounts of alcohol, taken into the body are rapidly oxidized, that is, completely burned up, the claim has been made that under these conditions alcohol is without toxic effect on the body tissues. That it does injure these tissues, even when taken in moderation, is indicated by studies conducted by various life insurance companies, to which reference has been made in previous numbers of the *Bulletin*. Unlike the observations by physiologists on relatively small numbers of individuals, the figures collected by the insurance companies are derived from an analysis of the life histories of millions of persons.

The habit-forming properties of alcohol are so well known that further comment on this phase of the alcohol problem is unnecessary.

Altogether, the conclusion is inevitable that though technically, physiologists are correct in classing alcohol under certain conditions as a food, practically, the consumption of alcohol, even in moderate quantities, constitutes a grave menace to health. As Woods Hutchinson has well said, "Alcohol as a food is a joke, and rather a bad joke at that."—*Weekly Bulletin, Department of Health, City of New York.*

Safety First — Why Not? — The New Haven Railway has recently issued a statement that during the past year 5,471 persons have been killed in this country while walking railroad tracks. This is unnecessary slaughter at the rate of fifteen a day. No lives are lost in this manner in England, for there the public are not allowed on the railway property.

Honey in Diabetes.— A Russian physician, having discovered accidentally that honey in the diet of a diabetic patient did not increase the urinary secretion of sugar, added honey to the diet of a number of diabetics, and found that as a result the urinary sugar was not increased, and in some of the patients there was an actual decrease in sugar after the addition of honey to the diet.

Strychnine Not a Heart Stimulant.— Newburgh, in *Archives of Internal Medicine*, March 15, 1915, says that strychnine in medical doses does not increase the output from the heart, slow the pulse, or materially raise blood pressure, and that there is no logical basis for its use as a stimulant for the circulatory system. He is also doubtful that caffeine is a true stimulant to the circulation.

Iodine Treatment of Erysipelas.— According to Magi's experience, as recorded in *Policlinico*, April, 1915, brilliant results were obtained as a result of painting the inflamed area with tincture of iodine, especially when there was infection complicated with enlargement of the lymph glands, following infected wounds of the hands. After one application the swelling usually subsided, and even the rebellious cases yielded after several applications. He found that erysipelas of the face and scalp also responded promptly to the iodine treatment.

Switzerland's Medical Contribution.— Switzerland, which has already played an important humanitarian rôle in the present war, in the way of looking after the interests of wounded prisoners, is now to undertake a new task,— the hospital care of certain of the prisoners of the various belligerents who are not in a sufficiently serious condition to return to their own country, but who suffer from the life of the prison camps. The first class to be taken care of will probably be the tuberculous, who will be distributed among the various Swiss resorts. Prisoners will be allowed a measure of liberty necessary for recovery.

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General Headquarters, Medical Department General Conference S. D. A., Takoma Park, Washington, D. C.

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Florida Sanitarium, Orlando, Florida.

Glendale Sanitarium, Glendale, California.

Iowa Sanitarium, Nevada, Iowa.

Kansas Sanitarium, Wichita, Kansas.

Loma Linda Sanitarium, Loma Linda, California.

Madison Sanitarium, Madison, Wisconsin.

Nebraska Sanitarium, College View, Nebraska.

Nebraska Sanitarium, Hastings, Nebraska.

New England Sanitarium, Melrose, Massachusetts.

Oakwood Sanitarium, Huntsville, Alabama. (For colored.)

Paradise Valley Sanitarium, National City, California.

Portland Sanitarium, East 60th and Belmont Sts., Portland, Oregon.

St. Helena Sanitarium, Sanitarium, Napa Co., California.

Tri-City Sanitarium, 1213 15th St., Moline, Illinois.

Wabash Valley Sanitarium, La Fayette, Indiana.

Walla Walla Sanitarium, College Place, Washington.

Washington Sanitarium, Takoma Park Station, Washington, D. C.

Washington Sanitarium Branch, 1713 I St., N. W., Washington, D. C.

Foreign Sanitariums

Adelaide Sanitarium, Barker Road, Nailsworth, Adelaide, South Australia.

Bellair Hydropathic Sanitarium, Bellair, near Durban, Natal, South Africa.

Cape Sanitarium, Plumstead, Cape, South Africa.

Caterham Sanitarium, Surrey Hills Hydro, Caterham Valley, England.

Christchurch Sanitarium, Papanui, Christchurch, New Zealand.

Christiania Health Home, Akersgaden 74, Christiania, Norway.

Friedensau Sanitarium, Friedensau, Post Grabow, Bez. Magdeburg, Germany.

Kimberley Baths, 7 Cheapside, Kimberley, South Africa.

Lake Geneva Sanitarium (Sanatorium du Leman), Gland, Ct. Vaud, Switzerland.

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

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

Skodsborg Sanatorium, Skodsborg, Denmark.

Stanborough Park Sanitarium, Stanborough Park, Watford, Herts, England.

Sydney Sanitarium, Wahroonga, N. S. W., Australia.

Warburton Sanitarium, Warburton, Victoria, Australia.

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