

Life & Health

THE NATIONAL HEALTH MAGAZINE

March 1916

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LIFE AND HEALTH

WASHINGTON, D. C.



GATHERING MAPLE SAP

This is a familiar scene in Vermont in March. An auger hole is bored through the bark, an iron spout is driven in, and to this the pail is hung. The cover drops down over the pail and keeps out rain and foreign matter.

LIFE AND HEALTH

March, 1916

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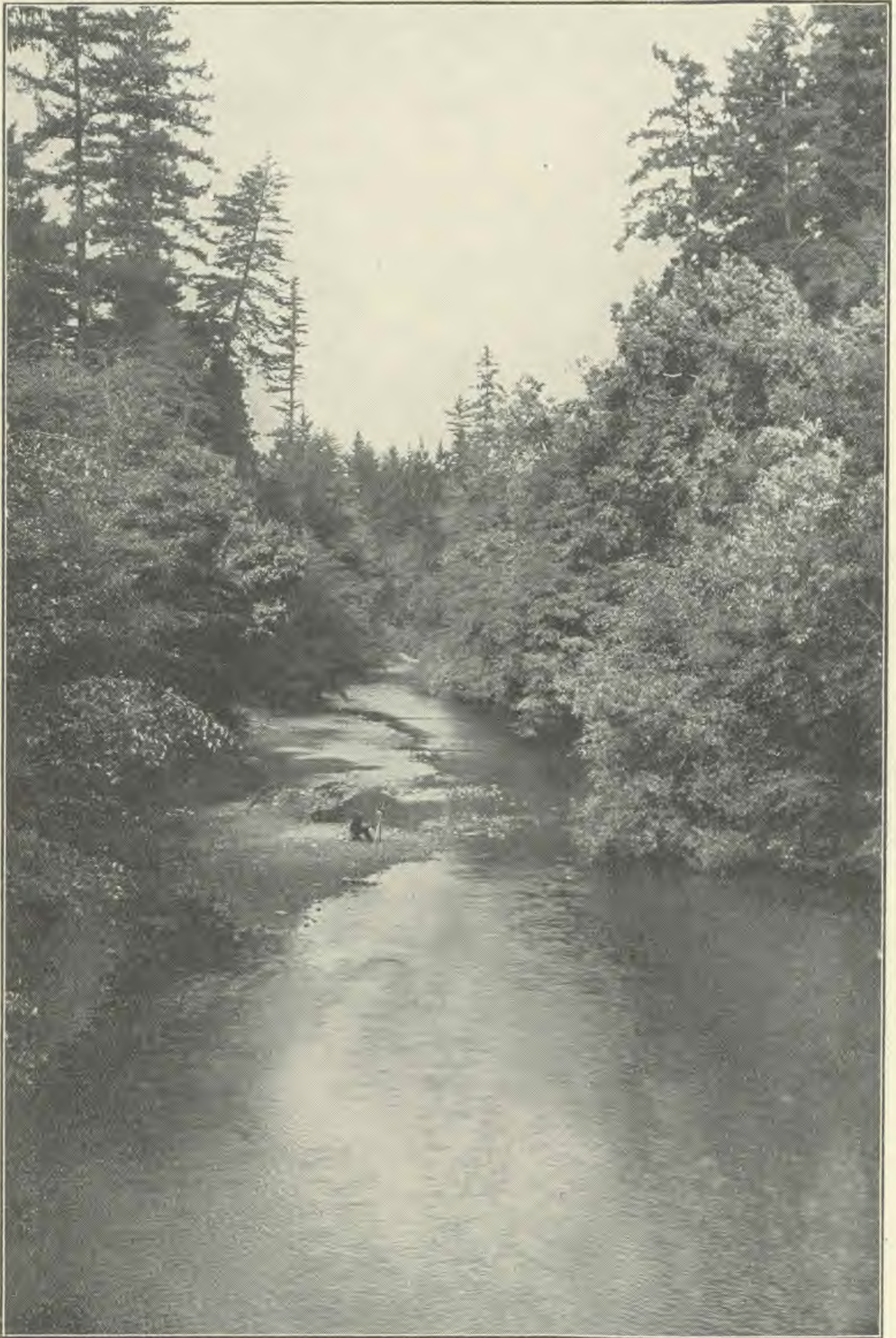
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SAN LORENZO RIVER

A view in the Santa Cruz Mountains, California.

VOL. XXXI
No. 3

Life & Health

THE NATIONAL HEALTH MAGAZINE

MARCH
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

THE EFFECTS OF BREATHING VITIATED AIR

Eliza H. Morton

THAT breathing vitiated air affects the color of the lungs as well as the health of the individual has been demonstrated in various ways. In the museum of the Edinburgh University there are three sets of lungs preserved by a chemical process. One set, pure white, was taken from an Eskimo who spent most of his time in the open air; the second set, a dirty brown in color, was taken from the body of one who lived in London, breathing constantly its vapor-, smoke-laden atmosphere; while the third set, jet black, was from the body of a coal miner who for years had breathed the coal dust in a deep mine.

The rabbit experiment performed by scientists in Paris proves conclusively that air which has been breathed once is poisonous. Three glass containers were placed in a row and connected with a tube. A rabbit was placed in each. The first was given pure air, and he survived the severest tests. The second had to breathe the air which had been breathed by the first, and the result was that he lived but two or three weeks. The third rabbit was made to breathe the air which had been breathed by the two others, and he died in a few days.

That the contaminated air of crowded or badly ventilated apartments causes dulness, faintness, and drowsiness is a well-known fact.

The history of the British Army shows that for many years while its barracks were constructed with no regard to ventilation, the mortality from consumption was great; but as soon as the buildings were improved and the air supply increased, the deaths diminished more than one third.

In certain workshops and factories material is used from which fumes and dust are constantly arising, and the result is disease and death to the workmen.

Children who habitually take in pure, fresh air generally grow up strong and ruddy, cheerful and active, while those brought up in crowded tenement houses are puny and sickly.

That constantly breathing impure air leads to all kinds of vice and impurity is a fact that cannot be disputed. Men's thoughts and feelings are to a certain extent gauged by the air they breathe. Lord Derby says, "Cleanliness and self-respect go together, . . . and you cannot get healthy brains to grow on unhealthy bodies."

Portland, Me.

Among other topics to be discussed in the April issue will be "Aids to Health Restoration," by Dr. D. H. Kress.

NERVOUS PROSTRATION, OR NEURASTHENIA

Loe A. Sutter, M. D., Supt. Kansas Sanitarium

WE so often hear the expression, "My wife is suffering from nervous prostration," or, "I have a nervous breakdown." What is really meant by these statements we shall try to point out in this article.

Nervous prostration means a too rapid or a too great physical or mental fatigue experienced in doing the everyday duties of life. There is really an emotional unbalance or an undue irritability of the nervous organism. This leads to a state of inefficiency or nervous disability.

The Cause of Neurasthenia

Sometimes the real cause is to be sought in the parents or ancestors of the sufferer. The mother, perhaps, is a sickly woman, or the father indulges in the use of alcohol, or one of the grandparents may have been a chronic sufferer from general nervousness or some eccentricity. Sometimes there is a family history of hysteria, epilepsy, gout, alcoholism, or some form of insanity. Not infrequently a real genius has a son or a daughter who is a marked neurasthenic.

At times neurasthenia is caused by an infectious disease or some organic weakness. Often an inherited tendency is made worse by the home training. A child who has not been robust is pampered by the mother, its slightest wish gratified. The other children are required to give up to it. The mother never fails to tell company, before the child, that "Jimmy is very delicate and nervous." It is only a short time until the child learns to give vent to an outburst of anger whenever he is denied the slightest desire. An indulged temper or a sensitive and selfish disposition, predisposes to neurasthenia.

The usual age for nervous exhaustion to appear is in the late teens, or the early adult life. However, at puberty a boy or girl may complain of headache, or pains in the back, or may tire mentally and be unable to do the required school work.

There is always some exciting cause preceding an attack of nervous exhaustion, or neurasthenia. This may be a severe emotional shock, exacting mental strain, or fatiguing manual labor. It is not necessary, however, that the mental or physical work done be greater than an average individual would perform under like circumstances with no ill effect.

The exciting cause is often the worry habit, or it may be a severe fit of anger, prolonged loss of sleep,¹ or poor food that lessens the nervous store of an already inherited and cultivated tendency to neurasthenia.

Fear is often noticed in a nervous individual. A close analysis will usually develop the fact that the fear is produced by undue sensitiveness or jealousy.

Another exciting cause is chronic constipation. Here the individual with nervous instability has his small store of vitality sapped by the poisons that he absorbs from his intestinal tract.

I think there can be no doubt that our present method of living has an influence upon our nervous organism. The vibrations from trolley motors and automobiles, the succession of shocks in rapidly moving elevators, and the severe strain incumbent upon earning a livelihood, must lessen nervous stability.

Emotional stress has more effect on the nervous organism than physical overwork. Emotionalism is to a great extent an acquired trait. In the first place, the youngest child in the family, or the only child, usually has all its whims gratified. A child learns to grumble and find fault when asked to work, and is pampered if he complains of not feeling well. Every small ache or pain is made a mountain by an overanxious mother. This develops an enormous ego. Selfishness becomes the ruling motive.

¹ Though these may be merely symptoms of an on-coming attack rather than the cause.—Ed.

The child's teacher is often a neurasthenic woman. Any trivial thing of beauty she sees may lead to ecstasy of feeling. The child is accustomed to the expression, "Oh, how wonderful!" "Isn't it just exquisite?" and similar exclamations. A thing is not bad, it is "just dreadful." And so he becomes accustomed to slight extravagance of expression. These all tend to exaggerate his emotions. Many such children have no idea what restraint or discipline means.

Many persons develop neurasthenia by playing the game of life without sufficient interest. Others play the game so intensely that they wear themselves out. Either extreme is a departure from the norm that tends to instability.

Symptoms of Neurasthenia

The most constant complaint is that of too rapid fatigue, mental or physical, or both. This may be brought on by as slight an exertion as shaking hands or taking part in a short conversation.

An attack never comes on suddenly. Usually for months previous to the breakdown, the individual has been making mountains out of molehills. Her attention begins to wander. She begins a task with enthusiasm, but cannot accomplish it as formerly; because the mental effort tires her, and she is not able to keep her attention on the task. In time there is fatigue from continuous thinking.

There may be marked fear of impending evil, or dread of being alone. Closed or open places may cause fright. There may be great unhappiness of mind because of the inability to work as formerly.

Unfortunately, the neurasthenic is liable to be fretful, faultfinding, selfish, unreasonable, and to manifest a lack of appreciation for what her family and others are doing for her.

Moderate physical or mental exertion may bring on a headache, usually in the back part of the head or in the top of the skull. Often, however, the pain is in the back of the neck or between the shoulder blades. The head may feel too

heavy for the shoulders, or there may be a feeling as if there were a band around the head. There may be pains in the feet and limbs, or hot and cold flashes in the extremities. There may be complaint of a queer feeling in the head. If asked to describe it the patient may tell you that it is just a sort of "dizzy, mean feeling."

The scalp or the spine may be tender. A slight touch may cause pain. There may be a feeling of numbness or dryness in the palms and soles. At times there is numbness or pain along the outside of one or both arms, going down into the little and ring fingers. There may be complaint of a dull, dragging ache in the extremities. The patient may feel as though she is falling to pieces. Often she will come to the doctor complaining of a curious sensation in the chest or abdomen. She may have palpitation of the heart with a choking sensation. She may feel her heart beat at the root of the tongue or in her legs and arms. She may think that the blood is boiling in her veins.

The food does not taste right. The patient may imagine that her food does not agree with her, or that if she could have some certain food which circumstances forbid her having, she would be all right. At times she eats ravenously, meanwhile complaining that there is nothing she can eat. The food seems to lie like a ball in her stomach. Gas may press on the diaphragm and cause palpitation of the heart.

On rising in the morning she is usually tired and has a bitter taste in her mouth. She has an all-gone feeling. At times she may vomit food which she has taken but a short time before. She is usually constipated, and complains of pain and gas in the bowels. Sleep is very poor. There may be a feeling of falling as she drops asleep, or there may be jerking of the limbs during sleep. Frequently she will affirm that she did not sleep a wink during the night, when as a matter of fact she had sufficient sleep for any one. Dreams are frequent. She drinks but little water, and often complains of ir-

ritability of the bladder. Reading for a short time will cause blurring before the eyes. Our neurasthenic is a very imaginative individual.

Men are neurasthenics about as frequently as women, but they do not so often seek relief from physicians. The above-mentioned symptoms are perhaps not all present in the usual case of neurasthenia, and there may be other symptoms not mentioned here.

Treatment

All neurasthenics should have a change of surroundings. Some may recover by adopting a simple, quiet, outdoor life. One thing is imperative, and that is that any one suffering from nervous exhaustion must be treated away from home and from oversympathetic friends. Rest, with massage and bathing, is very beneficial.

At the present time there are many excellent sanitariums where nervous persons can obtain ideal surroundings, with proper food, isolation, and the like.

A severe attack of nervous exhaustion demands complete isolation in a sanitarium where no one but a nurse and the physician is allowed to see the patient for a time. The patient is put to bed, the bowels are kept open, and she is given plenty of nourishing food at regular intervals, with light massage once a day. Later the massage is given heavier, with resisting movements, and as the patient gets stronger, electricity can be used. A definite amount of water is given to the patient every day. As the condition improves, she is taken out of doors. Exercise is increased as strength returns. The patient is encouraged to smile and laugh, and so gradually returns to normal living. The patient's nurse should not allow the patient to discuss her troubles.

Warm sponge baths are given at first, and as the patient improves, warm tubs.

The water is generally cooled until the patient enjoys cold water. It is well to give the patient's hair a shampoo two or three times a month. The teeth and tonsils should be carefully examined, and treated if diseased. Eyestrain, if present, should be corrected. Constipation should be relieved by a regulated diet. Abdominal massage and movements may be administered, and at times an abdominal binder may be worn with great comfort to the patient. A neutral pack or a warm blanket pack at night is very soothing, and may induce sleep. Hot foot and leg baths, with fomentations to the spine, followed by a tepid sponge, may soothe the patient's tired nerves. Improvement should be observable in six weeks, in weight, in appetite, in the color of the skin, and in the condition of the tongue.

The patient should begin work very gradually. It is well to take up some hobby that will afford amusement and keep the mind busy so there will be no tendency to think about self. Cheerful and tactful friends may help to keep the patient's mind diverted from herself.

Some women who enjoy the distinction of being sick, have a marked aversion to work and a strong inclination to lie around. Such individuals should be encouraged to take active exercise from the first. Those who are weak and have lost a great deal of weight and strength need the rest-cure.

Neurasthenia is a disease that demands institutional care. Those who are suffering from this malady should be encouraged to go to some sanitarium where they can receive not only skilful treatment, but what is more beneficial, wise counsel and advice for the future. Some patients need only a few weeks away from home, to have awakened in them a new interest in life. Others require a longer stay at an institution.

Wichita, Kans.

HEALTH POSSIBILITIES

Belle Wood-Comstock, M. D., Glendale (Cal.) Sanitarium

DISEASE is the result of inherited and cultivated tendencies. For our inherited tendencies we are not responsible; for our cultivated we are.

All are loath to acknowledge that they have sown for disease, and are too ready to blame their sicknesses upon their ancestors; when if the facts were known it would be evident that for one disease coming directly as the result of the mistakes of our forefathers, we suffer from a score brought on by our own shortsightedness and ignorance. In fact, if parents could understand and train their children rightly up to the period of adolescence, and if these children, as they reach this period and onward, could know the right way to live, the harmful physical tendencies left by grandparents might become negligible.

It lies within the pale of possibility for every person to reach a high standard of health if he comprehends the physical handicaps with which he has come into the world, and understands how these handicaps may be obviated.

Weaknesses have we all; some greater, some less; some more apparent, some not easily seen. How are these weaknesses to be dealt with? is the vital question. Are they to be allowed to dominate the individual, or by careful training and exercise are the weakened tissues or organs to be made strong?

Here is a boy born into a family, many of whose people have died of tuberculosis. He is a delicate child, with chest long and narrow; and as he grows he tends to become flat-chested and round-shouldered, because that is the family type which he inherits. Is he doomed to die of tuberculosis because his habit is such that there is a more or less fertile field for the ever-present tuberculosis germ?—By no means. If his weak point is recognized at an early age, and he is guided by a wise parent, he begins

to develop his chest, taking proper exercise and deep breathing, and living out of doors, avoiding a sedentary life, and eating right; and where his grandparents were weak he becomes strong, and may pass on to his descendants a better heritage than he received.

Here is a girl born of a mother who has always had stomach trouble, constipation, and prolapse of the stomach and bowels, with its accompanying nervous condition; and it is soon evident that the daughter is of the same type. "She is like her mother." Must this mother with her illnesses and struggles be reproduced in her daughter?—Not necessarily. O, for an intelligent eye that can early see the need for proper training to overcome this tendency, that will direct this child into paths leading away from her heritage of weakness toward strength of body and mind, so that she may cultivate the health which can so easily be hers in spite of her birthright!

This girl should have careful diet, proper clothing, plenty of exercise in the fresh air, and as she enters womanhood, physical training that will develop her body along natural lines and strengthen those parts that are weak. She should be healthfully dressed, in order that her muscles, unhampered by stays and artificial supports, may become strong to perform their function of holding the organs up in their proper place. She should be trained to habits of self-control, in order that her nervous system may be strengthened, insuring to her the nerve force and mental poise she needs. With this training she may grow to be even a stronger woman than would have been possible had it not been necessary for her to undergo this special training.

But you say, "My parents did not know." Born with weak tendencies, I was allowed to cultivate them until now it is too late." Ah, no! At any time that the awakening comes, at twenty,

thirty, forty, or older, take an inventory of your physical assets and liabilities. Class your cultivated weaknesses along with those inherited. Look at the situation squarely, and right about face. Take note of your limitations, your physical shortcomings, and set about to overcome these and make your weak points strong.

Nature tends to restore, if given half a chance. Find the right physical program for yourself; and carefully train the weak places. Lighten wherever possible the load certain overworked organs are carrying; exercise properly; live along right lines; obey nature's laws. Before long it will be apparent that a change is taking place, and sooner or later the burden and handicap of diseased and improperly functioning organs will be lifted. It may be a long, hard pull. It will take time. No magic potion will do it, but persistence in the right program will bring results. Perseverance will win out. Determination and courage are often needed, but let us remember that in our physical needs as in our spiritual, we have an ever-ready Hand reaching to help us and to do for us that which in our humanity we may be unable to accomplish.

By those who would decry the importance of health in life's success, we are

often told of great men who, in spite of physical weakness, accomplished much for the world. Who knows but they had this vision, and to a certain extent, if not entirely, overcame the weaknesses of their youth? May it not have been the discipline of overcoming physical handicaps that made it possible for them finally to reach the heights of success?

Fortunate, indeed, is the child whose parents start it aright. Happy the youth, who early gets this inspiration. But thankful should we be for the opportunity given to us at whatever age to correct wrong habits of living, to place ourselves in right relationship to God's physical laws, and cultivate the possibilities for happiness and success within us.

It is not what is behind but what is ahead that demands our attention. There is no limit to that which may be accomplished if in sincerity we look for the path leading to the standard of health and efficiency we desire so much to attain. There is light ahead for those who wish it; and a gospel that includes the salvation of man's body with the salvation of his soul, is the one needed by the human race, and is the one offered by the Great Physician who went about doing good, healing the diseases of the people as he forgave their iniquities.



UNIVERSITY OF CALIFORNIA

One of the buildings of the great university at Berkeley, California, which has the largest enrolment of any university in America,

CALIFORNIA CLIMATE FOR THE INVALID

T. J. Evans, B. A., M. D., Superintendent Loma Linda Sanitarium

THE great attraction of California is its climate. This is the chief factor in bringing three fourths of the people to the land where the setting sun bestows her good night kiss before she goes to sleep across the great blue sea. Nature has there lavished herself in giving the best she has. The delightful climate, the fertile valleys, the rippling streams, and the ocean breeze all add to the comfort of those who have come here for rest.

California seems to have been adjusted by nature to meet the needs of all. She has the ocean side where the climatic condition remains the same the year around. She has her great mountain peaks, which tower above the clouds and send their massive forms high into the deep blue sky. California campers may pitch their tents on the highest or the lowest spot in the United States. There are valleys, fertile and barren, some high in the region of the clouds, some far below sea level, giving to the health seeker the greatest range in altitude and in soil conditions.

California's flowers are in perpetual bloom, and her golden fruit can be picked fresh every month in the year. In the month of January, while standing amid lawns of living green, decked and bordered with beautiful flowers, one may see, a few miles away, mountains clothed in their mantles of white, shivering in the blast of the storm. In one place the birds may be singing their melodious song as in a sum-

mer breeze, and not far distant others may be crouched under a snow-laden pine bough.

Many expressions similar to the following burst from the lips of travelers as their eyes rest on these scenes of nature: "I bow in holy reverence before my Maker as I gaze on the scenes spread out before me." William McKinley said while visiting Redlands, "One has no idea of its beauties until he actually looks upon it." Andrew Carnegie remarked, "I said to my wife today that we have never seen anything so fine on earth as that beautiful view of mountains and valleys while we wound about among the trees and flowers." William M. Tucker exclaimed, "I have traveled over pretty nearly all the attractive parts of the world. California is a revelation to me. On the eve of our departure for our Southern homes, we have spread before us the most beautiful spot our eyes have ever rested upon." Said another, "I

have today had a foretaste of what my happiest conception of heaven has placed before me, and it has convinced me of the reality of such a place. I shall from this time henceforth endeavor so to conduct myself as to merit entrance into that delightful realm." We frequently hear our patients say, "This country is so restful to me. The tension of my nervous system seems to have entirely gone."

The value of out-of-door life is appreciated by most physicians, and they are recommending the open for a great variety of diseases.



EL CAPITAN
Yosemite Park, Cal.



NOT A TROPICAL SCENE

This is not a Hawaiian landscape, but a bit of typical Southern California scenery.



A RUSTIC BRIDGE

Woodland and stream in California's Sunny South.

Open-air treatment can be used to great advantage in this climate, as the winters are so mild that exposure to the sun and air is available during every part of the year. Thus nature's own remedies can be utilized by all.

Invalids who wish to reap the full benefits of a residence in this section, must take advantage of this variety in climate. A location that brings health and vigor to a person suffering from one ailment might aggravate some other ailment in another patient. Thus, persons who have been living in malarious countries, with systems depressed by the dregs of fevers, are especially benefited by a residence on the Coast. The same may be said of victims of nervous disorder, including those who are suffering from insomnia. The atmosphere of the Coast forms a better and more effective sleeping draft than any that can be obtained from the drug stores, and moreover, its effects are lasting.

Sufferers from rheumatism and neuralgia should avoid the lower portions of the country near the seacoast. Relief from these affections is found in the more elevated regions where the air is warm and dry, both night and day. The same remark holds good in reference to catarrh, asthma, and bronchial affections, the highland and back country affording a very soothing and healing air, more favorable than the coast districts.

God cares for his loved ones, and he expects us to do all we can for those who have been intrusted to our charge by placing them under the most favorable condition for their welfare.

Invalids should remember that local conditions overshadow general conditions, and it is a mistake to leave the home fire-side to wander in any land, be it ever so favorable, without money or friends. The most beautiful flowers frequently grow among sharpest thorns.

Loma Linda, Cal.



CANYON CREST PARK, REDLANDS, CAL.
There are many charming drives in this vicinity.

A CAUSE OF MOTOR CAR ACCIDENTS

T. D. Crothers, M. D., Hartford, Conn.

DAILY experience shows that the drivers of automobiles are often alcoholics, using beer, wine, or spirits, and the question arises, To what degree are they incapacitated, dangerous, and unfit for this work?

Comparisons with the experiences of railroad men, who control and drive steam engines, show some very startling facts. Years ago, locomotive engineers drank spirits daily, and often carried bottles of spirits in the cabs with them.

On some of the English railroads you will observe engineers and trainmen taking beer at the station. For a long time it was thought that this in no particular way impaired their usefulness, and whenever accidents occurred, the habits of the engineer were never questioned in the causes. As long as trainmen had the appearance of sobriety and did not act stupidly or wildly, there was little or no question concerning their work.

A few years ago accidents on railroads became the subject of exact study. The officers of the roads recognized that this was a source of loss which could probably be eliminated, and the effort to make the management of the road as nearly perfect as possible, called for a variety of expert studies concerning the condition and causes of accidents.

One of the most startling discoveries, found to be generally true on all the roads, was that the men who were responsible for accidents used spirits more or less; also that men using spirits did not exercise their usual good judgment. They could not think and act so quickly as abstainers. Their senses were impaired, their memory was faulty, and a general carelessness marked their work.

Drinking engineers and trainmen had more trouble and were less regular in their work than the abstainers. Acting on these conclusions, the managers began to eliminate drinking persons from re-

sponsible positions, and the accidents and losses diminished at once. They followed this up, and became more and more rigid and insistent that no one in their employ should use spirits. The losses lessened so markedly that it was evident that drinking had been the active source of the trouble.

It was found in all departments of train work that drinking men failed in times of emergency, when quick and accurate judgment was required. This experience was so universal that now all the large companies are becoming more and more insistent that responsible employees of all grades shall be total abstainers, or at least not use spirits while in service.

This experience was recognized by manufacturers, business houses, steamboat companies, and industries of all kinds employing expert workmen. It was found that work which depended on the personality of the individual and his capacity to act wisely, was greatly impaired by his use of alcohol in any form. Thus the engineer in a factory, the mechanic in charge of delicate looms, or the treasurer of a bank, and even the salesman on the road or in the house, was rendered less efficient and less competent by the use of alcohol.

In view of these facts, the new vocation of driving high-power motor cars over the country, calls for the same, and even more, accurate use of the senses and judgment of the driver.

The high-power car on an ordinary road is a combination of energies that respond at once to the will of the driver. The conditions are constantly changing, and the driver must adjust himself instantly to them. He has no possibility of remedying mistakes, only in a very narrow way. The wheel registers his exact thought and will every moment. The driver is directing motor energies that are absolute and work with certainty.

The engineer on a steam train is pro-

tected by the rails which hold the train to the track. The mistakes of the engineer are confined to the signals and speed of the train. The chauffeur must recognize the surface of the road and its influences on the wheels, and the innumerable possibilities of danger constantly occurring. He must have such perfect command of these energies that he can instantly direct them. Anything that will impair his senses and judgment, or will lower his capacity to act wisely according to the circumstances and conditions, must be avoided.

It is a fact well recognized by all authorities that alcohol has a special numbing influence on the senses. The drink may be very small, but the effect is the same, differing only in degree. The senses seem to be the most positively impaired. Thus sight and hearing are diminished and the muscular control is lessened after the use of a comparatively small amount of spirits.

The automobilist who takes a glass of spirits, feels better for the first few moments, but he is literally destroying his capacity for directing the automobile with good judgment, and he is more or less incompetent to determine the quality of his own acts.

The chauffeur who, chilled from a long drive, takes a glass of whisky and feels warm and much better, imagines that he is quite as competent as before; but in reality he has done the very worst thing possible for safety. He has diminished his sense of sight and his ability to judge of the dangers possible at crossings, on bridges, from bad roads, and so on. His reasoning as to how and when he can pass another motor with a margin of safety and at what speed he should go, is impaired. The possibilities of mistakes are increased, and errors of judgment are likely to occur at any moment. The innumerable conditions that may suddenly concentrate before him, such as persons, animals, or vehicles on the road in front of him, holes in the road, rocks or obstructions suddenly appearing, requiring rapid and accurate judgment to avoid,

increase the possibility of an accident.

Stated in mathematical terms, the automobilist, as a total abstainer in his best condition, must take a five-per-cent chance of accidents in every ten thousand miles. After taking spirits, this chance is increased to twenty-five per cent in every ten thousand miles. Thus the danger to life, risk of property, and chance of accident are increased four hundred per cent.

This is only a minimum estimate. A man who started from Boston for San Francisco, hiring motor cars on the way for runs of from fifty to one hundred miles or more, estimated that thirty per cent of the accidents and delays, the losses and failures to make proper time, were due to the drinking chauffeurs. He found a certain number of men who carried spirits with them, and after a drive of thirty or forty miles, drank a little. Invariably something happened, the machine broke down, or slight accidents occurred. Where the driver was an abstainer, the accidents were practically nil, even though the roads and the conditions were unfavorable.

This experience is confirmed in every attempt made to regulate the traffic and to hold the drivers responsible for reckless driving and general negligence. In a little village outside of New York, on a main thoroughfare to Boston, during a period of six months, every accident and arrest for reckless driving noted was in cases where the drivers had been using spirits. It is absolutely certain that the driver of a motor car who uses spirits is inviting disaster of some kind.

In some cities the authorities demand that operators of jitney cars shall present certificates of total abstinence, before they are allowed a license to run the cars; and policemen are ordered to arrest, at all times and places, any one having the appearance of being under the influence of spirits while driving a car. This will soon become universal.

The public should demand that the drivers of these cars should at least have the appearance of being free from all

use of spirits, and the managers and owners of cars should, for their own sake, employ persons who are in full possession of all their senses, and who show reasonable expectancy of acting wisely, under all circumstances and conditions.

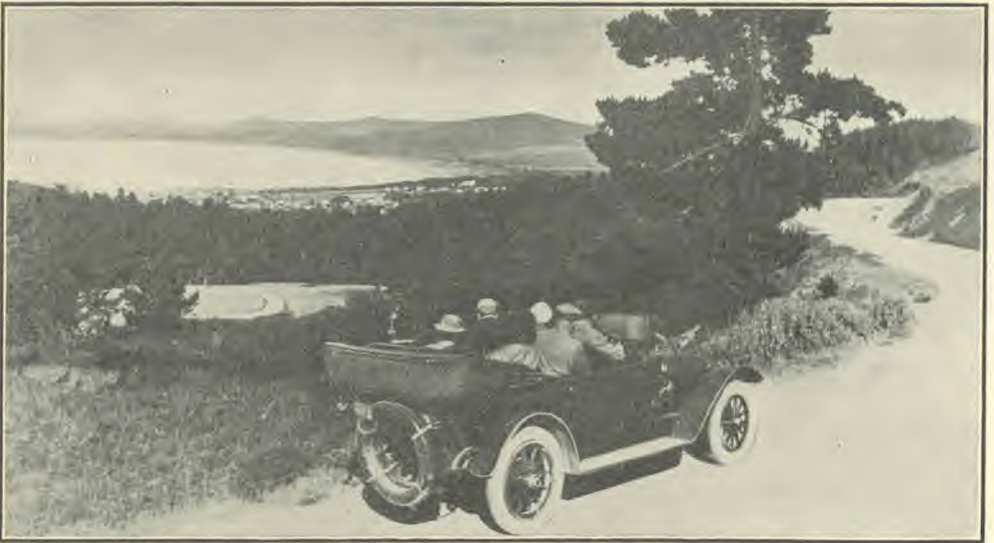
A statistical study of the number of persons killed while riding in or driving motor cars was made in Worcester, Mass., covering a period of six months. From this it was estimated that ninety per cent of those killed or injured were under the influence of spirits. Other statistics showed the same terrible mortality, particularly of the drivers. One would think that any man of good sense and judgment would never undertake to drive a motor car after using spirits. The risk he takes is equal to that of putting him into an electrical power house, and

assuming that he would exercise extraordinary caution and care in protecting himself from the deadly currents.

In a large garage in New York, where several hundred men are employed, may be seen this notice, ALL CHAUFFEURS WHO DRINK ARE NOT ONLY DANGEROUS TO THEMSELVES BUT THE COMPANY, AND WILL THEREFORE BE DISCHARGED AT ONCE. THE COMPANY CANNOT AFFORD TO TAKE ANY RISK. THIS RULE WILL BE APPLIED RIGIDLY.

Evidently a new era is coming for the motor cars and the men who drive them, and the conclusion is unmistakable that no one can afford to run the risk of riding in a motor car driven by an alcoholic.

Hartford, Conn.



The seventeen-mile drive, Monterey and Monterey Bay, Cal.



THE USE AND ABUSE OF SUGAR

E. H. Bartley, M. D.

The following is an abbreviation of a paper by Dr. E. H. Bartley of Brooklyn, which appeared in the *New York State Journal of Medicine*. More than twenty years ago, the author called attention to the evil effects of an overuse of sugar upon the digestive organs and the general health of growing children. Observation during the intervening years has confirmed the views then expressed.

THE sugars are among the most valuable articles of human diet. They yield their heat and energy in the body with the expenditure of the least effort on the part of the organs of digestion and assimilation. But this very characteristic may make them harmful when used in large quantities. It is the abuse of the sugars, not their proper use, to which I wish to call attention in this paper.

It should be stated at the outset that I do not pretend to say that all children are similarly affected by even what we may believe to be an excessive amount of sugar. I am convinced, however, that a large number of children are seriously injured by it, and it is of these cases that I am speaking.

We can often feed an infant a food of high fat content if we keep the sugar down, or we can feed a high sugar content with a low fat content; but when a baby is taking a fairly full amount of fat and doing well, we can cause fatty acid curds to appear in the stools by increasing the sugar.

But it is the effects in older children to which I wish to call attention. Here we have undoubtedly to deal with mixed sugars and mixed symptoms. Sugar injury to the gastric and the intestinal

membrane is certain, which results in catarrhal changes, but only after repeated applications of sugar, and is most readily produced by sugars taken into an empty stomach. Invert sugar and glucose are more injurious than cane, malt, or milk sugar. Of this I have satisfied myself by repeated trials. Cane sugar is partially inverted, or converted into glucose and levulose, by heating it with organic acids. Therefore, in apple sauce, fruit jellies, jams, preserves, rhubarb, etc., the sugar is partially inverted.

Determinations have shown that from one tenth to one third of the sugar in these articles is in the form of a reducible and fermentable sugar. Modern confectionery contains from ten to twenty-five per cent of glucose or corn sugar, made from starch by boiling with sulphuric acid. In lemonade and the various fruit sirups, the sugar is inverted to a variable degree. I have examined some cakes, and have found the sugar but slightly inverted in them.

Sugar is not absorbed from the stomach, except when in a concentrated form. Glucose is absorbed when the concentration reaches five per cent. Probably in an ordinary mixed meal little, if any, is absorbed, but when candy is eaten be-

tween meals there may be some absorption of glucose from the stomach. Cane sugar is inverted and made ready for absorption slightly in the stomach, but completely in the small intestine.

The symptoms of distress from sugar eating may begin within a half hour after eating it. These early symptoms are malaise, drowsiness, and epigastric heaviness. Vomiting as a symptom, except in infants, is apt to occur from one to three hours after the meal.

A mother consulted me about her daughter, who, by the mother's statement, "had vomited two hours after every meal for a year." Inquiry brought out the fact that the girl had been living almost entirely on cake, because her appetite did not crave anything else. The vomiting promptly ceased on withdrawing the cake. After three weeks it promptly returned after eating cake again.

Sometimes the vomiting is delayed twelve or twenty-four hours, when the vomitus is apt to be green in color. In the latter case fermentation certainly plays an important part. The irritation of the organic acids, or some other attending irritant, plays an important rôle in producing the vomiting.

I believe that cane sugar, as well as invert sugar and glucose, when taken into the empty stomach in considerable doses, acts upon the membrane as an irritant. Some years ago it was my privilege to observe autopsies upon two children who had died from the effects of excessive eating of candy. At the autopsy both showed acute inflammation of the gastric mucosa, which in one case was intense. The candy in this case was that known as white molasses taffy. The child had eaten about six ounces rapidly. The candy was not all dissolved, but a considerable part of it was found at the autopsy mixed with abundant mucus in the stomach. Some of it was ejected during the vomiting which preceded death and which began within a couple of hours after eating it. It was decided by the coroner's physician that the cause

of death was acute inflammation of the stomach due to the candy. A chemical analysis failed to reveal any foreign substance in the candy. There could be no doubt that the candy acted as an irritant; whether as a mechanical or chemical irritant may possibly be in doubt.

In the second case a longer time elapsed after eating the candy before the symptoms appeared. At the autopsy not only the stomach but the duodenum was found acutely inflamed. The candy was practically all dissolved or disintegrated. It was mixed candy, and a chemical analysis did not reveal any poisonous adulterant. The quantity eaten was excessive. The evidence that the candy was the only cause of death in this case was less conclusive than in the first case. It seems certain, however, that it was the cause of the gastroduodenitis. I think we have all seen cases of acute gastritis set up by an overindulgence in candy. We can only conclude that sugar is an irritant, when taken in large quantities.

In the natural state the most of our carbohydrates are eaten in the form of starch. A small part only is in the form of cane and milk sugars, except in infants' food. In certain acid fruits, some is in the form of invert sugar. Man has greatly increased the proportion of sugar in the modern diet. Statistics show that the per capita consumption of sugar in the United States is about eighty pounds a year (3.6 ounces a day).

Starch is partly changed to dextrin and maltose in the stomach, but the most of it is still left in the unfermentable form until acted upon in the intestine, and then it is gradually changed into glucose well down in the intestine. This very gradual production and absorption of the sugars derived from starch, or from cane sugar, is very different from the ingestion of invert sugar, or glucose of candy, when these are poured upon the intestinal mucous membrane suddenly and in quantity. It is akin to the difference between the action of a dose of morphine by the mouth, and the same dose given hypodermically.

DIET FOR NURSING MOTHERS

AT the Section on Diseases of Children of a recent meeting of the American Medical Association, Dr. A. W. Myers read a paper in which he considered some of the reasons why the attempt to rear a baby on breast milk is not always successful.

It has been preached that if mothers would discontinue artificial feeding methods and return to nature's way, there would be a remarkable falling off in infant mortality. More baby lives are saved by nature's method than by artificial feeding methods, "but there are some real difficulties which arise not infrequently in the course of breast feeding."

"It would be a misunderstanding and an injustice," says Dr. Myers, "to charge with indifference or neglect all the mothers who give up at an early period the effort to nurse their babies. Many of them have tried faithfully, fully realizing its value to the average infant, and they may have called to their aid what medical advice was available. But they have been overcome by the obstinate logic of facts. The children did not do well."

Dr. Myers believes that no amount of imagination can convince a mother that she is pursuing the best method when her baby is constantly uncomfortable and is

losing weight. Regarding the effect of the mother's milk on the baby, he said:—

"Whatever the nature of the irritating substances contained in the milk, there is manifestly a great variation in the sensitiveness to them displayed by the digestive tracts of different babies, or even by the digestive tract of the same baby at different ages. Many babies seem to be serene and happy under all conditions, no matter what the mother eats; other babies are restless and disturbed during the early weeks or months of life by food substances in the mother's diet which cause no such reaction at a somewhat later period."

His advice in these cases of susceptible babies is "to begin by forbidding entirely to the nursing mother the use of fruits, fruit derivatives, spices, and highly flavored vegetables at the beginning of lactation, or, when digestive disturbances are manifested," until digestive comfort has been restored. He believes that danger of disturbing baby's digestion will best be avoided by the use of a bland diet for the first month. After this time, vegetables and fruit may be tried cautiously, not more than one new thing being tried in any one day.

Among the foods he allows are "eggs, potato, rice, macaroni, cereals, milk, cream, butter, bread in various forms, and starchy substances, like cornstarch, tapioca, sago, etc."



BATHING IN THE PACIFIC

SCHOOL OF HEALTH

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

DIETARY OBSERVATIONS IN INDIA

H. C. Menkel, M. D.

This article appeared first in the *Sanitarium*, the official organ of the Association of Seventh-day Adventist Physicians, issued quarterly.

THE people of India in their penury have been obliged to learn some of the essential lessons of life in the school of experience. The meager wage of eight to fifteen cents a day, the average pay of the working class, which must be drawn daily, and judiciously spent to meet the needs of an ever-increasing family, necessitates a knowledge of the daily ratio of food required to sustain life and maintain working strength. The results thus gained in this practical school of life have been so generally recognized throughout India that every man or woman is prepared to tell the quantity of carbonaceous, protein, and fatty food required daily per individual in terms of rice, dal, milk, vegetables, and oil, varying slightly in different sections of India, but approximately as follows:—

Dal (lentils)	8 ounces
Rice	1 pound
Wheat flour	1½ pounds
Ghee (melted butter)	3 ounces
Milk	8 ounces
Vegetables	10 ounces

The Mohammedan often substitutes six ounces of meat for the dal. This food is divided into two meals, one in the morning, the other at night when the day's work is over.

On such a diet, the farmer toils all day in the field, and the coolie performs his arduous task as a beast of burden, carrying such huge loads on his head or strapped to his back that it often requires several men to lift or adjust this weight. It is not an uncommon thing to see a

coolie struggling up the mountain trail with freight or luggage weighing from 250 to 350 pounds, from the railway terminus at the foot of the Himalayas to a station miles up in the mountains.

I have on several occasions bargained to pay the hire of two coolies, being certain it would require the two to transport certain goods, and upon its arrival found all was piled upon one man; and he grinned with keen satisfaction at having worked the sahib and earned two men's pay for what to him was but a good task for a man of muscle power and endurance.

That the Indian workman is able to develop working power and endurance, with skill of muscle and brain, upon the above-mentioned dietary, is abundantly evident to him who must meet his competition in the various trades and professions.

One incident will serve as an illustration. In India we feed our horses on bran mixed with dal (lentils). This same dal, or some other variety, combined with rice, also forms the staple diet of the laboring classes. I had been dealing out the regular daily allowance of food for my horse, but found him gradually getting thinner, for which I could not account. One of my servants suggested that perhaps the syce (horse attendant) was eating the horse's food, as this is a very common practice among these men. Upon investigation, I found this was actually what was taking place, so I ordered the horse to be fed at my

door, and he thrived well on his regular allowance. The man was getting fat on my horse's food, while the horse was losing weight. Their eating the same food as given to horses must account for the laborers' remarkable strength to do the work of beasts of burden. I often take the syce with me to look after the horse on my rounds of visiting patients, and find that he arrives at the destination about the same time that I do, he

trotting right along behind my horse. The same food that gives the horse strength for burden bearing, long wind, and fleetness of foot, also imparts the same to the man who subsists upon much the same food.

Such practical demonstrations worked out in the school of necessity constitute an unanswerable argument in favor of a simple, nonflesh, low-protein dietary.

Simla, India.

Simple Measures for Relief of Pain

FOR deep-seated pain, and sometimes for pain nearer the surface, hot applications are indicated, and the fomentation (see December issue) is a sovereign remedy. Any means of applying the required amount of heat to the surface may be used. The heat should be sufficient to sting but not to injure the tissues. A hot flatiron wrapped in a cloth, a hot stove cover, a hot water bag, with perhaps a layer of damp flannel next the skin, a small bag of sand heated in the oven, are some of the means that have been used in this way. The application should be as hot as the patient can bear, hotter, perhaps, than he thinks he can bear. The tendency is to be content with an application that is little more than warm. Such an application can do no good. A large *hot* application, so hot as to be decidedly uncomfortable to the patient, by diverting the blood current perhaps, but more likely by reflex effect, gradually brings relief, which may last for some hours. The fomentation has the advantage of being light, soft, and conformable to any surface.

For pain at the surface, a cold application is better than hot, and for this purpose nothing is better than an ice bag; though in absence of ice, a frequently renewed compress wrung out of very cold water may answer.

Another way to relieve pain is by position. Pain in foot or hand may be distinctly lessened or entirely relieved by raising the affected part higher than the rest of the body. To accomplish this, the patient may lie down with the affected limb raised on a pillow. Gravity will cause some of the blood to leave the part, and thus relieve the pressure. This is particularly applicable in case of a burn of the hand or foot, though it should not take the place of dressing or other treatment.

But in case of pain, one should not be content with relief. It is best to have expert advice from a physician as to the nature and cause of the pain. For instance, if the pain is due to peritonitis or some other serious condition, the sooner it is recognized and treated properly, the more certain is recovery.

Backache in Neurasthenics

MANY cases of backache in neurasthenics are caused, says Dr. Abrams, by a faulty spinal attitude. And he is right. The listless, slumping position, whether sitting or standing, which is accompanied by flat chest, protuberant abdomen, and rounded shoulders, throws extra strain on spinal muscles that should not bear it; and, by dropping the abdominal organs out of position and stretching their ligaments, establishes painful reflexes.

After all, the slouchy posture is largely a habit, which in most instances can be overcome with a little determined effort. In the correct position the chest is well up and the abdomen drawn in, so that the curve is as in the accompanying figure, and not as it is when the figure is turned upside down.

If a person, approaching a wall, touches it with the abdomen rather than with the chest, either his position is faulty or he is growing too fleshy for his own good.

One way to acquire a correct position is to stand with hips and shoulders against a wall, then throw the head back as far as possible, thus forcing the chest forward. When the head is brought forward to position, the body will be erect and well poised, as it should be. Another method is to stand with the chest forced as high as possible and the abdomen drawn in. This chest-raising exercise should be taken at intervals during the day, and kept up as long as possible consistent with one's duties. Where one has habitually assumed a slouching position, the attempt to correct it will require continuous effort until the unused muscles are educated to their task. But it is worth all the trouble it costs, for one who stands erect rarely has digestive or intestinal disturbance. In standing and walking, the hips should be carried *back* as far as possible, considerable muscular force being used. If one will consciously assume this position during walking for a few days, the habit of a correct posture will be gradually acquired. But until the habit is fixed, the body will slump into its own position as soon as the attention is turned to other matters.



The On-Coming Cold

Do not overlook the first indications of an on-coming cold — the itching of the throat with tendency to hawk, the feeling of unusual dryness of the nose, or the tendency to sneeze. It is at this stage that a cold is most readily aborted or "broken up."

Do not forget the "cold neck pour" as given in the July, 1915, issue. This will often give immediate relief to an on-coming cold in the head. If the nose is already stopped, a vigorous pour will sometimes open the passages and enable free breathing. The patient, with neck bared, should lean over a tub, and an assistant should pour very cold water on the back of his neck from a pitcher. This treatment can be kept up very profitably until the neck is thoroughly chilled. It should then be wiped with a rough towel till dry and red.

Another excellent treatment is the hot foot bath, or better the hot leg bath. The water should be as hot as can be borne, and should come well up toward the knees. More hot

water should be added at intervals as the patient is able to bear it. The hotter he can stand it, the more vigorous the effect. It is an advantage to cover chair, leg bath, and patient, all except his head, with a kind of tent improvised out of a comforter. This will induce sweating. After about fifteen minutes, during which the patient may drink freely of water as desired, he may get into bed. If the air strikes the sweating body, the treatment may do more harm than good. It is better to leave the comforter around the patient until he is covered in bed. Then the feet may be thoroughly dried. It is an advantage to have nothing on the patient during the treatment except the comforter.

Some persons coming down with a cold seem to do best to get right out into vigorous exercise in the open air, the colder the better. I have known a half hour's shivering with icy feet in a fireless waiting room to break up a fresh cold. Others seem to do better to go to bed in a warm room and remain there for a day or two.



A CALIFORNIA LANDSCAPE

The lover of the out of doors can here enjoy nature every day of the year.

HOME COOKING SCHOOL



COOKING PROCESSES

George E. Cornforth

COOKING is both a science and an art. As a science we have said it is to prepare food for digestion,—to make such changes in it that it will be in a proper condition to be acted upon by the digestive organs. It breaks up its organic structure, as in the softening produced in a potato or an apple in baking it, in cereals and legumes in boiling them, or in vegetables in boiling or steaming them. It produces chemical changes, such as the change of starch from insoluble to soluble in boiling and to dextrin by browning. It destroys living organisms, or germs; they may be disease germs or the organisms that cause the spoiling of food, as in the sterilizing of milk and in cooking fruits and vegetables in the process of canning.

Of cooking as an art it has been said, "The fine art of cookery consists of developing the full natural flavor of the foods themselves and in combining them in pleasing ways." Under this phase of cooking we notice that cooking changes the appearance of food. A raw potato does not look very appetizing, but the sight of a hot baked potato may "make the mouth water." Cooking develops food flavors. The flavor of raw beans does not appeal to us, but one enjoys sitting down to a dish of well-baked beans when he is very hungry. Cooking also produces temperature changes. We can serve soup hot, or a dessert cold, or even frozen.

The different methods of applying heat to food are the following:—

Boiling.—Cooking food in actively boiling water. Water is said to boil when

bubbles of steam are rising through the water and breaking at the surface, causing steam to be given off rapidly. Water boils at 212° F.¹ The loss of heat from the surface of the water in boiling is rapid enough to prevent the temperature of the water from going above 212° F. No matter how hot the fire, the temperature of boiling water in an open, or simply covered, kettle cannot be made hotter. The temperature of water can be made hotter than 212° F. by confining it under pressure while heat is applied, as is done in a pressure canning outfit. For this reason it is a waste of fuel to build a hotter fire for the purpose of hastening the cooking process after boiling has once begun.

Simmering.—Slow, steady boiling.

Stewing.—Long, steady cooking in a small quantity of liquid at a temperature a few degrees below the boiling point, 160° to 180° F. Cooking in this manner can be conveniently accomplished in a double boiler.

Baking.—Cooking in an oven, in heated air, by radiation. Only foods containing a considerable degree of moisture are adapted to this method. Slow oven, 270° to 350° F.; moderate oven, 350° to 400° F.; quick oven, 400° to 480° F.

¹ At ordinary sea-level pressure. The higher the altitude, the lower the boiling point. Increased pressure, as when the vessel is tightly closed, raises the boiling point, notwithstanding the paradoxical fact that the kettle boils sooner if the cover is on. The reason it boils sooner is that the increased pressure prevents evaporation and consequent loss of heat, and thus the temperature is raised the more rapidly to a point a little higher than 212° F. The addition of salt to water also raises the boiling point.—Ed.

Broiling.—Cooking a small piece of an article of food before or over glowing coals or under gas, by radiant heat.

Roasting.—Cooking a large piece of food material before glowing coals. This used to be done when the cooking was done by open fireplaces. This method has now been largely superseded by baking in the oven.

Steaming.—Cooking by steam in a closed vessel with a perforated bottom over boiling water. Temperature, 212° F. Cooking in a double boiler may be called dry steaming, the temperature being from 192° to 200° F.

Frying.—Cooking in deep fat at a temperature of from 360° to 400° F., a method not to be recommended from the standpoint of wholesomeness. As a rule, fat is rendered less wholesome by cooking.

Sautéing (pronounced *sō-táy-ing*), often called *frying*.—Cooking in a small quantity of fat in a shallow pan. This is worse, from a health standpoint, than frying in deep hot fat, because it permits more fat to soak into the food.

Pan-Broiling.—Cooking on a hot griddle that has been oiled only enough to prevent the food from sticking to it.

When it is desired to extract the nutritive constituents and flavoring matter out of food, as in making broth, put the food to cook in cold water. When it is desired to retain the nutritive matter and flavor in the food, put the food to cook in boiling water.

Make the following experiments to determine the effect of hot water and of cold water on the different food elements:—

Into a tin cup, or a small agateware or aluminum vessel that holds about one-half pint, put one-fourth cup cold water. Then stir into the water one-fourth teaspoon cornstarch. Allow it to stand a few moments. Notice that the starch does not dissolve in the water, but gradually settles to the bottom. Now stir up the starch again, set the cup on the stove, and heat it very gradually, stirring continuously. Notice that when the tem-

perature of the water approaches the boiling point, the mixture gradually thickens and becomes clear. This is because hot water bursts the starch granules, they dissolve, take up water, and swell, forming a pasty mixture.

Place a thin slice of stale bread in a moderately heated oven, and allow it to remain, watching it, till thoroughly dry throughout and lightly browned. When cool, taste it. Notice that it tastes different from untoasted bread. Bread contains a large proportion of starch. Heating it till it turns light brown partially changes the starch to dextrin, a form of carbohydrate intermediate between starch and sugar. Starch foods prepared in this way may be said to be partially predigested.

Wash the cup and again put into it one-fourth cup cold water. Stir into the water one tablespoon sugar. Notice that the sugar dissolves slowly. Heat this mixture, and notice that the sugar dissolves rapidly in hot water. No other change in the sugar can be detected by the eye by simply boiling. But a very small quantity of the sugar is changed to what is called invert sugar, a non-crystallizing sugar. If boiled with an acid, the sugar gradually becomes entirely changed to non-crystallizing sugar. If a large quantity of sugar and water is used, sufficient so that it can be tested by a thermometer as it boils, it will be noticed that as the liquid evaporates the temperature of the boiling mass becomes higher, and when it reaches a temperature a little above 300° F. it begins to turn brown, or caramelize. Candy makers take advantage of this fact, because the degree of density of the sirup is indicated by the temperature.

When sugar and water are boiled together till the temperature is 238° F., the sirup has reached what is called the "soft-ball" stage, because when a little of it is dropped into ice water it forms a soft ball; or if a fork is dipped into the sirup and lifted out, the sirup forms a "thread" as it drips from the fork. This is the stage to which sirup should be

boiled in making frosting and fudge.

At 254° F. the sirup is said to have reached the "hard-ball" stage, because when a little of the sirup is dropped into ice water it forms a hard ball. This is the stage to which sugar is boiled in making caramels.

At 260° to 275° F. it has reached the "crack" stage, because at this stage it becomes snappy and brittle when dropped into ice water. This is the stage to which sugar is boiled in making taffies.

At 290° F. it has reached the "hard crack" stage, at which it becomes very hard and brittle when dropped into ice water. This is the stage to which sugar is boiled in making peanut candy.

When boiled above 300° F., the sirup gradually changes color from light yellow to brown, then red, and if the cooking continues it turns black and smokes. For use in coloring and flavoring, water is added to the cooking mass to dissolve it when it reaches the right shade. Caramelized sugar of a light-brown color, so dissolved, is used in flavoring custards, ice creams, and other desserts. That of a dark-red color is used for coloring gravies and soups.

Into the same cup used in the previous experiment put one-fourth cup cold water, and stir into it one teaspoon vegetable cooking oil. Notice that the oil neither dissolves nor mixes with the

water, but floats on top. Now set the cup on the stove, and heat till the water boils. Notice that the boiling produces no change in the fat. It does not dissolve nor mix with the water. Fat is not changed at the temperature of boiling water, but at higher temperatures the fat is decomposed, or split up, into fatty acid and glycerin. Different fats decompose at different temperatures. Butter begins to decompose at about 256° F., and lard at 360° F., beef suet at 440° F., cottolene at 450° F., refined cotton-seed oil and olive oil at 600° F. Fatty acid is irritating to the system. At 500° F. and above, the glycerin is changed into acrolein. This is the substance that gives the smarting sensation to the eyes, nose, and throat when fats are overheated. It is very irritating to the mucous membrane. It is the substance that is produced in the burning of cigarette paper, from the glycerin in the paper; and in the smoking of cigarettes more harmful results are attributed to the acrolein than to the nicotine in the tobacco. It will be noticed that butter would be the worst fat to use in frying, because it decomposes at the lowest temperature of all fats.

The experiments with the food elements may be made with test-tubes and an alcohol lamp if these are at hand.

In the next lesson we will continue the experiments, and will give recipes illustrating the cooking of sugar.



FIFTEEN THOUSAND ACRES OF OLIVE TREES, SYLMAR, CAL.

DRINK-CRAZED
YEAR OLD BOY
PURSUE

Pandemonium reigned at Youngwood, Pa., as a 7-year-old boy, Altiman, set a party of pursuers on his heels. The boy, who is a native of Youngwood, was seen by a party of men who were on their way to work. They saw him running and they followed him. He ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

YOUR IS AT RISK BY MAN INTOXICATED

Washington, D.C., Feb. 20. — A man who was intoxicated was seen by a woman who was on her way to work. She saw him running and she followed him. He ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

WOMAN FRIEND TO ROAD, WATER-DAMPING
CHARGE MANY

A woman who was on her way to work was seen by a man who was on his way to work. She saw him running and she followed him. He ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

Drunk Youth Assaulted his Aged Mother

A young man who was on his way to work was seen by a woman who was on her way to work. He saw her running and he followed her. She ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

When Drunk Too Overp
Alfred W. Has Stealing

A man who was on his way to work was seen by a woman who was on her way to work. He saw her running and he followed her. She ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

MAN MURDERS FIVE
ATTEMPTS TO SHOOT UP
WAS BRANIGHT DOWN
BEATS WIFE AND
WOULD BURN HOME

A man who was on his way to work was seen by a woman who was on her way to work. He saw her running and he followed her. She ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

DRUNKEN WASHOE
BITTEN

A man who was on his way to work was seen by a woman who was on her way to work. He saw her running and he followed her. She ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

WOMAN FRIEND TO ROAD, WATER-DAMPING
CHARGE MANY

Drunk Youth Assaulted his Aged Mother

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Drunk Youth Assaulted his Aged Mother

When Drunk Too Overp
Alfred W. Has Stealing

When Drunk Too Overp
Alfred W. Has Stealing

DRUNKEN MAN
SLAYS HIS WIFE

A man who was on his way to work was seen by a woman who was on her way to work. He saw her running and he followed her. She ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

DRUNKEN WASHOE
BITTEN

WOMAN FRIEND TO ROAD, WATER-DAMPING
CHARGE MANY

Drunk Youth Assaulted his Aged Mother

When Drunk Too Overp
Alfred W. Has Stealing

Drunk Youth Assaulted his Aged Mother

When Drunk Too Overp
Alfred W. Has Stealing

When Drunk Too Overp
Alfred W. Has Stealing

When Drunk Too Overp
Alfred W. Has Stealing

IN THE BACKGROUND ALWAYS
If Men Could Only See the Shadowy Bottle As Dangerously As They See the Dead Body.

A man who was on his way to work was seen by a woman who was on her way to work. He saw her running and he followed her. She ran for some time and then he was caught. He was taken to the police station and he was held there for some time. He was then released to his parents.

DRUNKEN WASHOE
BITTEN

WOMAN FRIEND TO ROAD, WATER-DAMPING
CHARGE MANY

Drunk Youth Assaulted his Aged Mother

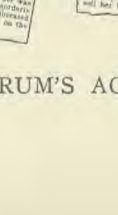
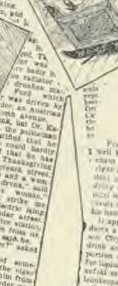
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RUM'S ACTIVITIES



EDITORIAL

IS THE MODERATE DRINKER A MENACE?

IN this age of lightning expresses, powerful motor cars, and congested roadways, the man who drinks is an anomaly, as much out of place as the proverbial bull in the china closet.

Time was when the drinker, so long as he indulged moderately, was not so great a potency for harm. When the horse-driven vehicle was the most rapid means of locomotion, when there were no railway crossings, when street cars were pulled by decrepit horses, the man who took an occasional drink was not so liable to injure others.

But with the powerful motor cars, the unprotected grade crossings, the congested streets, the man who takes a drink is a menace.

He imagines himself to be sober and fully able to manage a powerful car or perhaps a locomotive.

He has increased confidence in his ability to do what he would not venture to do if perfectly sober.

For mind you, the man who has taken *one drink* is not sober. He thinks he is, his friends think he is; but scientific tests have shown repeatedly that he is not quite up to his normal in self-control, notwithstanding his confidence that he is above normal.

Here is the danger. He takes dangerous risks.

He may be so fortunate as to do no harm, but so long as he has control of a powerful machine, he is potentially a destroyer.

The accompanying page of clippings, gathered within a brief period from a few daily newspapers, is a type of what may be seen in the papers nearly every day.

In all these accidents and crimes, the man who was responsible had been drinking.

Accidents are rare when there has been no drinking.

Practically all accidents come after one or more of those implicated have been drinking.

These disasters of drink do not concern you? Your child, your brother or sister, or aged mother, crossing the street, may be the next victim of some drunken or partly drunken driver of a motor car.

One does not have to be intoxicated in the ordinary sense in order to be unsafe as a driver. *One drink* is sufficient to unsteady the nerves, and yet give a feeling of overconfidence which tends to reckless driving.

More people are killed or injured by accident than by crime, and a large proportion of such accidents follows and is the result of the use of liquor.

Moreover, an overwhelming proportion of the crimes of violence are committed under the influence of liquor.

And this is not all. *Many more accidents are caused by persons who seem to be entirely sober*, who, perhaps, have had one or two glasses at a roadside house, and then have failed to note the railway crossing and the coming train, until it was too late. The papers do not list these as cases of drunkenness, for the motorist or person responsible for the accident appears to the casual observer to be sober, and he considers himself to be sober.

Science has shown that one drink, while unsettling a man's nerves so as to make him unsafe to drive a motor car or an engine or any complicated machinery or to be in charge of any critical situation, may at the same time give him a feeling of optimism and self-sufficiency that causes him to take risks he would not think of taking when perfectly sober.

Railway officials say that no man who drinks should run a locomotive, and in proportion as this is made a rule and enforced, the list of railway casualties is diminished. The law should say that no man but an absolutely sober man shall have a license to handle an automobile. Such a ruling would reduce to a minimum the loss of life and limb by automobile accidents.



BRINGING IN THE MAPLE SAP

From the pails the sap is poured into a vat, in which it is hauled to the sugarhouse where it is concentrated over fires, to the consistency of maple sirup or to sugar.



Agreeable Food Poisoning

REFERENCE has been made at different times to the work of Bishop, whose study of the diseases of the circulation entitle him to speak with authority. Recently he delivered an address¹ showing that arteriosclerosis is not a disease of one or two organs, but of the cells as a whole, dependent upon a wrong relation between the ultimate products of digestion—the food products in the blood—and the cells; in other words, upon a faulty nutrition of the cells. He maintains that this faulty nutrition often consists in a disturbance of relation of particular proteins to the cells. That is, certain proteins, as of meat, or fish, or eggs, may become actually poisonous to the cells. This, perhaps, is as near as one may represent his teaching in popular language. One paragraph of his paper is well worth consideration. After speaking of the sensitization of the cells to certain foods (so that the foods in fact act as poisons to the cells) he continues:—

“Unfortunately—I say ‘unfortunately’ because I mean it—food poisoning may be accompanied by agreeable symptoms, just like any other poison. If a person is slowly poisoned by arsenic, it gives him a sense of well-being until it is withdrawn. The same is true of other poisons. If a person is poisoned by meat, the withdrawal of meat is accompanied by a sense of prostration, and the restoration of meat by stimulation. If the person is not poisoned by meat, it can be withdrawn without any particular discomfort.”

¹ “Arteriosclerosis as a Cellular Disease, Together With a Study of Its Hygienic Treatment,” an address delivered to the Stamford Medical Association, Nov. 9, 1915, by Louis Faugeres Bishop, A. M., M. D., Clinical Professor of Heart and Circulatory Diseases, Fordham University School of Medicine. Published in the *New York Medical Journal*, Dec. 4, 1915.

The same discomfort is experienced in the withdrawal of morphine, cocaine, alcohol, tobacco, tea, and coffee. It would seem, then, according to Bishop, that meat comes near being in a class with the habit-forming drugs.

But when one is sensitized to a food, the case is different, and instead of producing agreeable symptoms, there may be very disagreeable, and perhaps violent symptoms when even a small quantity of the food is taken. Dr. Bishop believes that the cause of the increased sensitiveness to certain foods—idiosyncrasy, as we would call it—is some great nervous shock or strain, some acute illness or acute food poisoning, which has caused certain foods which formerly were comparatively harmless to act as poisons.

“The person may be sensitized to meat, fish, eggs, or other proteins. When a person has been sensitized to a food protein and goes on eating that food, the cells of the body are irritated and some of them destroyed. And the organs become defective, and are not able to do their work properly.”

So we have kidney disease, and increased blood pressure, and heart disease, etc., each defect tending to make the others worse. As to cure, Dr. Bishop says:—

“The remedy for this disease is to be found in the discovery and removal from the dietary of the offending proteins, meat being most common, and in the correction of metabolism by physical methods, particularly exercise. *Exercise is the greatest stimulant of metabolism there is.* Exercise makes the patient breathe deeper, it helps the digestion of food and stimulates the kidneys. It is the great stimulant of metabolism. Exercise has an important place in the treatment of arteriosclerosis. First diet, then exercise. The third important thing is attention to the intestinal tract.”

For this he advises the use of castor oil.

**Sugar and
the Heart**

ARTHUR GOULSTON
has published a book

in which he gives reasons for believing that cane sugar has a specific action in strengthening the heart muscle in cases of heart trouble, such as auricular fibrillation, auricular tachycardia, beginning failure after valvular lesions, tobacco heart (if smoking is given up), and, in fact, in any case where the heart muscle is failing.

He gives cane (not beet) sugar, dissolved in hot but not boiling water, to be taken in sips throughout the day, say every two hours; or if a large quantity is to be taken, part may be taken with milk, stewed fruit, etc., or spread on bread and butter. The first week he gives two ounces of sugar daily; the second week, three ounces; the third week and after, four ounces.

He advises against the use of sharp acids, such as vinegar or lemon juice, while taking the sugar. The diet, he says, should be plain, moderate, and largely farinaceous, and liquids, such as tea, coffee, milk, etc., should be reduced to the minimum. Alcohol should not be used.

Criminal Carnivores UNDER this heading the Los Angeles *Times* of Sept. 14, 1915, has the following, which is self-explanatory:—

"Meat eaters cause all the trouble in Los Angeles. They commit all the crimes and break all the laws. Only two instances of vegetarians having transgressed the laws are on record in the police station, and they were early exonerated of any blame.

"The statistics came to light yesterday when Chief of Police Snively asked Jailer John Shand if provision was made in the city jail for vegetarians.

"'We have no such things,' Jailer Shand tersely reported.

"The question was advanced at a conference regarding the purchase of supplies for the jail. Jailer Shand said he needed so many pounds of beef, so many pounds of pork and other meats.

"'Every one must eat meat in the jail?' Chief Snively said.

"'Every one,' said Jailer Shand. 'We have had only two vegetarians since I can remember, and they were only held as witnesses, supposed to have something to do with a crime.

Not one criminal has been a strict vegetarian. They don't take to crimes, it appears.'"

It may be suggested that there are no vegetarians in Los Angeles. The fact is, however, that vegetarians and those who abstain from the use of flesh food are well represented in Los Angeles.

There are two reasons why vegetarians do not get into jail: First, those who abstain from the use of meat do so from principle, and have learned a certain amount of self-discipline; second, a non-meat diet tends to develop a peaceful disposition.

**The Abused
Stomach**

BEFORE the Section in General and Abdominal Surgery at the sixty-sixth annual session of the American Medical Association, held in San Francisco, June, 1915, Dr. S. J. Mixter, of Boston, read a paper (*Journal A. M. A.*, November 6) on "The Intestinal Tract," dealing particularly with its surgery. Regarding the stomach, he says in this article:—

"The stomach is certainly a most tolerant organ. For years it is generally either starved or overfed. It must receive and take care of all kinds of substances, from milk to clay. It is tanned with tea, irritated by alcohol, tortured by drugs, alternately scalded and chilled, and yet it works on, doing its best though receiving the blame that should fall on its owner or the other organs. Some people complain of their 'bad stomachs' all their lives, while in reality the poor thing is not at fault and is doing its best. Its great failing is that it is too sympathetic, reflecting the trouble of its neighbors."

The stomach is "more sinned against than sinning." Some try to tell us that stomach trouble is largely the result of eyestrain or other reflex irritation. But in the vast majority of cases it is not difficult to show that in the dietetic habits of the person suffering from indigestion there is abundant cause for the trouble.

**Wu Tingfang
and Tobacco**

MR. WU TINGFANG, former Chinese minister to this country, while appreciating the many excellences of Western civilization, did not fail to see some of its fail-

ures and inconsistencies. He was not impressed, for instance, with our wisdom in dress, in the use of narcotics, and in our carnivorous diet. In reply to a letter sent to him by Dr. D. H. Kress, a frequent contributor to *LIFE AND HEALTH*, he sent the following, showing that he bewails the fact that many of his countrymen, in ridding themselves of the shackles of opium, are allowing themselves to be enslaved by tobacco:—

"DEAR DR. KRESS: . . . I have never contracted that pernicious habit of smoking tobacco or cigarettes. I am grieved to find that this habit is spreading enormously throughout China. It is a recent growth, introduced by foreigners; and if not checked, it will certainly ruin our people, as opium has done. Three years ago I and some of my countrymen started an anticigarette society, with the object of persuading people not to continue this bad habit, as it would ruin their health; and we have been sending men to different places to tell them not to smoke, and public meetings have been held from time to time for that purpose. Notwithstanding this, I am sorry to see from the customs' return that the importation of foreign cigarettes, besides home manufacture, is increasing every year. The British-American Tobacco Company are the great sinners, because they are so active in their work. They send men and agents all over China to boost and sell their goods."

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Sour-Milk Therapy

L. F. RETTGER reports in the *Journal of Experimental Medicine*, XXI, 1915, No. 4, pages 365-388, a large number of feeding experiments with chicks and rats, regarding the influence of milk on the character and growth of intestinal organisms.

No difference was observed between the ordinary sour milks and that soured by the *Bacillus Bulgaricus* of Metchnikof.

When the diet contained milk and milk sugar, there was a marked influence on the character of the intestinal bacteria, which was not observed when other carbohydrates were used instead of milk sugar.

Rettger expresses the opinion that the lactic germs or other foreign bacteria do not influence materially the common intestinal germs, and that the administration of Bulgarian bacillus tablets is a useless procedure without milk in the diet.

"The beneficial effects which it is claimed have been derived from the use of yogurt and other Oriental sour-milk products, have in all probability been due to the milk as such, rather than to the bacteria which they contained."

The benefits claimed by the producers of the various Bulgarian bacillus preparations have been out of all proportion to the value of the preparations.

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How to Blow the Nose

GRIFFIN says,¹ "The failure to clean the nose by the handkerchief thoroughly is responsible for over seventy-five per cent of the catarrh cases that apply for treatment. The incorrect way of cleansing the passages is also responsible for any number of ear cases." If this be so, certainly it is important to learn how to blow the nose. Dr. Griffin continues:—

"The average cold starts in the head. The patient, instead of properly using his handkerchief, begins to hawk secretion back into the nasopharynx; then some of the mucus is expectorated, while a certain amount will remain glued to the pharynx and the inner border of the soft palate. . . . Then there is a constant string of mucus hanging down from the palate. This mucus keeps up a constant cough that is known as winter cough. This cough is only a symptom of faulty handkerchief service."

This seems to be revolutionary doctrine, but it is from a man who has been making a careful study of the nose and related parts for many years, and his observations ought to be worth something. He says that medicines fail to remedy the condition outlined above, though opiates may relieve for the time. He finds the morning vomiting of catarrh to be caused by the accumulated mucus that has been swallowed.

Another result is irritable pharynx or "sore throat." He goes so far as to say that the improper use of the handkerchief is a factor in developing consumption. While his anatomical description may be of little use to the average reader, his instruction regarding the gentle art

¹ "How to Blow the Nose," by E. Harrison Griffin, M. D., New York, in the *Medical Record*, Dec. 11, 1915. Dr. Griffin has been a specialist in diseases of the nose and throat for more than thirty years.

of blowing the nose may prove interesting. So we will give it:—

"To blow the nose properly, it is best to look at it as a double-barrel shotgun; the nose as the muzzle of the gun, the chest as the air receiver, and the mucus as the bullets and charge.

"A deep inspiration to fill the chest with air, then one finger is placed upon the ala of one nostril to obstruct the passage. With one violent expiration the air from the chest is forced through the open chamber of the nose, and the offending discharge is caught upon the handkerchief. This maneuver is repeated on the opposite side."

But is not this the simple old-fashioned way of blowing the nose which our forefathers used freely until good society admonished them to use the soft pedal? And is this soft pedal enforced by good breeding the cause of our winter colds and sore throats and consumptions? I confess I am skeptical; but here is a man who has been specializing in this line for so long that he ought to know. Perhaps, however, other specialists will not agree with him.

Prevention of Blindness

THE National Committee for the Prevention of Blindness has just issued a new publication, entitled, "Trachoma—A Menace to America," which has been prepared by Mr. Gordon L. Berry, field secretary of the committee. This document is prepared as a popular presentation of the subject for the education of the laymen as to the prevalence of trachoma, its effects upon vision, and the methods adopted for its control and eradication. Much of the information contained therein will prove of interest to the oculist, physician, and surgeon, and the publication may be used by any one desirous of presenting the subject of trachoma through the medium of an illustrated lecture.

Nearly one hundred lantern slides to illustrate the text have been prepared from photographs by the author or are lent by the United States Public Health Service, the United States Indian Service, and others. Copies of these slides may be purchased at cost from this com-

mittee, or will be lent without charge other than transportation expenses.

It has been remarked that notwithstanding the publicity that has been given to the subject in recent years, the word "trachoma" does not appear in any one of our leading abridged, high school, or collegiate dictionaries.

A copy of the publication on trachoma will be sent free to any physician upon application to the National Committee for the Prevention of Blindness, 130 East Twenty-second Street, New York City.

The Cause, or a Cause, of Pellagra SINCE Dr. Goldberger has supplemented his previous work by inducing in prisoners, through a one-sided dietary, symptoms indistinguishable from those of pellagra, there has been a tendency both in and out of the Public Health Service to jump to the conclusion that we have finally discovered the cause of pellagra. In the opinion of the present writer, there are important reasons why it would be better to say that we have discovered an important contributing cause of pellagra. The editorial comment in the December *Southern Medical Journal* is to the point:—

"At first glance it would seem that Dr. Goldberger has proved his theory that improper or imperfect nourishment is the cause of pellagra. Long ago he and others had taken severe cases of the disease and cured them promptly and thoroughly by feeding them freely with proteins. That was one side of the question. Now that he has taken a lot of apparently healthy men and by keeping them on an improper diet for six months has caused them to develop pellagra in their own persons without, so far as is known, their coming in contact with any pellagrins, or with anything that might have been infected by them, there is no denying the correctness of this report or the ability of the physicians who made the diagnoses.

"Is it not enough? Is it not conclusive? No, not quite. Inevitably the question arises: If a meager diet, if any kind of diet, can cause the unmistakable symptom-complex we call pellagra, why was the disease unknown in so many regions now affected until the last twenty years? Poverty of diet has always been with us, but not pellagra. Misers have starved themselves and their families, but they did not develop pellagra. Hunters and explorers have existed on the barest sustenance, religious devotees have starved themselves to skin and bone; but there was no pellagra.

Even today the disease does not always limit itself to the indigent, but at times attacks the well-to-do. Wherever it makes its appearance it is followed, sooner or later, by other cases. They can sometimes be numbered in their regular order of sequence.

"Is there any other disease to which poorly nourished people are more liable than the well fed?—Yes, tuberculosis. And in the incipient stages, of tuberculosis ample nourishment is an element in the cure. If we had not found the germ of tuberculosis, we might easily have thought that it was caused by an unbalanced diet. It is entirely possible, and even probable, that some day a causative organism for pellagra may be discovered. Meanwhile let us rejoice that pellagra can be classed among the curable diseases, and the public should know that it is amenable to treatment. There is no escaping the importance of Dr. Goldberger's demonstration, which proves that an unbalanced diet is at least a contributing or predisposing cause of pellagra."

College Athletics IN the November, 1915, *Atlantic Monthly*, President Foster of Reed College said openly what perhaps many college presidents have thought, but dared not express freely. For instance:—

"Intercollegiate athletics provide a costly, injurious, and expensive régime of physical training for a few students, especially those who need it the least, instead of inexpensive, healthful, and moderate exercise for all students, especially those who need it most."

The trend of the entire forceful and illuminating article is along this line, and the facts mustered by President Foster, no one can successfully gainsay. Commenting on this article editorially, the *New York Medical Journal* of Dec. 4, 1915, says:—

"The athletes, or at least their chief backers, are mostly recruited from those who are little interested in the essentials of college education. Enthusiasm for athletics, is easily aroused in these men, who, in fact, are quite opposed to legitimate college exercise. It is also this class which is likely to foment disturbance, and the president and faculty are apparently afraid of offending them. In consequence they give in to almost anything asked for in the way of athletic privileges, and wink at much besides. New conditions and the evils that arise from them must be met by new methods, and the present unhealthy growth of intercollegiate sport, which has no place in real education, physical or mental, should be done away with by all institutions that wish to give the rank and file of students a square deal."

Certainly a scathing criticism of intercollegiate athletics, but is it not just?

Pneumonia and the Grip THIS winter the case incidence and the mortality from influenza and pneumonia are unusually high, and it behooves every one to avoid exposure if possible. The following rules are to the point:—

Avoid crowds whenever possible, especially stuffy street cars.

Do not remain in the vicinity of one who is coughing, unless it is absolutely necessary to do so.

Dress for the weather. Do not have too much on when indoors, especially in hot, ill-ventilated buildings; and be sure to have on enough when out of doors.

Be especially careful to have the feet warm and dry.

Remembering that most infections enter the system through the mouth and nose, be careful to maintain a good hygiene of these orifices.

Bad teeth or other faulty dental conditions, diseased tonsils, chronic catarrhal condition, and the like, should have careful attention. It is well to wash the mouth and throat with some mild antiseptic solution, perhaps dilute peroxide of hydrogen, once or twice a day. If there is a catarrhal discharge, it is well to irrigate the nose by one of the approved methods, using a teaspoonful of baking soda or salt, or a mixture of the two, in a pint of water, and gently drawing the water through the nostrils. Too much force used in this operation will endanger the ears.

Avoid all dietary indiscretions. Live on a moderate amount of well-selected food; "keep the head cool, the feet warm, and the bowels open."

If you find yourself contracting a cold, your best course is to go home and immediately go to bed. A foot bath or other hot treatment is good, but when not taking treatment, stay in bed until the cold is "broken." You will save time thereby.

If you have a cough, do not expose others. Keep out of public places as much as possible.

Never spit on a sidewalk or crossing or on a floor.

The TEMPERANCE MOVEMENT

THE ANTECEDENTS OF THE PROHIBITION MOVEMENT

D. H. Kress, M. D.

A YOUNG beer drinker met with an accident. His thigh was crushed. It was found necessary for him to have an operation. As he was wheeled into the operating room, he looked up into the face of the surgeon and inquired, "Doctor, will this operation kill me?" "No," replied the surgeon, "the operation won't kill you, but the beer may." *And it did.* The operation was skilfully performed, but the wound refused to heal. The man died of blood poisoning. Beer, not the accident nor the operation, was responsible for his death. It pulled on the graveyard end of the rope.

Beer brings about degeneracy of all the tissues and glands of the body. This makes the drinker a poor subject for the operating table. Should he be stricken down with pneumonia, the chances are against his recovery. The beer drinker is almost certain to die, early in life, of some disease of degeneration, as Bright's disease, apoplexy, heart failure, or diabetes. The beer drinker seldom reaches old age. In Germany, where beer drinking is general, it has been found that the total abstainer's chances to live to the age of one hundred years is one in three thousand, while that of the drinker is but one in eight hundred thousand. Fifty years ago Germany had six times as many who were one hundred years old and over as she has today. This may be largely attributed to her beer consumption.

In France, wine has been the national drink as has beer in Germany. The use of wine has created a craving and paved the way for stronger alcoholic beverages. France, today, consumes more alcohol per capita than any other civilized nation. France is a dying nation. She cannot long survive. During the first six

months of the year 1914 there were nearly twenty-five thousand more deaths than births in France. When a nation is unable to fill the vacancies made by death, she is doomed. S. H. Leroy Beaulieu, professor in the free school of political science, recently said: "The French people are rushing to suicide. If they continue on this course, the French nation, those of French stock, will have lost a fifth of their number before the expiration of the present century, and will absolutely have vanished from Europe by the end of the twenty-second century." "The French people," he adds, "are gradually committing suicide. They are tightening the cord about the national neck; the breath of life is becoming feebler, and is now but a gasp which must soon end in silence." The commission which was appointed to ascertain the causes of this degeneracy, discovered that the women annuitants found on the books of the various life insurance companies, averaged over seventy years of age, while the men averaged a bare fifty. On the books of one company several centenarians were found, all of whom were women. The only explanation satisfactory to themselves which they were able to give, was, "Men drink too much and smoke too much. Women, being much wiser, drink ten times less and seldom smoke."

Dr. Hindhede found that in Copenhagen, between the years 1905 and 1909, in every period beginning with middle life the death rate was higher among men than among women. In middle life it was almost twice as great. Between the ages of forty-five and sixty-four the death rate from apoplexy was over twice as great among men as it was among women. In summing up, the author concluded: "There is therefore a probability

almost reaching certainty, that alcohol and tobacco, or rather both together, occasion a premature hardening of the brain cell, with consequent breaking."

It is safe to say that in all beer-drinking nations the mortality from diseases of degeneracy is greater among men than among women, chiefly because of the greater alcohol consumption by them. It is our men in America, not the women as a rule, who drop off at a moment's notice, of heart failure or apoplexy, in middle life; and it is our men in America who consume the beer. The mortality from Bright's disease has increased one hundred and sixty-seven per cent in Chicago in thirty years, an increase of over five per cent annually. This possibly holds good in all our larger American cities. Fortunate it is that women as a rule are abstainers. To them we are indebted for the racial vigor we still possess. We have reason to thank God for sober women.

Among races where women drink and smoke as do the men, degeneracy is much more rapid than it is among the races where women refrain from these indulgences. The natives of New Zealand were considered the finest type of mankind discovered by the white race. Captain Cook declared that they were perfect in physique, and that men at ninety were still young and athletic. They then numbered 120,000. By the white man alcohol and tobacco were taken to them. Among these innocent natives, women learned to drink and smoke the same as the men. As a result, during the past one hundred and fifty years they have been reduced to less than forty thousand. Chief Justice Stout of Wellington, in passing sentence on a native, said: "If this drinking continues, we are in measurable distance of the time when the Maori race, the noblest race with which civilization has been brought in contact, will be exterminated."

The nation that drinks is doomed. Babylon felt secure and in the height of her power, when, on the night of Belshazzar's feast, the handwriting announcing her doom appeared on the wall of the

palace where they were drinking wine. Drink was responsible for her fall, as it was of that of other nations which succeeded her. Rome for five hundred years practiced prohibition, and for centuries refused to allow her women alcoholic beverages. But the time came when she became intemperate, and she, too, fell. France, England, Germany, and America are following in the footprints of these other nations. Similar causes will bring similar results. All history attests the fact that drinking nations cannot survive, and time will demonstrate this.

The marked physical individual degeneracy which everywhere exists, is the handwriting which today is announcing the doom of these nations. But now, as in the days of Babylon, none of the drinkers are able to interpret the writing. It required a Daniel, a *total abstainer*, to read and interpret the writing *then*; and so today. Nations may boast of their greatness, as did Babylon, and say, "I sit a queen, and shall see no sorrow," at a time when the very foundations are crumbling, and the walls tottering, ready to fall. Drink blunts the brain, and makes men unconscious of their visitation and the threatened danger.

Abraham Lincoln was a total abstainer. He evidently fully appreciated the need of suppressing the sale of alcohol if the nation would survive. In the year 1853, in an address at Springfield, Ill., he said: "The liquor traffic is a cancer in society, eating out its vitals, and threatening destruction; and all attempts to regulate it will not only prove abortive, but aggravate the evil. There must be no more attempts to regulate the cancer: it must be eradicated; for until this is done, all classes must continue exposed to become the victims of strong drink. The most effectual remedy would be the passage of a law altogether abolishing the liquor traffic. Law must protect and conserve right things, and punish wrong things; and if there is any evil in the land that threatens society or individuals more than another, it is the liquor traffic." And on April 14, 1865, the morning before his

assassination, he said, "After reconstruction, the next great question will be the overthrow of the liquor traffic."

Emperor William also is a total abstainer. He, too, recognizes the danger threatening his country. In his address to the Murwick naval cadets, in the year 1911, he said: "The next war and the next naval battle will demand sound nerves on our part. But these are undermined and endangered from youth upward by indulgence in alcohol. Later on, you will have opportunity of seeing target ships and the effect of modern projectiles upon them, and you will be able to picture to yourselves the conditions of battle. There the cry will be for firm nerves and a cool head. The nation which takes the smallest quantity of alcohol will win."

In addressing the naval cadets at Flensburg, Nov. 21, 1910, he said: "It is necessary that you be able to endure continued heavy strain without exhaustion, in order to be fresh for emergencies. In the next great war, nerve power will decide the victory. Now the nerves are undermined and endangered from youth up by the use of alcohol. *Victory will be with the nation that uses the smallest amount of alcohol.*"

The woe still rests upon the nation that legalizes this traffic in rum, and puts the bottle to the lips of its subjects. In my medical practice I have seen so much of the misery traceable to drink, that some years ago I determined to do all in my power to enlighten the public in regard to the true nature of alcohol. I fully believe that if the people knew the scientific facts pertaining to alcohol, and understood its effect on body, mind, and soul, and were then granted the opportunity of a candid expression at the polls, every saloon, every distillery, and every brewery would be closed.

Let us no longer merely forbid the

saloon keeper to sell to the drunkard, and then by our vote place our approval on his work of making drunkards. The drunkard is the finished product of the saloon. It would be better to allow the saloon keeper to complete the work of destruction he has begun, by selling to the drunkard, than to permit him to sell to, and make drunkards of, our boys and young men.

The little girl whose brother made a trap to catch birds, prayed that God would in some way keep the little birds from entering it. This did not altogether satisfy her, for she felt that possibly one might enter. She then prayed that in case one entered, it might be able to obtain its release. This did not wholly satisfy her. Again she attempted to pray, but could not. Suddenly she arose from her knees, and, going to the trap, she jumped upon it and smashed it. There are those who, like the little girl, have suffered saloons to exist, and have prayed that our boys might escape these traps. But, in spite of their prayers, they have seen many caught, and have then prayed that in some way these might be rescued. As Christians and citizens, there remains but one more duty for them to do: that is to wipe out the entire traffic. Prayer alone is of little value without this.

This Can Be Done

When opium became a great evil in China and threatened the existence of the nation, China decreed that the traffic in opium must cease. She is demonstrating before the entire civilized world that it is possible to wipe out any evil which may be threatening the individual, the society, the nation. If we are defeated, the defeat will be traceable to the apathy of men and women of prayer who have refused to vote and encourage others to do so. This ought we to do, and not to leave the other undone.

ITEMS OF INTEREST

Will Vote on Prohibition in 1916.—Vermont will vote in March; California, South Dakota, Nebraska, Montana, and Alaska in November.

Liquor Saloons Abound in California.—California is said to issue more retail liquor licenses than did all the eleven States which last went dry.

British Anti-Treating Law.—According to the coroner of Southwark, as stated at a recent inquest, the order forbidding treating has done more to lessen drunkenness than anything else.

Kentucky's Statehouse Dry.—The governor of Kentucky, inaugurated December 9, has announced that during his four years' term of office no intoxicating liquor will be allowed in the Statehouse.

New Liquor Regulation in France.—The minister of the interior has issued a regulation forbidding the sale of alcoholic drinks before 11 A. M., and the sale at any time to women, or to minors under eighteen.

Idaho Very Dry.—The prohibitory law in effect in Idaho, January 1, is drastic, as it provides that any person in the State who has a drop of liquor in his home or his place of business may be subjected to severe penalties.

Sobriety Increases Demand for Reading Matter.—Following prohibition in Russia there has been an increased demand for reading matter; and books are sold there as cheap as a farthing—a fraction of a cent. Enormous quantities of these cheap books have been sold. It has been noted in this country that the movies have largely taken the place of the saloon, showing that drinking is often the result of a desire to occupy the mind.

Liquor Restriction in Berlin.—New orders forbid sales of liquor except between 9 A. M. and 9 P. M., and absolutely where there are women waiters or barmaids. All liquor sold must be drunk on the premises.

Bryan's Wit.—William Jennings Bryan is credited with this: "The aeroplane that drops its bomb from above, and the submarine which shoots its torpedo from below, are less to be feared than the schooner that crosses the bar."

Governor Advocates Temperance Education.—Governor McCall of Massachusetts says that "alcohol destroys human energy," and is a firm advocate of education as a means of creating public sentiment in favor of temperance.

Dry, Jan. 1, 1916.—The following States went dry the first of the year: Washington, Oregon, Idaho, Colorado, Iowa, Arkansas, and South Carolina, seven in all, making a total of eighteen dry States. Virginia will go dry Nov. 1, 1916.

Russian Soldier's Testimony.—The following is from the letter of a Russian soldier, published in a Petrograd paper: "All through the mobilization and movement of the troops, all of us soldiers were sober. And we are sober now. Sober, we took leave of our families; sober, we left our homes; sober, we faced our foe, and calmly we bear our heavy burden. It seems to me that it would be such a beautiful, such an exalted way to celebrate our victory over the great foe, the green serpent (vodka), if all the wine shops were converted into schools, all the wine warehouses into asylums and poorhouses. This is how we should begin the reconstruction of our political, economic, and religious life."

WET AND DRY GEOGRAPHY OF THE UNITED STATES BEGINNING THE YEAR 1916



OUR WORK AND WORKERS

MEDICAL MISSIONARY WORK IN MANY FIELDS

The following is the conclusion of an abbreviated report of the Medical Missionary Conference held in Loma Linda, Cal., November, 1915. The first part of the report appeared in the February number of this magazine.

IN India our medical work is making its way, and helping to gather out a people for God. A dispensary conducted by Brother J. S. James, at Nazareth, was the beginning of our largest mission station in India, with a church of one hundred members and a school of eighty-five boys and thirty-five girls.

There are seven dispensaries, four treatment rooms, a health journal, and a health food factory in India. The report of the medical secretary shows 35,000 patients in the dispensaries for the biennial period, coming from 437 villages. There were 1,168 visits made to the homes in the villages, 1,092 gospel talks given, and considerable literature was distributed.

At Jagdispur, medical mission work has been carried on among the Santals for two or three years. It is united with the school work, house-to-house visiting far and near, and public village work.

The mission dispensary at Kalyan gave between 15,000 and 20,000 treatments last year, with 975 homes visited in 85 villages. A report just received shows 2,080 treatments in September. Patients come thirty and forty miles for relief. The dispensary day opens with a morning Bible reading, a short talk, and prayer, with those waiting for treatment. Reading matter is given to all who can read. Sister M. D. Wood, who is in charge, is only a nurse, but she holds a certificate from the government, permitting her a wide latitude in her medical practice. She also holds an annual railroad pass, allowing her to travel freely. She goes twice a week to Igatpuri, sixty miles from Kalyan, where a branch dispensary has been established.

At Najibabad is a woman's dispensary, under the care of Sister B. A. Kurtz, assisted by native help, giving about fifty treatments a day.

A mission for the Karens is being opened seventy-five miles north of Moulmein, with a bungalow for a mission home and dispensary. The medical work is under the care of Brother Eric Hare and his wife; he is a trained nurse from the Sydney Sanitarium.

Besides still other dispensaries, there is Dr. V. L. Mann's itinerating dispensary. Two large boxes made and arranged by an old medical missionary, contain a compact and full equipment for general practice, including minor surgery. A bullock team and wagon are now used for transportation. F. H. Loasby is associated with the doctor, using a stereopticon outfit at the close of the busy day's care of the many patients who come. The pictures showing Bible scenes are understood and appreciated.

The best of India's population is reached. Maharajas and rajahs, maharanis and ranis, which mean great kings and little kings, and their wives, come in the pomp of royalty, with their retinue of sword bearers and other attendants. Barristers, physicians, and European officials from both civil and military ranks are patients.

Dr. H. C. Menkel, who has opened treatment rooms at Simla, sent recently to us for a set of stereopticon slides on the life of Christ, together with other material for public services. He is active in evangelistic work, and writes of being very happy in his field. He has found to his own satisfaction how to combine

spiritual aid and the treatment of physical ailments.

The treatment rooms at Mussoorie are doing well, under the care of Brother William Lake, reaching a good class of people, and paying financially.

People of standing and means everywhere commend our medical work. A Methodist woman going as a missionary to India, spoke very highly of our work, her mother having spent some time at the sanitarium in Moline, Ill. When she learned we had treatment rooms in Calcutta, she at once went there. Even missionaries of other denominations are known to come to our workers for Bible study, having been drawn by the mission medical work carried on.

There are twelve dispensaries in the Asiatic field. In China some medical work has been done among the poor. Here, too, the object is evangelical. Dr. Law Keem is both a physician and a minister. Dr. A. C. Selmon is likewise a minister as well as a doctor. Dr. A. G. Larson, in addition to his other duties, carries dispensary work. Other medical workers are on their way to China, and still others are being called for. Mere professional workers are not wanted. A well-qualified surgeon is greatly needed. The conservation of the health of our workers makes the need of some skilled medical help imperative in mission fields.

The dispensary work in China reaches the most promising persons to be found in the mission field. It brings men and women within the hearing of the gospel,

presenting practical and tangible manifestations of the spirit of Christ. It places literature in the hands of people. It develops friends for mission work. Those who have been helped are ready to speak a good word for those who help them. It reaches even those who have vowed never to set foot in a Christian chapel, for they come to the dispensary for help, and the dispensary door is an entrance to the chapel.

In Kobe, Japan, Dr. Noma operates a sanitarium as well as treatment rooms. The work is successful, and the sanitarium has been an evangelizing agency. As a result of its influence, a number of persons have been led into the gospel truth. A good church of about seventy members has been developed in that city since the medical work began there. Dr. Noma has trained head nurses, and thorough work is done in training some of our young people as nurses.

In Korea, Dr. Riley Russell continues his medical evangelistic work. Ten thousand persons a year pass through the dispensary. He aims to spend one day a week there. In his absence while doing field work, his wife, with the help of nurses, looks after the dispensary.

In Dr. Russell's labors, medical and gospel work are fully united. One does not appear more prominent than the other. One is not a side line and by-product of the other. Both have the same object; in fact, we may speak of such a union of teaching and healing as one work.



Group of poor patients waiting their turn for treatment, Mussoorie Dispensary, India.

QUESTIONS and ANSWERS

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.

Boils.—"I am often troubled with boils. What may be the cause? Physicians tell me my blood is in good condition. I live as healthfully as I know how. Just now I have some small boils on my neck. They usually appear with the cold weather. What treatment would you advise?"

Boils are always caused by pus germs getting into the skin. They usually enter through one of the hair apertures. Sometimes they may be caused by an abrasion, giving the germs direct contact with the deeper layers of the skin. Boils often form on the neck where the collar chafes.

Doubtless one's condition has something to do with boils. When the resistance is low, one is more liable to succumb to the action of germs than when it is high, but by rubbing the germs into the skin, even one in excellent health may be caused to have boils. The germs which are responsible for boils are always present on the skin, even when one is quite careful of the toilet.

When the boil appears, if it is too late to abort it, it is best to treat it with a warm compress until it comes to a head. This compress is best made by dipping gauze into a solution of one to four thousand bichloride of mercury. If this compress is covered with some nonconducting substance, such as oiled muslin, it will keep warm for an indefinite period. The ordinary flaxseed poultice or a bread-and-milk poultice will draw the boil to a head. But it is much better to use the antiseptic compress. Be sure to keep the skin thoroughly cleansed, and do not allow any discharge from the boil to reach any other part of the skin.

Sometimes a boil can be aborted, when it first shows itself as a little pimple, by taking a toothpick and dipping it into strong carbolic acid and driving it down into the pimple. This, however, is not apt to be successful unless one knows just how to do it. And it is necessary to be careful not to allow the carbolic acid to spread over the skin.

Ordinarily, when one is subject to boils, there is some fault in the nutrition. The patient is not getting enough out of his food.

Catarrh of the Stomach.—"Kindly give me some suggestions for relieving catarrh of the stomach."

You should be under the personal care of a physician who can watch the effect of your diet from day to day, and prescribe accordingly. I will, however, make the following suggestions:—

Drink hot water before your meals, but not too much if it seems to disturb your stomach, or if it remains in the stomach. You may find that a diet of milk and zwieback, especially graham zwieback, will agree with you as well as almost anything. If raw milk does not agree with you, it may agree better if you cook it. You can easily make zwieback by placing sliced bread in a slow oven. It should be very slightly browned. The bread should not be too fresh. It may be to your advantage not to eat quite so much at a meal as you have been eating. You may have been eating two meals a day and eating large meals, and thus loading your stomach too much at one time. If you are doing this, it might be better to eat three lighter meals.

Prolapsed Stomach.—"Is a prolapsed stomach apt to result in anything serious? What may be done to relieve it?"

The stomach is often, even in fairly normal persons, lower than was formerly supposed. If your stomach empties fluid within a reasonable time, so that there is no splashing sound when you jar it, it may be doing reasonably good work.

Your abdominal walls may be relaxed, and you may do well by taking regular exercise for developing them. Rowing a boat is a fine exercise for this purpose; but this may not always be convenient. The following exercises, faithfully carried out, may develop your abdominal muscles:—

Stand erect; toes out; hands upward raise; bend forward at the hips, touching the floor, if possible, with hands. Then rise and bend backward as far as possible. Repeat this six to ten times. Then with the arms outstretched sidewise, bend first to the right, then to the

left, alternately, six to ten times. After a rest, with the arms raised to the level of the shoulder, twist to the right, then to the left, alternately, as far as possible, six to ten times.

Next, lie on the back on a sofa and flex the thighs as much as possible, at the same time bending the knees. Do this alternately with right and left thighs, and then both together. Next, lie flat on the floor, and with toes under the sofa or other furniture and hands on hips, rise to a sitting position, and then drop slowly back. Repeat this six to ten times.

The exercise of alternately compressing the diaphragm and the abdominal muscles so as to push the abdominal wall forward, then backward, vigorously and rapidly, can be taken almost anywhere, several times a day for two or three minutes at a time. In some cases where the abdominal wall is very lax, it is necessary to use some sort of support. Some of the modern forms of corsets which lift the abdominal contents and do not compress the waist answer very well for this purpose.

Human Standards.—"What are the measurements of a perfect man and the measurements of a perfect woman?"

There may be such variation in height, weight, and general measurements compatible with perfect physical health, that I do not believe any one can give a standard of what a man should be. Some individuals may be larger boned and have fuller muscles than others, and yet one may be in as excellent health as the other. It is not necessarily the person who weighs the most or the one who has the largest muscles that is the most perfect individual. The test of perfection, so far as the human body is concerned, is the efficiency, and this does not always depend upon physical proportions.

This is not to say that it makes no difference what one's posture is, or whether one has a crooked spine or displaced organs.

Pneumonia.—"Kindly give instruction what to do for pneumonia."

The most important thing is to have medical aid. A certain proportion of pneumonia cases will get well under almost any treatment, or no treatment. Some will die in spite of the best of treatment, and some will recover in case they have proper treatment but would be lost if they did not have. Proper treatment does not mean routine treatment such as should be prescribed beforehand, but treatment based on careful observation of the patient at the time. One should know the condition of the lungs and the heart, for treatment that would be applicable in a case having a strong heart would be quite different from that demanded for the weak heart.

An excellent treatment in case of pneumonia is the ice pack.

It is generally believed now that better results are obtained by feeding the patient nourishing food than by placing him on a starvation diet. The food, however, should be easily digestible. Most physicians have learned that drugs do very little good in pneumonia.

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Peroxide for Indigestion.—"I have been advised to take peroxide for indigestion, which has disturbed me for several years. I took one dose, and felt better for several meals following it. It seemed to destroy the mucus. Do you think the continued use of the above dose two or three times a week would be injurious?"

If peroxide is pure I do not know why a small quantity of it used occasionally should be injurious. Sometimes, however, peroxide contains impurities, and is not to be recommended for internal use.

I am rather doubtful that peroxide will relieve you permanently. You may find that the use of one or two cups of hot water, to which has been added baking soda in the proportion of a teaspoonful to a pint of water, taken one-half hour before meals, will remove the mucus and improve your digestion.

The Stomach and Catarrh.—"Since my stomach has been worse, my nasal catarrh has been so bad I hardly know what to do with it. Catarrh jellies and salve do not seem to do much good. What would you suggest?"

Regarding the local condition in the nose, I do not know what to suggest, as I do not know what the trouble is, that is, whether you have difficulty in breathing, or dryness of nose, or whether there is a discharge back in the throat. A warm saline irrigation or spray may help you. To prepare this, take one-half teaspoonful of salt and one-half teaspoonful of bicarbonate of soda to a pint of water. If you prepare it too strong or too weak, it is irritating. The water should be just as hot as can be borne comfortably. It may be sprayed into the nostrils with an ordinary spray, or snuffed up from the palm, although there is a little danger in snuffing the water of getting it into the Eustachian tubes. If the nose is dry, use a little petrolatum or vaseline.

You are right in supposing that the stomach trouble may have something to do with your catarrh. But it is also true that the catarrh may increase the stomach trouble. And there is a possibility that both of these are symptoms of some other condition. It is a pretty general rule that no part of the body suffers without other parts of the body suffering with it, and it is usually very difficult to remedy a local condition unless this local treatment is accompanied by general treatment. That is the reason why treatment for catarrh administered in a sanitarium in connection with general treatment is often so much more effective than would be the same treatment given by an expert when not so accompanied.

Yale University Dry.—A new regulation in effect Nov. 1, 1915, forbids all Yale clubs and societies to serve alcoholic liquors.

Street Railway Dry.—Employees of the Lincoln Traction Company, Lincoln, Nebr., if caught entering or leaving a saloon, are discharged at once.

SOME BOOKS

Your Baby — A Guide for Young Mothers,
by Dr. E. B. Lowry. Cloth, 254 pages, \$1
net. Forbes & Co., publishers, Chicago.

Those who have read other of Dr. Lowry's carefully written books will rightly expect to find in this an authoritative treatise for expectant mothers. A large portion of the book is devoted to the preparations necessary for maternity. One chapter considers the various methods offered for painless childbirth. It is a book that every mother and every expectant mother could read with profit. The latest and most-approved methods of caring for the baby are given, such as relate to feeding, clothing, exercise, sleep, training, etc.

Tahan. Out of Savagery Into Civilization.
An autobiography by Joseph K. Griffis.
Price, \$1.25 net. George H. Doran Com-
pany, publishers, New York.

Mr. Griffis, once a warrior chieftain, later an officer of the Salvation Army, minister of the South Presbyterian Church of Buffalo, and popular Chautauqua lecturer, gives in this volume a fascinating recital of his remarkable life. Though his mother was a full-blooded Indian, and he himself lived his early life in the primitive style of the wild and uncultured natives, Mr. Griffis is a man of unusual culture and charm, a master of pure English, a shrewd observer, and a keen portrayer of the white man's faults. His story shows that not all the savagery and treachery were on the side of the red men.

The Patrol of the Sun Dance Trail, by
Ralph Connor. Price, \$1.25 net. George H.
Doran Company, publishers, New York.

Rev. Charles W. Gordon, D. D., who under the pen name of Ralph Connor wrote "The Sky Pilot" and other popular books, has in this volume given us a story of the Northwest Mounted Police that is destined to have a phenomenal sale. The first printing was 100,000.

The Kingdom in History and Prophecy, by
Lewis Sperry Chafer. Cloth, 75 cents net.
Fleming H. Revell Company, publishers,
New York.

"Vagaries" best describes many of the doctrines taught at the present time in the religious world, and almost invariably these vagaries cluster around the doctrine of Christ's second coming and the millennial reign of the church. There is one feature, however, which is to be commended,—the truth of the second personal coming of Jesus Christ is emphasized. In "The Kingdom in History and Prophecy,"

Lewis Sperry Chafer, the author, calls on ministers of the gospel to teach this doctrine, giving it as a palliative for coldness and lukewarmness in the church. In some respects the book is "decidedly different" from that written by D. D.'s. Its weakness is in that it has the millennial reign of Christ on earth, whereas the Bible teaches it will take place in heaven, and has the Jewish nation restored to its former position of favor with God. Mr. Chafer fails to note that the prophetic word teaches positively that the Jewish nation terminated as a nation at the expiration of the seventy weeks of Daniel 8 and 9. He has Gentiles also living on earth during the millennium, even though Jesus compares his second coming with the days of Noah, when the flood came and took away all who were not believers in the message of the flood and God's way of deliverance. The ungodly will be unable to abide in the day of Christ's revealed glory, and they will perish as would cutworms should they be exposed to the glory of a noon-tide sun. There is some ointment in the book, enough to float many dead flies.

The Survival of the Unfit, by Rev. Philip
Wendell Crannell, D. D. Price, \$1.00 net.
George H. Doran Company, publishers, New
York.

According to the scheme of evolution, the unfit must give way to the fit, and doubtless this process of elimination is an old one; but Dr. Crannell here brings to view another force, the force of divine grace, which is able to say to the weak, "Be strong!" and to the foolish, "Be wise!" The book contains some stirring uplifting chapters adapted to the trembling Christian soul who feels too feeble, or too ignorant, or too foolish to accomplish anything worth while. Note this striking statement from the chapter on "Bad Temperament as an Asset:" "When a man takes stock of his inherited equipment, there is nothing in the inventory that is not an integral part of his working capital, intended by the great Designer of lives to furnish in one way or another some element of power or approach to efficiency."

Shams: How to Be Insignificant: What Is a Gentleman; by Frederick A. Atkins.
Cloth, illuminated pages, 50 cents. Review
and Herald Publishing Company, publishers,
Washington, D. C.

Three charming sermonettes by a master hand, long out of print, have been reprinted in this attractive booklet. They together form a guide and an incentive to better Christian living.

CURRENT COMMENT



A Nauseating Publicity

SENSATIONAL medical articles in newspapers have become a common, everyday occurrence. Pathology is now a breakfast-table topic, and the science of eugenics agitates the fluttering breasts of stately matrons and young *débutantes* at afternoon teas. The most recent sensation concerns the action of a Chicago physician regarding an infant marred by various anomalies of development. The newspapers featured the case; they elaborated it with gossip and discussion, with opinions from physicians, with the statements of social workers and psychologists, with letters of mothers and even of crippled and imbecile children. And the end is not yet. One newspaper publishes an autobiography of the physician, who promises to write, in serial form, the story of the case. The whole incident is nauseating. Infants with similar anomalies are born almost daily; no two cases are exactly alike; each is a problem unto itself. In this instance, apparently, the rights of the individual have been flippantly considered, and the sacredness of the home has been ruthlessly banded in public. Nothing has been nor can anything ever be gained by such disgusting discussion as has accompanied this particular incident. One person has been basking in the limelight of publicity, but in this instance it is not the brightness of the spot light, but a yellow, sickly flame.—*Journal A. M. A., Nov. 27, 1915.*

A Cruel Handicap

THE insistence of saloon keepers and saloon employees that they be rated in point of citizenship as high as merchant and mechanic is pathetic. They are not accorded such rating. The best fraternal organizations deny saloon keepers membership. At decent social gatherings, announcement that this or that guest is a saloon keeper, proves most embarrassing. "My little girl is as good as any other man's child," announced a prominent San Francisco saloon keeper in resenting a slight his child had suffered.

So far as the child is concerned, that saloon man was right. His little girl is a bright little girl; she attends the best schools; she has home surroundings as admirable as money can secure. In all ways she is quite as interesting, competent, and worthy as the little girls about her. But already, the child—unjust though it undoubtedly is—has felt the handicap which her father's calling places upon her.

The child is not to blame. But it ill becomes the father to rave against the injustice of

visiting his status upon his little girl. There are ways of making a living which society holds more honorable than dealing out drinks. The handicap upon his child is of his own making.—*The California Liberator.*

The Insalivated Thumb

To the great causes of disease, the attention of the profession has long been directed. There are, however, many apparently insignificant factors which, acting together over a wide area and through an enormous number of people, produce an effect which, in the aggregate, may be more potent for harm than is realized.

To this class unquestionably belongs that common but exceedingly reprehensible custom, to be observed in practically every establishment in which foodstuffs are sold, of carrying the thumb to the lips and moistening it with saliva in order to facilitate the opening of the bag or the handling of the sheet of paper in which the purchases are placed or wrapped. As the food itself is almost invariably touched with the same thumb, it is obvious that it must be defiled by the salesman's saliva.

It is an unsavory thought.

It is a still more unsavory fact.

Were any one to smear deliberately any article of food with saliva, the person to whom that food was given would instantly reject it as being unfit for consumption. Yet, because that saliva is ostensibly used merely to open the bag, the proceeding is overlooked or ignored.

When we reflect that the mouth is one of the finest germ incubators we can find, that it constantly contains pathogenic bacteria, that men and women alike are often unconscious carriers of the microbes of diphtheria and typhoid, to say nothing of the fact that innumerable clerks and shop assistants must be victims of pyorrhea alveolaris, the danger the public runs of germ infection from this cause is by no means either slight or far-fetched.

Whenever there is an outbreak of certain germ diseases, the physician's first thought is naturally to trace the source through the water or milk supply. By what has now come to be an exceedingly simple means of investigation, many an epidemic which might have assumed grave proportions is nipped in the bud. Yet here we allow to go on unchecked a habit which, through infecting our food, may be the cause of more sporadic disease than many other more frequently suspected sources of infection.—*American Medicine, November, 1915.*

NEWS NOTES



Price of Radium Lower.—Through the work of the government research bureau, the cost of radium has been reduced from \$120,000 to \$36,000 a gram—certainly a remarkable reduction. Still it is cheaper to own and maintain an automobile, or even to live on fresh eggs, than to keep a tube of radium.

Hygienic Servants.—The town of Montclair, N. J., has a new departure in the shape of a bureau for the physical examination and certification of servants. The purpose is to examine servants for the presence of disease, and to issue certificates of health to those entitled to them. The fee for the examination, which includes blood tests and search for tuberculosis germs, will be three dollars.

Christian Scientists Convicted.—In Berlin two women were sentenced to six months' imprisonment for neglect in allowing two actresses to die, who were suffering from diseases from which, under ordinary treatment, they might have recovered. Perhaps these practitioners will console themselves during the next six months with the thought that imprisonment, after all, is only a figment of the mortal mind.

Dealcoholized Wine.—An Italian farm paper, *L'Italia Agricola*, describes a new wine, different from unfermented grape juice in that it contains all the components of wine except the alcohol, including the ethers and aldehydes which give to wines their pleasant flavors and stimulating properties. It also contains the same acids as wine, including tannic acid, which is supposed to be a protective against cholera and typhus fever. The wine is dealcoholized by fractional distillation under low pressure.

Dietetic Cause of Pellagra.—A number of physicians have succeeded in curing typical cases of pellagra by placing the patients on a liberal diet containing a fair proportion of animal protein. Now Dr. Goldberger, of the United States Public Health Service, has actually produced pellagra in a number of inmates in a Southern prison, by giving them a diet deficient in proteins. The governor offered pardon to as many prisoners as would submit to the test, and eleven men took the risk. Of these, six developed pellagra. This would indicate that a one-sided diet is one of the causes of pellagra. Probably, however, it is only a contributory cause, else pellagra would be far more general than it is. The one-sided dietary is not a recent development.

To Study Animal Diseases.—Under direction of Dr. Theobald Smith, the Rockefeller Institute for the Study of Animal Diseases has recently begun its work, being temporarily housed at Princeton University, pending the completion of its million-dollar plant, which is to be located in the vicinity of Princeton.

Saskatchewan Offers Premium on Children.—A law has been enacted in Saskatchewan, Canada, providing that every time a mother gives birth to a child the province shall pay her \$25, and the medical attendant is to receive an additional fee of \$15 from the government. Probably want to make up for loss of those sent to Europe.

Help for Disfigured Soldiers.—The American Red Cross has formed an organization to raise funds to establish a hospital in Paris for the treatment of disfiguring wounds of the face. At present there is no provision for the treatment of such wounds. The proposed hospital will do skin grafting and other operations necessary to render wounded soldiers presentable.

Public Drinking Cups and Towels.—The Commissioners of the District of Columbia, on recommendation of Dr. Woodward, the health officer, has ordered that after Feb. 1, 1916, the public drinking cup and the public towel be abolished in the District. The responsible person in any factory, house, or office building that permits these relics of an insanitary past to remain in use, will be liable to punishment.

Association Opposes Sale of Narcotics.—The American Association for the Study and Prevention of Infant Mortality, in its convention held in Philadelphia, November, 1915, adopted a resolution refusing to indorse any law countenancing the sale of narcotics in any medicine. There has been a disposition to make exception of medicines containing a minute amount of narcotic. The consensus of opinion at the convention was against the use of all narcotic drugs in medicines.

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A Blessing in Disguise.—When David Moylan, a switchman, was run down by an engine, eleven years ago, and lost both arms, it doubtless looked like hard luck; but David did not depend on luck. When he graduated from the hospital, he showed his pluck by taking up the study of law. In a few years he passed the Ohio Bar examination, and recently he became a municipal judge in Cleveland. He might have been switchman yet had it not been for his "bad luck."

Carbon Monoxide Poisoning.—It has been shown that in cooking with gas there is a chance for carbon monoxide poisoning, owing to the fact that when the flame strikes a cold surface, there may be imperfect combustion with the formation of carbon monoxide. The same condition is present when gas water heaters are installed. The symptoms of carbon monoxide poisoning are headache, nausea, and failure of the circulation. The gradually increased use of "water gas," which contains a considerable proportion of carbon monoxide, makes gas leaks more dangerous than formerly. The preventives are: avoidance of all leaks, and the provision of hoods and air drafts to stoves and heaters to convey off the products of combustion.

Date Culture in the United States.—According to a recent publication of the United States Department of Agriculture, the date palm "is now the basis of one of the great productive fruit industries of the Southwest." The country is well adapted to date culture, and varieties of dates have been imported from all the great date-growing countries,—Egypt, Algeria, Tunis, Morocco, Nubia, and the oasis of the Sahara. We have a much larger variety of dates than any of the countries where the date is native. The department is working out a plan for the proper fertilization of the date. Where there is alkali in the soil, it has been found that the addition of calcium sulphate to the soil improves the quality and the yield of the dates.

Poisoning From Preserved Corn.—An Oregon physician reports a case of apparent poisoning from corn. A woman opened some Mason jars of preserved corn, finding two of them so bad that they were discarded at once. Tasting the third, which appeared to be good, the woman decided that it, also, was not good. The contents of the three jars were fed to the chickens, forty-two in number, the result being that forty died. The same afternoon the woman complained of slight headache. The next day she took laxative pills. She had some diarrhea, and in the morning some tightening of the throat, which continued and acted like a paralysis until the time of her death; in fact the entire gastro-intestinal tract seemed to be paralyzed. There is a possibility that the corn had been contaminated by one of the food-poisoning germs which are more apt to be found in connection with meat, but which may sometimes be found in beans and other vegetables. The symptoms in such cases may not come on until twenty-four to thirty-six hours after the food is eaten.

Care of the Teeth in Tuberculosis.—If the proper care of the teeth is generally desirable as a matter of personal hygiene, it is of surpassing importance in those suffering from pulmonary tuberculosis. In these, it is necessary not only to prevent the absorption of poisons from suppurating gums and decaying teeth, but also to provide the patient with as good a masticatory apparatus as possible.—*Bulletin of the Department of Health, New York.*

Ten Feeble-Minded Boys Sterilized.—Ten male inmates of the Wisconsin State Home for the Feeble-Minded have been sterilized in accordance with the provisions of the new law. There are fourteen more inmates of the home, but on these the operation will be deferred until the results of the ten operations are apparent. But why confine the operation to the boys? Not so many years ago, doctors sterilized women by the wholesale who gave no other evidence of feeble-mindedness than that they trusted themselves to the tender mercies of these doctors with a nimble knife.

Safety-First Federation of America.—One of the most important undertakings of the federation will be the publication of the textbook "Safety First for Children," in which the most common forms of accidents will be graphically illustrated, showing how to prevent their recurrence. It is the plan that every boy and girl in the public schools shall have one of these booklets. Indications point to a large number of indorsements and approvals from municipalities, warranting the statement that "Safety First for Children" will have an enormous circulation.

Improving Cancer Statistics in the United States.—At the suggestion of a number of the foremost American students of the cancer problem, the United States Bureau of the Census has instituted radical improvements in the collection and publication of the statistics of this disease. A special report on deaths from cancer in the United States during the year 1914 is in preparation, and will be issued shortly after the first of the year. Although a large amount of additional labor has been thrown upon the Division of Vital Statistics of the Census Office by the preparation of this report, it is believed that the trouble and expense will be more than repaid by the result. Much of the valuable knowledge of the disease which we possess today has resulted from the collection and comparison of statistical data, and this method must be relied upon, side by side with experimental research and clinical observation, to elucidate the baffling problem of the nature and cause of this disease. The publication of this report by the Census Bureau should bring out new and useful information as to the prevalence of the disease in the United States, and thereby contribute to the better understanding of its controllable features. The new plan will not only produce data for the year 1914, but every future year a vast amount of information will be recorded and stored away, and can be compiled and published when the demand warrants.

Milk Shortage.—The city of New York has faced a shortage of forty thousand quarts of milk daily, owing to the fact that large quantities of milk are being condensed for shipment to the Allies. It is said, however, that the shortage affects only grade "b" milk, as that is the grade used for shipment. Doubtless this works hardship on the poor, who have to use the grade "b" milk for the sake of economy.

The United States Public Health Service.—The annual report of the surgeon-general of the United States Public Health Service records the largest amount of work performed in the history of that organization. Since the passage of the law of 1912, the public health functions of the Service have materially broadened, thereby increasing greatly its usefulness to the American people. Perhaps the most important achievement of the year was the discovery that pellagra is a deprivation disease, resulting from a faulty diet containing an excess of carbohydrates. While the final experiments which led to this discovery have only recently been completed, the conclusion itself is the culmination of investigations extending over a period of seven years.

Death Rate in the Registration Area in 1914.—The total number of deaths recorded in the registration area in 1914 was 898,059, corresponding to a death rate of 13.6 per 1,000 population. This rate is the lowest on record, the most favorable year prior to 1914 having been 1912, for which the rate was 13.9. The death rate for 1914 is 16 per cent lower than the average for the five-year period of 1901-05. When due allowance is made for the addition of many new States to the registration area between 1905 and 1914, and the comparison is confined to the registration States as they existed during the period 1901-05, there still is shown a decided decrease, amounting to 9.4 per cent. In other words, in a typical community in the registration area there were only 10 deaths in 1914 where there were 11 a decade earlier.

Danger of Trespassing on Railroad Tracks.—Words cannot express the extreme hazard one assumes in walking on the right of way, trestle, or bridge of a railroad. During the last twenty-four years there have been 108,009 persons killed and 117,257 persons injured, a total of 225,266, walking on the railroad tracks and flipping on cars in the United States. A number of railroad companies have endeavored to obtain legislation in various States, thirty-five of which have no law specifically prohibiting trespassing, with no results, owing to the hostility of those in the rural localities who use the railroad track as a short cut and highway, but oftentimes a short cut to eternity. The subject of trespassing will be one of the important items considered at the coming convention. In all probability, Congress will be petitioned to make a law prohibiting the entering, going upon, or being upon the property of any railway engaged in interstate commerce, and putting it up to the United States marshals to enforce.

Dr. Trudeau Dead.—Himself a victim of the dread disease, Dr. Trudeau has for years been an indefatigable worker in combating the spread of tuberculosis. He went to the Adirondacks in 1884, in search of health, and established the Cottage Sanatorium at Saranac Lake, the pioneer antituberculosis institution. Now there are in the neighborhood of six hundred such institutions scattered over the country. The medical world is deeply indebted to Dr. Trudeau for his unceasing labors in the study of tuberculosis. It was at Saranac Lake that the cold-fresh-air treatment was first popularized.

Foreign Parents Save More Children Than Native Parents.—A recent survey by the New York Health Department shows that out of every 1,000 children of native parentage, 44 boys and 35 girls die before the age of five; and of 1,000 children of foreign parentage, 39 boys and 32 girls die before the age of five. Of the children of Negroes, 112 boys and 95 girls die before five. The better showing for the children of foreign parentage is supposed to be due to the fact that the foreign mothers are more apt to stay at home and look after the children, and that health officers come more into personal contact with foreign mothers. Foreign mothers are also more apt to boil the milk fed to children.

Careless Diagnosis.—In a paper read before the California State Medical Society by a well-known surgeon of San Francisco, who has had quite an extensive experience as medical referee for the Industrial Accident Commission and for insurance companies, the statement was made that out of thirteen injured-back cases he found only two properly diagnosed and only one of the two properly treated. The results would tend to show that the general practitioner is more accurate in his diagnosis and more successful in his treatment of industrial injuries than are the so-called specialists. This cannot be because the specialists are deficient in knowledge and skill, but it must be due to hurried and superficial first examinations.

Cheap Imitations of Well-Known Preparations.—Several shipments of worthless imitation drug products have been seized by the officials in charge of the enforcement of the Food and Drugs Act. Itinerant peddlers are selling to drug stores large quantities of preparations made up and labeled in imitation of high-priced patent medicines of foreign origin. Only small quantities of the genuine medicines have been imported since the war began, causing a great increase in prices. Unscrupulous manufacturers are attempting to reap a harvest by substituting for the genuine medicines cheap chemicals with no medicinal value whatever. In order to make it difficult to trace these preparations to the parties responsible for their manufacture, they are not usually distributed through the regular channels of commerce, but are peddled about to drug stores by itinerants who make immediate delivery at the time of sale.

Pellagra Prisoners Pardoned.—The twelve men who volunteered to submit to the pellagra tests conducted by the U. S. Public Health Service have all been pardoned. The experiment proved that pellagra can be produced in healthy persons by a one-sided diet consisting of an excess of carbohydrate and a deficiency of protein. The test began Feb. 15, 1915, and ended Nov. 1, 1915.

For Greater City Efficiency.—Plans are on foot to ask the New York Legislature to revise the charter of the city of New York, merging into one department the health department, the department of charities, and the Bellevue and allied hospitals, under the name of the Department of Social Service. It is expected that the head of this department will be Dr. S. S. Goldwater, the recently resigned head of the health department.

The War and Women Physicians.—The call of men to the service has left a dearth of physicians for nonmilitary duty in the belligerent countries, and in England and Germany women are being eagerly invited into the profession. In both countries there is a larger contingent of medical women students than ever before, and women physicians are finding situations formerly open only to men. One place in England which had always been filled by a man at \$500 a year and emoluments, is now filled by a woman at \$1,000 a year and emoluments.

Silver Nitrate for Erysipelas.—Rondet in *Lyon Médical*, Lyons, has used a 1-to-40 solution of silver nitrate, applied to the affected area every three hours night and day for seven to nine days. The skin is first cleansed with hot soapy water. In from twelve to fourteen hours the benefit is so marked that one might be tempted to discontinue treatment, but if the applications are given up, the inflammation increases. In order to be sure of a permanent result, the treatment should be kept up for nine days, never less than seven. The fluid should be swabbed over the entire area and for two fingerbreadths beyond. The earlier the treatment is begun the more favorable the result.

Unprotected Food and Street Dirt.—The chemist of the Pennsylvania Dairy and Food Commission states that he has found, in raisins exposed for sale on a Philadelphia street, pieces of prunes; beans and rice; strands of human hair; cat fur; cotton and wool fiber; straw and bits of bran; insect wings and legs; ashes of cigars and cigarettes; and a yellowed cigarette paper. Possibly none dangerous to life if eaten, but evidence that foods exposed on the streets are liable to gross contamination.

Garlic Juice as a Wound Dressing.—A very successful dressing for wounds in the present war has been garlic juice. Efficient drainage is first established, then the wound is washed out twice daily with a lotion of garlic juice and distilled water, 1 to 3 or 1 to 4. A notable improvement was observed within 24 hours, and a decided improvement in 48 hours. In a large number of cases the purulent discharge markedly diminished, and the pain and surrounding inflammation were relieved. The wounds treated included recent, dirty wounds, in which suppuration had not yet occurred; foul, lacerated, suppurating wounds of the face and scalp, thigh, etc.; and extensive superficial burns.

Chauffeur's Knee.—Dr. Gustav F. Boheme, Jr., of New York, describes in the *New York Medical Journal* of December 11, a condition which he has found among chauffeurs. During the past two years a number of drivers of cars have consulted him for pain in the knee, made worse by ascending stairs or on moving the knee to control the pedals of the machine. Movement of the knee is limited and painful, and to the patient there is a sense of grating in front of the knee. There is more or less swelling on the sides of the kneecap. It seems to be an inflammation of a bursa beneath the tendon of the patella. The cause is supposed to be the continuous use of the knee in a cramped position. The treatment given was cessation from driving, rest for a short time, with local application of aluminum subacetate, or lead and opium solution. Passive movements with massage and baking are given early to prevent stiffening.



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- Christchurch Sanitarium, Papanui, Christchurch, New Zealand.
- Christiania Health Home, Akersgaden 74, Christiania, Norway.
- Friedensau Sanitarium, Friedensau, Post Crabow, Bez. Magdeburg, Germany.
- Kimberley Baths, 7 Cheapside, Kimberley, South Africa.
- Lake Geneva Sanitarium (Sanatorium du Lemman), Gland, Ct. Vaud, Switzerland.
- Natal Health Institute, 126 Longmarket St., Pietermaritzburg, Natal, South Africa.
- River Plate Sanitarium, Diamante, Entre Rios, Argentina, South America.
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