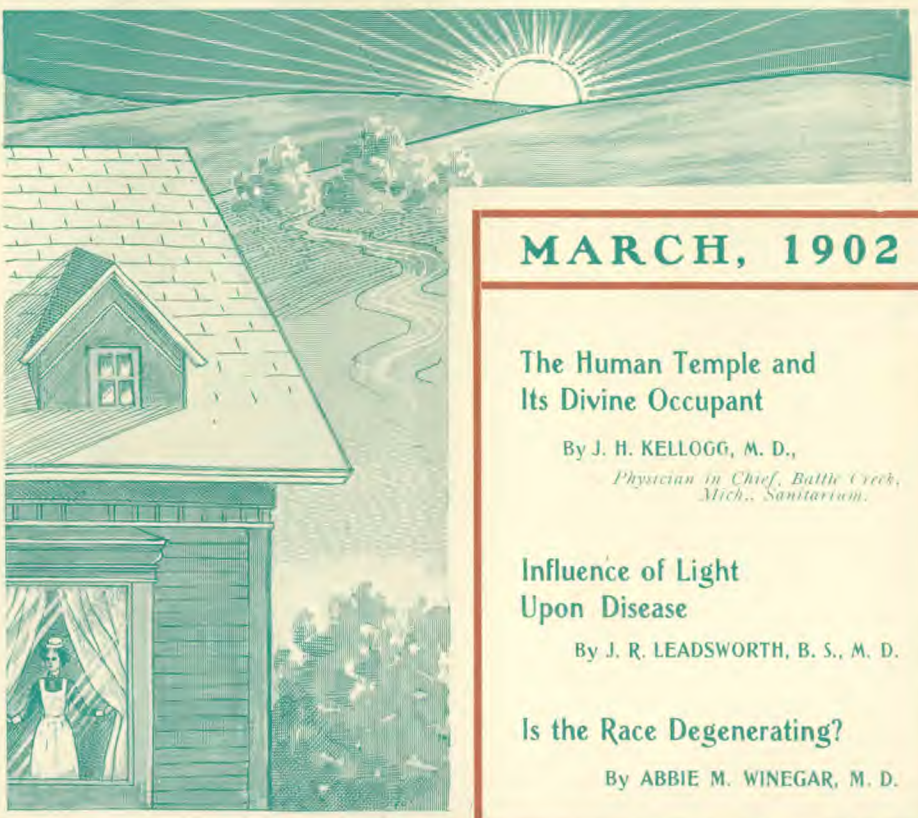
NEXT MONTH—"THE HUMAN BODY, Its Object and Attention"
By A. G. DANIELLS

# PACIFIC HEALTH JOURNAL

"Enter Sunlight,
Depart Disease"

From "Influence of Light Upon Disease"



MARCH, 1902



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# "The Name"

He chuckled. "Oh, I get it! When all my money is done, the canteen-keeper gives me drink till I owe him £1. Then he won't give me any more, so then I get my brother-in-law to lend me his wagon, and, weak as I am, I gather wood in the *veldt*—bushes and bits of wood—till I get a wagon-load. Though I am sick, the longing for the drink, when the canteen man won't give me any more, makes me strong to go on getting the wood together, till I get enough to go to Kimberley to sell it; and my brother-in-law sends some one with me (my wife is with me now) to take £1 for him for his wagon, and I sometimes buy a little brandy in Kimberley, and then bring all the other money, sometimes £3, to the canteen man here, and I drink every day till I drink all the money out. Then he lets me drink after that for another £1; then I have to get more wood. So I live."

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*"The Name" is the title of a little 16-page tract, which gives the story of a poor heathen who had come to the conditions mentioned above, and yet was saved by breathing "the Name"*

**Pacific Press Publishing Co.**

OAKLAND, CALIFORNIA

A CORNER IN THE ST. HELENA SANITARIUM PARLOR.

# PACIFIC HEALTH JOURNAL

A SOUND MIND IN A SOUND BODY

VOL. XVII. OAKLAND, CAL., MARCH, 1902. No. 3.

## The Human Temple and Its Divine Occupant *

By J. H. Kellogg, M. D.

[Physician in Chief of Battle Creek Sanitarium.]

**"For it is God that worketh in you."**—Bible.


THE foundation of Christian philosophy is that God is all and in all; and the explanation of all the universe and of every mystery is God. When we recognize that God is behind everything, and is in everything, and is expressing Himself through everything, we can not have a mystery.

It seems to have been a special design of the forces of evil to convince men that God is a long way off. Paul sought to combat that idea. He said God is nigh unto every one of us.

In the very beginning of the first book of the Bible it is stated that God made man and formed him out of the dust of the earth, and breathed into his nostrils the breath of life, and he became a living soul. He put Himself into him.

Paul said, "Know ye not that your body is the temple of the Holy Ghost?" That spirit that was breathed into man's nostrils was not breath, not air. That breath is God Himself.

Some think this conception belittles God; but to see God in the whole universe does not belittle Him.

Let us look at man's body, and see the evidences of something besides man there. A man can eat his dinner, but he can't digest it. It takes exactly the same creative power to digest a dinner as to make a flower. You can't digest a dinner without gastric juice, which must be created on the spot. The stomach is not full of gastric juice, waiting to digest the dinner, but just such quality and quantity of gastric juice as is necessary for that particular dinner, has to be manufactured. The gastric juice is absolutely dependent on the quality and quantity of the food taken into the stomach at each meal. Where does the gastric juice come from? You say the stomach makes it. Is the stomach, without brain, without intelligence, without will, without reasoning faculties, able to do what you, with brains and mind, can't do? Has the stomach power to discern the food, and then make gastric juice exactly adapted to it?

*Abstract from a lecture given before the medical section of the Workers' Institute held in San Francisco, Jan. 23–31, 1902.

That gastric juice is a new creation, and the power that is manifested in its manufacture is as much a manifestation of creative power as the creation of a man. So when you digest your meal you stand in the face of as much a miracle as if you saw a man created right before your eyes.

Bread, beets, parsnips, turnips, nuts of various kinds, fruits of various colors, are taken into the stomach, and become homogeneous red blood—one color and one flavor. This is as great a miracle as the turning of water into wine, and requires the same divine power. It would be as easy for you, with the touch of a finger, to make the food on your plate into red blood, as to do it in your stomach. When it is in your stomach, it is as much beyond the control of the human will as it was on the plate. So digestion is done by divine power, and not by human power.

Now to go a little farther. This food is digested, dissolves, and disappears, leaving the stomach intact. The gastric juice digests beefsteak, a live oyster, and has actually dissolved two legs of a live frog in a dog's stomach, the stomach being preserved absolutely intact, and I make bold to say that not a living man on the face of the earth can tell why the stomach itself is not digested under the circumstances; for if one dies with gastric juice in the stomach, it will very likely eat a hole through the wall of the stomach. The same power that digests the dinner is performing that miracle of digestion, and performing a miracle of the very opposite kind in the preservation of the stomach, in the presence of this wonderful miraculous process of solution and absorption.

Let us study the circulation. The food has been dissolved, and is taken into the blood, and the blood comes to the heart, that living engine pumping away every minute of our lives, at the rate of from 50 to 150 strokes a minute.

Before my arm is raised, it has to have a command, and there must be a will behind the command to issue the order. When it has a command, it comes up or goes down. What is true of my arm is as true of my heart. Don't imagine you have a mechanism wound up like a seven-day clock, that keeps going with the motion first given to it. This heart beats fast or slow, according to the needs of the body. When you run upstairs, it will beat 120 times a minute. When lying down, it will beat only 60 times a minute.

Here is a clock that will beat according to the needs of your body, but you can't control it with the will. Try to make your heart beat fast or slow. Put your finger on your pulse, and notice how it is going. Now try hard to make it go slow. It would be a very dangerous thing if our hearts were under our own control. We are not wise enough to manage a heart. This heart has to be taken care of night and day. You could not go to sleep if you had it under the control of your will, for, when you fell asleep, it would stop.

Your hand may have ever so much cunning, but the moment you go to sleep it has lost its cunning, and is absolutely useless, because it needs intelligence behind it to direct it. Exactly so with the heart. It needs a sleepless intelligence, a will that never sleeps. So with every heartbeat there is evidence of divine power within the body, that can intelligently

direct. It is worth everything to know that, and to really believe and appreciate it. You can explain this in no other way than by saying that God dwells in the body.

No man is so wise that he can tell why the heart beats, if he eliminates God from his philosophy. The heart is very carefully protected in all its work, and there is peculiar evidence of the sleepless intelligence. When one hurries or works hard, his heart beats more rapidly, because the muscles require fuel. You notice when the locomotive, the express, is rushing over the rails how fast the fireman works. He is thrusting in the coal. He is fighting for life. He must keep up steam. If he is running a freight train he may sit down occasionally and rest; but the man on a lightning express does not have a chance to rest unless he burns petroleum.

The heart is an engine that supplies fuel to the muscles, and must supply the needs of the body. When a boy is running fast to school, his heart beats rapidly to supply the muscles with what is required of them. When a man lies down, his pulse is 60; when he sits up, it is 72, because it takes more work to sit up than to lie down. When he rises up and walks, it is 80; if he walks fast, it is 100; if he runs, it is 180, or even more. The heart's work is exactly adapted to the muscle work. Your heart is just about as big as your fist. If you have a large fist, you have a large heart, because the heart has to back up the fist. When the fist is working hard, the heart is working hard too.

We breathe when we are awake, and keep right on breathing when we are asleep. It is utterly impossible for anybody to hold his breath till he dies. He might possibly hold it till he became unconscious, but the moment he became unconscious he would breathe again, because his will ceases to hold his breath.

(To be continued.)

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# The Warfare Against Tuberculosis. No. 5

By G. H. Heald, M. D.

THE RECOGNITION OF TUBERCULOSIS IN ITS EARLY STAGES.

HAVING considered at some length the prevention of tuberculosis, it will be in order next to give attention to the cure of the disease where it has already gained a foothold; and as the treatment is far more successful in the early stages, it is of great importance that it be recognized at this critical period. Many die of tuberculosis because they began treatment too late, not realizing their danger.

Physicians often fail to recognize tuberculosis in the incipient stages, and we can not hope to place before our readers signs by which they may diagnose tuberculosis with certainty at its inception, but by giving careful attention to these signs they may have warning in time to consult their physician.

La grippe, pneumonia, bronchitis, smallpox, whooping-cough, and diabetes frequently prepare the way for consumption; and a lingering cough following one of these diseases should

be the signal for a thorough examination; in fact, a lingering cough should always be looked upon with suspicion and investigated. Usually the cough is more or less characteristic—a short hacking cough, especially after a full inspiration or when patient is about to speak.

The spitting of blood which is frothy and bright red, no matter how small in amount, may be taken as almost positive proof of tubercular trouble. If the sputum is merely tinged with blood it should at once arouse suspicion of possible tubercular trouble.

A pulse which is habitually above normal or an afternoon temperature (taken under the tongue between 4 and 6 P. M.) of 99½ or over are suspicious symptoms, to which may be added occasional pain in the chest, inability to maintain a normal weight, tendency to become tired easily. Night sweats and emaciation indicate that the disease has made considerable advancement. Often the temperature by rectum will be found to raise in the afternoon, when there is no corresponding raise in temperature of mouth or axilla.

Remember that these symptoms may not all be present; and if you have had reason to suspect the presence of tuberculosis, do not let the matter rest because some physician tells you "it is only a little cold on the chest and will soon pass off." Many an unfortunate, thrown off his guard by similar words, has neglected himself until too late, when the proper warning might have saved him.

Sometimes I fear that physicians give such misinformation because they fear to frighten the patient. The writer has seen numerous cases who had been under the care of reputable physicians, in some cases, lung specialists, to whom he had the unpleasant task of imparting the information that they were not suffering from "a little trouble in the bronchial tubes" but from tuberculosis. Some of these cases were so far advanced that recovery was improbable, and yet their physicians had not recognized the trouble or else had through mistaken kindness withheld the information from them.

The patient should not be satisfied with anything less than a careful physical examination of the entire nude chest, and a microscopical examination of the sputum. But the failure to find the tubercle bacillus by microscopic examination should not be taken as proof of the absence of tuberculosis, for the bacilli are not always present in the sputum in the early stages of the disease.

Having determined the presence of tuberculosis, the directions given in previous numbers for the prevention of the disease,—plenty of air, deep breathing, sunlight, nourishing food, etc.,—are all especially applicable.

### THE CLIMATE CURE.

Formerly much virtue was attached to climate in the cure of consumptives; and no doubt many have been greatly benefited from the change in climate. Some seem to do well in warm, moist climates of low altitude, while others thrive in a cold, dry climate with high altitude. And climates seem to wear out; so that there is marked improvement for a time after going to some new place, followed later on by a relapse. One thing is certain: home, with its comforts and its social advantages, is far preferable to life among

strangers in the best climate in the world, especially if, as is often the case, the means of the patient are limited. What are ordinary comforts at home may be dearly bought luxuries at the health resort. Often has the consumptive in the last stages gathered together the family means and started for some place having a wonderful reputation, using a large share of his little store in transportation, to find himself among strangers to whom the treatment of the sick has, through long usage, come to have only a commercial side; whose only interest in the invalid is the size of his pocketbook. Woe be unto the impecunious consumptive in such a case! His disease is a crime which can only be atoned for by the sacrifice of large amounts of money. If he has it, he may be more comfortably cared for and have the food and medical attention upon which the whole history of his case depends. If he hasn't it, he is a beggar, and as little likely to receive care as the ordinary beggar. And the people of these places are not altogether to be blamed.

To my mind it is a sad calamity for a place to get a reputation as a climate favorable for consumptives. It attracts large numbers of consumptives, who fill earth and air with their sputum, rendering what was once a healthful spot, a hotbed of disease. Many of them are poor. The inhabitants can not open their doors to take them in, for they keep coming. Every one taken into the family is a menace to the others. Where they can pay liberally there is some inducement to make the sacrifice. If they can not pay, what then? The county hospital? The state and county do not want to burden themselves with sick immigrants. And indeed the consumptive, if without means and in a strange country, is in a sad plight. And the one who is more fortunate as regards the possession of the world's goods, will often do better in his own home than he will elsewhere.

SANATORIA.

We are learning that there are other factors in the treatment of consumption quite as important as climate. There are a number of sanatoriums in all parts of the civilized world and in all kinds of climate which are having excellent success in the treatment of tuberculosis. And where one can afford it, a residence at one of these will probably do more toward stopping the ravages of the disease than any other means. These sanatoriums are, as a rule, officered by men who have made a special study of tuberculosis, and who constantly supervise every detail of the patient's life—his food, drink, exercise, rest, air, treatment, in such a way that all shall tend toward recovery. The history of these institutions has thrown a much lighter coloring into the hitherto dark picture of the consumptive's future.

One might think that the gathering of so many consumptives might be dangerous, but in well-regulated sanatoria, the system of supervising the care of the excretions and the disinfection of halls, rooms, bedding, and clothing is so perfect that there is little to fear in this regard.

In choosing a sanatorium there are advantages in favor of one having as near the home climate as possible; whereas patients cured in some entirely different climate may find it necessary to ever after live in this climate to prevent a relapse. For

instance, there are those who, having been cured in Colorado, find their old symptoms returning when they attempt to live at a lower altitude. It is possible, of course, that such would not have received any benefit had they not in the first place gone to a home institution. Another point in favor of the home institution is that in case one finds himself failing rapidly, it is not so difficult a matter to reach home.

The best place for the patient is *home* if he has one where he can get nourishing food and proper surroundings, and has a physician conversant with modern hygiene and methods of treating consumption, whom he is willing to obey implicitly in the matter of care of sputum, rest, exercise, diet, etc.

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## Items of Interest

By B. B. Bolton, M. D.

[Director Los Angeles Sanitarium.]

FIGURES recently published by the British Board of Trade show that, while the consumption of wine, beer, and spirits per head is 14.69 gallons per year in the United States, 30.89 in Germany, and 33.8 in France, the United Kingdom uses 33.21 gallons per head. She drinks more beer than Germany does, the figures being 31.7 and 27.5. The people of the United States consume but 13.3 gallons of beer per head.

As it is well known that the use of alcohol always, through its injurious action upon the nervous system, and more particularly its modifying influence upon the vital processes concerned in the life and functions of the delicate cells of the brain and other important nervous centers, affects not only the moral and social nature of the user, but also the judgment of the individual in financial matters, may not the foregoing figures throw some light upon the cause of the decline of British commerce and the degree of financial prosperity which this country s at present enjoying?

DR. ASHMEAD, in an article in the New York *Times*, advances the theory that it is not especially the eating of raw fish, but the handling of infected fish, that is the means of conveying leprosy from one individual to another. While it is known that leprosy may be communicated by actual contact with the leper, it is also true that leprosy is much more prevalent in and about fisheries. It has also been observed that climate has but little to do with the disease, as it is found, not only in the islands of the South Seas, but also in the fisheries of the Newfoundland coast and among the Japanese fishermen of the Columbia River. Lepers are also numerous in such fish-producing regions as the coast of China, Japan, Cuba, the Sandwich Islands, etc.

Experiments are now being made to determine whether fish can be inoculated with the lepra bacillus, and also to discover, if possible, fish so affected in the fisheries and waters of the regions known to be inhabited by lepers. Should the theory be found

to be correct, it may lead to closer inspection of fisheries and the fish offered for food in our markets.

BIENSTOCK, who has previously shown in the intestines of animals the presence of a bacillus putrificus, a microbe having a putrefying action on proteids, now finds that under normal conditions, such putrefaction does not occur in the intestine. He is of the opinion that the putrefactive processes are checked in the intestine by certain bacteria, such as the lactic acid and colon bacilli. His conclusion is that these organisms, which are ordinarily present, are of great value in the prevention of putrefaction.

He favors the use of raw instead of sterilized milk, because the sterilization, by destroying the lactic acid and colon germs, increases the possibility of putrefaction. It has long been known that lactic-acid kumyss, buttermilk, and other lactid-acid-containing milk products, are valuable in case of intestinal putrefaction.

ACCORDING to Frank Carpenter, the consumption of quinin is 16,000,000 lbs. per year, or 9,000,000,000 grains. Not long ago a St. Louis firm bought at one shipment six and one-half tons of quinin to be used in the manufacture of a quinin tonic.

Four and one-half million packages of a popular patent medicine were sold last year on the strength of a claim that it contained quinin as the most active curative agent.

Each dose of quinin taken produces a congestion of the delicate tissues of the internal ear, and repeated doses often taken to break up a cold, or for some slight indisposition, produce a permanent thickening of the tissues concerned in the function of hearing, thus causing permanent partial deafness. In view of the above, it is evident that quinin is not a suitable remedy for a cold.

A RECENT number of the *Anales de Sanidad Militar*, of Buenos Ayres, gives an interesting account of extensive army experiments in which the effect of diet upon horses during the fatigue of long forced marches was observed, and in which it was found that the addition of two hundred grains of sugar daily to the regulation ration gave greatly increased powers of endurance.

The horse obtains the needed muscle-sugar by the digestion of the raw starch and woody fiber found in the coarse foods furnished it, and during periods of prolonged exertion, can not furnish the energy necessary to digest enough of such food to meet the increased demands made upon its muscular system.

The sugar given in the above experiment furnishes a partially predigested food from which the horse can more readily obtain that which will satisfy its immediate needs.

IN crushing accidents, in which the limbs have been caught in machinery, it is very difficult to cleanse the wound properly, owing to the fact that the parts are much covered with grease, due to lubricating substances. Ordinary gasoline is an excellent thing wherewith to remove this grease; it causes no pain, dissolves away the grease, and leaves a clean surface upon which watery solutions or antiseptics can exert their full power.

# Hope for the Broken-Down Dyspeptic

By David Paulson, M. D.

[Superintendent Chicago Branch of Battle Creek Sanitarium.]

THE broken-down dyspeptic, or any one who has serious indigestion, is prepared to take almost any disease, and readily succumb to its ravages. Often such cases make but little progress in their efforts to recover lost health, yet they ought to be resurrected quickly and beautifully, and even pleasantly. When a man has a sort of dingy-looking skin, with just a slight suggestion of jaundice, and the white of his eyes is just a little more muddy than yellow; when his tongue is thickly coated with a gray or dirty brown substance, and his breath is foul; when he can not sleep well, and has an almost constant headache; when his bowels are extremely constipated, and he has irregular pains in various parts of his body; and yet he has practically a normal temperature; such a person can generally get well in a very short time if his case is laid hold of in a vigorous manner.

### POISONED FROM WITHIN.

Such a set of symptoms does not suggest such serious diseases as consumption, typhoid, or malarial fever; but merely that the man is slowly but surely poisoning himself; he is, in fact, virtually committing suicide by means of the toxic substances developed in his alimentary canal as a result of various fermentations and putrefactions. A man may present such a picture as has been sketched, and at the same time have other serious diseases; but, if not, he can ordinarily be quickly cured; but usually he simply makes a funeral march toward the tomb. The process of curing such a patient is very simple. Such a man is generally doped with calomel, which provokes activity of the bowels, but does not remove the cause of the trouble. He may take headache powders which will stop his headache, but they likewise fail to remove the cause. He may take tonics, such as strychnin, etc., and feel better, when, in reality, he is no better. All this is simply a process of treating symptoms. The proper thing to do is to treat the causes, not the symptoms.

### CURE THE MAN, NOT HIS SYMPTOMS.

When we attack the causes, we at once give such a patient a splendid chance for his life. The first thing to do is to place him upon such a diet as will tend to kill the germs which are at work in the alimentary canal, and at the same time encourage the elimination of the poisons which are being there produced. Nothing will accomplish this more admirably and quickly than an exclusive fruit diet. Give the patient fruit for breakfast, dinner, and supper. Let him have fruit three or four times a day, and thus avoid that wretched feeling which arises from a long-continued empty condition of the stomach. Allow the patient to eat as much fruit as he desires four times each day. No harm will arise from this, as fruit passes

very quickly out of the stomach. During these few days be careful to keep the patient in bed a large share of the time, because such fruit as apples, oranges, peaches, and pears, contains but little nourishment, and the patient will experience a sense of weakness and weariness if he takes vigorous exercise.

### DIFFERENCE BETWEEN NATURAL AND ARTIFICIAL STIMULANTS.

The fruit corrects the inactivity of the bowels, because their acids are a natural stimulant to the bowels. Natural stimulants do not wear out any function; artificial stimulants do. For instance, if a man is given a drug to promote the flow of saliva, its quality will be poor, while the natural stimulation of the salivary glands by a dry diet increases both quantity and quality of the saliva produced. If a man is given a drug to stimulate the bowels, from day to day more and more will have to be given; so the cardinal difference between a natural and an artificial stimulant is that the more a natural stimulant is used, the more effect is secured; while the longer an artificial stimulant is used, the less the effect derived from it. The germs that have saturated the patient's alimentary canal do not flourish on fruit, and consequently die.

### THE SIGNIFICANCE OF A COATED TONGUE.

Why is a patient's tongue coated? —It is because the vital activities of the tissues are so far below par that germs can flourish there. The rest of the alimentary canal is in the same condition. As soon as the man begins to live on more natural food, his tissue activities become stronger, and the coating begins to disappear—it is being thrown off. When the tongue gets strong enough to throw off all this growth, it is an indication that the stomach is in the same condition. The tongue is really the first few inches of the alimentary canal, and is a fair index to the condition of the stomach. By the time the tongue has cleared up, which ordinarily requires but a few days, the patient may try to eat some toasted bread, crackers, and some nut preparations.

If this causes headache and a recurrence of some of the other disagreeable symptoms, it should be a strong suggestion that the solid diet was begun too soon, and perhaps it would be well to return to the fruit diet for another day. By this time the patient, who could scarcely sleep at all, usually begins to sleep fairly well. The skin, instead of having that dingy appearance, is beginning to become clear, and the patient is beginning to feel fairly comfortable. In some cases the patient really feels worse in some ways, but that is no positive proof that he is not improving. It is important to know we are right, then go ahead, even though our expectations are not all realized at once. It is one thing to get the head of a drowning person above the water, and another thing to get him upon dry land. So our work is not done when a patient reaches the point where he is merely comfortable; he must learn to live on a higher plane of health, and the attainment of this does not depend solely on the diet question.

### RATIONAL TREATMENT.

While we are starving the germs out, we ought to be very careful to do everything possible to tone up the body. Apply hot fomentations over

the stomach and liver, because with hot treatments immediate effects are secured. Then take a towel and wring it out of cold water, and place it around one arm, and then rub the arm until you feel the heat coming through the towel. Then thoroughly dry with a towel, and repeat for the other arm, then the lower limbs, and, last, the chest and back.

The procedure only involves a small area of the body's surface at one time, so a good reaction is secured. When the patient becomes stronger, give a salt glow. That will thoroughly irritate the skin, and bring the blood to the surface. Wash off the wet salt by pouring over the patient's shoulders three bucketfuls of water, the first one at a temperature of ninety-five, the second at eighty-five, and the last at seventy-five degrees. Then wrap a sheet around him, and rub vigorously while drying him. If a man can not react promptly against cold, he can not resist germs. This cold treatment is a sort of vital gymnastics to increase the resisting power of the body.

So, to sum it all up, we build up the body from the outside by giving him these gymnastics, and build it up inside by giving him pure food, on which germs will not thrive. If you have a Christian physician, a Christian nurse, and a patient who is also a Christian, and who will, therefore, work in harmony with God's healing power, with the blessing of God, why should not such a person get well?

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## Influence of Light upon Disease. No. 2

By J. R. Leadsworth, B. S., M. D.

[Superintendent Mount View Sanitarium.]

THE study of man, removed from light or exposed to its intensity, furnishes a field for valuable scientific deductions.

Virchow has said, "Where light is not, the doctor will be found." Sir David Brewster, "Light is the life-blood of nature." Heat has been named nature's nervous system. Pliny has written, "Enter sunlight, depart disease." Hippocrates, often called the father of medicine, has said, "Old people are much younger than their age in summer, and double their age in winter."

The destroying and inhibiting effect of light on the growth of microorganisms is abundantly proven, as referred to in a previous number of this JOURNAL.

It has been suggested, as a solution of the therapeutical action of light, that in infectious diseases germs circulate more or less in the blood; that the blood is almost constantly being exposed to light by passing through the dense network of vessels on the skin. As a proof of this it is shown that negroes and Indians, when exposed to tubercular infection, resist the disease feebly, and its progress is rapid and deadly. The pigmented skins enormously prevent light penetration.

The influence of light on the vegetable kingdom needs only reference. Experiments have proven that without light almost no frog eggs could be hatched, that the influence upon life and development is either entirely checked or greatly modified.

In an eastern state penitentiary the average number of convicts has been about one thousand. The prison has a separate cellular system. Each individual convict, after first entering his cell, is practically confined to its limits until the end of his sentence, an average period of two and a half years. The cells for fifty years were very poorly lighted, having only a slot-like opening in the ceiling. The solid doors were kept closed; good, even temperature and ventilation were maintained by ample openings into the corridors and from that to the individual cell.

Reliable analyses of the air were made, which showed it to be of good quality, and the same in the cells as in the corridors. For the fifty years over sixty per cent of deaths occurring were from lung tuberculosis. At the end of that period the light into the corridors was greatly increased, the cell windows greatly enlarged, and all cell doors kept constantly open.

All tubercular convicts, as well as those in a run-down condition, were given one hour's daily sun bath in the large open yards between the corridors. For the ten years following this change the deaths from pulmonary tuberculosis were reduced to less than one-third the previous record, and the total deaths from all causes to less than one-half.

It is stated that the more highly-vitalized tissues of the body degenerate into much lower grades in the absence of light. Advantage of this fact is taken by poultrymen in confining fowls which are more muscular and less fat than is desirable, in totally dark coops, for some weeks before they are killed, in order that their flesh may soften.

The tenement district of New York, where large, closely-crowded buildings exclude almost entirely heaven's beneficent sunshine, furnishes additional evidence for the candid seeker after truth.

For instance, in sixty-six of these old, dingy, sunless houses, of which the Health Department kept a list, it was found that the occupants numbered 5,460 people, one-quarter of whom died in five years. In the houses standing singly on a lot, the annual mortality was 29.03 per 1,000 of the living.

Where there were rear houses on the same lot—thus almost entirely excluding the sun's rays—the mortality rose to 61.97. Of the infants living in these quarters 200 of the 1,000 died annually. While the mortality of the whole city of New York, for a period of five years, was only 24.63 per 1,000, that of the tenement district for the same period was about 62.9.

And so well recognized are the advantages of sunshine that it is given a commercial value by the enterprising landlords of this eastern metropolis. For instance, a flat with one ray of sunshine costs fifty cents a month more than a flat with none; a front flat, "where the sun shines right in your face," $17; a rear flat, where it doesn't come in at all, $11.

In the sick-room sunlight is second only in importance to fresh air, and provision should be made to move the patient about after the sun, according to the aspect of the room. As soon as convalescence is established, the daily sun bath should be a part of the routine treatment, and thus the patient will be kept constantly above the much-dreaded agents, disease-producing germs.

# Progress of Hygiene and Sanitary Science in the Nineteenth Century

By W. R. Simmons, M. D.

[Superintendent Portland Sanitarium.]

Portland Sanitarium

THIS branch of medical science has for its object the preservation and promotion of health, and hence deals with all subjects pertaining to our physical well-being. It is simply putting into practise the teachings of chemistry, physics, physiology, pathology, and bacteriology for the maintenance of the life and health of individuals and communities.

The subject has received much attention, not only in the last few years, but we find in referring to history that the Egyptians and Hebrews studied how to prevent disease, and the matter of health has been a subject of legislation for centuries past. The city of Athens had a sewer system in its early history. The Greeks and Romans were careful as to their water supply, and paid special attention to the physical training of the youth. The Romans also constructed the "Cloaca Maxima" more than 2,400 years ago, where the refuse of the city was dumped. This also helped to drain the marshes, and formed the main sewers of the city of Rome.

The writings of Hippocrates, 400 B. C., touch on the subject of water, soil, air, habitations, occupations, and also give his views on seasonal influences and on epidemic and sporadic diseases. During the time of Cæsar, health officers were appointed, and in the fourteenth century hospitals were established.

During the middle ages a terrible state of affairs existed; houses and stables were crowded together; filth of every description was thrown into the streets; sewers were not used, and water for drinking and cooking purposes was taken from wells polluted with the filth of the subsoil. Conditions were most favorable for the spreading of infectious disease, and in the fourteenth century alone, the bubonic plague, according to history, took off one-fourth or over twenty-five millions of people from the population of Europe. The ignorance of the people was shown in the fact that they attributed the disease to divine wrath, or regarded it as the dispensation of God's providence, and sought relief by inflicting all manner of punishment upon themselves. In 1348 the city of Venice appointed overseers of the public health, and adopted laws in regard to isolating infected houses and districts. Germany, in 1426, appointed city physicians, and sent out an imperial decree compelling sanitary efforts, and regulating the disposition of infected clothing, the fumigation of infected houses, etc.

In the seventeenth century, Prussia established councils and bureaus of health; and at the beginning of the eighteenth century, when threatened with an epidemic of the bubonic plague, created the pest college, which was the starting of our state boards of

health of the present time. The king of Spain had great difficulty in establishing the use of privies in 1760. The people as well as the physicians thought that the filth absorbed unwholesome particles from the air which would otherwise be taken into the body. Through his persistence, however, the edict was carried into effect. It is not surprising to know that with the existence of such unsanitary conditions the mortality in towns was greater than the birth rate. However, toward the end of the eighteenth century, many reforms were put into effect, orphan asylums were established, the condition of prisons and schools was much improved.

The history of the past has done much toward influencing the establishment of more strict sanitary laws in the last century. It is to the interest of every one concerned in the public welfare to see that these regulations are enforced. Scientific medicine of to-day has for its highest aim the eradication of all diseases that are preventable. The subject is one in which the general public are fast becoming interested. This is not to be wondered at when such plagues as the epidemic of cholera in 1830, carried off so many people. This not only aroused the towns of England to institute sanitary reforms in regard to sewers, water supplies, conditions of houses, etc., but nearly all nations followed her example, with very satisfactory results.

The ideas of personal liberty held by the people of our country made them slow in legislating on matters pertaining to public health, for fear that freedom of action would be lessened. However, the early colonists recognized the need of preserving records, which really is the foundation principles of public health, and in 1639 a law was passed "that there be records kept of the days of every marriage, birth, and death of every person in this jurisdiction."

The importance of obtaining and preserving vital statistics is even now appreciated by but ten of the states—Maine, Delaware, Connecticut, New Jersey, New Hampshire, New York, Rhode Island, Vermont, Massachusetts, and Michigan—to the extent of having anything like a satisfactory system. For many years the only health legislation enacted by the states were a few laws relating to smallpox. Vaccination was not made compulsory, and it is probably due to this fact that during the last fall and winter there were over eleven thousand cases as compared to seven thousand during the same period the year before. Dr. Abbott estimates now the vaccinated portion of the inhabitants of the United States at not far from ninety per cent, and the revaccinated portion at about fifty per cent. Several of the states have now enacted laws requiring children to be vaccinated before entering the public schools. The decrease in the number of cases where these laws have been enforced, and the epidemics now raging where they have not been, should certainly arouse the public to greater action in regard to the enforcement of these laws. In this connection, we would say that where there were no regulations in regard to school hygiene (where it is most needed) in the beginning of the century, there has been since 1894 thorough inspections, not only of buildings, but examinations of children as well, in many of the larger cities, which have proved very valuable, and

we believe will soon be inaugurated in every city and town in the land.

Where there were no fixed laws in regard to public health in the beginning of the century, we now find that nearly every city of importance in the land has its health officer or board of health. Congress in 1878 created a national board of health, whose duty it was to make investigations into the causes and means of prevention of contagious and infectious diseases; to indicate measures of national importance, and to be a center of information for all matters relating to public health. This was not, however, maintained, for want of appropriation, and since 1883, the matter has been discharged by the Surgeon-General of the United States Marine Hospital Service. The duties have enlarged to cover areas of investigation and research, and the last Congress appropriated sufficient money for the erection of laboratories for the investigation of infectious and contagious diseases and matters pertaining to the public health.

During the last few years there have been appointed, national, state, city, and town commissioners and health officers for the investigation of many questions pertaining to the public health. Among some of the more important ones are quarantine laws, pure food, and drug legislation, sewers, and public water supplies, sanitation of prisons, hospitals, sanitariums, etc.

We doubt if any country in the world is better equipped in hospital facilities than the United States. At the present time there are more than 1,800 hospitals, 300 sanitariums, 200 dispensaries, 8,000 mineral springs, more than 700 of which are health resorts.

There are at present thirty-five special hospitals in the United States for the care of consumptives, and many precautions are now being used to prevent the spread of this dreaded disease.

That the medical profession is interested in these great subjects, is evinced by the great number of sanitary conventions that are being held, and the number of leading men forming such associations as the American Public Health Association, Sanitary Council of the Mississippi Valley, American Chimalogic Association, and the Section on State Medicine of the American Medical Association.

The fact that the public mind is being moulded, human suffering relieved, and human life greatly prolonged, is shown in the following figures. In the sixteenth century the average length of life was eighteen to twenty years; at the close of the eighteenth century, thirty years; while to-day it is over forty years. The mortality in London between 1660 and 1678 was eighty per one thousand inhabitants; at the present time it is seventeen to nineteen per one thousand.

The medical profession have much to be proud of; for the success gained in sanitary science in the last century is due to the untiring efforts and activities put forth by the profession.

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DR. HEINZ, professor of therapeutics at the University of Erlangen, advises long, deep, and quick breathing for curing seasickness. He believes that one cerebral lobe is affected, and that this influences the stomach. Oxygen rapidly reaches the blood by drawing deep, long, and quick breaths, and the feeling of nausea disappears. His experiments upon people have been very successful.—*Philadelphia Medical Journal.*

# Is the Race Degenerating?

By Abbie M. Winegar, M. D.

[St. Helena Sanitarium.]


THE psalmist has very aptly said that man is fearfully and wonderfully made. No piece of machinery made by man can compare with the human body in intricacy and accuracy of adjustment. As the mighty engine made by a master mechanic requires great skill to control it and keep it in order, so the human body, made by the divine Architect, requires wisdom in its management in order that those conditions which tend to decay and death may be avoided. As the skilled workman must have a thorough knowledge of every part of the machinery, with its relations to all other parts, so man should have an accurate understanding of the human body, with its various organs, and their functions and relations. Well has it been said, "The greatest study of mankind is man."

That man may attain to the greatest height physically and mentally there must be harmonious action of all his parts and an adherence to the laws which govern his being. But man has departed from the original plan. The wise man has said, "God made man upright, but they have sought out many inventions." By these devices and inventions, abuses of all kinds have been heaped upon the race, until we now find man dwarfed, deformed, diseased, and in many cases weakened mentally. In the earliest period of the world's history man lived to a great age—almost one thousand years. Later we find the average to be threescore years and ten, less than a hundred. At the present time the average length of life is from thirty-five to forty. What has caused this rapid deterioration?

The change that has been wrought may be attributed to violation of physical laws. Prominent among the causes now prevalent is the narcotic habit. Men, women, and even children become slaves to the habit of drug-taking. Opium, morphin, alcohol, cocain, nicotin, and many milder drugs are in common use, often without the direction of a physician. Every physician is well aware of the baneful influence of such drugs. Pain for which these substances are often taken is nature's means of warning us of danger to the body, as the creaking or grating of some part of the machine indicates that something is out of order. Instead of trying to quiet the noise or close our ears that we may not hear it, we should immediately set about to find the cause. By the use of these drugs the nerves are paralyzed and the process of disease is increased rather than checked.

Sometimes these drugs are used not for pain but for the purpose of stimulating physical and mental faculties which have been impaired by wrong habits. For a time the flagging energies may be whipped up, but they soon cease to respond to the unnatural stimulus, and the body sinks the more rapidly under the additional burden.

The use of tobacco in every form,

and especially the deadly cigaret, is another common but deplorable habit, of which the resulting evil can never be estimated. The pale, sallow cheek, the sunken eye, and the tainted breath speak too plainly of the poisonous effects of the nicotin. The boy who has formed this habit and has his mental powers blunted is powerless to resist the clamorings of appetite for a stronger poison, so the habit for alcoholic drinks is easily formed.

A great mass of humanity are addicted to the use of drugs in the form of tea, coffee, and cocoa. This habit is often formed in childhood, and grows upon one so gradually that it is often difficult to convince those suffering from disease that these so-called simple things have any bearing on their condition. Tea and coffee have no food value, and are in no way beneficial to the system. These are harmful not only because of their stimulating properties but also because they interfere with digestion.

In addition to the above-named drugs may be mentioned condiments, spices, pepper, mustard, pickles, cheese, and vinegar, which act as irritants to the delicate mucous membranes, weaken the digestive organs, overtax the system, and produce results similar to those following the use of drugs.

Intemperance has its origin not with the first glass but may be traced back through the tobacco, the tea and coffee, the rich, spiced foods, the pickles, peppers, mustard, and even to the premature feeding of the child on foods adapted to older people.

Another great cause of disease and physical weakness, particularly among civilized nations, is the wrong use of foods. The purpose of food is to build up the body and repair the waste that is constantly going on; and such foods should be taken as will best accomplish this result. Many take food largely to gratify a perverted appetite, and with little thought as to whether it will make the best bone, brain, or muscle. Among other common evils of the ordinary diet are the use of rich pastries and pies, the excessive use of free fats, the combining of foods in such a manner that fermentation and decomposition take place. Many take an excessive amount of food and at irregular hours, thus overtaxing the digestive organs and causing decomposition and autointoxication.

The social system, with its banquets, dinners, teas, and luncheons at all hours of the day and night, not only works disaster to those who attend them, but the influence upon the young and those who witness such scenes is an education in wrong lines.

Society and fashionable dissipation are rapidly using up vital force and energy. Late hours spent in exciting pleasures, when the body calls for rest, are a tax which few if any can endure and retain their health.

There is probably no more common cause of disease among women than fashionable, or, more properly speaking, conventional dress—the tight, stiff corsets, the heavy skirts, the bands about the waist, the thin-soled, high-heeled shoes, the collarettes, covering only a small portion of the upper part of the body, while the arms are exposed. No wonder the young women of to-day are pale and languid and lack the ambition which should characterize the young. Those who dress in this manner should not be called upon to bear a greater burden than the weight of their clothing. Women are slaves to fashion, while altogether unconscious of it.

This heavy burden which women are trying to carry has led to another evil, which also tends to weaken the race. Lack of proper exercise causes an unequal development of the body, some portions being almost useless from inactivity. This leads also to another evil, the lack of fresh air and sunshine. Many, not realizing the value of these life-giving agents, spend hours indoors poisoning the mind with some fascinating novel and depriving the body of oxygen.

Indoor life and the routine followed in many universities and colleges, with but little industrial work, tends to unsymmetrical development, the mental faculties being highly developed, while the physical nature remains to a large extent dormant. As a result, many young people come from the schools nervous wrecks. The industrial school plan, which is meeting the approval of a large number of the best thinkers, is a great improvement in our school system, and it is to be hoped will better the physical condition of our young people.

Last, but by no means least, must be mentioned the social vices which are ruining the lives of many young people and demoralizing society to an alarming extent. All these great evils, which prey like vultures upon the vitals of the race, are so blended that they may be considered links united into a strong chain which binds the race and drags it down to physical perdition. The problem which confronts us as a thinking people is, How shall we meet the conditions as they now exist? and what shall we do to avoid the dangers which must follow from such a course of life?

## Athletics and Tuberculosis

THE death of the professional athlete, Hosmer, at one time leading oarsman of the world, of tuberculosis, recalls the fact that there is such a thing as over-training. The severe strain that is borne by professional athletes is very apt to be followed by collapse sooner or later. It is noticeable how frequently the collapse is accompanied by the development of tuberculosis. Over-development of a part of the structures of the body is a source of weakness rather than strength. The "bicycle heart" is a marked instance of this fact. The heart increases in size and power because of the demand thrown upon it by the prolonged and violent exercise. The tendency of this abnormal condition is to shorten life.—*Modern Medical Science.*

## Average Length of Life

WE are rapidly gaining in the average length of human life. Better sanitation, the enforcement of precautions against contagious and infectious diseases, and the advancement of surgery and medicine, are causing an even more rapid reduction of the death rate than the layman might guess. The census bulletin of deaths that occurred in 271 cities of 5,000 population or more, shows that 18.6 persons died in 1900 out of every 1,000, whereas in 1890 the number who died in the same cities was 21 out of every 1,000. The average age at death in 1890 was 31.1 years; in 1900 it was 35.2 years. If these statistics be accurate, the saving of human life that has been achieved in a decade is enormous.—*Philadelphia Medical Journal.*

# WOMAN'S REALM

Conducted by Mrs. M. C. Wilcox

## To Mother

I HAVE seen the sunrise breaking on the shores of distant seas—
I have seen the mists of evening creeping slow across the leas
To the borderland of twilight when the birds were winging home,
And the air was filled with sweetness from the newly-furrowed loam;
But the wondrous tints of evening and the glory of the skies
Can not move my soul to gladness like a smile from mother's eyes.

I have heard the chimes of church bells faintly echoing on the breeze—
I have heard the south wind sighing soft and low among the trees
When the moon had bathed the hilltops in a weird and magic glow,
And her wake was traced in silver on the river far below;
But the sweetest strains of music can not make my heart rejoice
Like the love note low and tender that I hear in mother's voice.

—*Maitland Le Roy Osborne.*

## Character Builders

By Mrs. M. C. Wilcox

"Build thee more stately mansions, O my soul,
As the swift seasons roll."

DID you ever feel, dear fathers and mothers, that your field of usefulness was narrow and circumscribed? Did you ever sigh for a broader expanse over which to shed your personal influence for the uplifting of your fellowmen? If so, will you not stop and consider the immensity of the field to which you have already been called—"character builders"? To whom does this grandest of all works belong more than to parents?

Just look for a moment upon that sweet, innocent, helpless little infant just laid in the mother's arms. What grand possibilities may be wrapped up in that tiny speck of humanity! How it draws upon your affections! And, as you look away into the future when it is grown to manhood or womanhood, you behold in it all that is lovely and pure, noble and true.

How well do I remember when my first-born son was first laid in my arms! A prouder and fonder mother there never was, and as I gazed upon his sweet baby face and smoothed his brow with a mother touch, I said, as I thought of the future, "My noble boy!" How little did I then dream of the struggles, the tears, the anxieties it would take on my part to make this fair ideal of him!

Ah, dear parents, it requires united effort, patient, unwearied effort, to make of our precious children all that we desire! They must be given line upon line, precept upon precept, here a little and there a little, until the character is rooted and grounded and established. And is this work a narrow work?—Ah, no! It is as broad as immensity, as far-reaching as eter-

nity. It will require all there is of us, and, as we consider the work, we will be led to exclaim, "Who is sufficient for these things?" Of necessity we will be drawn to Him who is our wisdom and strength.

As I have been meditating upon the work to-day, I have felt that we are not giving sufficient attention to it. It is such common, every-day work we are inclined to lose sight of its great importance. But my heart has been made to rejoice that *some* attention is given to it, for it is the foundation work of all works. It is the work of God in the fullest sense, this home work, this home education, this implanting and living the principles of the gospel of Jesus Christ in the every-day life, this character building, and we need to have our minds called to its importance over and over again.

"A stream can not rise higher than its source," and so all the ambitions and aspirations we may have for our little ones are vain if we ourselves are far below the standard. "Be yourself what you desire your children to be," are words worthy of careful consideration. But how shall we attain to a higher standard?—There is no way to it save by the religion of Jesus Christ. Nothing but this can enable us, after years of carelessness in forming habits that are evil, to eliminate those things from our lives. Nothing but this will enable us to expel the unlovely traits of character and put features of beauty in their place.

And this work can not be accomplished in a day. But by resolute, heroic purpose and unceasing prayer we shall continually advance.

Not alone are the eyes of our tender, helpless darlings upon us, noting all our failures and victories, but the eyes of our tender, sympathizing Saviour are upon us, watching our efforts with the deepest interest. He knows all our weaknesses, all our infirmities, all our discouragements. Ah, "He knoweth our frame, He remembereth that we are dust." And this same mighty One has said, "I will never leave thee nor forsake thee." And, more, "I will subdue their iniquities. Sin shall not have dominion over you." Praise His glorious name!

In view of this, shall we not with one hand grasp His hand and with the other tenderly grasp our own little ones, and so climb to the highest round of the ladder in our most precious God-given work.

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## The Girl Who Laughs

FOR a good, every-day household angel give us the girl who laughs. Her pastry may not always be just right, and she may occasionally burn her bread and forget to replace missing buttons, but for solid comfort all day and every day she is a very paragon.

Home is not a battle-field, nor life one long, unending fight. The trick of always seeing the bright side, or, if the matter has no bright side, of polishing up the dark one, is an important faculty, one of the things no girl should be without. We are not all born with sunshine in our hearts, as the Irish prettily phrase it, but we can cultivate a cheerful sense of humor if we only try.—*Anon.*

# What Is Woman's Need

By Mrs. H. W. Pierce

WE read much about the responsibilities of womanhood. Verily woman's mission is a high and holy mission; for to her is committed the work not only to rear the child and mould the character of her own sex, but her life is the example before all the noble manhood this world has ever known. Men of God commissioned to fulfil their heaven-appointed work in church or state, to sound the glorious message of salvation to earth's remotest bounds, to speak and act with energy and decision in a crisis, when the honor of God is at stake,—each and all of these have been cradled in a woman's arms, educated by precept and example by woman, moulded in habits of thought and conduct, prepared by woman, to a great extent, for their life-work, all the years from infancy to mature age. If all this be true, it is readily seen that it makes a vast difference to the world whether woman is faithful to her trust or not.

In view of these weighty and heaven-committed responsibilities, what answer shall be made to the question at the head of this article? Does she not then need all the help she can get from man, who is the stronger party, instead of having her labor made more trying and uncertain by him? You will freely acknowledge that she does.

She needs all the love and power that God has vouchsafed to mortals, to enable her to guide and to restrain those under her care with gentleness and with firmness, and that she may diffuse in this dark world the sunshine of God's love upon all about her.

An inspired answer to the question may be found in Luke 10:42. Whatever is meant by the "one thing needful," it comprehends the "good part that shall never be taken away from her." The Lord is the portion of His people. Ps. 16:5; Deut. 32:9. If we have Christ enthroned in the life, we have all that we need. The fulness of His grace, the abundance of His power, will enable us to do as He would do in our places. Sister, "you need not go to the ends of the earth for wisdom, for God is near. It is not the capabilities you now possess, or ever will have, that will give you success. It is that which the Lord can do for you. . . . Put your talents into the work, ask God for wisdom, and it will be given you." One need too often overlooked is health. Will it be saying too much to say that God wants us to have it? I think not, for the pen of inspiration records these words: "Beloved, I wish above all things that thou mayest prosper and be in health, even as thy soul prospereth." Then why is woman even more than the other sex bound about with weakness and infirmities? Is it not because that in her physical life she is not in harmony with her Creator? "Loose the bands," "undo the heavy burdens," "let the oppressed" body go free. Come into cooperation with God in the clothing, in eating and drinking, in labor and rest. So shall you know that "it is God which worketh in you both to will and to do of His good-pleasure." His pleasure is our best good, because He loves us. If you come into harmony with Him, He will fulfil the promise, "But my God shall supply *all your need* according to His riches in glory by Christ Jesus."

*Oxford, Miss.*

## Some Things a Girl of Sixteen Should Know

*In the Home.*—How to sweep, dust, and put a room in order, neatly, quietly, and with but little expenditure of vitality. How to set a table tastefully, wait on it gracefully (and cheerfully), clear it away expeditiously, and wash the dishes scientifically. How to make beds properly. How to wash, starch, and iron such articles as she wears. How to cut, make, fit, and mend her under-clothing, her plain dresses, and her common wraps. How to trim her own hats, and repair all her garments except shoes. How to make and mend everything, above the mattress, on her bed. How to cook potatoes and vegetables, make at least fair bread and biscuit, some kinds of cake and cookies, and something appetizing for the family invalid; how to cook cereals and not have them either soggy or wishy-washy. How to entertain, and be entertained.

*Among Her Associates.*—How to make friends, hold them, overlook faults, and help build up the best that is in them. How to say, "Yes," and stick to it; and how to say, "No," graciously and with due regard to reason. How to be dignified without seeming priggish, and how to be bright without being silly, rude, or sarcastic.

*Among Older People.*—How to be deferential, helpful, and "good company," without being forward and bold.

*In the Church.*—How to lead a meeting, whether for business or prayer. How to help without assuming too much. How to lead in any of the regular work if the leaders are disabled.—*Preston Papers.*

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## Care of Baby's Brains

"WHAT, not talk to my baby!" exclaimed a young mother, who sat holding her three-months-old baby, and chattering to it with the fond foolishness of which young mothers are capable.

"No, my dear, don't talk to him so much, not nearly so much," replied the older woman. "Dear as he is, you must not forget how delicate in every way a tiny baby is."

The young mother was sobered, but not convinced.

"How can it possibly hurt him?" she asked. "He can not understand me, and I do so love to see him smile and answer my talk with his happy look."

"Which proves that he does understand, and in his way replies to your loving talk; and it is that which is the strain. You take care to feed the baby with the greatest exactness, and to keep him clothed daintily and comfortably, and that is right. His brains, however, are just as weak and undeveloped as is his body. What this small mind needs most is rest, and when you talk to him, the tax on his mentality is beyond his strength. A young babe can not be kept too much like a little animal; let him sleep and eat, and eat and sleep again, keeping him in cool, well-ventilated rooms, and not too much in the strong light, either of the sun or artificial light. Be advised, and let your baby alone. Let him grow naturally, and not by any forcing process."—*Health.*

# EDITORIAL

## Personal Hygiene

ONE writer in this issue calls attention to the tendency to physical degeneracy manifest in the race, while another, more hopeful, sees evidence of progress in health lines. The subject of hygiene is a broad one. Public hygiene is accomplishing marvels through the untiring efforts of public-spirited men; but more needs to be done in the line of educating the people in personal hygiene.

The great foe to health is *filth*. All organisms in their process of growth and repair produce waste matters, which, if retained, are highly injurious. Man is no exception to this rule. From lungs, skin, kidneys, and alimentary canal are thrown off poisons, and anything which interferes with the free elimination of these poisons results in disease; *in fact, nearly all disease originates in this manner.*

Poorly-ventilated rooms and shallow breathing retard the escape of poisonous matter from the lungs. Decomposing filth about the premises gives off poisons, which are absorbed into the blood by the lungs. Neglect of exercise and the bath retards the elimination of poisons by the skin, and soiled clothing favors their reabsorption.

Overeating, hasty eating, irregular eating, great variety at a meal, and other errors in diet result in decomposition in the intestinal canal, with the formation of poisons to be absorbed into the blood. Constipation, through the retention of decomposing matter, favors absorption of poisons. Wı ter results in a slowing of the excretion of waste matter by the kidneys.

Normally, the skin, lungs, kidneys, and intestinal canal are amply sufficient to remove the wastes and keep the body clean and pure, but the artificial conditions to which it is usually subjected, handicap the human mechanism so that it is unable properly to carry off the wastes, and they accumulate—to make work for the doctors.

Prevention is better than cure, and the best physicians are cleanliness of person and premises, sunlight and fresh air, simplicity in diet, clothing well distributed and allowing perfect freedom of movement, regular exercise, a happy mind, and a clear conscience.

We are glad that more attention is being paid to the study of physiology. Every child should know, at the age when he is forming habits for life, what practices are harmful, and why. He should be taught the value of his body, the sacredness of the trust imposed upon him, and the advantage of living a pure, true life, free from all the habits and ills which cause sickness and premature death. H.

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SEVERAL inquiries having come to the writer regarding the merits of a certain eye cure advertised in this JOURNAL, he takes this method of saying that he is not in a position to recommend it. The contract for the advertisement was made without his knowledge. It is the purpose of the JOURNAL to carry no ads. notheartily endorsed by those in charge of it, and it shall be our aim to watch this point more closely. H.

## A New Discovery

SCARCELY a day passes that does not herald some new discovery in medical lines. About the latest in this direction is a remedy for leprosy. It seems that about two years ago a plant was sent from South America by the United States Secretary of Agriculture, and planted in the experimental grounds of the Planters' Experimental Station.

Experiments of various sorts were attempted with this plant (*tuatua*), until a Tahitian lady, teaching in the public schools, procured one of the prepared remedies, and forwarded it to her parents in Tahiti, to be tried on a leprous relative. Periodical reports have been received of the experiments tried, but, recently, the report has come of beneficial results obtained in several cases.

It is not claimed that the remedy applied has entirely cured any case of leprosy. In the case of one boy, upon which it was used, the nose had already swollen and distended abnormally. The finger nail had fallen off, and the fingers were deformed, having stiffened cords and tendons. After using the remedy for a time, the fingers partially returned to a normal condition, and the finger nails reappeared. The nose returned to its former shape and size, and the discharge of mucus from the nasal glands nearly ceased. A slight puffiness at the ends of the fingers is yet traceable, which, it is thought, will disappear with the application of appropriate treatment.

This seems a most remarkable case, and if the reports received are confirmed, the now-dreaded disease of leprosy will not seem so formidable. But it is much better to use a preventive for this than to be obliged to treat the disease itself. There is no doubt that it would be less prevalent if sanitary rules were observed by those who now seem most subject to the disease. The gospel of hygiene would, doubtless, prove a power for good to those who are brought in contact with leprous surroundings. Why should not people give attention to missionary work along the line of physical salvation for such? Surely an ounce of prevention is worth more than many pounds of cure. C.

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SOME interesting facts are brought to light by a recent bulletin of the United States Census Bureau, showing that the proportion of deaths to the population in the cities numbering 8,000 or more has fallen off nearly ten per cent in the last ten years. There has been a remarkable falling off in the death rate from tuberculosis, more so than in any other disease, though there is a marked falling off in several of the other "preventable diseases." If in the next ten years the masses could be induced to give as much attention to personal hygiene as the health officers are giving to public hygiene, there would be a still more remarkable decrease in mortality.

That personal hygiene plays an important part in the prevention of tuberculosis is shown from the investigations of a French physician who made a study of 2,192 cases of tuberculosis, finding 1,229, or 56 per cent, were alcoholics; 651, or 30 per cent, were of sedentary habit, having insufficient oxygen; 184, or 8 per cent, were destitute; 46, or a little over 2 per cent, were evidently due to direct contagion.

H.

# HEALTHFUL DISHES

## Desserts

By Mrs. S. H. Colvin

**Nut Custard.**—Rub one rounded tablespoonful of nut butter smooth with one-half cup of water. Add one egg, two tablespoonfuls of sugar, and one-fourth teaspoonful of salt. Beat all well together, add the other half cup of water, cook in a double boiler until creamy, and strain; or, if desired, pour into custard cups, set into a pan of hot water, and bake in a slow oven until set, or into a small pie-pan covered with paste, and bake as a pie.

**Almond Rice Pudding.**—Take one cup of rice (the long grains are best), wash and put in an agate pan upon the stove with three cups of water; let stand until thoroughly swelled, or until water is all taken up. Dilute one tablespoonful of almond butter in one quart of water (adding water gradually); to this add one tablespoonful flour mixed with five tablespoonfuls of sugar. Those who are accustomed to using flavoring extracts may add four or five drops each of vanilla and lemon, though this is not necessary. Then pour over rice, put in baking-dish, and bake.

**Peaches with Rice Mould.**—Wash two cups of rice in three waters, and cook in six or eight quarts of boiling water until a grain of the rice can be easily mashed between the finger and thumb. Strain the water from the rice and let the rice stand in a colander to permit all the water to drip off; return it to the saucepan and add to it two tablespoonfuls of thick cream (double cream); stir a little to mix without mashing the rice; dip a teacup in cold water, half fill with rice, turn out into a platter; continue until you have the quantity needed. Lay half of a nicely-stewed peach against each mould of rice, and put around each some of the syrup in which the peaches were cooked. The syrup should be thickened with a little corn-starch, and allowed to boil a few minutes before pouring on the peaches. Serve hot.

THERE is a vast difference in the flavor, digestibility, and nutritive value of bread fresh from the oven and bread three or four days old. It requires at least forty-eight hours for the rich, nutty flavor of good bread to become developed, and bread of the best quality seldom reaches its most perfect condition until the third day after it has been baked. People who persist in eating freshly-baked bread—in most cases underdone—do not realize how enjoyable, digestible, and satisfying a slice of bread is cut from a loaf that has been made scientifically, baked thoroughly, and permitted to reach its best estate by ripening three or four days; but if they can be induced to give such bread a trial for a short period, they will never again be satisfied with the freshly-baked, flavorless, indigestible, innutritious stuff that is now found upon the average table. Make your bread properly, bake it thoroughly, keep it in a well-ventilated box in a cool, dry place, and you will never have a moldy loaf.—*Dietetic and Hygienic Gazette.*

# The St. Helena Sanitarium

By Thomas Allen

QUITTING San Francisco, with its headlong rush and business roar, by the 4 o'clock boat for the Oakland Mole, in due time we were spinning along beside the bay, its waters as placid as a mill-pond, mirroring one of those gorgeous sunsets seen only in the region of the Golden Gate and Mt. Tamalpais,—a sight once beheld, never forgotten.

A change of cars at Vallejo Junction and a sprint up the Napa Valley brought us to St. Helena at 7 P. M. A ride of three miles by stage into the country, and we were at our journey's end.

A night's refreshing sleep and a breakfast of most palatable, wholesome, vegetarian food better fitted me to enjoy the interesting sights and pleasant surprises I met on being conducted from point to point around and in the sanitarium.

*Sanitarium Main Building.*

The general location is unique and extremely picturesque. A large main building and several cozy, sunny cottages are nestled like "pearls in emerald set," high upon the side of one of the many foot-hills near the base of Howell Mountain.

Sweeping round about are forests of live oak, spruce, pine, and other evergreen trees, and various shrubs of perennial leaf. In the well-kept gardens many varieties of roses and other fragrant flowers in full bloom cheat the senses as to the season of the year,

*Pratt Valley.*

making one think twice to remember that it is January.

To the southwest, immediately below and directly in front, lies Pratt Valley, a charming nook of meadows, fields, and orchards, all laid out in line and angle with the precision of a checkerboard. Through a wide opening between the graceful slopes of Sugarloaf and Glass Mountains stretches out one of the most attractive portions of the famous Napa Valley. Farther away the prospect rolls upward over successive ranges of hills and ends in the clear-cut sky-line along the crest of the overtopping mountains beyond.

Toward the northwest another interesting view is obtained. Sugarloaf Mountain, with its summit and beautifully-rounded sides thickly studded with shapely spruce and pine, stands on the left. From its base a restful little valley spreads out and widens

and lengthens, till lost among far-away peaks, most prominent of which is grand old Mt. St. Helena, standing like "huge Olympus," a grim sentinel of the surrounding country, his hoary head touching the clouds four thousand four hundred feet above the sea.

The whole scene is indeed beautiful in its grandeur, and grand in its beauty.

Long stretches of graded walks and miles of "trail" give ample opportunity for the wholesome exercise of perambulation. Blackmon's Cañon, a very rugged, romantic, and beautiful

*Looking Northwest from Sanitarium.*

spot, is only a half mile away. The cave, a place of interest to those who enjoy the weird sport of wandering underground, is one mile distant. A walk of two miles brings you to Bell's Cañon, a wild, fantastic, fascinating place. Here are found some of the largest trees of these near-by mountains. Standing as they do amid environments so stern as to forbid their removal, they are "sour grapes" to the woodman, and are, therefore, spared the ravages of his savage ax. Down the cañon, over the great stones in a thousand waterfalls, comes a stream, dashing and slashing and splashing, a veritable "Cataract of Lodore."

Many other places of beauty and real interest might be mentioned, but suffice it to say that one can have walking, mountain climbing, and sight-seeing to the heart's content.

Those who can not walk have the privilege of driving with fine turnouts to numerous places in the valleys and on the mountains. This is a rare treat to those who enjoy the beautiful and the grand.

The sanitarium is 67 miles north of San Francisco, and, being 760 feet above sea level, the climate is salubrious, some apply the adjective "delicious." An abundance of rain falls in its season, but much sunshine and little fog is the general rule.

Entering the building, everything and every place were found scrupulously clean. Passing down the long corridors, glimpses caught through open doors revealed neat, cozy, well-furnished rooms, with pictures, photographs of views and faces, trinkets and bric-a-brac, giving the apartments an air of homelike attraction and comfort. Indeed, one is struck with the homelikeness and domesticity of the whole place.

In the handsome parlors and on the wide verandas sat groups of people in friendly chat, while cheating Father Time out of their attention to the fleeting hours.

Supreme quiet reigns within and without. How grateful to oversensitive nerves, racked and shattered in the battle of life! Here, "far from the madding crowd's ignoble strife," rest and sleep, "nature's sweet restorer," have full freedom to perform their cures, the tranquil stillness of the place soothing like a healing balm.

More than a hundred airy, cheery rooms in the main buildings and

cottages, and in proper season numerous tents, all nicely furnished, are at the disposal of patients and guests.

The main building is five stories high, with elevator service and every modern appliance for convenience.

*Cottage No. One.*

Every room in it, and also in the cottages, is connected with the business office by electric bells, to the ringing of which ready call-boys promptly respond.

Protection against accident by fire is secured by all the usual apparatus, such as chemical fire extinguishers, fire hydrants and hose, fire buckets, fire escapes, etc. Besides all this, each floor opens out upon the ground, and even from the roof one may reach the ground without descent.

All rooms are warmed by steam, which is kept in circulation by the "vacuum system"—noiseless and efficient. All the buildings and the entire campus are brilliantly lighted by electricity, produced by a home installation.

The dining-room is well lighted, spacious and commodious and complete in all its appointments. But two meals a day are served. Patients and guests breakfast at eight o'clock, and dine at three o'clock. No tea or coffee are served, and beafsteak may be obtained only in accordance with a physician's prescription.

The culinary department is in charge of a man who is not merely competent, but who is in every particular an artist in his line.

When it is borne in mind that many disorders of the human body creep in through a defective stomach, and that a deranged condition of that organ is generally the result of improper dieting, embracing what, how, and when to eat, and that one of the main features of this institution is the correction of stomach troubles and the promulgation of diet reform both by precept and example, it will be recognized that the kitchen is a department of no mean importance. It is, as it were, in one sense, the central soul of the whole place, and cooking becomes the science of all sciences.

*Dining Room.*

The physicians' offices are equipped with every detail of furniture, appliance, instrument, etc., necessary for the thorough treatment of all bodily troubles. Surgery, the application of static electricity, X-ray examinations, the examination and treatment of the

eye, ear, nose, and throat, receive special attention. Everything is run on a scientific basis. What science approves is done; what science disapproves is avoided.

Surgical work in the institution is very successfully performed, since the patient receives a special preparation, by careful diet, baths, massage, and general tonic treatment, before the operation, and is attended by well-trained nurses thereafter. Skilled surgery and skilled nursing before and afterward, and hygienic surroundings give the patient every possible chance for a speedy and thorough recovery.

*Bird's-eye View of Sanitarium Surroundings.*

The treatment rooms for men and for women are large, handsomely finished, and fully furnished with every device necessary for the giving of all forms of rational treatment.

Hot or cold baths and electric, Russian, or electric-light baths, also rubs of various kinds, massage, manual Swedish movements, electrical applications, etc., are given by nurses and masseurs of large experience, who perform their work in the best, latest, and most scientific style known to the profession.

The laboratory, under the direction of a skilled chemist, is prepared for the examination and analysis of the different fluids and tissues of the body, by which means unsuspected conditions of the blood, stomach, kidneys, etc., are discovered, thus rendering possible accurate diagnosis and philosophical treatment of every case.

The gymnasium is well fitted up, and is under the management of a competent director. The exercises are beneficial and attractive.

A neat chapel is maintained, wherein religious services are regularly conducted and to which all are cordially invited.

Other departments, such as the dairy, laundry, livery stable, store, power plant, etc., are each complete and up to date and are respectively presided over by men eminently proficient each in his line.

The water supply is sufficient and the quality the best. An analysis of the water by Prof. E. W. Hilgard, director of the Agricultural Experiment Station at the University of California, shows that it is strictly pure. The report says it is "an excellent water for all ordinary purposes, domestic and technical; no contamination."

Like many other things and places, to justly appreciate it, one must see and taste the St. Helena Sanitarium.

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ONE matter of importance overlooked by the writer of the foregoing is that of the facilities of the St. Helena Sanitarium for manufacturing all kinds of health foods, such as the famous granose, granola, oatmeal, and wholewheat crackers. Their food factory is located near the foot of the hill on which the sanitarium stands, and employs a large force of workers in order to supply the popular demand for their unexcelled foods. Patients fall greatly in love with these foods while at the sanitarium. C.

# PACIFIC HEALTH JOURNAL

MONTHLY—DEVOTED TO

FAMILY HYGIENE AND HOME COMFORT

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Address all business communications to PACIFIC HEALTH JOURNAL, Pacific Press, Oakland, California.
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VOL. XVII. OAKLAND, CAL., MARCH, 1902. NO. 3.

REPORTS from the various sanitariums on the Pacific Coast indicate more than usual prosperity for the coming season.

THE frontispiece for this month is another view of some of the comforts to be found at the St. Helena Sanitarium. If the reader contemplates seeking a healthful and hospitable home for any part of the year, it will pay him to take a second look at the cozy corner shown in that picture.

IN our January number appeared a notice of the new book entitled "Rational Hydrotherapy." At that time we were not informed as to the price of the work, but are now able to state that it is furnished in two styles, in cloth binding at $5.00, and in half Russia at $6.00, to be had of the L. A. Davis Company, of Philadelphia.

JUST as the JOURNAL was going to press we were pained to learn by telegram that our parent health institution, the Battle Creek Sanitarium, had been totally destroyed by fire. Later word is that all of the 400 inmates were rescued, with possibly one exception. A loss of nearly half a million is entailed. What will be done to supply the lost facilities we can not now say, but we hope that the institution may be speedily rebuilt. We may be able to speak more definitely of the fire and the probable future of the Battle Creek work in the next number of the JOURNAL.

OUR subscription list is rapidly increasing, and we will soon have to raise our advertising rates, which are now extremely low.

Until that time approved advertisements will be accepted for inside pages, as follows:—

| | 6 MOS. | 3 MOS. | 1 MO. |
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The PACIFIC HEALTH JOURNAL, Oakland, Cal., care of Pacific Press Publishing Co.

# Battle Creek Sanitarium

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**FRUIT : : : CRACKERS**

Make a dough with one cup of cold, sweet cream or rich milk, three cups of sifted graham flour, and a little salt. Knead thoroughly, and divide into two portions. Roll each quite thin, then spread one with currants, stoned dates, figs or seedless raisins, chopped fine, and place the other on top; press down with the rolling pin, cut into oblong squares with a knife, and bake. White flour may be used instead of graham flour if desired.

*This book may be obtained post-paid by addressing the publishers*

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