

Significance of Fever

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"Something better is the law of all true living."

Vol. XX

Washington, D. C., January, 1905

No. 1

The Significance of Fever

Frederick M. Rossiter, M. D.

FEVER is not an unmitigated evil, a foe to be annihilated at once. It is, in and of itself, a beneficent manifestation, operating to save the life from destruction.

Twenty-five hundred years ago, Hippocrates, the father of medicine, regarded it as a protective process. This view was lost sight of for centuries, but now there is a tendency among the more progressive to view the meaning of fever in this light.

Fever is an effort on the part of nature to consume the poison and the dross, hence the vital fires are allowed to burn fiercely at times. But that the fever may not consume everything, nature offers compensation by taking away the appetite so that no more fuel will be added, by increasing the thirst for water to aid in quenching the consuming fires, by taking away the strength and putting the patient to bed and at rest, by taking away even the desire to talk and visit; for every movement or exertion increases the fires. Nature is unrelenting, yet she is merciful. She afflicts, but at the same time she works with all her restorative powers, to bring back the harmony and unity destroyed by the raging conflict.

Fever is an elevation of the temperature of the body, and, as a rule, is attended with characteristic symptoms, such as headache, and other aches, rapid full pulse, rapid breathing, a hot dry skin, with flushed face, thirst, loss of appetite, and constipation. As a rule, a fever is not harmful unless the temperature persists above 104.5 degrees. Most of the harmful results attributed to high fever are not due to the fever at all, but to the toxins, or poisons, that cause the fever.

With but very few exceptions, possibly none, fever is due to poisons produced by germs within the body. These poisons are absorbed and taken into the blood, carried to the brain, spinal cord, and nerve-centers, and there disturb the equilibrium of the heat-controlling centers. These poisons vary in their action according to the germ producing them. In typhoid fever the poison irritates the brain cells, and hence often causes intense headache and sleeplessness, and later, dulness. The poison in diphtheria is so very violent that it prevents a high temperature, and soon exhausts the heart and kidneys. In tuberculosis the poison causes a rapid heart in the very early

stages of the disease. In pneumonia the poison is of a peculiar nature, causing a great increase in the number of white blood cells.

As soon as these poisons begin to be formed within the body, the temperature begins to rise; for increased oxidation is going on in the liver, in the lymphatic glands, in the blood, and doubtless in other tissues. The fever is an indication of increased oxidation. If the rise of temperature were prevented, and the formation of poisons continued, death would be very apt to result. In fact, experiments have been performed proving this very point. Chickens and guinea-pigs, having been inoculated with malignant germs, were placed in cold water to prevent the temperature from rising. They promptly died. In others the fever was allowed to rise several degrees, and all lived. Nature attempts to combat all poisons with an increase of heat production. In all fevers which attend such an increase in heat production, the blood elaborates an antitoxin, which tends to counteract the effect of the poison produced. Hence it is obvious that fever is a protection against infection.

Viewing fever from this standpoint, it is clearly to be seen that to rapidly reduce fever with such drugs as quinin, antipyrin, phenacetin, and other coal-tar preparations, is not only unphysiological and unscientific, but it does positive harm to the patient, lessening the chance for recovery. Many cases of heart failure and of nervous disorders, can be directly traced to the extensive employment of these so-called antipyretic [to reduce fever] drugs in *la grippe* a few years ago. To "break up" fevers with these drugs is positively dangerous.

No doubt, then, the question naturally arises to many, Is it not harmful to use

cold water or ice in fever, and in trying to reduce the temperature?

The answer must be No, and for this reason: cold, when brought in contact with the skin, not only abstracts heat from the body, and hence lowers the temperature, externally at least, but through its effect upon the nervous system the nerve-centers are energized, the liver and all glandular organs are stimulated to increased activity, which all means increased oxidation, or the breaking up of poisons, and their elimination through a better action on the part of the kidneys. If the cold bathing simply depressed the heat-producing centers, and had no effect on the poisons, then it would be harmful, the same as antipyretic drugs. This is the whole philosophy of the use of hot and cold treatments in fever. Give treatment to remove the poisons, and the fever will take care of itself, or, more plainly, there will be no fever.

Since looking at it from this position, I have never been an advocate of the plan to deluge a patient all day and night with cold water, cold packs, and compresses, and tub baths, and hot applications, simply because the temperature was one hundred and four degrees, and persisted at that point. Many typhoid and pneumonia patients have thus been treated much to their disadvantage. The fever is not the crying evil. The poisons are doing the mischief. When I am treating a case of fever, it is the amount of poison that concerns me, and not the fever. If the production of poisons can be reduced, and good elimination secured, the fever need give little concern.

This brings me to another point concerning fevers, on which there is much misunderstanding, and that is "breaking up" fevers. There is a very popular notion that typhoid fever and pneumonia

can be broken up if only the right medicines are taken. And in every town there are certain learned and skilled (?) physicians who profess to be able to do just that sort of business. My observation leads me to believe that such physicians have to sign a great many death certificates. Then our homeopathic brother often carries a little pill that will check smallpox in its mad career, and abort scarlet fever by the third day. This is all medical nonsense, and worse than that; it deceives the people. When a physician makes the claim that he can "break up" typhoid fever, it at once shows that he knows but little about the real nature of the disease.

As a matter of fact, typhoid fever has had a start of from one to two weeks before fever and other symptoms of any degree appear. During all this time the germ has been incubating and getting a foothold. When the fever begins to appear, it indicates that the germs are pro-

ducing enough poison to affect the heat-controlling centers. One might just as well claim to break up scarlet fever or yellow fever after it has once started.

However, typhoid fever or pneumonia that begins with severe symptoms, and gives all indications of running a severe course, may be converted into a mild form of the disease, and run a shorter course, by withholding all food for several days, and securing thorough elimination from the bowels, the kidneys, and the skin.

So fever is not a dangerous foe to be attacked with the "hammer-and-tong" method, but it is a protective process, healing in its nature, and at work to save the body from the ravages of infection. The fierceness of the fever will depend upon the vital resistance of the patient, the susceptibility, and the amount of dross present, and the virulence of the infection.



Be careful before you start up your heating system for the winter, that there are no leaks permitting some of the products of combustion to enter the rooms. Poison in the lungs is as bad as poison in the stomach, or worse.

Do not be always dreading the advent of some disease. You will invite it if you do. Take proper precautions, but look on the hopeful side.

If a stove is used, remember that a damper in the stovepipe above the fire may cause the entrance of poisonous gases into the air of the room. When nearly all the draft is cut off, there is formed a very poisonous gas — carbon monoxide — which escapes through the cracks, and is said to pass even through

the heated iron. This gas is one of the very harmful substances, whose presence, even in minute quantity, may cause headache and other unpleasant symptoms.

Do not overheat. Do not neglect to ventilate. Do not try to economize fuel at the expense of the purity of the air.

POWDERED starch, kept in a small container like a salt shaker, and dusted on the well-dried hands after each washing, will do much to prevent cracking.

It is a good practise to keep water standing in a room, as it absorbs impurities. It is not a good practise to drink such water. The water should be quite frequently changed.

Heart to Heart Talk with Mothers

The Girl of Ten

Margaret Evans, M. D.

FLEETING are the days of childhood. You have your daughter to-day, and to-morrow she nestles her own sweet child. To-day she is a romping, rollicking girl, to-morrow the burdens of life weigh heavily upon her. Fun and frolic fill her life to-day, but to-morrow she is molding the nation.

As a mother, it behooves you to give to the precious girl loaned you for a season, that training which will prepare her for a true, useful, and noble womanhood. Inspire her with a wholesome love for work, with a desire to be useful, and to look at no task as a disagreeable duty. Teach her to be happy, to make duty a delight, and to find happiness in making others happy. Cultivate in her a love for animals, and for nature in all its varied forms. Make the home atmosphere bright and cheerful. At almost any sacrifice of comfort it is worth while to set apart a play room for the children. They must have their fun and frolic. Do not repress their buoyant spirits. They are entitled to their mirth, and if it must be left at the threshold without, they will soon regard home as a place to eat and sleep, and will find pleasure at other and less profitable places. The noise of their joyous merriment may at times be loud, but better the din at home than sly wickedness away from home.

The quiet, gentle, prim, pale-faced little girl who is every inch a lady is not strengthening her muscles, expanding her chest, and building a bulwark against disease. Do not lay upon her the burden of sex. Allow her the innocent freedom which her brother enjoys. It is no worse for a girl to be rude and boister-

ous than for a boy. It is alike bad for both. Do not curtail her pleasure or limit her merriment because she is a girl. To engage in the active sports with her brothers will improve her physically, broaden her mentally, and at the same time do much to take the rough edges off of the boys.

Until puberty there should be absolutely no difference between the physical, mental, or industrial education of our boys and girls. Until that period the girl may safely carry on her studies with boys. Her tastes should be like those of her young brothers. Sex is not developed till puberty, and has no influence over her, and we should not make her conscious of that which does not exist. For this reason it is sadly out of place to allow your little girl to be teased about having a lover or a sweetheart. She may have friends and playmates, but no such thought of lovers should enter her innocent girlish mind. Foolish jesting about that which is most sacred gives to her a decidedly abnormal view of the holy and beautiful things of life.

Never be too busy to enter into the confidences of your daughter. Be ever ready to listen to her little secrets, her joys and sorrows, and encourage her to open her heart to you. She has many problems to perplex her wondering mind, and she ought to be encouraged to come to you in unrestrained freedom, and ask any question to which she may honestly desire an answer. A child often asks aimless, thoughtless questions, and you sometimes find that after becoming wearied by answering many successive inquiries, you have only prompted her

to propound twice that number; so at times it becomes necessary to make limitation, but this should be done without repressing any desire for knowledge. Let your little daughter know that no one in all the world understands her as you do; that her interests are ever your interests, and that you would feel pained to have her keep anything from you. If you do not fully understand your daughter, become acquainted with her, and teach her to unburden to you her heart's secrets. A wise mother finds time for many twilight talks with her daughter as she treads the thoughtless years of childhood. She tells her how she was born, of her physical relation to her mother, and how God used her parents as agents in making her. The unfolding of this beautiful truth will excite no sense of unfitness in your child, but will prove a sweet, tender bond of love. Too many children have the impression that there is something vulgar and shameful in life, which must be kept hidden and wrapped in silence; but it is your God-given duty as a mother to delicately unfold to your daughter the knowledge that would otherwise appear mysterious and vile.

By earnest training the character of the child may be so fixed that, even if she must hear from immodest playmates vile things regarding the mystery of sex, she, in the purity of her soul, will not be contaminated. If these things have been explained to her by her mother, they will excite no curiosity, even should she hear them in a ribald way from irresponsible persons. No matter how pure your child may seem to be, do not rest too assured that she has not been told by her schoolmates the vileness of the mystery of sex, when she probably knows nothing of the sacredness and ennobling grandeur of it. No one but her mother would be likely to

teach her that part of it, but there is many a child in school and on the playground quite ready to instruct your innocent girl in things inexpressibly vile, and thus mar her life's happiness.

It is not strange that the utmost confusion of mind and morals should exist regarding matters of sex. Mothers have sadly neglected their duty in this particular. How can they be willing to have low-minded associates explain to their children the most tender and sacred relations of life? How can a mother be content to let her child learn from ignorant, vile lips the facts concerning so sacred a function? Your child may be young, and may appear quite innocent, and it may be impossible for you to believe she has seen or heard anything she should not know, but remember if she has learned anything vile, the next thing she will learn is to keep you in ignorance of it. Mother, take time to explain to your child the care and proper treatment of her own body, and the dangers incident to solitary vice. Don't flatter yourself that she is too young, or that you may wait another year. Many are the ways through which your daughter may become contaminated. You can not be too careful of her associates. Public schools all have their instructors in this debasing vice. Servant girls have been known to teach it. The deplorable habit may be formed by improper bathing, by ill-fitting garments, or through resisting or delaying the calls of nature. But give your child an insight into the laws of her being, and show her how to preserve her physical and moral health and purity.

"It pays to give a helping hand
To eager, earnest youth;
To note, with all their waywardness,
Their courage and their truth;
To strive, with sympathy and love,
Their confidence to win;
It pays to open wide the heart,
And keep it pure from sin."

Starving Colds

DR. C. E. PAGE* was a life-long sufferer from colds in a variety of forms. His mother, an uncle, aunt, brother, and sister had all died of consumption, under the prevailing methods of treatment. To all appearances, he bade fair to follow them in a few months, when he made some observations which set him thinking. He wondered why an apparently trifling exposure is apt to be followed by a cold, when a much more severe and trying exposure may not be followed by any bad effect.

The more he thought about it, the more firm the conviction became that there is something more important than exposure in the causation of a cold.

Suspecting that his constantly recurring colds might be due to disturbance in his stomach as well as his skin, he made a complete change in diet and clothing, abandoning heavy-weight flannel garments and the practise of "bundling up" on exposure. He gave up the three-meal system, and the use of fish, flesh, and fowl, and most of the accompaniments of a flesh diet, and lived mostly on vegetable food.

Nominally he ate twice a day, but he would often skip a meal when he noticed any sign of indigestion, or when he had reason to think he would be better off without eating. He averaged, as he says, "about a dozen meals a week, each less in amount, though more nutritious, than formerly."

His appetite was perfect, but he was

never "hungry," as he formerly was. When he ate three meals a day, he was hungry before every meal. If the meal was delayed, he was faint and languid, disinclined to labor—a symptom which disappeared when he kept on working. This led him to believe it to be the result of self-intoxication, and hence he called it "poison hunger."

When he lived up to the system of diet, as outlined above, he had no symptoms of cold, and no physical inconvenience whatever; but on returning to his old manner of life, he would again be troubled with colds. He was now certain that he had found in over-feeding and over-dressing the real causes of cold,

I am sure that most persons who will accustom themselves to an outdoor life and to light clothing have only to reform their eating habits to make themselves virtually disease proof.—Dr. Page.

but he determined to give the matter a thorough test. To this end, he walked in snow and sloop until his low shoes were soaked through, and sat in this condition for an hour or more. He wore all-wool underwear in moderate weather, and when cool weather came, he left off his undergarments, and went without his overcoat. He slept in winter with a draft blowing on his head and shoulders. On going to bed, he sat for a quarter of an hour in a strong current of air, entirely nude, on a cold damp night in fall. He wore a flannel gown and heavy bed clothing one night, and slept in cotton sheets and light bed clothing the next. He made these tests repeatedly, and failed to catch cold.

Returning to his old regime of three generous meals a day, he had a cold in a short time, even when he was careful to avoid what are commonly considered

* Author of "The Rational Cure of Consumption." Fowler and Wells, Publishers.

the causes of cold. He experimented on others on the same line, and always, as he says, with the same result.

Whenever he had fed the cold as far as he cared to go, he broke it up by going without food, and taking extra rations of outdoor air. He says he "never failed to break up a common cold in from twenty-four to forty-eight hours, whatever the age, sex, or occupation of the individual, and regardless of the supposed origin of the disease."

When he continued eating heartily after the cold had started, the symptoms would increase in severity. Headache,

slight feverishness, languor, sore throat, hoarseness, pressure over the lungs, would manifest themselves, and would require two or three days of fasting to bring about a cure with part of the time spent in bed.

Colds, in his case, seemed to yield more readily to a course of light eating and fresh air than in the case of his neighbors, which he attributed to the fact that he never allowed himself, at any time, to breathe impure air, such as one breathes in ninety-nine families out of a hundred.



Remember

THAT a child with sore throat may have diphtheria or scarlet fever; one with cold in the head may have measles. In case of any such illness on the part of a child, learn from a physician the nature of the trouble before exposing other children. A few days' quarantine for one child is much better than an epidemic in a neighborhood, with possibly some deaths.

That the medical treatment of whooping-cough is exceedingly unsatisfactory. Parents should realize that the advent of this disease is a real catastrophe. Children who have the disease should, under no circumstances, be allowed to associate with others.

That a child with a "cold" and slight fever may be coming down with a dangerous infectious disease. Keep him away from other children until the doctor has seen him, and is satisfied there is no danger.

That if sunshine is valuable in summer, it is doubly so in winter. Take every opportunity offered to bathe the body in the sun's rays. It is not the

heat,—stoves can furnish that,—but there is health in the sun's rays, for which there is probably no adequate substitute. Court the sunlight.

That if you have headaches after starting up your heating system, there is probably some leakage by which you are getting poisonous gases instead of pure air, or else you are not ventilating properly. Pure air is as necessary to health in winter as in summer.

That celluloid collars and cuffs are highly inflammable; and if ignited while being worn, they will cause very severe if not fatal burns.

That it is easier to catch cold than to get rid of a cold; and that it is much better to avoid a cold than to cure one.

That stove heat is more economical as a dryer of clothing than body heat. Do not sit around with damp clothing on.

That dampers closed in the pipe above the fire may economize fuel, but at the expense of health. It is dear economy.

That a neglected cold may be the beginning of a life-long catarrh, or of something worse.

Causes of Infant Mortality

J. R. Leadsforth, B. S., M. D.

COMMENTING upon a recent paper relative to the causes and frequency of tuberculosis in children, Dr. Irving, of Richmond, Va., gave a striking illustration of the possibility of infection from cow's milk. He said that in Richmond there was an infant asylum containing about thirty infants. A public-spirited citizen gave it what he thought was a very fine cow, whose milk was sufficient for the entire institution. Soon after the cow was received, it was noticed that the infants began to droop and pine away, and in less than a year only one infant survived. The cause of this high mortality was vainly sought for. Finally the milk from the cow was suspected. A post-mortem examination gave evidence of tubercular infection.

In looking over the mortality records of several hundred children who were victims of this dread disease, it appears that more than half the fatalities occurred between the ages of six months and three years. The percentage of deaths increases from three months up to eighteen months, then rapidly declines. One writer suggests that infection, in many cases, is due to the fact that tubercular bacilli is inhaled and admitted through the mouth during the time when children are creeping about the floors. The carelessness in disposing of the sputum in homes where one member of the family is hopelessly afflicted with this disease is lamentable. Frequently the sputum is deposited from time to time upon an old cloth, where, meanwhile, the drying process begins. When it is rapidly carried to every part of the house, the floor naturally coming in for a liberal proportion.

Of fifty-nine deaths reported by Dr.

Fischer, of New York City, only two were breast-fed, the rest were bottle-fed, the food consisting of grocer's milk, condensed milk, and modified cow's milk. He thinks that condensed milk furnishes the poorest foundation for the child. It is deficient in proteids, and contains a great deal of sugar, and develops fat in the place of muscle. It consists largely of cane-sugar, which is put in to preserve it. Many of the children fed on condensed milk suffer from constipation, which is often an early manifestation of rickets. It is, perhaps, more largely used by the poorer classes because it is cheap, and sold in convenient form for use. Such food as this is deficient in the proper elements to nourish the child, and that, together with unsanitary surroundings, lack of sunshine and fresh air, seem to be prominent causes in furnishing the high infant mortality.

That a child born of a tubercular mother does not often inherit the disease seems a well-established fact. But being in the closest association with her, it is a question of a few weeks or months until the infection is transmitted. Some have advised that the child be separated from the mother soon after birth; but if it is necessary to choose between nourishing it entirely by artificial food in that separation, or allowing the mother to retain possession of her offspring and provide it with natural milk, it would seem that the arguments were largely in favor of the latter method.

Where a good wet-nurse can be procured, it seems highly desirable that the child should be placed in the care of such an one, and taken from its unfavorable surroundings.

Divergent Dietetics

“When the Doctors Disagree”

EVERY one should make a careful study of foods and food values, so that he may intelligently supply to the body just what it needs for greatest efficiency, with the least digestive work.

The normal appetite is the best indicator as to when and what to eat.

By following the natural order one will experience a keen hunger at the regular meal-time. This hunger is the sign of good digestive power.

Flesh food is essential to man. Man can not be at his best on a non-meat diet.

Milk is one of man's most valuable foods.

Condiments are a valuable addition to the menu, increasing the appetite, and aiding digestion.

Fruit and bread form an ideal diet; milk is injurious.

Fruits and vegetables have little or no place in the sick-room. Milk should form the basis of the invalid diet.

Raw foods are the only true foods. Cooking destroys the life of food.

Food should contain a large proportion of bulky, indigestible material, in order to secure good intestinal action.

Drink freely of pure water. The system can not be kept pure without constant flushing.

One in sound health should have two or three good movements a day.

Man should eat three meals a day or more.

The early morning meal should be omitted, the heartiest meal coming after the work of the day.

The foods for the sick should be in a liquid condition.

If we wait until we are hungry, and masticate our food thoroughly, our own instinct will be an unerring guide as to what is best for us, and will lead us far better than any study of dietetics.

The rule to “eat until satisfied” is a bad one: the rule to “eat when hungry” is erroneous.

Ordinary hunger and thirst are morbid sensations only, and the result of excessive alimentation [overeating].

Flesh food is not only unnecessary, it is positively injurious to man. Man is at his best on a “natural,” or non-meat diet.

Milk is intended for calves, and is unfit for human consumption.

Condiments overstimulate and eventually paralyze digestion. Normal appetites require no condiments.

Fruit and milk form an ideal diet. “Bread is the staff of death.”

Fruits and fruit juice should have the preference in the sick-room. Milk will favor the growth of germs, and cause a bilious condition.

Predigested or doubly cooked foods are preferable to other foods.

All indigestible material should be discarded in the process of mastication. Its presence in the intestinal canal can do only harm.

On a natural diet, no water will be craved or needed, and one will be better off without drinking.

One following the above method will be in perfect health, and have, perhaps, one small movement a week.

Man should eat one, or not more than two, meals a day.

The evening meal should be omitted, or be very light, and several hours before bedtime.

The foods for the sick should be dry, requiring much mastication.

One should eat few articles of diet at one meal, but should change from meal to meal, avoiding a monotony, as monotony causes loss of appetite, and, hence, indigestion.

One should train himself to eat the same food day after day for long periods, as the digestive juices do their work better when they become accustomed to the food.

This table of discordant utterances might be extended considerably did space permit. It shows that dietetics is not an exact science. These utterances are by men who have had more or less success in dealing with disease, and embody the results of their experiences.

I do not mean, by quoting these statements side by side (I have not attempted to quote the exact language of the writers, but to give the substance of their views) to indicate that I consider all of these statements of equal value. Some of them seem to me to be decidedly erroneous; but I give them so that the readers of LIFE AND HEALTH may see

how much divergence there is in the hygienic teaching of the day.

Each of these statements is probably true under some circumstances. Few of them are likely to be of universal application.

One should not take any author — or any number of authors for that matter — and accept every statement regarding dietetics, without first putting it to a personal test.

A little judicious use of one's own brain will be a wonderful help in the effort to preserve or improve health. "Prove all things; hold fast that which is good."



Letters from a Physican to His Son

MY DEAR SON: In a former letter, while discussing "The Importance of Right Ideals," we saw that the opinions of men differ so widely and change so often that it is not possible to find a human standard that is trustworthy. We found, however, that the Lord's ideals, revealed in the Bible, are unchangeable and right.

Fortunately for us, he told us at the close of creation week that all he had made was "very good." Hence, whatever we find in the garden of Eden we may take as a standard of excellence.

We have no record of a change in the animal kingdom by which any race or species has ever increased its size beyond that of its ancestors; therefore we may assume that such a thing never occurred.

In Gen. 6:4 it is plainly stated that there were giants on the earth before

the flood. We trace them later in the time of Abraham, in Gen. 14:5, under the name Rephaims; and still later, as we are told in Deuteronomy third chapter, giants were living upon the earth. One of them, Og, king of Bashan, was so large as to require a bedstead nine cubits long and four cubits wide. At twenty-one inches, the cubit,—the Hebrew cubit,—he was little short of sixteen feet tall, and built in good proportion.

From these facts we must conclude that our first parents were two or three times as large as men and women of our time.

We are secure in the belief, also, that their vitality and endurance were in proportion to their size; for the record says of all before the flood whose names are given, that they reached an age of nearly a thousand years. Adam himself

died at the age of nine hundred and thirty years.

Taking our first parents as a standard for the race in both size and vitality, what a degenerate people we find ourselves to be! Moreover, with Jehovah himself as Teacher, Adam made such advancement in the study of the natural sciences that he was able, from an intimate knowledge of the plants and animals created, to give appropriate names to them all. What a wonderful mind he must have had!

Another evidence of the high standing of the first pair is the statement that Jehovah himself was delighted, or "refreshed," with their companionship when living in Eden. Please see Ex. 31:17. In the Rarotongan Bible this verse ends thus: "and was greatly delighted."

By these evidences we see that in contrast with those first generations on the earth the people of this generation are mere pigmies, and sadly degenerate in other ways.

The people of our time can not now easily realize their own physical lack; much less can they realize their awful moral condition.

Whatever men become accustomed to in infancy seems natural to them. This is doubtless the reason why the ways of

sin seem natural to us until we become acquainted with God's original plan and handiwork, as revealed in the Bible.

This thought that familiarity causes things to seem natural, is illustrated by the experience of a little girl living in one of the suburbs of New York.

The electric street-cars had run by her door from her earliest recollection. They seemed commonplace to her. One day her father took her with him to visit New York, and they spent the day in sight-seeing. On a by-street they saw what was to her the most wonderful thing seen in all New York. It was only a horse street-car; but for many days she continued to speak with wonder of what she called "an electric car drawn by horses."

Your mother and I read your letters with eager interest. We are particularly pleased with evidences of your care in the selection of your companions. When you must reject the society of one, you may do so kindly; but let not a desire to please cause you to change your purpose to associate with none but the pure and the good.

At a future time I wish to point out some of the causes of the present frightful degeneracy of the human family.

As ever, your affectionate
FATHER.



43. Liquozone.—A. J. M., Missouri: "Is liquozone a reliable disinfectant in diphtheria? Do you recommend it?"

Ans.—Liquozone is a cheap mixture advertised as a wonderful cure-all. It is claimed to be a cure for almost every known disease. In the July number of LIFE AND HEALTH you will find an article on patent medicines, in which liquozone is classed with "Microbe Killer" of unsavory reputation. Since the publication of that article, the analysis of liquozone has been published in *American Medicine*, with comments as follows:—

Water	98.61 per cent
Sulfuric acid	1.05 per cent
Sulfurous acid28 per cent
Hydrochloric acid, trace	
Fixed residue06 per cent

"The fixed residue doubtless comes from the fact that the water used has not been distilled. There appears to be no justification whatever for the claims made in the advertisement of this simple mixture. The cost of its preparation probably does not exceed one cent per gallon." We do not recommend it.



THE MEDICAL MISSIONARY AT WORK

An Echo from Maritzburg, South Africa

It is now six months since we came to Maritzburg. Our methods are entirely new to the people around us; yet we have met with exceptional support, especially as we have had to compete with other curative systems which have been very firmly established in many minds here. In every instance with those who have patronized us, the Lord has helped us to demonstrate that our principles are correct.

Many in this city expected to see our institution close up at the end of the first month; but we thank God that this work is not of man, and what God plants he is able to take care of. Some of the medical men here have sent us patients, and thus, through an unconscious influence, probably from these who have received help, we are securing their friendship, which is so valuable to us at this time. We could relate many successful cases, and in order to inspire our readers with more confidence in rational methods, a few might be in order:—

One instance, of a young girl, who came to us with St. Vitus's dance, and was unable to hold a limb still, was, after seven weeks' treatment, sent out well. She is to-day the picture of health. Another case was that of a gentleman who came from the hospital, having been there six months with rheumatism. It was with great difficulty that he managed to get into the house from the jinrikisha. He left us, after one month's treatment, sufficiently well to attend to his business. Another was a case of paralysis, of five and one-half years'

standing, with deformity, the victim of which had to be carried about. After three weeks' treatment he was able to walk with the aid of crutches. We might also mention the case of a young man who came suffering from neuralgia. He wished to be treated according to his own ideas, but we told him that we upheld certain principles that had stood the test of years, and if he liked, we could help him. After getting his consent, we gave him the necessary treatment, which took all the pain away, and we did not see him again for two days. When he returned to thank us, he said that on leaving us he proceeded home and went to bed and slept sixteen hours, after which he felt better than he had for years. We have seen him several times since, but the neuralgia has not returned.

We have given about six hundred treatments since we opened, but have been handicapped by having such a large building to keep up. The Lord has certainly prospered the work here, and we thank him for it. The most valuable experience, however, is the many opportunities afforded us of speaking a word for the Master. It is really surprising to note how eager the people are to listen to the truth. I realize that we have been a little too slack in the past in introducing the message, and especially so among the better classes. Our orders are to sow the seed, and the Lord will give the increase, although we may not see the results at the time. Our courage in the work is good, and our desire is that whatever we may have lacked in the past, the Master will help us to accomplish in the future.

I. R. ARMER.

Johannesburg, South Africa

THE medical missionary work is doing well. It has more than paid expenses during the five months I have been here. Of course it would do much better were it not for the hard times. There are hundreds of men out of work, and there is much suffering in consequence. Still I am glad to be here and deliver the message to this great city, which has been neglected so long. The Lord has blessed my efforts, as he always does all work done for him.

A lady found by one of the sisters here was in a very miserable condition. She had been suffering with gall-stones for sixteen years. After a few months' treatment and dieting, she was quite another person. A little girl suffering from St. Vitus's dance was brought to us. After two months' treatment, she is now entirely well. The mother and two daughters attend our Sabbath-school, and we hope that the entire family will soon accept the truth. The sisters in the church here have found a number of patients for me, and are ever ready to help and encourage in every possible way. One is paying for the treatment of a lady suffering with rheumatism, who has not walked for three years. She is much better, and we hope soon to see her walking about. To His name be all the glory.

AMELIA WEBSTER.



SPEAKING of the grandeur of the medical missionary's aims, the late Mr. Miller, professor of surgery in the University of Edinburgh, said: "Think of the brilliant career that opens out before the medical missionary. How noble, by the simple operation for cataract, to throw open the darkened windows of the soul, and let the sweet light of heaven into man's otherwise dreary tabernacle!

but how nobler far to open the spiritual eye to see the Sun of Righteousness, to behold the Lamb of God! How kind the art, by vaccination, to deposit in man's earthly frame a particle of wondrous power, whereby a loathsome and most fatal plague shall be either altogether averted or rendered mild and tractable when it comes! but yet how far more kind to be the means of introducing into the inner man a new and vital principle, more powerful and prophylactic still — the new heart, the gospel light, the Spirit's grace — whereby the worst of all evils, sin, shall be shorn of its malignant power, shall be subdued and trampled on, routed and driven away! How blessed is that skill which cures the ulcerous wound, and mitigates the agonies of fell disease! but how far more blessed to heal the soul's deadly hurt, and pour the 'balm of Gilead' into the sinner's wounded spirit! How merciful the hand that safely amputates the unsightly mass of morbid and abnormal growth, whose very weight is burdensome, whose course is deathward! but what richer mercy far to help, Bunyan-like, to lift that heavier load, which not only oppresses now, but would crush and sink the bearer into endless misery! How grateful is the task to cure the halting cripple, and make him walk and leap again as if in youth! but how more glorious far to recall the wanderer's steps from folly, sin, and death; to guide his feet into the way of peace; to show him the old paths, where is the good way, that he may walk therein and find rest for his soul!"



"Most people will admit that selfishness is the cause of all the unhappiness in the world, but they fall under the soul-destroying delusion that it is somebody's selfishness, and not their own."

Come Apart and Rest Awhile

Mrs. E. G. White

It was just after the return from their first missionary tour that Jesus bade his disciples, Come apart, and rest awhile. The disciples had returned, filled with the joy of their success as heralds of the

into a desert place, and rest awhile."

Near Bethsaida, at the northern end of the Sea of Galilee, was a lonely region, now beautiful with the fresh green of spring, that offered a welcome retreat



"Going in their boat across the lake."

gospel, when the tidings reached them of the death of John the Baptist at the hand of Herod. It was a bitter sorrow and disappointment. Jesus knew that in leaving the Baptist to die in prison he had severely tested his disciples' faith.

With pitying tenderness he looked upon their sorrowful, tear-stained faces. Tears were in his own eyes and voice as he said, "Come ye yourselves apart

to Jesus and his disciples. For this place they set out, going in their boat across the lake. Here they could rest, apart from the confusion of the multitude. Here the disciples could listen to the words of Christ, undisturbed by the retorts and accusations of the Pharisees. Here they hoped to enjoy a short season of fellowship in the society of their Lord.

COME APART AND REST AWHILE

Only a short time did Jesus have with his beloved ones, but how precious to them were those few moments! They talked together regarding the work of the gospel and the possibility of making their labor more effective in reaching the people. As Jesus opened to them the treasures of truth, they were vitalized by divine power, and inspired with hope and courage.

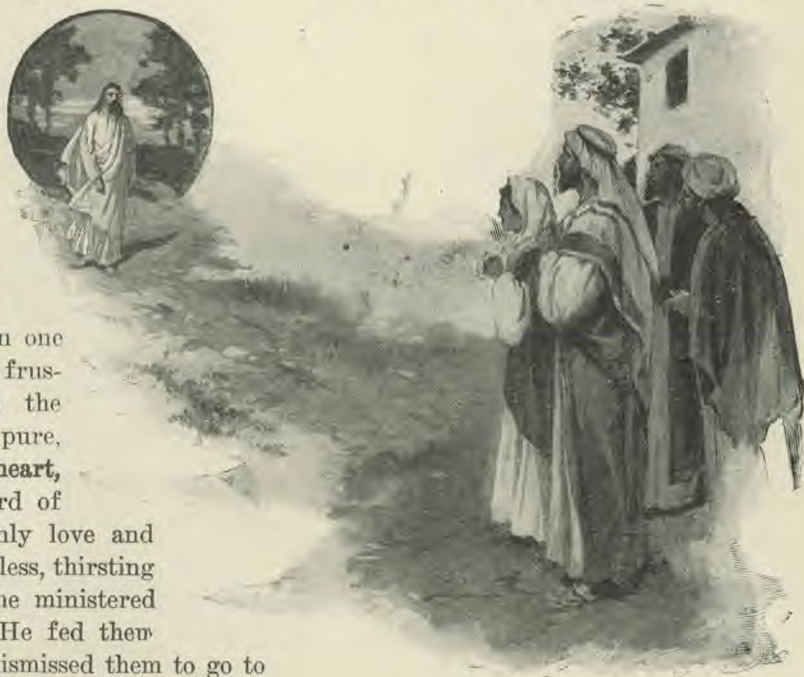
Then he was sought for again by the multitude. Supposing that he had gone to his usual place of retirement, the people followed him thither. His hope to gain even one hour of rest was frustrated. But in the depths of his pure, compassionate heart, the good Shepherd of the sheep had only love and pity for these restless, thirsting souls. All day he ministered to their needs. He fed them at evening, and dismissed them to go to their homes and rest. Again he goes into a mountain, and among the trees of the forest pours out his soul in prayer for these suffering, sinful, needy ones.

In our Saviour the cry of humanity reached the Father of infinite pity. As a man he supplicated the throne of God, till his humanity was charged with a heavenly current that connected humanity with divinity. Through continual communion he received life from God, that he might impart life to men.

In a life wholly devoted to the good of others, the Saviour found it necessary to withdraw from the thoroughfares of travel, and from the throng that fol-

lowed him day after day. He must turn aside from ceaseless activity and contact with human needs, to seek retirement and unbroken communion with his Father.

Though Jesus could work miracles, and had empowered his disciples to work miracles, he directed his worn servants to go apart into the country and rest. When he said that the harvest was great,



'Returning from the place of prayer.'

and the laborers were few, he did not urge upon his disciples the necessity of ceaseless toil, but bade them, "Pray ye therefore the Lord of the harvest, that he will send forth laborers into his harvest."

The Saviour's words of compassion are spoken to his workers to-day just as really as they were spoken to the first disciples. Come ye yourselves apart, and rest awhile, he says to those who are worn and weary. We need the quiet hour, for communion with our own hearts, with nature, and with God.



HEALTHFUL COOKERY

AND HOUSEHOLD SUGGESTIONS

Useful Hints on Settling Down

Mrs. M. H. Tuxford

A LADY who has a very resourceful turn of mind found that her stair-carpet, after a move, refused to go farther than the first two flights. So, as new carpets were out of the question, and the stairs happened to be of a very good quality of wood, she decided to paint them. This she did herself, by means of some dark oak enamel paint, and the effect was wholly successful and entirely good. Of course it would be quite risky to have them beeswaxed, so they were dusted every day, and washed as occasion demanded; and when the first bloom of the enamel showed signs of wear, they were promptly varnished. The stairs should receive one coat of paint, and one of dark oak or white enamel.

If this idea is not liked, there is a great deal to be said in favor of the art canvas or any of the denims, for stair carpeting. These materials, which run from twenty-two inches wide and cost about twenty or twenty-five cents a yard, give excellent wear. I speak from experience. Art canvas or the denim is to be had in several different colors—gobelin blue, bronze green, scarlet, and dark red.

Bronze green would look well with a blue paper and blue or bronze green paint. Scarlet or red looks charming with ivory or red walls, and for cheer-

fulness of aspect is hard to beat. The latter would be my choice for a dark house.

Where polished furniture has become dull and shabby, and no amount of home labor, however skilfully performed seems to give any good results, it will be found by far the wisest economy to secure the assistance of a French polisher. A working polisher charges only about fifteen cents an hour, and a day's steady work should result in restoring the furniture of the drawing-room and two bed-rooms to its pristine beauty, for something under three dollars.

For painted furniture there is nothing better than a fresh coat of enamel, and this one can easily apply by using a good brush, and distributing thinly and evenly all over the furniture. Two or three suites, providing they are not elaborately ornamented, could well be renovated in one day's work.

When the parlor furniture has grown hopelessly shabby, as regards the upholstery, it will often be found far the best plan to have some pretty and loose covers made. Chints is the ideal fabric for the purpose, and very pretty goods is to be had for twenty cents and upward a yard. Should chints be thought too costly for the purpose, a very pretty art muslin, thirty-six inches wide, in a large variety of colorings,

may be bought for about ten or twelve cents a yard; this will be found to be much easier to make up than chints, which is, at the best, harsh and unyielding stuff to sew.

When new parlor curtains are found to be a necessity, Madras muslin of corresponding shades in the pattern of the chints would look well. They should be made quite short, to reach only just to the inner sill, with valance of the same arranged in some artistic way over the pole or around the brackets.

The dining-room may be treated in a similar way; and where the rug fails to reach the appointed surroundings, if painted, then use some paint and enamel of the desired shade.

When all these small items are finished, you will be astonished that these improvements and beautifyings can be done at so little cost.



Dried Fruits and Their Preparation

DURING the winter and spring months fruit is scarce. In some less favored localities it is scarce throughout the year. Dried fruits may be substituted with advantage. "But," says one, "I have no use for dried fruits; I would rather do without any fruit than to eat dried fruit."

That is because you do not know dried fruit at its best. One not accustomed to it would find it difficult to distinguish between a good grade of cooked dried fruit and good canned fruit.

Dried fruit, as often prepared, is anything but inviting, and so it may be worth while to devote some space to the preparation of dried fruits for the table.

Much depends upon the selection of the fruit. If fruit is of an inferior grade, and not fit for the market when in the green state, it will not be much

improved by drying. The fruit should be bright and waxy, and should not be too dry.

The fruit should be soaked in tepid water for fifteen minutes, and washed, after which it should be covered with water, and allowed to stand until it has taken back about as much as it has lost in drying. This will require from three to thirty-six hours, depending on the kind of fruit and its dryness.

The water should cover the fruit about an inch, and should have added to it sufficient sugar to make the fruit palatable. It will be absorbed by the fruit, and not remain in the sirup.

When the fruit has swelled to its original size, put it on the stove with the water in which it has stood; add more water, and simmer from one to three hours, or until it is soft.

Drain off the liquid, and after straining through a fine sieve, add half a cupful of sugar to every quart of juice, and boil it until it is a rich sirup, then pour back over the fruit.

Fruit prepared in this way will be found to be tasty, nutritious, and healthful.

Apricots, if fully ripe when cured, will require very little cooking. In fact, it is better simply to cook the water in which they have been soaked. Use a generous quantity of sugar, and boil to a thick sirup. A little pineapple will add to the flavor.

If, after *peaches* are washed, they are allowed to stand a few minutes in boiling water, the skins may be readily removed by means of a fork. Soak until tender, and cook slowly, being careful to preserve the halves in good shape. A little orange peel will add to the flavor.

To prepare baked *pears*, select good halves, soak at least twelve hours, put into a baker sheet, sprinkle a little sugar over them, and add the water in which

they were soaked, and enough hot water to cover them. Bake *slowly* until quite soft. The juice will be a rich sirup. When cool, add the juice of one or two limes.

Orange peel, put in while soaking, is an improvement.

Peaches may be baked in the same way, but do not require the lime juice.

Prunes should be cooked until the skin is tender. The addition of sugar adds richness even to a prune. H.



Some Ways of Cooking Apples

Apple Biscuits

IN spite of their name, these do not belong to the bread family at all, as neither flour nor yeast enters into their composition. Peel and core some ripe apples, and reduce them by boiling to pulp. Flavor with juice of lemon, and mix while warm with their weight of powdered sugar; drop on plates, and dry in a slow oven for several days. The heat should never be sufficient to bake, only to dry them. When thoroughly dried, they should be packed in glass jars for winter use. Apricots, pears, plums, raspberries, strawberries, etc., may be prepared in the same way.

NOTE.—These biscuits can be put into the oven every day after the midday meal is over, as the oven will then be cool enough.

Apple Snowballs

Wash some rice well; boil it for ten minutes in fast boiling water; drain, spread on small floured pudding cloths. Peel and core some apples, being careful not to break the apple when taking out the core. Fill the center of the apple with sugar; place on the rice in the cloths; tie up, and boil for about half an hour. Serve with sugar.

Apple Meringue

Peel, core, and quarter four large apples; stew till soft, with one ounce of butter and two ounces of sugar. When the mixture is cooked and cool, add one tablespoonful of apricot jam, and pile on a glass dish. Whip the whites of two eggs, with two ounces of castor sugar, and spread over the apples. Put in the oven for a few minutes till slightly browned.



FOR each shelf and drawer of the linen closet, make pads to fit, of two thicknesses of cheese-cloth, or one of muslin, with cotton batting laid between, and spread thickly on the batting lavender flowers and a little powdered orris root; sew them all together around the edge. A delightfully delicate odor will permeate everything laid on the shelves or in the drawers, and consequently the bedrooms.



TO CLEAN TRAYS.—Japanned trays are best cleaned by rubbing them with a sponge wet in a little warm (not hot) white soap-suds. Wipe dry, and then sprinkle with a little flour. After a few minutes rub with a dry, soft cloth, and then with a piece of old silk.



DID you ever write one of the children (your own or a neighbor's) a letter when he was recovering from some illness, or kept indoors by inclement weather? Try it; the pleasure derived from a little letter of one's own, compensates for the slight effort needed.—*Selected.*



DRUGS have been invented for the patient and physician—to relieve the former from obeying the laws of hygiene, and the latter from inculcating them.—*Abrams.*

Household Accidents

A SLIGHT cut or abrasion of the hand, or a slight burn, may become a serious matter if it is totally neglected. Where the skin is torn or cut, it is desirable in the first place that the wound should bleed freely. Cases of lockjaw are of rare occurrence where this is the case, and a very slight wound of the hand or foot has been known to produce this dangerous malady where bleeding did not follow.

One of the greatest dangers lies in the wound of a kitchen-knife, which may have held impure matter, or even in the scratch of a pin, fatal cases of blood-poisoning frequently resulting from so simple a cause. Absolute cleanliness, therefore, is necessary in the treatment of such a wound. After the wound has bled a little, it should be washed with perfectly clean water. That which has been boiled is best for the purpose, and there is no harm in using a little carbolic acid in the proportion of a drop or two to a quart of water.

Do not attempt to stanch bleeding by the use of cobwebs, which are naturally dirty and full of impure germs, but use a little lint and a clean cotton or linen cloth. These should be always kept in the house for use in case of such accidents. A trustworthy druggist will always supply some

preparation of carbolic acid, properly weakened for household use. Even household ammonia, though it is painful at first, is recommended as a mild way of cauterizing a simple wound. A thick paste of equal parts of common baking-soda and flour, wet to a paste with cold water, is the best remedy for a burn.

It is better than lime-water, because lime-water is liable to become incrustated, while the paste of soda and flour is cooling to the surface, and can easily be removed. The object of treating a burn is to cover the extremities of the nerves which have been injured, and give them opportunity to heal. While such a paste is being prepared, cover the wound for the moment with common flour, and wrap it up in clean cotton.

A simple healing plaster which may be prepared in the household, calls for half a pound of resin, an ounce each of mutton tallow, camphor gum, and beeswax, half an ounce each of British oil, cedar oil, gum myrrh, and linseed-oil. Melt the resin, mutton tallow, camphor gum, beeswax, and gum myrrh together, and add the oils. This plaster should be spread on cotton when needed, and applied to the wound.— *Selected.*



QUESTIONS AND ANSWERS

Conducted by George A. Hare, M. S., M. D., Iowa Circle, Washington, D. C.

[This department is designed to be a "Bureau of Information" on topics pertaining to health. To that end we invite questions from all our readers. Please give name and address. These will not be published if the writer prefers otherwise; but we can not pay any attention to unsigned communications.]

34. Rheumatism.—R. D., Ill.: "I have been threatened for several years with rheumatism; often have pain in my wrist, shoulders, or knees. Have been a large user of flesh foods, but for six months past have been using nut foods in place of flesh, but do not see any improvement. What can I do to get free from the danger of rheumatism?"

Ans.— You did a wise thing to stop the use of flesh foods. We advise you to use but a very small amount of nut foods, especially of peanuts, as the peanut contains fully as much uric acid as do flesh foods.

We advise you to lessen the amount of food eaten, and spend more time eating it. Use some dry foods, such as toast, corn flakes, or granose with each meal, so you will be compelled to chew it very thoroughly. Eat only enough to keep up your strength. Work enough every day outdoors to get up a good sweat, and follow with a good rub down. Avoid being chilled. Keep the bowels active.

35. Nasal Catarrh.—M. A. P., Md.: "I suffer a great deal from nasal catarrh. Can I obtain relief by dieting?"

Ans.— Yes. Avoid all cakes and pastries. Use but little sugar or fat foods. Select a diet of plain foods, skilfully prepared. Chew your food very thoroughly. Eat much less than you are accustomed to. Take a warm soap and water bath twice a week, and a cold hand bath every morning.

36. Cancer.—L. B. W., Vt.: "1. Is cancer increasing in frequency? 2. What is the cause of cancer? 3. How can I avoid having it?"

Ans.— 1. Yes, decidedly.

2. The exact cause of cancer is not known.

3. Maintain every tissue of the body in good health, and you will not have cancer. Cancer, like tuberculosis, never attacks healthy tissue.

Freedom from these diseases is assured only by such practical methods of right living as will develop a body strong in every part.

37. Infant Feeding.—"My baby is two months old, is not well nourished, seems to be hungry all the time, but is not satisfied when fed. Is there any way to feed a baby so it will not be cross? If so, tell us how."

Ans.— Yes. A young baby never cries except for good cause. Babies that are well born and properly fed *do not cry*—are never cross. You can waken them at any hour, and they are ready to laugh and play. Such a baby is a natural baby—the sweetest, happiest thing on earth, "for of such is the kingdom of heaven."

To raise such a baby the mother must have good health, lead a natural, happy life, take no drugs, tonics, or stimulants. Following the birth of the baby, the mother's diet must be nourishing, but simple. All acid fruits, such as strawberries and currants, and vegetables of decided characteristic, such as cabbage and onions, etc., must be avoided.

The baby should have nothing but breast milk. Many a baby's stomach is impaired before it is six hours old by the meddlesome kindness of some friend who insists that the baby must have some water sweetened with cane-sugar. For the first few months the baby should be fed every two hours during the day once or twice during the night, and the feeding should be done on the minute,—never a drop of food except at the regular hour of feeding. Your baby, if thus fed, will waken in the night as promptly as the hour arrives, take its food, and fall asleep in a few minutes.

Give your baby every care needed, but don't be fussy with it. A baby thus raised will bring such happiness into the family as but few households know.

38. Digestibility of Potatoes.—Which are more digestible, baked potatoes or mashed potatoes?

Ans.—Baked. Mashed potatoes are cooked by boiling at a temperature of two hundred and twelve degrees Fahrenheit. Baked potatoes are cooked at a much higher heat, usually three hundred degrees Fahrenheit or more. This renders the starch easier of digestion.

39. Burning in Stomach.—What causes a burning sensation in the stomach several hours after eating?

Ans.—Heartburn, or throat burn, as it is often called, is due to butyric acid fermentation. It is usually caused by rancid butter, stale or rancid nuts, or olive-oil that is not sweet and fresh, or any form of rancid grease which may have come in contact with food. Great care should be used that only fresh, pure, sweet flavored nuts, butter, or other oily foods be used. The use of what is known as "cooking butter" in any manner whatever connected with the preparation of human food should be considered a crime.

All cooking utensils and baking pans that have any oily substance on them should be thoroughly cleansed daily. A little baking soda or ammonia added to the water is of good service in cleansing them.

Good, wholesome food, in moderate quantities, eaten slowly and masticated thoroughly will correct the trouble.

40. Physical Culture.—Which is preferable for physical development, gymnastics, outdoor sports, or hard work?

Ans.—The best lecture on physical development ever given is found in Gen. 3:19, "In the sweat of thy face shalt thou eat bread." Both gymnastics and outdoor sports have many things in their favor, and the writer is exceedingly fond of both.

But useful labor supplies every essential factor for physical development, and possesses especial value in the formation of character—in the development of personal integrity—not found in the gymnasium or on the athletic field. Useful labor, with its self-forgetfulness and tangible results, stimulates the feeling of self-support and self-reliance, both of which are of practical value, especially to the youth of to-day.

41. Consumption — Outdoor Air in Cold Climate.—E. C., Maine: "I have unmistakable evidence of beginning tuberculosis in one lung. 1. How can one, in a severe climate like this, live in the open air enough to cause any improvement? 2. Would not the patient have to exercise so much that more harm than good would result?"

Ans.—1. Where one is too feeble to be out of doors, he can have the benefit of open-air treatment by throwing open the windows of a sunny room even in very cold weather. The patient may remain in bed with plenty of light, warm bedding, or he may sit up warmly clad, and, if necessary, use a hot bottle to the feet.

2. The benefit of the open-air treatment is due, first, to the abundance of pure air, and, second, to the tonic effect of the cold air, which, with sunlight and exercise, is the best tonic and appetizer known. No one can have a good appetite or maintain good health who spends all his time in the warm air of an ordinary living-room. Get into the free, pure, sun-lighted air, even if it is cold: there's life and health in it. Try it.

42. Drowsiness after Meals.—G. H., D. C.: "1. I have noticed that after a meal I become excessively thirsty. 2. If I take a drink of water, I become so drowsy that I can not perform my work properly. What is the cause?"

Ans.—The drowsiness is due to the fact that a drink of cold water taken after digestion has begun stops the process. More blood is called to the stomach—the person becomes drowsy.

The cause of the thirst may be due to fermentation, to condiments, to improper food, to too hasty eating, or to overeating. Drink an hour before eating. Select wholesome, thoroughly cooked, pleasing foods that will agree with you best: eat slowly; eat happily. Chew your food thoroughly,—chew as if your life depended on it,—for it does,—and don't eat too much.

[Question 43 on page 11]

44. Zwieback.—"What kind of bread should I use to make good zwieback?"

Ans.—Good, well-baked yeast bread will make good zwieback if cut in ordinary slices, and toasted thoroughly, so as to toast the center without burning the surface.



Vegetarianism Attracting Notice

ONE of the great New York dailies has published a number of articles calling attention to different phases of the vegetarian question. It gives an account of a boy of sixteen who has never eaten fish, flesh, fowl, or even eggs, who, from a child, has had an abhorrence of these things, and could not be induced by any means to use them, though the other members of the family used them freely. The *Herald* says: "Contrary to the prophecies of the physicians that he would be sickly and delicate [by the way, physicians have several things to learn yet in regard to dietetics], he has enjoyed the best of health, and has never been ill more than one week in his life. He is an athlete, and fond of outdoor sports, being captain of the high-school football team and the baseball nine. He is intelligent, a good scholar, and has won many prizes as an elocutionist."

The diet of this boy is principally potatoes, with bread and navy beans. He cares nothing for pastry, and eats little fruit.

The *Herald* in another article quotes the *Medical Record* as saying that the Japanese have taught the Europeans and Americans a lesson, and quenched, in some degree, the conceit of the Caucasian in his superior capacity to do all things. "Even in the matter of diet, one long-cherished theory that the energy and vitality of the white man is largely due to the amount of animal food consumed, must undergo revision."

"The Japanese are allowed to be among the very strongest people on the earth. They are strong mentally and physically, and yet practically they eat no meat at all." After considering more minutely the manner of Japanese life, the *Herald* continues:—

"The Japanese have proved that a frugal manner of living is consistent with great bodily strength; indeed, is perhaps more so than the meat diet of the white man."

Another article is entitled "Popularity of Vegetarian Cafes." One of the staff observed a large number of persons lined up, waiting for a chance to get a seat in a vegetarian restaurant, so he went in out of curiosity. He had to wait fifteen minutes in order to get a seat. He describes himself as pleased with what he saw.

The writer begins the article with a remark concerning the rapidity with which vegetarian restaurants are multiplying in New York City. He says there is a growing liking for this kind of food, "and many who eat the meals regularly have told me how much better they feel since they have left off meat."

It is a favorable sign when the great newspapers begin seriously to agitate a subject. The anti-slavery sentiment began in a small way, and few "respectable" people could be found who would sanction the movement. Even in the North the Abolitionists were subject to persecution for their "peculiar views," but earnest men worked away against heavy odds until a nation was stirred.

At one time any one who advocated total abstinence from intoxicating liquors was considered a fanatic and an extremist. Education has gradually enlisted nearly all thinking people on what was a most unpopular proposition.

At present there are few, even among physicians, who realize that meat is not necessary to either physical or mental health, but the proposition is surely gaining ground.

People are learning that meat is not essential to health; that it is frequently diseased; that most people, and probably nearly all people, are better off without it.



Meat and the "Poison Hunger"

INDIVIDUALS who have given up the use of flesh-meats, as a rule find that they do not have that overmastering craving which demands three or four meals a day. They testify that they can live comfortably on two meals a day, some on one meal a day.

This fact is explained by some on the theory that meat furnishes force in a concentrated form, which is soon utilized and soon used up; that it partakes largely of the nature of a stimulant.

In harmony with this is the testimony of one who recommends the use of the Salisbury (exclusive meat) diet. He says: "If the strict meat diet should be prescribed, many a pang of hunger must be endured before a cure can be effected. Yet this will not be real hunger; it will not be due to lack of bodily nourishment. It will be the fierce cry of poisonous microbes and of other microscopical creatures among the wastes of the body, which call aloud for the food which they desire — for the fermentible foods, without which so many of them die."

But microbes are not little animals

with voices to make known their hunger. They are plants, and if they have no food to grow on, they do like other plants — like corn in a crib, for instance. They simply wait — unless they are destroyed by other microbes or by poisons. The false hunger is the reaction from over-stimulation. It is present to a certain extent on a mixed diet, and to a greater extent on meat diet.



Too Much Theorizing

THE editor of *American Medicine* believes, rightly, that there is too much theorizing as to the cause of disease. He says: "The making of fanciful and unbased theories is still prevalent, even among the scientists." He quotes with disapproval the recent utterance of "a great authority in the medical profession" who wrote as follows: "Dyspepsia, the besetting malady of the country, is largely due to improper diet, imperfectly prepared, and too hastily eaten. One of the great lessons to be learned is that the preservation of health depends in great part on food well cooked and carefully eaten. Sweets between meals, ice-cream sodas, the hurried meal at the lunch-counter, overeating and drinking, kill more people than the sword."

Perhaps there are no statistics to warrant the last statement. We can not know how many people are killed by wrong eating. We can only guess. But if this statement is unwarranted, the rest of the quotation is probably within bounds.

The writer does not say that dyspepsia is entirely due to wrong eating, but that it is largely so. He does not state that the preservation of health depends entirely, but "in a great part" upon food well cooked and carefully eaten.

Some people have inherited such vigorous digestive powers that for years they can eat with impunity whatever their appetites call for. There are others who, through inheritance and early habits, have so weakened their digestive system that they can scarcely avoid dyspeptic attacks on the most careful diet. And between these extremes there are all grades of conditions.

The severity of one's dyspeptic symptoms, therefore, is no indication as to the extent of his dietetic transgressions.

Dr. Gould says, "Those troubled with modern 'dyspepsia' have not been more guilty of the sins of hurried eating, sweets, or overeating, than their non-dyspeptic neighbors."

Possibly not; but let the doctor for the moment drop the theory that eye strain is the cause of about all the ills that man is heir to, and try a little dieting in these dyspepsia cases. Nine times out of ten, he will, if he is shrewd enough to select a right diet, accomplish a great deal in the amelioration of his patients' symptoms.

There are many patients who can testify, and more undoubtedly could, if they were observant, that the condition of their digestion depends entirely on their manner of eating.



Is Your Indoor Air Properly Moistened?

A BROOKLYN physician has recently called attention to the importance of having the indoor air properly moistened, as well as heated, in winter.

In summer, at least east of the Rocky Mountains, the air is likely to be moist enough; but in winter the indoor air may be so dry that it is not only a cause of discomfort, but of ill health.

As air cools, it loses its power of retaining moisture, so that at freezing temperature it can hold only one fourth as much water as at seventy-two degrees. If this cold dry air is warmed, it is hungry for water, and absorbs from every available source.

Breathed into the lungs, it dries up the mucous membrane of the air-passages, and causes more or less irritation. It hastens evaporation at the surface of the body, and thus abstracts heat more rapidly.

For this reason, a house heated to seventy degrees or over with dry air feels colder than one at sixty-five degrees with moist air.

This extra heating not only makes a material increase in the fuel bill, but it increases the danger from colds and lung trouble.

Air at a temperature of sixty-five degrees, and with a humidity of over fifty degrees, has been found to be most agreeable and healthful.

It is an advantage to have both thermometer and hygrometer, in order that the humidity as well as the temperature of the air may be observed; but, in the absence of these, remember that a tea-kettle boiling on the stove, or a pan of water evaporating in the furnace, will save coal bills and doctors' bills—two big items in winter.



WE are informed that in the last two years 28,600 deaths have occurred in California, "of which 5,798, or more than one fifth, were from preventable diseases." We dare say that if the truth were known, a much larger proportion died from preventable diseases.

What the health officer usually means by preventable diseases are such as may be limited by public sanitary effort. It is not customary to consider as pre-

ventable, diseases which result, indirectly perhaps, from errors of diet and other indiscretions. There is no way of determining exactly how many lives might be saved by a proper personal hygiene.

Dr. J. C. Jackson, the pioneer of the old Jackson Sanitarium of Dansville, a man who had the opportunity to make very extensive observation, seemed to think the proportion of preventable diseases very much higher. He said: "Of all the diseases with which doctors have to deal, and of which persons die, ninety-five per cent of them have their origin in bad dietetic indulgence, and in deviations from right ways of living, caused directly by, and to be attributed to, bad habits of eating and drinking."



HARRY THURSTON PECK in *The Twentieth Century Home* wonders why it is that "it is almost always the ill-favored women who have no manners, and it is the good-looking women who are considerate and thoughtful for the convenience of others." He continues, "This is odd, because you would naturally expect it to be just the other way." He thinks nature has dealt with woman rather unfairly, giving her all or nothing.

Not so. Nearly every woman decides for herself by her treatment of others whether she shall be attractive or repellent. A loving soul will make the most homely features attractive, and a selfish disposition will make classic features repellent.

What Mr. Peck has observed is not a mere whim of nature, but is the effect of well-established causes. Nature has not dealt harshly with the angular, brazen-faced woman. Her unfeeling and arrogant treatment of others has reacted, boomerang-like, on herself, and she is simply carrying around the advertise-

ment of her selfishness, and bearing the punishment of her own churlishness.



WHAT constitutes pure sewage? The sewer receives the waste matter from dwellings, from factories, from slaughter-houses, perhaps, from stables. Whatever it receives, the composite mass is pure sewage. The composition is immaterial. No, I'll take that back. If too much water is mixed with it, as in the Illinois River, it can no longer be considered pure sewage. What constitutes pure beer? The fence signs say that "Pabst beer is always pure."



If Carlyle said that "the average American meal is an unpunished crime," he was mistaken. It is punished, all right, only the infliction is delayed a while. But it is the guest, and not the cook, that pays the penalty, unless the cook is foolish enough to eat of his own cooking.



"THE food from which a man abstains, after he has eaten heartily, is of more benefit to him than that which he has eaten."



Ten Rules of Health

1. EAT simple foods.
2. Never overeat.
3. Masticate well.
4. Never worry.
5. Bathe often.
6. Drink plenty of pure water.
7. Be temperate in all things.
8. Do not fear disease.
9. Exercise in the open air.
10. Breathe deeply through the nose.

There are others, but try these thoroughly, and note the result.

Advice to Tuberculous Patient

THE following circular of advice for tuberculous patients has been issued from the department of heart and lungs of the Presbyterian Hospital Dispensary: Your improvement and final recovery depend largely on your own conduct. The right way of living must be continued for many months, or even years. Before doing anything, ask yourself, *Will this help me to get well?* Be careful always to burn or disinfect your expectoration. Avoid soiling your person or clothing with it. Never swallow it. Do not kiss any one on the lips, especially children. Wash your hands, and rinse out your mouth before eating. Cough as little as possible. When you cough or sneeze, turn your head aside, and hold a handkerchief before your face. Spend as much time out of doors as you can. The parks and roofs of many city houses are good places to take the fresh-air treatment. Avoid violent exertion of any kind. Whatever makes you short of breath or makes your heart beat fast is injurious. If you have fever take no active exercise, but rest in bed or on a reclining chair. Your bed-room should be the largest, sunniest, and best ventilated you can get. Carpets and curtains are undesirable. Do not occupy dark rooms opening on shafts or in basements. Keep your windows open, but do not expose yourself to drafts. Avoid a stooping position. Keep your shoulders back and head erect. Keep out of crowds and away from dust, dampness, and high winds. Do not wear chest protectors or porous plasters.

The underclothing should be woolen throughout the year, but of light weight during the summer. Take a daily sponge bath, with brisk rubbing afterward. The bath should not be cold

enough to make you feel chilly, but the temperature may be gradually reduced until a lukewarm or cold bath may be taken. If you have fever, the bath is best in the afternoon or evening, otherwise the first thing on rising in the morning. Eat as much wholesome, nourishing food as your stomach will digest. From one to two quarts of milk a day should be taken, and in addition, from four to six eggs are desirable. Do not drink wine, beer, or spirits in any form unless prescribed by your physician. If you cough so hard after eating that you vomit, wait a little and eat again—do not lose the nourishment. Smoking is harmful, cigars and pipes less so than cigarettes. If you must smoke, do so only in the open air. Smoke in moderation, and do not inhale the smoke into your lungs. Do not take patent medicines, or remedies advised by friends, or advertised as consumption cures. Stop any drug which spoils your appetite or gives you indigestion. However well you may appear to be doing, continue under the regular observation of your physician, and follow his directions faithfully.



“MODERATE daily exercise in the open air, with a cheerful spirit and an encouraging remuneration, is worth a thousand times more than all the remedies of the *materia medica* in the removal of ordinary ailments, when coupled with temperance and cleanliness.”



“VERY many diseases are laid at the door of weather. It is the want of weather which brings multitudes in our large cities to an untimely grave.”

News Notes

Pure Foods

IN Philadelphia forty-seven persons have been indicted by the grand jury for violating the pure-food law. In nearly every instance the men indicted were dealers in fruit-sirups, or extracts, or owners of soda-fountains.

THE Jersey City Health Board, finding it impossible to stop the sale of adulterated milk in that city, has given up the fight. It was found impossible to secure juries who would punish dealers selling milk not up to the standard.

THE Health Department of New York City has appointed several inspectors, whose duty it is to investigate the condition of the many dairies furnishing milk to New York City. Offenders are vigorously prosecuted, and there is a notable improvement in the condition of the dairies.

THE investigations of Dr. W. H. Wiley, Chief of the Bureau of Chemistry, U. S. Dept. of Agriculture, as to the effect of eating foods containing preservatives, such as boracic acid, show conclusively that the continued use of such preservatives, even in small quantities, causes "disturbance of digestion and health, manifested in loss of appetite, loss of weight," and other evidences of disturbed nutrition and deranged function.

THE San Francisco Health Department has published a bulletin giving the rating of dairies which furnish the city with milk. Though this rating is not based on so high a standard of cleanliness as is the case in some cities, fifty-five out of sixty-one dairies are rated as poor.

Some of the worst cases have been prosecuted, but the result is usually acquittal, because the health department is not furnished with adequate legal help.

Much agitation and education will be needed before the people are awakened to appreciate the importance of protecting their food supplies against ignorant and unscrupulous producers.

Communicable Diseases

It is said that bubonic plague has gained a foothold in Chile.

THE dispensary for consumptives recently opened in Washington, D. C., has been found to fill an urgent need. In nearly every case

presented, the necessity for proper diagnoses and treatment was obvious.

THE mortality reports of the large cities show a marked diminution in diarrheal diseases, beginning in October, and an increase in pneumonia beginning in November.

A PHYSICIAN, who for two years has been studying the question, is certain that he has a serum for the cure of articular rheumatism, which, he says, is caused by a streptococcus (a germ) which enters the body through the lungs.

HOSPITALS in various parts of the country have promised to co-operate with the Department of Health of New York City, in a combined investigation of pneumonia. Twenty thousand cases will be studied; the work done at the outside hospitals will be sent to the New York laboratories. Much light will probably be thrown on the disease by this combined investigation.

THE civil-service commission of New York City are obstructing the work of the Pneumonia Investigation Committee, by what may appear to be unnecessary red tape. They require that physicians in other cities before they can participate in this investigation under salary from New York State, go to New York, and there pass the civil-service examination.

THE first annual meeting of The National Association for the Study and Prevention of Tuberculosis will be held in Washington, D. C., the third Tuesday of May, 1905. A large proportion of the most eminent workers in this field are members of the association, and it is expected that the coming meeting will be an important one in the warfare against tuberculosis.

A COMMITTEE of Washington physicians is working in conjunction with physicians of other cities in four lines; legislation and administration, printing and distribution, lectures, and care and treatment. The people of Washington, as well as other cities, will need to be thoroughly educated on the subject of tuberculosis before the effort to stamp out the disease can be made efficient.

DR. DOCK, of Ann Arbor, thus speaks of the present status of the treatment of pneumonia: "I think we can safely assert that the best treatment is not yet established, despite

the many articles claiming specific value for various methods. Of these methods it can be said that they give no greater assurance than dozens of others which were looked on in the past as perfect, and abandoned as the result of further trial.''

IN 1900 after his grandchild had succumbed to an attack of summer complaint, Mr. John D. Rockefeller devoted two hundred thousand dollars to the discovery of the cause of this fatal infant malady. One of the most eminent of pathologists was engaged in the investigation, and with him a number of others. A serum was discovered which it was hoped would control the dysentery, but, after a careful trial, it is admitted that the serum is not a success. Nearly half of the children who were treated by this method died, and there was marked improvement in only a very few cases.

It seems from the result of investigations that summer diarrhea of children is infectious through the discharges, and that the discharges of diarrheal patients should be disinfected in a manner similar to the disinfection of typhoid discharges.

AT the Fourteenth Annual Congress of International Medicine held in Rome, in October, Professor Bacelli, the president of the congress, made a vigorous protest against the doctrine that malaria is transmitted entirely by means of the mosquito. He says that, however satisfactory the mosquito theory may explain some of the phenomena of malaria, it fails to explain some severe epidemics in rice fields and marshes situated at long distances from the haunts of the malarial mosquito.

Among other objections to the theory he stated that in experimental inoculations, it takes ten days for a mosquito bite to develop a case of malaria, but that people are stricken down with the disease within four days after entering a malarious district.

He also calls attention to the asserted fact that in July and August, when the disease is at its height, the anopheles mosquitoes are not plentiful, and later, when they are plentiful, the malarial season is drawing to a close.

Sanitation

THE first international congress of hygiene and sanitation in dwellings was inaugurated November 3, in Paris, the minister of public instruction being chosen president. There were present prominent representatives from many countries.

THE London *Lancet* of November 19, contains a communication from a correspondent in Pittsburg, Pa., condemning the cities of Philadelphia, Washington, Pittsburg, and Alleghany for their unsanitary water systems, supplying contaminated and unfiltered water to their inhabitants for drinking purposes, and thereby causing many unnecessary deaths from typhoid fever.

SPRINGFIELD, Mass., has adopted a very comprehensive anti-spitting ordinance. It forbids spitting on the sidewalk, crosswalk, or footway of any public street, park, or square, or on the floor of any hall or office in any hotel, apartment house, tenement, or lodging house which is used in common by the guests or tenants thereof, or on the floor, platform, steps, or stairs of any public building, hall, church, theater, railway station, store, or factory, street-car, or other public conveyance.

Education in Hygiene

THE Charity Organization Society of Buffalo, N. Y., is making an effort to educate the poor regarding tuberculosis. Cards and leaflets of instruction are distributed to those suffering from the disease, and to their friends.

THE California State Board of Health has ceased to publish vital statistics because, through imperfection in the laws, it is unable to secure complete and reliable returns. California was among the first States to establish a State Board of Health. But the laws have not been revised to bring the work up to date. The State Board has no authority to enforce the report of vital statistics. Bills have been drawn up to present to the next Legislature, investing the health officers with proper powers.

It is to be hoped that the laws governing the local boards, in San Francisco, for instance, may be so changed as to enable them to control the quality of milk and other foods, by bringing to justice unprincipled and incompetent producers and dealers.

SOME time ago the Medical Society of the State of Pennsylvania appointed a committee to examine school text-books on physiology and hygiene. This committee find a large number of different text-books used, one county using eighteen different books. The teachers are dissatisfied with them. One of the largest high schools makes the complaint that it is necessary to teach physiology to the

students from these ward schools the same as though they had never had any instruction in this line.

The committee concludes that "the present method of teaching physiology and hygiene in many of the public schools of Pennsylvania does not educate the growing generation in these branches sufficiently to impress upon them even the ordinary laws of health and hygiene."

Pennsylvania probably does not materially differ from other States in this regard.

Poison Habits

THE Sheriff of Cleveland County, Oklahoma, has been keeping a record of the habits of his prisoners. Of the three hundred prisoners under his charge the past year, seventy per cent were victims of the cigarette habit.

A COMMITTEE of the National Reform Bureau has placed before Secretary Hay a petition asking the government to inaugurate a world movement for the abolition of the opium trade. The secretary promised to bring the matter to the attention of the president.

Miscellaneous

THERE is a movement headed by a number of prominent physicians to organize a National Society for the Prevention of Dust.

THE fact that there is a growing prejudice against elderly men in business is causing an increasing use of hair dye, in this country and in Europe.

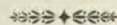
IN Europe there is a movement in favor of a more rational dress for women, which is gaining

many adherents. The movement is so popular, it is said, that there is a great falling off in the manufacture and sale of corsets.

By a vote of forty-four to nine the Board of Aldermen of New York City recently passed an ordinance prohibiting speed contests in which any one person shall compete for more than three hours out of twenty-four. Good! May save the hearts of many reckless athletes.

THE town of Sherborn, Mass., with a population of 1,446, lodged during 1895, 1,844 tramps at the town almshouse. In March 1897, it was decided that the tramps should be employed in useful labor for the almshouse, as in chopping wood. In four years, as a result of this policy, the number of tramps lodged diminished from 1,844 to 31. Work is a splendid cure for Mr. Hobo.

AN unusual case of poisoning was reported in a recent number of the *American Medical Journal*, resulting in death in about ten hours. The cause, as near as could be learned, was as follows: The young man had purchased, a few days before his death, a pair of shoes, black patent leather lowers with cloth tan tops. On the evening previous to his death he had applied a liquid shoe-blackening to the tan cloth uppers of the shoes. The cloth uppers absorbed enough of the blacking to entirely cover up the tan color, enough of which passed through the tops to stain the feet. Both the shoes and the blacking were turned over to the city chemist after death. Analysis showed the presence of pure nitro-benzol, a substance almost as poisonous as prussic acid.—*J. R. L.*



SCARCE anything in life more determines a soul's welfare than the nature of its outlook. If spiritual frontage is toward the shadow, the soul sees all things in the gloom of the shadow. If spiritual frontage is toward the sunlight, the soul sees all things in the brightness of the sunlight.—*James G. K. McClure.*



THE Milwaukee Treatment Rooms have been reopened in new quarters, 137 Oneida Street.

ALMOST from October to May it is the rule that our dwellings are overheated.—*Grayson.*



THE apothecary is perpetually employed in countermining the cook and the vintner.—*Addison.*



THE ignorance which prevails in regard to the simplest physiological facts is astonishing. Nor is this ignorance confined to the class of people commonly regarded as ignorant.—*Dr. Keightley.*

LIFE AND HEALTH

(Continuing Pacific Health Journal)

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With the Publishers

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Regularity of meals — preferably two a day. Nothing between meals.



Eat slowly; masticate well; use little liquid and not much soft food. Let the surroundings be pleasant, and the mind serene.



Exercise daily in the open air, to point of perspiration, but not of exhaustion.

Bathe often enough to prevent any suspicion of odor.



Clothing — no constrictions, corsets, or belts; no dragging or heavy skirts. Garments suspended from shoulders. Extremities warmly clad. Thick-soled shoes, but not too tight; not of impervious leather. Stockings changed often enough to prevent damp feet. Underwear, linen or cotton, loose wool, one or more suits as needed. Meet sudden changes in weather by changes in outer garments. Avoid heavy clothing which will cause moisture, as scarfs, "lung protectors," pads, muffs. They weaken the skin, and increase liability to cold.



Maintain a hopeful, helpful, cheerful disposition, with a firm trust in God.

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