

Life & Health



WASHINGTON, D. C.



An Advertisement by
The Chamberlain Sanitarium

UTILITY—

"In common life, we may observe that the circumstance of utility is always appealed to; nor is it supposed that a greater eulogy can be given to any man than to display his usefulness to the public, and to enumerate the services which he has performed to mankind and to society."—*Hume*.

Hume recognized the fact that a man's value to society and to his fellow men, depends upon the services which he is able to perform.

Good health is essential to perfect achievement or maximum service. It is that priceless something without which a man fights a losing battle in the game of life.

If you are in poor health, the Chamberlain Sanitarium will endeavor to improve your condition. This Sanitarium takes pride in restoring efficiency where possible; and with this as an object, the utmost in the way of modern equipment is at your disposal.

Our X-ray department, our laboratories, our wonderful system of treating disease, and our perfectly appointed building, makes it possible for us to handle each case in an individual way.

A week spent with us in the dry and invigorating climate of South Dakota may tone you up and make you of the highest value to society.

Information may be had from Dept. A

THE CHAMBERLAIN SANITARIUM
CHAMBERLAIN, S. DAK.

Life & Health

Published monthly by the
REVIEW AND HERALD PUBLISHING ASSN., TAKOMA PARK, WASHINGTON, D. C.

Entered as second-class matter June 24, 1904, at the Post Office at
Washington, D. C., under the Act of Congress of March 3, 1879

CONTENTS OF THIS ISSUE

CONTRIBUTED ARTICLES

MAKING THE MOST OF THE VACATION	227
<i>L. A. Hansen</i>	
MEETING EMERGENCIES DURING VACATION	229
<i>H. W. Miller, M. D.</i>	
HOT WEATHER SUGGESTIONS	231
<i>J. W. Hopkins, M. D.</i>	
THE DIGNITY OF LABOR	232
<i>Mrs. E. G. White</i>	
OCCUPATION THERAPY	233
<i>J. W. Hopkins, M. D.</i>	
THE VALUE OF USEFUL WORK	235
<i>D. D. Comstock, M. D.</i>	
ANTECEDENTS OF DISEASE IN COUNTRY AND CITY	239
<i>G. H. Heald, M. D.</i>	

EDITORIAL

THE KIND OF VACATION NEEDED	244
-----------------------------------	-----

TEMPERANCE PROGRESS

ALCOHOL AND LIFE INSURANCE	246
<i>Eugene Lyman Fisk, M. D.</i>	

AS WE SEE IT

Digestibility and Utilization of the Protein of Eggs — Half Truths May be a Barrier to Truth — Is Meat Needed in the Treatment of Pellagra? — The Menace of the Biting Stable Fly — A Simple Method for Pas- teurizing Milk.	248
---	-----

QUESTIONS AND ANSWERS

Sore Foot in Diabetes — Mechanical Exercisers — Brain and Nerve Foods — Foods to Prevent Fermentation — Starvation Cure in Shaking Palsy — Charcoal from Cereal Coffee — Colic in Infants — Exercise for Nervous Patients.	250
---	-----

SANITARIUM NOTES AND PERSONALS

NEWS NOTES	252, 251
------------------	----------

SUBSCRIPTION RATES.— One year, \$1; six months, 60 cents. Remit by Post Office Money Order (payable at Washington, D. C., post office), Express order, or Draft on New York. Cash should be sent in Registered Letter. When a change of address is desired, both old and new addresses must be given. No extra charge to foreign countries.



© Underwood & Underwood

GIRLS ENJOYING LUNCHEON

Anne Morgan open-air girls' summer camp at Sterling Forest

Life & Health

HOW TO LIVE

Editor

H. W. MILLER, M. D.

Associate Editor

L. A. HANSEN

Office Editor

G. H. HEALD, M. D.

Vol. 32

August, 1917

No. 8



THE real value of the vacation lies in its opportunity for health getting. It is the one time of the year for breaking away from the grip and grind of routine duty and devoting oneself to care-free relaxation. It is the time of all times for recuperating lost vim and for stocking up, as it were, with reserve energy.

This splendid opportunity for securing substantial benefit is to be appreciated. It is more than a holiday. Its value should not be lost in the spirit of abandon that often characterizes a vacation. Serious thought as to making

Making the Most of the Vacation

L. A. Hansen

the most of the occasion is not opposed to its enjoyment, but, on the contrary, is essential to its fullest enjoyment and to its lasting results. Just getting away

from the regular work for a certain time and calling that a vacation does not necessarily constitute it such. While a change may make for recreation, it is possible, after all, to make a change that is not for the best.

To go to the country for a season might be a desirable change and afford pleasant recreation; but if one should contract typhoid fever through a polluted water supply, it would not help

matters much to call the occasion a vacation.

Living a few weeks in a mosquito-infested locality and thereby contracting malaria, would be, after all, a poor way to spend a vacation, and the fact that it was a vacation would not go far toward making the malaria an enjoyable after-effect. One might look back with some pleasure to the fun and enjoyment, but this would not cure malaria.

It is best to take a little precaution. Find out about the water supply, look out for the mosquitoes, and let such enjoyment as may be had, be of a kind that will last. The same is true with reference to other features that have a bearing on the real benefit of a vacation.

In planning for the vacation take into account the health conditions, bearing in mind that the main idea is to regain health and strength. The same principles of health and hygiene that govern one's welfare at all other times must be regarded during vacation. While it is proper to throw off care and worry, it is not in place to throw away caution.

It is true that the relaxation, outdoor life, and general recreation of a vacation make possible a régime that could not be followed under ordinary conditions, but it does not follow that the laws of health are suspended for the time being. One cannot with impunity indulge in dissipation and health law-

lessness simply because one is on a vacation.

Whether one goes to the seashore, to the country, or to the mountains, one will need a due amount of sleep, a proper ration of food, good water, and the other essentials of good living. The vacation spirit must not be indifferent to these essentials. Any amount of relaxation cannot make up for them. Throwing off business care will not in itself be a means of putting on flesh.

So look out for the late hours, the same as you would for the malaria mosquito. Don't let yourself believe that "just anything" in the shape of food is good enough. Remember that bad water in the country may be just as harmful as bad water in the city, and possibly more so.

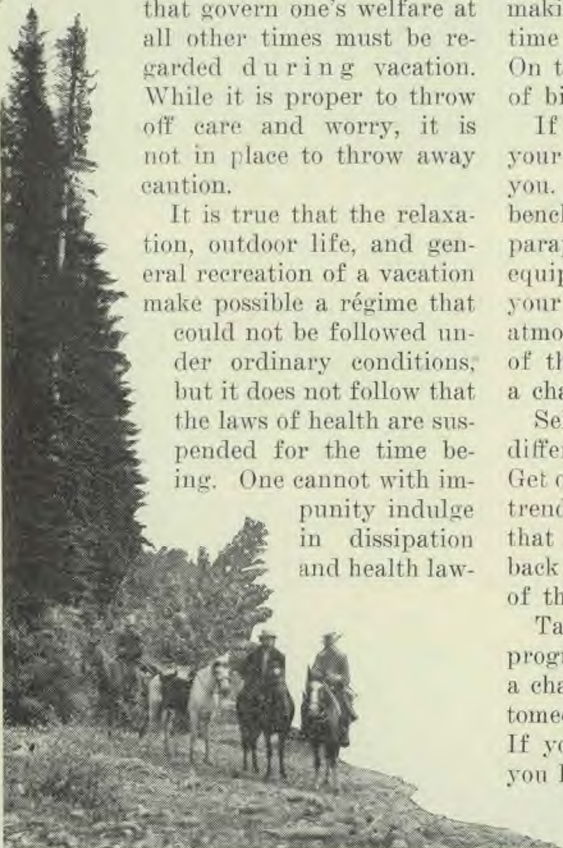
Don't halve the vacation benefit by doing things that counteract the good you may get. Do not be satisfied with making the vacation merely as good a time as that which you generally have. On the contrary, make the occasion one of big gain. Get all out of it you can.

If you are trying to get away from your work, don't take your work with you. Of course you will leave your bench or desk, your tools and working paraphernalia. Do the same with the equipment that you generally carry in your head. As you seek a change of atmosphere, don't take with you so much of the old that after all it will not be a change.

Select a vacation ground that will be different from your usual surroundings. Get out of the ruddy round of the regular trend. Leave behind you the worries that have beset you, and when you get back forget to take up the worry end of things.

Take care, though, in changing your program, that you do not make too great a change at once. If you are not accustomed to sea bathing, begin gradually. If you are climbing the first mountain you have climbed in a long time, do not try too big a climb at first. If it

(Continued on page 243)



Meeting Emergencies During Vacation

H. W. Miller, M. D.

Superintendent Washington (D. C.) Sanitarium

SINCE those going to vacation resorts often indulge in unaccustomed recreations which result in bruises, fractures, dislocations, sunburn, drowning, etc., it is well for them to be prepared to render first aid and to treat some of the common injuries.

SUNBURN

Bathers should especially avoid constant exposure to the sun's rays. The skin of the covered parts of the body is very sensitive to sunlight, and often becomes badly sunburned, a condition frequently requiring the remaining period of the allotted vacation to recover from.

Prevention, naturally, is the first essential. Let the skin become accustomed to the sun's rays by bathing at short intervals. When the reaction sets in, indicating undue exposure, be careful not to wear the clothing tight where it will rub against the burned skin. The skin should be thoroughly covered with vaseline, or bathed with a weak solution of baking soda, and fine lint or cotton batting should be applied and held in place by a loosely wrapped bandage.

SUNSTROKE

When persons accustomed to an indoor life go out in the open, they may be overcome by the sun's rays. They may fall unconscious, or may only feel a dulness and heaviness in the brain as a result of congestion in those parts. One thus overcome should be taken to a shady place and given plenty of air. However, it must be remembered that he should not be chilled by the application of too much cold to the body. A heart stimulant, such as aromatic spirits of ammonia, may be administered.



Several days' rest should follow such a stroke, and very great caution should be exercised in reference to exposure to sunlight thereafter, as one attack very markedly predisposes to another. Cold water may be applied to the forehead and neck, but heat should be applied to the surface of the body and to the extremities. It is well to start kidney activity through copious water drinking.

EYE AND EAR INFECTION

An irritation of the eyes, which often amounts to an inflammation, frequently occurs. This is caused by dust being blown into the eyes while traveling, or by exposure of the eyes to bright sunlight. Bathing the eyes with pond or sea water may also cause the condition. The eyes feel sore, as if sand were in them; they are hot and watery, and strong light increases the pain. This affection is very common around bathing places, and should be given careful attention. The immediate application of cold compresses over the eye, until the eye can be flushed with a few drops of ten-per-cent argyrol, or the irritating secretions washed away by flushing the eye with normal salt solution, keeping the eyes bandaged between treatments,

will, as a rule, relieve a very severe case in the shortest possible time.

Sea bathers, while diving, often infect the ear drum. The ears are filled with cold water, and this very often results in the perforation of the drum membrane, and in irritation and infection of the middle ear. Very prompt attention must be given to the treatment of a complication of this kind. A doctor should be consulted in the case of any discharge from the ear.

WOUNDS

Bruised wounds are much more liable to infection than clean-cut wounds, owing to the fact that in a clean-cut wound there is a rapid flow of blood, which cleanses the surface from germs. The vitality of the adjacent tissue is good, and can be made to approximate; so healing is quite rapid.

A bruised wound is more subject to germs, because the rough substance which opens the flesh carries large numbers of bacteria into the tissue, and the general traumatism results in lowering the vitality.

Many wounds are made more liable to infection by the after-treatment if poultices are used, or if infected water is used to cleanse them. It is not good to wash a wound, unless it can be done at once with sterile water or with some reliable disinfectant other than bichloride of mercury or peroxide of hydrogen.

It is better to use boiled water which has been cooled.



TREATMENT OF WOUNDS

The hemorrhage should first be controlled. This may require the services of a physician if a large blood vessel, artery, or vein has been torn or cut. Pressure over a wound will sometimes stop capillary oozing, and bleeding from small blood vessels.

A gaping wound may require only sewing together. To stop hemorrhage the wound is usually dressed by using sterilized surgical gauze. Carefully guard against the use of collodion dressings, or any form of dressing that seals the wound, as a wound thus sealed and not permitted to drain, will form an abscess, which will destroy considerable tissue and give rise to fever and much pain. A wound that is healing need not pain.

BRUISES

The slightest form of injury is known as a bruise. This is usually caused by some external violence, as a fall, a bump, etc., and is generally the result of carelessness. The bruise is characterized by some pain. The skin in some cases is broken, but not generally. However, beneath the skin there is oozing of the blood from small vessels, causing the ordinary black-and-blue spots.

Treatment: The immediate application of cold usually limits the extent of the bruise. After twenty-four hours this may be followed by alternate applications of heat and cold. The discoloration disappears in a week or ten days.

SPRAINS

Sprains are injuries to the joints in which, as a result of stretching or twisting, the ligaments are bruised and torn, often resulting in discoloration and marked pain. There is usually some swelling in the joint. The pain is noticeable on pressure, or on attempt to



produce motion. There is no deformity, but there is slight swelling. The relation of the bony parts is the same as in the healthy joint. Sprains, therefore, differ from dislocations in that there is no limitation of movement, only as caused by the pain, and there is no actual deformity. Ordinary sprains and bruises do not require the services of a physician, but can be cared for by one having had first aid work.

Treatment: Use cold applications, and put the joint to absolute rest. It will be found that an adhesive bandage is beneficial, as it gives support to the injured joint. After from twenty-four to forty-eight hours, alternate applications of heat and cold may be used, and in a few days massage may be applied to the injured joint, and the patient instructed to use it.

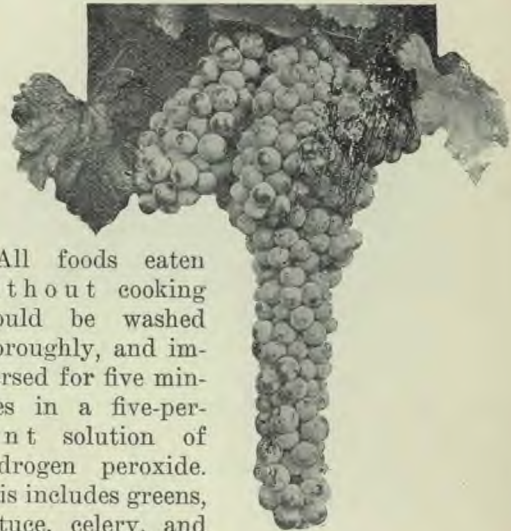
Takoma Park, D. C.

HOT WEATHER SUGGESTIONS

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

SUMMER time has its disadvantages as well as its benefits. The high temperature depresses the various functions of the body, and renders it more easily influenced by the action of germs. The increased perspiration of the summer time rids the body of a considerable amount of waste material, and while winter brings an accumulation of waste, summer becomes a season for cleansing and renovating the body. Winter, with its clean, cold air, is a tonic, and builds up the bodily functions. The tendency to overeat, particularly of proteins and fats, causes the accumulation of waste matters during the winter time. If these mistakes are avoided, winter becomes an excellent time in which to strengthen and build up the reserve of vitality. In the summer the tonic effect of the cold air is wanting, and the main action of the heat is that of a depressant. The extreme heat calls for an extra amount of water, and that preferably cold.

Ice water should not be swallowed. If taken, or if iced drinks of any sort are used, they should be sipped slowly, and warmed in the mouth before being swallowed. Much water should be used, and may be cooled by putting the ice around the vessel, rather than in it.



All foods eaten without cooking should be washed thoroughly, and immersed for five minutes in a five-per cent solution of hydrogen peroxide. This includes greens, lettuce, celery, and fresh fruits. Fruits particularly should be fresh and ripe, but not overripe. If any part of the fruit has become decomposed, this should be cut out, or the fruit thrown away.

Nature has indicated the kind of diet to use in summer time by the abundant supply of fruit and green vegetables which she supplies. These should be used as foods, with the addition of a small amount of the cereals, fats, and proteins. The fats and sweets are sources of heat and energy, and are not needed in such amounts in the summer time. There is another advantage in the use of abundance of fruit—the great amount of water present supplies the body with the excess needed in warm weather, and aids in cooling the body through the perspiration. The acids of the fruits are cooling to the tissues.

They are changed to alkaline carbonates, and unite with the acids in the tissues, thus removing many of the waste matters.

The home keeper should not spend so many uncomfortable hours preparing complex and rich dishes. Simplicity of diet is particularly needed. The digestive system should be spared as much as possible, the foods used being such as will put very little taxation upon it.

Milk is apt to produce disturbances of the stomach and intestinal tract, so should be used in moderate amounts, and great precautions taken to keep it absolutely clean. While condiments and stimulants, including tea, coffee, and



flesh foods, are out of place at all seasons of the year, this is particularly true in the summer time. Tobacco and alcohol should not find any place in the summer program. We should follow the example of the animals and of the birds, and keep out of doors as much as possible during the heated season.

The neutral or cold bath may be employed to advantage in periods of several minutes to a half hour. A bath taken at a temperature of 92° to 95° is a great comfort. The morning cold bath should become a habit during the summer time. If this wonderful tonic is begun at this season of the year, the individual will be educated to take the cooler bath during the fall and winter.

The children should be encouraged to play out of doors as much as possible. During the hot part of the day, they can be shaded. One and all should keep out of doors all the time possible, sleeping, exercising, and living there.

THE DIGNITY of LABOR

Selections from the Writings of Mrs. E. G. White

THE public feeling is that manual labor is degrading, yet men may exert themselves as much as they choose at cricket, baseball, or pugilistic contests without being regarded as degraded. Satan is delighted when he sees human beings using their physical and mental powers in that which does not educate, which is not useful, which does not help them to be a blessing to those who need their help.

While the youth are becoming expert in games that are of no real value to themselves or to others, Satan is playing the game of life for their souls, taking from them the talents God has given them, and placing in their stead his own

evil attributes. It is his effort to lead men to ignore God. He seeks to engross and absorb the mind so completely that God will find no place in the thoughts. He does not wish people to have a knowledge of their Maker, and he is well pleased if he can set in operation games and theatrical performances that will so confuse the senses of the youth that God and heaven will be forgotten.

One of the surest safeguards against evil is useful occupation, while idleness is one of the greatest of curses; for vice, crime, and poverty follow in its wake. Those who are always busy, who go cheerfully about their daily tasks, are

(Continued on page 238)



Occupation Therapy

J. W. Hopkins, M. D.

Washington (D. C.) Sanitarium

THE value of occupation as a means of preventing sickness and as a cure for various diseases, is not fully appreciated. Few realize that some special hobby or work is the great thing needed to keep the well man healthy, and to bring the sick man back to a condition of health; and yet the effect of monotony in work is to be seen in every walk of life. The business man carries his work to his meals, and to bed, and dies at an early age, a virtual suicide. The farmer and the farmer's wife shorten their years and lessen their daily efficiency by the daily driving to which they subject themselves.

Every person, whatever his occupation, should choose some hobby or play as a means of daily diversion, and should faithfully train himself in this until its hygienic value has been fully developed. We have an excellent example of this method of self-conservation in the great Gladstone, whose life was undoubtedly prolonged and his daily work made more valuable by his unflinching habit of woodchopping.

The greatest factor in making a success of occupation as a therapeutic measure is the maintenance of a lively interest in the task or the game. Some diversion or employment must be selected of which the individual

is fond, and which may with readiness be developed day by day and week by week. It is not always possible to choose two methods of applying this treatment, but if possible this should be done. A game should be selected, as golf, croquet, tennis, or archery, which will call the man or woman out of doors and give opportunity for life and growth in the open air. A cheerful, kindly spirit must be cultivated in these matters, and all selfishness and self-seeking must be eliminated. Many times this principle can be carried into the work and routine of life. Ordinary housework, if done in the correct position and with the mind inspired by cheerful thoughts, will become uplifting in its influence. The muscles

as well as the mind will be exercised and benefited. The task selected as a means of diversion will have an added advantage if it produces some revenue.

There is an immense satisfaction in working, particularly if you can see something being accomplished. The

fact that some progress is being made day by day gives us a great incentive in our service. Cultivate your interest,



WILLIAM E. GLADSTONE
England's "Grand Old Man"

your occupation, or diversion. Do not allow your pleasure in it to flag for a moment. Choose some occupation which will not only forestall days of sickness and avoid long stays at various mineral springs and long trips away from home, but will supply additional means of livelihood. If possible, this work should be done out of doors. Faithful study and persevering application of these principles will cure much of the restlessness and dissatisfaction incident to life, and many times will remove the rebellious spirit. Exercise in the open air exerts a healing influence on the various tissues and organs, diverts the blood from the brain to the muscles and various internal organs, destroys much waste, and eliminates many poisons. Association with nature is beneficial in many ways, and altogether there is a great restoration of what has been wasted by dissipation, overwork, and worry. The tastes and habits of the individual are changed. Simple food is appreciated, and healthful clothing is chosen. Garments which restrict the muscles of the body and

tend to produce disease, are discarded.

The choice of work depends largely upon the time in which it is taken. Exciting games are bad at night, and should be avoided, as they overstimulate the brain and tend to produce insomnia. Gardening is probably the occupation of choice. Raising flowers, fruits, and vegetables gives the patient much healthful toil, and stimulates interest in the work. For those who cannot do work out of doors, there is a choice of wood work, or sloyd, brass work, chair caning, book-binding, basketry, leather work, and photography. Any one of these occupations may be made a hobby, and prove an excellent diversion and source of exercise and education. Useful occupation which exercises mind and muscles furnishes its own reward.

The inspiring principle in all this is, as Phillips Brooks says, "Do your work for God, in perfect, childlike, loving desire for his glory; then your work, be it as heavy in its nature as it may, leaps of itself from the low ground, and instead of crushing you with it to the earth, carries you up into the presence of God for whom you did it."

"Therefore, my beloved brethren, be ye steadfast, unmovable, always abounding in the work of the Lord, forasmuch as ye know that your labor is not in vain in the Lord." 1 Cor. 15:58.





THE VALUE OF USEFUL WORK

D. D. Comstock, M. D.
Pasadena, Cal.

THE sleep of a laboring man is sweet, whether he eats little or much," says the writer of Ecclesiastes, and he has left it for us to search out the reasons why Morpheus is especially charmed by the humble cot of the man of toil, but so often is fickle toward the couches of others who fain would entice the presence of his refreshing sweetness.

We know that in at least one respect the laboring man lies down with a clear conscience; for even if he has eaten "much," he knows he has not eaten the bread of idleness. He has earned his bread, or at least his appetite, in the sweat of his face, according to the divine injunction. And, by the way, please note that the scripture does not say "by the sweat of his brow," as it is usually, but incorrectly, quoted. A little embarrassment will produce moisture under the hat band, but it requires real work to make the *face* sweat.

In the economy of human life the Creator pronounced a blessing upon work, and adjusted the machinery of our bodies in such a way that in our daily life regular muscular activity is essential

to health efficiency and real happiness.

All physical exercise is beneficial, but that which is either productive or enjoyable is better, and that which is both productive and enjoyable is best of all. The satisfaction that comes from seeing something accomplished reacts wholesomely upon the nervous system, and is a good stimulant to all the physiological processes, and conducive to rapid recuperation after fatigue. The honest toiler, like the "village blacksmith,"

"Each morning sees some task begin,
Each evening sees it close;
Something attempted, something done,
Has earned a night's repose."

There is some physical benefit, but not much enjoyment or productivity, in a spiritless turn at a wall exerciser; but when the same energy is expended in turning over the soil in the garden, for instance, one has visions of real, substantial fruit for his efforts, and feels that he is a producer. These visions and feelings, with the exercise, enrich him physically and morally far beyond the possibility of any exercise taken for hygienic purposes alone. Likewise the man who establishes a small wood yard for his

health's sake, realizes that he warms not only his hands, but his hearth and heart as well. If one for reasons of economy or health decides to walk to his office, he receives threefold returns,—he saves car fare, he gets exercise, and he gets somewhere. While the first and third of these results are simply by-products of the second, yet the market value of the first and the moral value of the third combine to make his

simple quest for exercise much more interesting and beneficial.

A dog that will spring off with a bound of delight to round up the cattle or sheep, will appear dejected and humiliated when you lead him onto the treads of a dog churn. Evidently to be ever running without getting anywhere seems to his dog intelligence utterly useless and foolish.

Satisfaction, enjoyment, animation, expectation, are all elements which add greatly to the value of exercise. Some of these may be found for a time in play, or possibly to some extent in some apparatus, but they are found most of all in some form of useful work.

The physiology of the body is such that physical activity of some sort is a daily necessity for the best of health, and, indeed, even the majority of semi-invalids are benefited and their restoration to health is generally hastened by suitable muscular exertion. Exercise being a daily necessity, one could hardly expect it always to be animating and enjoyable, especially if its hygienic effects be its only purpose. Sooner or later one is likely to become disgusted with aimless walks and purposeless efforts, and he will tend to become introspective and supersensitive if these are largely depended upon for health of body and

mind. On the other hand, productive and useful effort has a good moral effect upon the individual, developing self-respect, independence, and courage, and strengthening the will and power of self-control.

Some persons feel that their social standing forbids their doing manual labor; that if caught so doing they would lose caste, so to speak. But the man who is afraid to be seen in his shirt



sleeves in the wood yard or garden, with bucksaw or hoe, or briskly walking to his office, needs to have a Lincoln, a Franklin, a Paul, or one of a thousand other eligibles read an emancipation proclamation to him, and, to be consistent, he should not condemn too severely the caste system of India. Useful work of any sort radiates a halo of genuine dignity that compels respect. The Lord dignified labor with his own indorsement in the carpenter shop of Nazareth, and commanded it in the decalogue, saying, "Six days shalt thou labor, and do all thy work." On leaving the presence of the great Pharaoh, Jacob, the humble Hebrew toiler, with a childlike simplicity but a dignity that towered high above the royal presence, stood and blessed this monarch of one of earth's greatest kingdoms, the momentum of his own strength of character unconsciously repressing any objection that the king might have had to being blessed at the hands of this venerable keeper of flocks and herds.

It is an old familiar saying that "a watched pot never boils," and this also seems to be true in a way with the body. If the mind is centered upon the stomach and the digestion of food during and after meals, the digestive process is retarded. A voluntary effort to go to sleep

will, in itself, often defeat the very purpose of the effort. If the mind is conscious of every muscular effort, the efforts are less precise and more fatiguing. It is when the mind is absorbed in other things that digestion works best; then sleep trips in, and muscular exertion is of the greatest hygienic benefit.

Did you ever watch two boys "batting up flies," and perhaps observe that one boy only occasionally hits the ball while the other seldom misses it? Why the difference? If you will observe more closely, you probably will find that the former watches his bat, while the latter watches the ball. If the tight rope walker thinks of himself or looks to his feet, he is more liable to fall than if he looks away. A certain nervous patient who could find but little relief from his nervous agitation and tension by treatment, gymnasium work, or walking, experienced immediate relief on being called to assist in the repair of some apparatus that had been accidentally broken. All the muscles and organs of the body work with greater ease and efficiency when unhindered by meddling introspection.

While all the tissues of the body require exercise, yet the skeletal muscles, which comprise nearly fifty per cent of the body weight, are the only tissues which require volition or an act of the will for their normal functions. The activity of the other organs goes on without thought or effort. However, these are all directly or indirectly dependent to a great extent upon the activity of the muscles for healthy function. In fact, it may be said that one's vital resistance to disease bears a direct relation to the health and tone of his muscular system. Activity is a law of life. Stagnation is prejudicial to health and to the growth of nearly everything except molds, moths, and mildew. It is a very old saying that

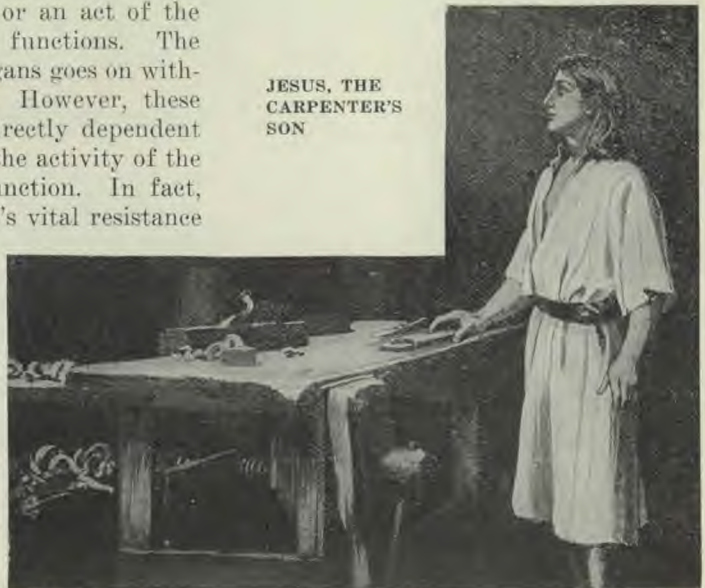
"a used key never rusts," and it still applies to the key to health and long life. In the original plan the physiological needs of our bodies were so adjusted to natural laws and conditions that the living machinery became as near "fool proof" as possible for one designed to be controlled by a free moral agent.

Provision was also made for the emergency of disobedience, and when it came, in order that man might not speedily destroy himself through its effects, it was decreed of him that in the sweat of his face he should eat bread all the days of his life. The ground was cursed for his sake, making work an absolute necessity in order to secure food and raiment. Thus nature herself could encourage man and gently coerce him to preserve his physical life. Notwithstanding this, through the many inventions that he has sought out, and through artificial modes of living, man has greatly disturbed the workings of this divine arrangement, much to the loss of the physical and moral strength of the race.

So let us choose as an avocation, if not as a calling, some kind of useful physical work, and we shall profit by it: first, by the market value of its products; second, by its physical and hygienic

(Continued on page 243)

JESUS, THE
CARPENTER'S
SON



The Dignity of Labor

(Continued from page 232)

the useful members of society. In the faithful discharge of the various duties that lie in their pathway, they make their lives a blessing to themselves and to others. Diligent labor keeps them from many of the snares of him who "finds some mischief still for idle hands to do."

In his earth-life, Christ was an example to all the human family, and he was obedient and helpful in the home. He learned the carpenter's trade, and worked with his own hands in the little shop at Nazareth. He had lived amid the glories of heaven; but he clothed his divinity with humanity, that he might associate with humanity, and reach hearts through the common avenue of sympathy. When found in fashion as a man, he humbled himself, and worked for the recovery of the human soul

by adapting himself to the situation in which he found humanity.

The Bible says of Jesus, "And the child grew, and waxed strong in spirit, filled with wisdom: and the grace of God was upon him." As he worked in childhood and youth, mind and body were developed. He did not use his physical powers recklessly, but gave them such exercise as would keep them in health, that he might do the best work in every line. He was not willing to be defective, even in the handling of tools. He was perfect as a workman, as he was

perfect in character. By precept and example, Christ has dignified useful labor.

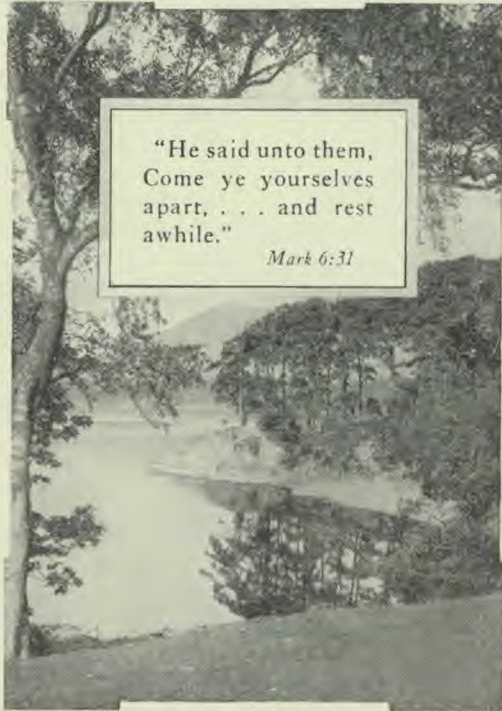
The time spent in physical exercise is not lost. The student who is continually poring over his books, while he takes but little exercise in the open air, does himself an injury. A proportionate exercise of all the organs and faculties of the body is essential to the best work of each. When the brain is constantly taxed while the other organs of the living machinery

are inactive, there is loss of strength, physical and mental. The physical system is robbed of its healthful tone, the mind loses its freshness and vigor, and a morbid excitability is the result.

The greatest benefit is not gained from exercise that is taken as play or exercise merely. There is some benefit derived from being in the fresh air, and also from the exercise of the muscles; but let the same amount of energy

be given to the performance of helpful duties, and the benefit will be greater, and a feeling of satisfaction will be realized; for such exercise carries with it the sense of helpfulness and the approval of conscience for duty well done.

In the children and youth an ambition should be awakened to take their exercise in doing something that will be beneficial to themselves and helpful to others. The exercise that develops mind and character, that teaches the hands to be useful, . . . gives physical strength and quickens every faculty.



"He said unto them,
Come ye yourselves
apart, . . . and rest
awhile."

Mark 6:31



Antecedents of Disease in Country and City

G. H. Heald, M. D.



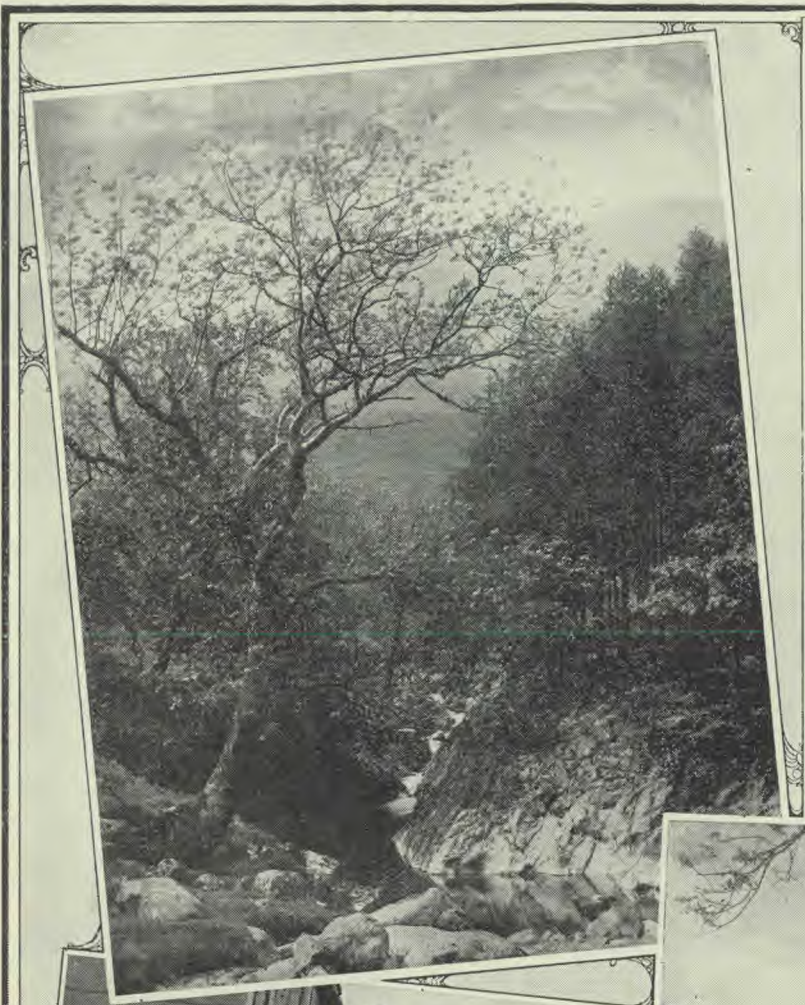
BOTH country and city have their plague spots as well as their show spots. Both have their spick-and-span parlor where it is a delight to show visitors, and both have their lumbered-up cellar and littered-up backyard which they hope the visitor will not notice.

One can motor along beautiful country avenues, lined with magnificent estates, and along city boulevards which are no less attractive; or can find places in both country and city which show the cumulative effect of poverty, ignorance, and shiftlessness on the part of the poor, and callous indifference on the part of the employers and property owners,—places which, by their degrading effect upon the inhabitants tend to perpetuate unhealthy conditions, and which are a constant menace to those living under better circumstances. It is in such regions, in both city and country, that the slow fire of an endemic disease smolders, awaiting some favorable circumstance to fan it into a flame of a devastating epidemic. There are festering slums in the city, as everybody knows; but there are also slums in the country, and it is not easy to determine which are the more dangerous and the more hopeless.

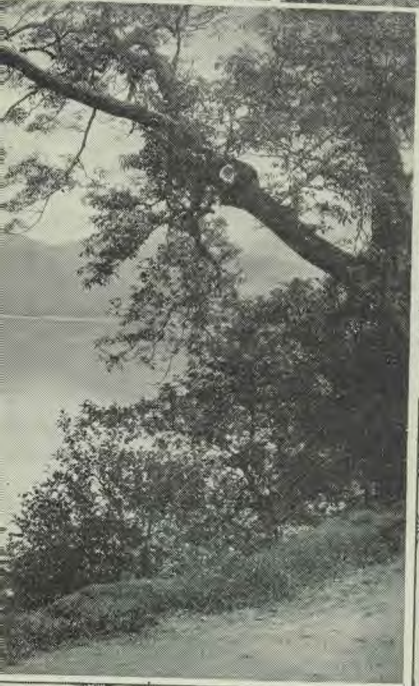
In the country there is no lack of air and sunlight. It is not in these particulars, usually, that unhygienic conditions are manifest; though, for purpose of fuel economy, some, even in the country, deprive themselves of air. The most deplorable conditions in the coun-

try come through bad drainage, water pollution, and soil pollution. Owing to the large extent of territory compared with the population, close supervision of the sanitation of the country is often impracticable under present methods. For this reason, nuisances which would not be tolerated in a well-regulated city are unchallenged in the country. Lack of sewer facilities necessitates the use of earth closets, cesspools, and even more primitive methods of filth disposal. For this reason nearly all surface water, including that from the ordinary dug wells, is liable to be contaminated with body excretions which are potentially breeders of disease. Not only is the water polluted, but often the soil is badly polluted with disease-producing organisms — for instance, hookworm eggs. Moreover, bad drainage, affording a breeding place for mosquitoes, furnishes an efficient means of malaria transmission and perpetuation.

The presence of such conditions in the country has its influence on the city, for the city is constantly importing water-borne diseases from the country. If the watershed of a city's water supply is inhabited, the water is necessarily fouled; and if the city does not filter or treat the water, there will probably be numerous cases of typhoid fever directly traceable to the water. Moreover, milk from the country brings to the cities epidemics of typhoid fever, septic sore throat, and other diseases. Not infrequently persons returning to the city after a vacation trip have an attack of



SOME OF NATURE'S



typhoid fever, the result probably of drinking infected water at some resort. These are some of the penalties the city must pay for the plague spots in the country.

The modern city, with its health organization, its more compact arrangement, its water and sewer systems, its provision for sanitary inspection and food inspection, has some advantages not possessed by the country; and were it not for the diseases imported from the country, the mortality would be still lower than it is. Sanitary engineering and sanitary ordinances enforced by specially trained health officers have made the modern city in

many ways more healthful than the country. This does not refer to city slums and country slums, but to the city and the country as a whole. But there is a phase of city life which has not yet had adequate treatment, either by boards of health or by philanthropic and charity organizations. It is the city's festering sore spot, its littered-up backyard, which it is not anxious to display to visitors. In the tenement quarters of the city are congregated masses of the down-and-out, the downtrodden, the wretchedly poor, the victims of their heredity, bad training, and bad surroundings, who are forced for economy's sake to live in insanitary quarters lacking air and sunlight, where poor nourishment, ignorance, filth, and perhaps drunkenness combine to sink each new generation a little lower in the scale of humanity. In such quarters the mortality, espe-

cially the infant mortality, is always high — perhaps it is a mercy. In winter, diphtheria, scarlet fever, and pneumonia carry the little ones away by hundreds to the burying ground. In summer, the procession of funerals burying little victims of summer diarrhea is even longer.

The slum in the country and the slum



FRONT GARDENS, BOURNVILLE, BIRMINGHAM, ENGLAND

in the city both stand as a menace to those who are fortunate enough to have better homes. The child of the millionaire may contract some fatal disease that has come to him from the slums. Even millionaires cannot have their foods prepared and their clothes laundered by other millionaires. In the cities the "sweat shops"¹ turn out many of the garments which are worn by dwellers in more pretentious quarters. If linen is "taken home" to launder, it may be to some place where infectious disease is present, or it may be washed in the same water with infected clothing. The fruit-store man who handles the apple, — afterward eaten without washing or peeling, — what disease may he have? These are only a few of the ways in which disease, smoldering in a slum, may be

¹ Dwelling places where the members of the family, some of whom have tuberculosis and worse diseases, all engage in some manufacture, usually of garments.

fanned into an epidemic, when it comes in contact with fresh tinder in the shape of a coddled child.

So long as a city or a nation permits slums in its midst, just so long does it allow the perpetuation of disease cen-

ters from which disease may be spread to more pretentious localities. This is a problem to which much serious thought has been given, yet the solution seems no nearer. Jesus said, "The poor always ye have with you."

MAKING THE MOST OF THE VACATION

(Continued from page 228)

is a hike you are taking, leave some of it for the next day, and the next. Too much of a good thing is,— well, it's too much.

It will not spoil a vacation to keep in mind that there are certain precautions to observe. It need not be a cause of anxiety or worry to guard the health.

Keeping well will give the best kind of rest and repose. Every day that one picks up in health and strength means several more days of real enjoyment. Make the whole vacation one good time of health getting, and it will stand out for a long time as a most profitable occasion.

THE VALUE OF USEFUL WORK

(Continued from page 237)


value in opening the drafts and quickening the fires of physical life, burning up wastes, relieving toxic headaches and pain, nervous debility, depression and the blues, quickening the pulse, driving on the stagnating blood in the liver and other internal organs, relieving indigestion, dyspepsia, and constipation, putting tone and elasticity into the whole neuromuscular system, burning up rheu-

matic clinkers that clog and cause pain, preventing colds, catarrh, and other infections, putting poise into the figure and vital resistance into the blood, thus making one feel that the battle of life is worth while; and third, we shall profit mentally in quickened memory, thought, and intellect, and morally in strengthened character, courage, and confidence.



EDITORIAL

The Kind of Vacation Needed

HAT rest is an essential in every person's program should be impressed upon all by reason of the fact that a portion of every day is provided for that purpose, and that one day out of the week is set apart as a rest day. More successful labor will be accomplished during the week if one day out of seven is given to rest and devotion than if the labor is continued throughout the seven days. When comparisons have been made as to the amount of work accomplished per week by farmers, manufacturers, and those engaged in various industries, there has been noted an increased efficiency of ten to twenty per cent, and even as high as thirty per cent, in favor of those who rest one day of each week.

But rest alone is not sufficient for complete recuperation; the body requires diversion. Two, and at most three, hours of continuous, arduous mental labor is sufficient to cause fatigue. The eight-hour laboring day has been generally considered by physiologists and economists to be best suited to man's ability for successful work. In addition to the portion of each day reserved for rest, diversion, and sleep, and in addition to the one day of each week given to rest and devotion, many who are laboring in factories or in offices where day in and day out throughout the year the same routine is followed, will find it advantageous to spend, at two separate periods during the year, from one to two weeks in an unaccustomed environment. This does not seem so necessary for the gardener and the farmer, who are in touch with nature throughout the entire year, and who through exercise in the open air secure diversion in their daily occupation. But those who are shut off from nature by four walls, who live for weeks and months in superheated factories and tenements, will find it to their physical advantage to have a vacation and change from the monotony of everyday life.

The object of a vacation should be to secure physical recuperation, which every one, even the healthy man, feels the need of. Thought, therefore, should be given to the kind of vacation that will bring about the desired result. Some choose a hunting tour. This indeed is a change, but in the outdoor life many expose themselves to unfavorable weather conditions, and as a result contract pneumonia. The excitement of the chase frequently results in such physical strain to the sedentary man that fatigue and exhaustion impair the health. Such large quantities of waste are thrown off from broken-down tissue, that for days there may be soreness and stiffness in the muscles.

Others select a summer resort as a place to spend their vacation, and are enticed to indulge the appetite and to enter certain contests. The pleasures of these resorts may result in an overdraft on the strength and vitality of those participating in them. So it becomes the rule rather than the exception

that those returning from their supposed vacations, taken for the purpose of regaining health, spend a little time at the hospital either before leaving the resort or upon their return home. The overstrain and excesses indulged in during vacation periods very frequently serve as the straw which breaks the camel's back.

We suggest that great care be exercised to plan for the maximum of accomplishment for the entire lifetime. This will necessitate the provision of stated periods of rest and recuperation, that will be reconstructive throughout, that will repair the weakened organs and tissues, and render more active all the functions of the body.

There are two methods of planning one's life. One man plans to work, disregarding laws and rules of hygiene until his strength is exhausted; then being reduced to invalidism for a period, he spends several weeks in recuperating from his afflictions, and when barely able to resume labor, he continues life on the old plan, until compelled to spend another period in illness, recuperating from the second illness, third illness, and so on.

Another man takes as his policy the avoidance of illness. His slogan is, "Keep well." He recognizes through the study of hygiene and the principles of right living that he can maintain his work at high efficiency for a certain period of time. As soon as he finds his efficiency diminishing, he takes a period of rest and diversion, and thus reestablishes his former efficiency.

Convenient to nearly every section of country, are to be found modernly equipped sanitariums. These institutions possess a homelike atmosphere, are usually roomy, with parlors, dining-room, gymnasium, swimming pool, spacious lawns, and croquet grounds, tennis courts, and other outdoor games. The work is under the direction of skilled physicians and nurses. A program is maintained, and every patient is carefully fitted into that program in accordance with his strength and ability as shown by physical tests made by skilled attendants. Here the object is to maintain a healthful environment and a social atmosphere that is agreeable and enjoyable. Sanitariums do not receive, as do hospitals, infectious and contagious cases, or those who, by reason of mental defectiveness, are uncongenial or otherwise repulsive. The guests of these institutions are, for the most part, up and about. Entertainment is provided, and instructive health lectures are given, so that those who spend a period of time in a sanitarium really take a short course in the principles of hygiene and health culture.

Sanitariums afford not only enjoyable places to spend a vacation period, but bring to the invalid and to the physically weak, exhausted, or nervous person added efficiency as a result of the rapid recuperation during the short stay. These institutions possess every scientific equipment necessary in the treatment of disease, and in addition have employees who are skilful in the administration of massage, baths, electricity, and other mechanical means for the regaining of health and strength.

Harry H. Miller

Temperance Progress

Alcohol and Life Insurance

Eugene Lyman Fisk, M. D.

Dr. Fisk, medical director of the Postal Life Insurance Company and director of hygiene of the Life Extension Institute, is well known as a man who is not attempting to advance any propaganda, except the propaganda of better and longer living. His arguments in the present article, taken from the *Atlantic Monthly*, November, 1916, are based on the death rate of drinkers as compared with that of abstainers as shown in the experience of European and American life insurance companies.

THE first important compilation of life insurance experience showing the comparative mortality of abstainers and users was that of the United Kingdom and General Provident Institution of Great Britain. The institution was founded at a time when the total abstainer was looked upon as a "queer duck," probably mentally unbalanced and certainly physically weak. In fact, this particular company was founded by a man who had been asked to pay an extra premium because he insisted on being a total abstainer. Later in the history of the company both classes were accepted, abstainers and users, but in no case those who were other than temperate in the use of liquor.

The records of this institution show that during the period from 1866 to 1910, the users of alcohol, who were about equal in number to the nonusers, and selected as high-grade, temperate "risks," showed a mortality 37 per cent in excess of that exhibited by the abstainers. These figures are particularly significant because the users of alcohol showed a lower mortality than that of British insured lives generally. Thus the comparison was made with a high standard of excellence, and yet the abstainers excelled the standard to a marked degree.

It is of interest to know that, while in the course of the company's whole experience the excess mortality among users was 37 per cent, the mortality among users between the ages of thirty-

five and forty, was 83 per cent in excess, showing the influence of some extremely unfavorable factor at the critical period. Was it alcohol? Let us wait and see.

The best evidence of the reality of the saving among the abstainers is the action of the company in paying bonuses to the abstainers, and the action of other companies in anticipating such bonuses by charging lower premium rates to abstainers. The saving is just as genuine as that effected by a manufacturer who is able to reduce the cost of manufacturing hats or automobiles.

Other British and Scottish companies—the Sceptre Life, the Scottish Temperance Life, the Abstainers' and General Life—show similar experiences; not over so long a period or for so large a group, to be sure, but the evidence is all in one direction, the excess mortality among users, ranging from 37 per cent to 51 per cent. These figures, though widely quoted by temperance reformers, have not until recently been accorded their full value by actuarial [insurance] authorities in this country. Various explanations other than the influence of alcohol were offered, and the fact that they were chiefly British figures deterred many from accepting them as reflecting probable conditions among insured risks in this country. . . .

In 1908, forty-three American life insurance companies—the older established "old line" companies, few of which had made any important effort to establish a total-abstaining class—

undertook to investigate their mortality experience among various classes of "border-line" risks, such as overweights, underweights, those with histories of various illnesses, and the like, and included in the investigation the mortality among users of alcohol, classified according to the degree of their indulgence. No investigation was made of total abstainers. There was also computed the relative death rate from such organic diseases as pneumonia, Bright's disease, and cirrhosis of the liver among the various classes of drinkers and among those engaged in the various branches of the liquor trade.

The investigation covered the period between the years 1885 and 1908, and its great value lies in the fact that the material was drawn from the records of 2,000,000 policyholders, and that all individuals were excluded from the study except those of sound average condition when insured. The final groups studied were, therefore, pure, or homogeneous, except for their varying use of alcohol or their varying exposure to alcohol as determined by their occupations. All extraneous influences, such as overweight, underweight, impaired family history or personal history, were excluded. The results may be subdivided as follows:

First, those who were accepted as standard lives, but whose histories showed occasional alcoholic excess in the past. The mortality in this group was 50 per cent in excess of the mortality among insured lives in general, equivalent to a reduction of over four years in the average lifetime of the group.

Second, individuals who took two glasses of beer or a glass of whisky, or their alcoholic equivalent, each day. In this group the mortality was 18 per cent in excess of the average.

Third, men who indulged more freely than the preceding group, but who were considered acceptable as standard insurance "risks." In this group the mortality was 86 per cent in excess of the average.

It should be borne in mind that these comparisons are made with the general class of insured individuals, both users and nonusers of alcohol. Comparison with total abstainers alone would probably show much greater differences. It is noteworthy that in these drinking groups the death rate from Bright's disease, pneumonia, and suicide was above the normal, and that among the steady so-called moderate drinkers—those using more than two glasses of beer or one glass of whisky daily—the death rate from cirrhosis of the liver was five times the normal.

The story becomes monotonous in its uniformity: wherever we find alcohol we find higher mortality, and a mortality constantly increasing with an increasing use of alcohol. But we must follow the story to the end. . . .

[Here Dr. Fisk gives the experience of various American life insurance companies, all showing in one way or another the havoc played by alcohol.]

In the American companies, especially, the custom has been to rule strongly against the alcoholic. One large company with which I was connected for many years had an almost inflexible rule that intoxication within one year of the date of application disqualified a candidate; free drinking, exciting some doubt as to the future, disqualified for a period of at least three years after reform, if not permanently, depending upon the extent of the habit; and treatment for the liquor habit called for rejection. It will be noted that this was wise practice, according to the figures just produced.

It is extremely important to bear this in mind, for the reason that these standards of selection show that the mortality figures as to drinkers are derived from supposedly favorable types, and that many individuals in the general population, admitting the same degree of indulgence, would show a higher mortality. That is, a policyholder admitting an indulgence of three glasses of beer daily would show a lighter mortality

than the average man in the population indulging to the same degree. The application of a person suspected of being seriously tainted with liquor is never knowingly accepted on standard forms of insurance by any company. The same principle holds good for persons engaged in those special occupations in which liquor is a hazard. The habits of all such candidates are closely scrutinized, and the benefit of any reasonable doubt

is given to the company rather than to the applicant.

[The conclusion is obvious, that if the "moderate" drinkers are so selected that only the most favorable are accepted, and that these most favorable show a distinctly higher mortality than the "general class" which includes drinkers and abstainers, the use of alcohol in any quantity certainly exerts a marked influence in shortening life.]

AS WE SEE IT

DIGESTIBILITY AND UTILIZATION OF THE PROTEIN OF EGGS

W. B. BATEMAN reports in the *Journal Biol. Chem.*, the results of his study of the effect of white of egg on the alimentary tract of laboratory animals and human subjects. He found raw egg to be decidedly indigestible, causing diarrhea in dogs, rats, rabbits, and man, when eaten in any large quantity. It is utilized by the body to the extent of only 50 to 70 per cent.

The well-cooked whites of four to six eggs could be eaten by dogs without the production of the symptoms caused by eating raw white of egg. Egg yolk, raw or cooked, is well utilized. It sometimes causes disturbance in dogs, perhaps because of its high fat content.

The author believes that the observations of earlier investigators have been misinterpreted, and that as a result raw whole eggs and raw white of egg have been too much prescribed by dietitians.

G. H. H.

HALF TRUTHS MAY BE A BARRIER TO TRUTH

DISCUSSING editorially the question of unclean paper money, the *Journal A. M. A.* of Dec. 9, 1916, makes a statement regarding "unwarranted assertions which continually appear in print under the guise of scientific or pseudo-

scientific authority," which, it seems to us, applies with as much force to some of the statements and some of the actions proceeding from health departments. Some new theory is liable, by some overenthusiastic health officer, to be given all the force of a proved fact, both in his public utterances and in his administration; and long after certain measures have been proved to be ineffectual, some health officers continue to enforce them, perhaps with severe penalties. But let the editorial speak for itself:

"Popular reaction is recognized as harmful when it initiates a spirit of distrust. Many of the hasty generalizations of science, and, above all, many of the unwarranted assertions which continually appear in print under the guise of scientific or pseudoscientific authority, sooner or later redound to the discredit of real progress. An attitude of skepticism is awakened, and the distrust of an obvious misstatement unconsciously becomes magnified into a reactionary indifference to the better contributions of scientific men. It is important, therefore, that workers in the world of science should guard against the public propagation of any doctrine which does not rest on sufficiently substantial evidence to justify the propaganda. The championship of half truths or conjectured truths inevitably acts in the course of time as a barrier to the very objects which are sought in public reforms; for in the end, truth always prevails."

The writer could give specific instances in which health officers have, through overzeal or a lack of true perspective or through ignorance of the

later developments in their science, said or done things which not only could do no good, but could do considerable harm by causing the public to look with distrust on the public health administration.

G. H. H.

IS MEAT NEEDED IN THE TREATMENT OF PELLAGRA?

THE *Therapeutic Gazette*, March 15, 1917, gives a discussion of an article by Wood which appeared in the *American Journal of the Medical Sciences* for December, 1916, and which contained some noteworthy expressions. It has been asserted by some that it is the absence of animal food that causes pellagra. The writer of the article in the *Therapeutic Gazette* believes that if it is necessary for the poor whites in the South to have animal food, the case is about hopeless. But—

"if decortication (removal of the outer hull) of grain and faulty methods of cooking cause the disease, the remedy is not beyond the reach of the poorest pellagrins. And this is Wood's experience. It is of course granted that the high protein diet is most desirable, but the practical solution of the pellagra problem in the South calls for some other remedy. It can easily be shown that people live without meat, milk, eggs, and other expensive protein, and still do not suffer from pellagra. Wood's experience is that such people do not eat decorticated grains. He has also learned that the response from feeding pellagrins the decorticated portions of the grain is more prompt than when the diet is meat and eggs. . . . It would appear that pellagra is readily prevented; and that the prevention does not require any increased cost of living; that the use of whole grains that have not undergone destructive changes, and the avoidance of alkaline raising agents ('soda') would entirely eradicate the disease."

G. H. H.

THE MENACE OF THE BITING STABLE FLY

ACCORDING to Jacques W. Redway, F. R. G. S. (*Medical Times*, September, 1916), the Oriental rat and the biting stable fly "are a menace to humanity, and should be exterminated wherever found."

"Of the dozen or more species of flies that infest houses, the biting stable fly is neither more nor less filthy in its habits than the

common house fly or any other species. It is more dangerous, not because of its habits, but because its mouth parts possess horny terminals that are sharp enough and strong enough to pierce the skin. The common house fly does not possess such mouth parts. . . .

"There is a popular tradition that flies 'bite' during rainy weather. The common house fly does not 'bite' at any time. During stormy weather, however, the stable fly seeks shelter; and indoors it 'bites' quite as ferociously as out of doors."

The name "stable fly," continues Redway, is something of a misnomer, for this particular insect finds its habitat in rotting straw stacks. The rotting provides two conditions favorable for the insect—the right temperature for hatching and food for the larvæ.

Wherever there are rotting straw stacks, there the stable fly may breed. Researches of the Department of Agriculture present strong evidence that various maladies of domestic animals are due to this insect. As it is a fierce bloodsucker, it may convey disease from one person to another.

Once in a while one is bitten by what may be supposed to be a house fly. More probably it is a stable fly. If it has previously bitten some infected person, there is the possibility of transmission of the disease.

If there are piles of rotting straw or of rotting filth in the vicinity, they should be destroyed.

G. H. H.

A SIMPLE METHOD FOR PASTEURIZING MILK

THE New York State Department of Health, after considerable experimenting, has recommended the following simple method for Pasteurizing a quart bottle of milk. If the directions are carefully followed, the milk will be efficiently Pasteurized, and will not be overcooked:

Boil two and one half quarts of water in a large agate saucepan; or better,

Boil two quarts of water in a ten-pound tin lard pail, place the slightly warmed bottle from the ice chest in it, cover with a cloth, and set in a warm place. At the end of one hour the bottle of milk should be removed and promptly chilled. *The water must be boiled in the container in which the Pasteurization is to be done.*

QUESTIONS AND ANSWERS

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

This is a service for subscribers to LIFE AND HEALTH.

If a personal reply is desired, inclose a two-cent stamp.

If you are not already a subscriber, send also the subscription price with your question.

Replies not considered of general interest are not published; so if your query is not accompanied by return postage for a personal answer, it may receive no attention whatever.

Remember that it is not the purpose of this service to attempt to treat serious diseases by mail. Those who are sick need the personal examination and attention of a physician.

State your questions as briefly as possible, consistent with clearness, and on a sheet separate from all business matters. Otherwise they may be overlooked.

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

Sore Foot in Diabetes

"Give the diet and treatment for a sore foot occurring in case of diabetes."

The best book on diabetes for ordinary purposes is "The Starvation Treatment of Diabetes," by Hill & Eckman, published by Wm. Leonard, Boston, Mass. It costs about one dollar postpaid, and can be obtained by ordering of the above publisher.

The first treatment to be given for a foot which is swollen and inflamed from diabetes would be the treatment of the diabetes; the second would be the ordinary antiseptic care with mild antiseptics and dusting powders, as bismuth-formic-iodide. The foot should be given an alternate hot and cold bath once a day, preferably at night. Have the hot foot bath at a temperature of about 105°, and the cold at a temperature of about 70°. Make the solution in which you bathe the foot antiseptic by using a teaspoonful of lysol to a quart of water. After this, dry the foot carefully and dust the sore with the bismuth-formic-iodide powder. The main thing is to get the diabetes under control. The book I have mentioned is the best thing in its line, but the treatment would better be under the supervision of a physician.

Mechanical Exercisers

"Is there any advantage in the use of the advertised exercisers and chest expanders, or may the same results be as easily obtained by other proper exercises?"

Some of the exercisers and chest expanders advertised are of value if faithfully used. The same results may be obtained by the use of proper movements without exercisers, and by labor in the correct position. Many of the household occupations, as sweeping, sewing, and bed making, if done with the body in proper position, will be of value in developing the different muscles. Walking is a splendid exercise.

Brain and Nerve Foods

"What foods do you think are valuable in repairing the brain and nervous system of a neurasthenic?"

For the dietetic treatment of neurasthenia, foods which contain the mineral salts and the other various food elements in the proper pro-

portion, are of the most value. Green vegetables, as celery, spinach, and asparagus, combined with whole-wheat preparations, the legumes, whole-rice preparations, and plenty of fruit, will build up the nervous system in the shortest time. A laxative and antitoxic diet is absolutely necessary, as a meat diet produces poisons which are a cause of neurasthenia. In the treatment of this condition, a systematic daily program is necessary. The patient should retire early, and get plenty of fresh air, both in the sleeping-room and during the day. He should also have a definite period for rest in the middle of the day. The stomach and bowels should be thoroughly flushed by drinking plenty of water, and in many cases by an enema once or twice a week.

Foods to Prevent Fermentation

"What are the best foods to prevent fermentation? What are the best combinations to prevent fermentation? What measures are recommended for overcoming slow digestion?"

To prevent fermentation in the stomach certain combinations should be avoided. Fruits and milk should not be used together, neither should fruits be used with vegetables. Cereals may be used with vegetables or with milk. A large number of articles of food at a meal induces fermentation, while the use of three or four kinds of food thoroughly masticated will lessen it. Particular care should be taken to prevent constipation. In slow digestion the mastication should be thorough, and foods which stay in the stomach a long time must be avoided. The fibrous parts of parsnips, cabbage, all meats, and other foods which are difficult of digestion, must not be eaten.

This distress in the stomach which is ascribed to fermentation is often due to an excessive secretion of acid in the stomach, and requires an entirely different line of treatment.

Starvation Cure in Shaking Palsy

"Is the starvation cure of any value in the treatment of shaking palsy?"

The starvation cure for shaking palsy will do the palsy no good and will undermine your husband's general health. Starvation cures are not to be recommended for any condition.

A flesh-free diet, with no tea or coffee, will

be better. Instead of the fast, the patient may take several meals of fruit a week. It may be well to take the fruit for supper, or to eat nothing but fruit one day in the week. In addition to the fruit, he should use plenty of whole-grain preparations, as whole-wheat bread, boiled wheat, shredded wheat, wheat biscuit, and granose flakes or biscuits. Unpolished rice with cream, and vegetables, as celery and spinach, will also build up his nervous system. The bowels should be kept regular by diet and massage, and the occasional use of an enema or mild laxative, if necessary.

In regard to electric treatments, the sinusoidal current is of great value. Massage with special attention to the development of the extensor muscles will help to overcome some of the shaking. Care should be taken not to tire the patient. You must understand that this is a chronic condition, and that the best you can do is to delay the progress of the disease, and to make the patient strong and comfortable. The diet, electric treatments, and massage are best taken under the supervision of a physician.

Charcoal from Cereal Coffee

"Can charcoal made from roasted grounds of cereal coffee be utilized medicinally?"

For charcoal to be used as medicine, you will find that the coffee grains will be of very little use. You would do better to get your charcoal tablets from a druggist. They are not very expensive, and are much more satisfactory. In this way you can know definitely how much charcoal you are taking—two grains or five grains.

Colic in Infants

"Please give a few words of advice to a young mother regarding the choice between brandy and essence of peppermint in the treatment of colic in infants; also the best remedy for colic."

Brandy contains from 39 to 47 per cent, by weight, of alcohol, with an average of 43 per cent. Essence of peppermint contains 85 per

cent of alcohol, or about twice the amount in brandy. A dose of brandy for the adult is from one dram to two ounces, and the average dose for an infant of three months is from two to twenty drops, or perhaps ten drops, if you calculate on the full dose for the adult. The average dose of essence of peppermint is from ten to forty-five drops, with an average of thirty drops for the adult; this would be a dose of three fifths of a drop for an infant of four months, calculating on the average of thirty drops for the adult. These figures are taken from Potter's *Materia Medica and Therapeutics*. So in the average dose of peppermint there is much less alcohol than in the dose of brandy. If I were to choose between the two remedies for my child, I should certainly use the essence of peppermint. However, I should make an effort to obtain the peppermint water instead of the essence, as it is made up by using two parts of the oil in 1/1000 parts of distilled water.

You will find that often plain hot water will relieve the colic. Give the child hot water, in small amounts by teaspoon. Turning the child across your knee, or laying her stomach against your shoulder, will often aid in expelling the gas. A small saline enema or a small glycerin suppository is also useful. The child should receive treatment for constipation. Give laxative diet, and gentle massage to the abdomen.

The mother's diet must be regulated, for often constipation and colic are due to errors in the habits of the mother. If these precautions are taken, there will probably be no need for the use of any alcoholic medication whatever. A warm fomentation applied to the abdomen for a short time, or a hot-water bag, will also relieve the pain.

Exercise for Nervous Patients

"What exercises yield the best results to nervous patients?"

The best exercises for nervous patients are breathing exercises. These, with the mild walking exercises, are of the most value. Massage is an excellent means of exercise for the nervous patient.

Aniline Dyes for Wounds

The *English Mechanic*, quoted by the *Scientific American Supplement*, states that Baumann, a Prussian surgeon, has successfully used methylene blue and especially methyl violet in the treatment of wounds. These dyes he finds far superior to any other antiseptic substances. They are quickly distributed, do not coagulate albumin, and in the quantities used are absolutely nonpoisonous. For burns, cuts, scratches, whitlows, abscesses, injuries to the skin of the head, and in many other cases, the surface of the wound is painted with a four-per-cent dye solution, and unless very dirty the wound is closed at once. If easily accessible, the wound is treated with the dye in powder form; in deep wounds a paste of the dye in glycerin with the addition of a little alcohol, is introduced with a small rod. If

there are deep cavities, antiseptic gauze saturated with the dye solution is introduced. Fistulous passages are treated by squirting the dye solution into them with a syringe. No harm is observed when even so much as a grain a day is used.

Dairy Company Sued

Sixteen suits, calling for a total of \$306,000 damages, have been brought against a dairy company by residents of South Brooklyn and Bay Ridge, N. Y. The reason for the action is an epidemic of typhoid fever which occurred in 1915, and which is said to have been caused by milk supplied by the defendant dairy company. The defendants claim that the cause of the epidemic was not fully established at the time, and deny that their milk caused the infection.

Sanitarium Notes and Personals

St. Helena Sanitarium

The first quarter of 1917 showed the heaviest patronage for this time of year in the history of the institution, the rush beginning with the close of 1916. The institution looks forward to a heavy business the rest of this season. The average number of patients during the first quarter of 1917 was just two and one-half times what it was during the same period in 1915.

The new building is proving an asset. Its modern equipment and splendid arrangements are satisfactory in every way, and a glance at the past year's records reveals that ninety-four per cent of the patients came from the State of California, thus showing that the increased volume of business is not due to an influx of tourists from the Eastern States.

The work of the nurses' training school is constantly attaining a higher standard. The present class numbers thirty-one, and some of the students hold college degrees. Several have had fourteen grades of school work, and a large number have had twelve grades.

The X-ray and special electrical department has been doing heavy work. Additional apparatus has been installed in order to meet the demands.

Dr. L. H. Butka, recently of the Middletown (N. Y.) Sanitarium, has joined the medical staff. Dr. Wm. J. Johnson, formerly of the Paradise Valley Sanitarium, National City, Cal., has been with the institution several months. Dr. Ida S. Nelson carries a large list of lady patients. Dr. Elsie B. Merritt confines her work to nose, eyes, ears, and throat. Burton Jones, M. D., is kept busy as superintendent. He makes occasional trips to San Francisco in connection with the city branch.

Florida Sanitarium

The last season at the Florida Sanitarium was one of the most successful in its history. The institution was packed to its utmost capacity during the greater part of the winter season.

A change of business manager has been made. B. W. Spire, who has served continuously for more than six years as treasurer and nearly four years as business manager, has been granted a vacation. L. T. Crisler, the former business manager, has assumed the duties in Mr. Spire's absence. Both of these men are well known to the patrons of the sanitarium, and the change of managers will occasion very little, if any, break in the affairs of the institution.

Nebraska Sanitarium

The Nebraska Sanitarium at College View has been running to the limit of its capacity. The surgical ward being too small to accommodate all the surgical patients, it has been necessary to fit up rooms for them elsewhere. All these patients have made good recoveries.

A number of needed improvements have been made in the buildings. The men's treatment-rooms have been finished with a new hard plas-

ter cement, impervious to moisture. Considerable painting has been done. The new porch and entrance to the institution is greatly appreciated, as well as the new arrangement of the business offices.

The Nebraska Sanitarium at Hastings has also been crowded to its utmost capacity for some time. The new annex has been filled. Dr. F. E. Dean has succeeded Dr. E. D. Haysmer as superintendent, the latter having settled at Jeffris, La.

Glendale Sanitarium

The past few months have brought a patronage to the Glendale Sanitarium that has more than taxed its capacity. On a recent trip the writer called at the institution, and on requesting a room for the night, learned that every room was taken, and that three men were occupying cots in the treatment-rooms, and two were sitting up all night in the parlor.

H. F. Rand, M. D., superintendent, has regular daily hours at the city branch in Los Angeles.

Paradise Valley Sanitarium

The patronage of this institution was not affected by the close of the San Diego Exposition. Although in an out-of-the-way part of the country, it is maintaining a substantial patronage. Much-needed improvements have been made of late. Drs. Owen Parrett and L. M. White are the physicians. Mr. and Mrs. J. A. Burden, several years with the Loma Linda Sanitarium, are manager and matron. Their experience enables them to do much for the comfort and welfare of the guests.

New England Sanitarium

This sanitarium not long since had the privilege of serving luncheon to about one hundred and twelve members of the Congregational Ladies' Union at their annual meeting. This was not the first time the ladies had had luncheon at the sanitarium, and they again showed an active interest in the health principles that were demonstrated to them.

A number of improvements have been made in and about the institution. A large cement-floor wareroom has been provided for the purpose of caring for store supplies.

Mr. H. B. Steele, who has served as business manager for some time, has recently disconnected from the institution. He is spending a little time with friends in Missouri, enjoying a needed rest before again taking up active work. His plans for the future are not yet matured. His work has been divided among various individuals, the official responsibility being placed on the superintendent, Dr. W. E. Bliss.

Washington (D. C.) Sanitarium

For some time the Washington Sanitarium has had a waiting list of patients. As usual, the guest book has registered the names of a

number of persons well known in connection with Washington official life. The men's new treatment-rooms are most modern in their equipment. What was formerly the gymnasium has been utilized, together with additional space, and affords ample room. The ladies' treatment-rooms are also under extensive improvements, having been doubled in size and given a number of added facilities. The new gymnasium and swimming pool are proving attractive features to the guests and to people in the vicinity.

General

A number of sanitariums have taken active measures to give instruction in first aid and emergency nursing. The courses are conducted

for the benefit of all who desire them. The Loma Linda (Cal.) Sanitarium has just closed a successful special course in this line in connection with its summer school. Students of this course at the Boulder-Colorado Sanitarium were favored with the help of Major Surgeon Jolly, of the State militia, who volunteered his services. He had recently returned from two years' work in the war districts of Europe, and his instruction was very practical. The New England Sanitarium was another institution to conduct a First Aid and Emergency Nursing Course. The Washington Sanitarium had a class of about one hundred members in this course, each member of which received a small case of first-aid equipment.

NEWS NOTES

Dr. Wiley Favors Prohibition

At a food conference in Baltimore, Md., Dr. Harvey W. Wiley said he stood flat-footedly against the use of grains and cereals for the manufacture of whisky and beer. He declared it a crime against the people in this country, and against the people in countries we are now allied with, for the government to permit this waste.

Bread vs. Liquor

Many prominent men, on account of the threatened shortage in food, have urged the prohibition, during the period of war, of the use of grains for the manufacture of liquors and beer. A number of distillers have, of their own accord, closed down their distilleries, saying that they would not turn into liquor grains that were needed for bread.

War's Waste

According to a recent report, there are in England alone, as a result of the war, 157,544 disabled men, 62,796 widows, 128,294 children of these widows, 29,832 dependents of deceased men, about 125,000 widows who have not reached the pension stage, about 65,000 men in the hospitals, about 65,000 medically unfit, or a total of 673,741 men, women, and children.

Nutritive Value of the Banana

Investigators have found that the food value of the banana is higher than that of any other common fruit. When fully ripe, the carbohydrates are well absorbed from the intestines. Bananas, however, are usually sold partly ripe. Indigestion usually occurs from eating unripe bananas. Much more sugar can be given in the form of the banana than of pure sugar. The banana is similar to the potato in its total carbohydrates and minerals. It is especially valuable because it can be eaten uncooked. It would seem to be valuable in the treatment of kidney diseases with retention of nitrogen.

Doctors for Prohibition

The Ohio Medical Association, at Springfield, voted unanimously in favor of nationwide prohibition.

Deaths in India from Wild Animals

During the year ending June 30, 1916, 26,385 persons in India died of snake bite. More than two thousand were killed by elephants, tigers, and other animals.

Danger of Trespassing

During 1914, 5,481 lives were lost as a result of trespassing upon railroad tracks in the United States. This is more than 15 a day. According to a poster issued by the Pennsylvania system, more than 10,000 accidents, half of them fatal, occur annually in the United States from trespassing on railroad property. The N. Y. and H. H. Railroad report for three years 442 killed and 334 injured as a result of trespassing.

Charcoal for Diarrhea

A French physician recommends for diarrhea a paste of charcoal which he has used successfully at the front. He powders together in a mortar 12 tablespoonfuls of charcoal, 4 tablespoonfuls of powdered bismuth, 1 tablespoonful of paregoric, and enough sirup to make a paste. He gives from 1 to 3 teaspoonfuls daily. The paste should be kept in a pot or a tin box.

Doctors Welcome Prohibition

When in his presidential address, President-elect Mayo, of the American Medical Association,—the world-renowned surgeon, of Rochester, Minn.,—made the statement that National prohibition as a war measure would be welcomed by the medical profession, the storm of applause from the 5,000 physicians present indicated that he had rightly judged the sentiments of the profession regarding the control of liquor.



Mt. Vernon Medical and Surgical Sanitarium

Centrally located in one of the Most Beautiful and Healthful Portions of the State

Latest Improved Apparatus for the Treatment and Cure of Chronic Diseases. Fully equipped for Modern Surgery. Scientific Cookery. Christian Attendants. Pleasant Rooms.

Address

V. L. FISHER, M. D., Supt.
Mt. Vernon, Ohio

California's Finest, Best-equipped, and Most Delightfully Situated Health Resort



Long Beach Sanitarium

A strictly modern and up-to-date institution, employing all the very best methods of treatment known to modern science, consisting in part of a special diet system, hydrotherapy, phototherapy, thermotherapy, electrotherapy, including X-ray, mechanotherapy, massage, diathermy or thermo penetration, milk diet, and rest cure. The finest Electrical, X-ray, and Mechanical Swedish departments in the West, every outdoor diversion, excellent table, thoroughly competent corps of men and women physicians and surgeons. Graduate nurses only employed. The big Health Depot where hundreds go each year to learn the "right way" of living, and to enjoy the pleasures of getting well. Reasonable rates. Free booklet.

W. Ray Simpson, Manager
LONG BEACH, CALIFORNIA



THE HINSDALE SANITARIUM

Is beautifully located seventeen miles from Chicago on the Burlington Road, and is of easy access to the great metropolis of the Middle West.

Surrounded by spacious lawns and sixteen acres of beautifully wooded grounds, this institution provides a quiet, restful retreat for the chronic invalid.

The institution is also well equipped for the scientific and rational treatment of the sick, both medically and surgically, this equipment including Swedish movements, electric apparatus, radiotherapy, hydrotherapy.

Instruction in dietetics especially adapted to each patient, is part of the daily program; also individual physical training and mental diversion in the way of occupational therapy, both in and out of doors.

Private rooms with private telephone in each room and regular hotel service.

Send for booklet. Address

The Hinsdale Sanitarium - - Hinsdale, Illinois



Washington (D. C.) Sanitarium

In one of Washington's most attractive suburbs, on a bluff overlooking the picturesquely wooded, rippling Sligo, stands this

Ideal Resort for Those Needing Rest From Business and Domestic Cares

The Sanitarium is a fully equipped medical and surgical institution, which utilizes the most modern medical and surgical measures, including baths of all kinds, electricity, physical culture, and a

Scientific System of Dietetics Specialized for Each Patient

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

A Modern Gymnasium

Physical Culture Drills

Outdoor Exercise and Recreation

An Inclosed Swimming Pool, Summer and Winter

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

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

For further particulars address

Washington Sanitarium, Takoma Park, D. C.



MAIN BUILDING

The Melrose Sanitarium

The Sanitarium estate, consisting of forty-one acres, is situated in the midst of Middlesex Fells, a State park of thirty-five hundred acres, preserved in its original, natural beauty. Although the health retreat is but seven miles from Boston, the grounds are surrounded by this veritable wilderness of woodlands, rocks, and rugged fells, with its placid lakes, rippling brooks, and cooling springs.

The rural location of the Sanitarium affords abundant opportunity for the best of all recreations,—communion with nature in her varied forms. In addition, there are golf links, tennis courts, archery, croquet grounds, quoits, and other facilities for outdoor exercise. The roads through the park in all directions are unexcelled, giving opportunities for delightful walks, drives, and automobile rides. The many places of historical and literary interest in and around Boston afford diversion to guests. Automobiles may be hired at moderate rates, and ample accommodations are provided for those who bring their own cars. The ocean beach is but six miles away, and readily accessible by trolley or automobile.

The service of the institution is equal in every way to that of a first-class hotel. An unconventional spirit is maintained, which immediately gives one the feeling of being at home.

Beautiful illustrated catalogue sent on request. Address New England Sanitarium, Melrose, Mass.



ANNEX

When you write to our advertisers, please say, "I saw your 'ad.' in LIFE AND HEALTH."

St. Helena Sanitarium



THE MAIN BUILDING—SHOWING THREE OF THE FIVE STORIES
New Concrete Hydrotherapy Building at the Right

AWAY from the noise, excitement, and contamination of the city, and nestled close to the heart of nature, on a beautifully wooded slope of Howell Mt., is situated the St. Helena Sanitarium.

ITS natural setting, in a forest of live-oaks, firs, manzanitas, and madronas, together with an almost unending variety of flowers and foliage, gives a beauty and fragrance to the place that beggars description. It must be seen and enjoyed to be appreciated.

EVERY modern facility favorably known to medical science in the treatment of curable conditions, has been incorporated into the institutional régime. Thus nature and science have combined to make the St. Helena Sanitarium all that can be desired by the diseased body or the weary mind.

Health is Contagious at St. Helena

Sixty-five miles from San Francisco, easily accessible by either steam or electric line; three and one-half miles from St. Helena; 750 feet above the sea level; splendid climatic conditions at all seasons of the year; pure mountain water; beautiful view of valley, mountain, and plain; seven physicians, seventy nurses; excellent service, liberal cuisine,—these and many other advantages are to be enjoyed at this beauty spot of California.

The St. Helena Sanitarium

Sanitarium, Napa County

California



The Loma Linda Sanitarium



The Glendale Sanitarium



The Paradise Valley Sanitarium

"The atmosphere breathes rest and comfort, and the many chambers seem full of welcomes." LONGFELLOW.

Come!

COME out to California—out where the skies are a trifle bluer—out where the sun is a little brighter—out where a fresher breeze is blowing—out where you can rub elbows with Nature and revel in the great outdoors.

Come!—break up the monotony—get away from the toil and moil of city life—cut loose from the daily grind—leave workaday responsibilities far behind—and dedicate a few weeks to health-building. *It pays!*

Once a year, at least, the body should be given a chance to catch up—to recuperate. Tired muscles and fagged-out nerves should be relaxed. Pleasant recreation should take the place of nervous tension.

And this rest period should be more than an aimless absence from

daily routine. It should be a period of actual body-building.

The value of several weeks of healthful living under such ideal conditions can hardly be overestimated. The natural results are sound, refreshing sleep—good digestion—a clear head—increased energy—and a sense of zest and buoyancy that makes life worth while.

It is a treat to see the outdoor life work its charm. Men and women with the pallor that comes with fatigue and indoor air, become ruddy, clear-skinned and healthy.

Come to one of these places, then, for your "rest-vacation". For here a

quiet, restful atmosphere prevails. Here you get all the pleasant diversion of a resort, with none of the health-defeating distractions.

WHY spend your "rest-vacation" in California? A natural question and an ample answer—if you'll send for our illustrated literature. Today is the day to do it.

- The Loma Linda Sanitarium**
308 Pepper Drive, Loma Linda, Cal.
- The Glendale Sanitarium**
208 Broadway, Glendale, Cal.
- The Paradise Valley Sanitarium**
108 Sanitarium Ave., National City, Cal.