

Colds: Prevention and Treatment

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CONTENTS FOR MARCH

GENERAL ARTICLES

General Hygiene, <i>Mrs. E. G. White</i>	61
Colds, <i>Frederick M. Rossiter, M. D.</i>	64
Revolutionary Dietetics	67
Cattle Feeding, <i>J. E. Froom, M. D.</i>	70
The Prevention of Influenza, <i>Chicago Health Bulletin</i>	71

THE MEDICAL MISSIONARY AT WORK

Wahroonga Sanitarium, <i>D. H. Kress, M. D.</i>	72
Leicester, England—Belfast, Ireland—Maritzburg, Natal, South Africa— Kolo, Basutoland—Fiji Islands—Tokyo, Japan—Japanese Surgery—Work- ers Together with Him	72-74
Mission Notes	74, 75

HEALTHFUL COOKERY

The Mistress of a Household, <i>Mrs. M. H. Tuxford</i>	76
Menu for March, <i>Mrs. M. H. Tuxford</i>	77

QUESTIONS AND ANSWERS, <i>G. A. Hare, M. S., M. D.</i>	79
--	----

EDITORIAL	81-84
-----------------	-------

Physical Basis of Crime—Extreme Positions—Microbe Maniacs—Regarding Ventilation—All Roads Lead to Rome—One Way to Cure a Cold—What Is the Motive?

BOOKS

Physiological Economy in Nutrition	85
Home Care of the Sick	86

NEWS NOTES	87
------------------	----

PUBLISHERS' PAGE	90
------------------------	----

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“Open the windows and the blinds”



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

Vol. XX

Washington, D. C., March, 1905

No. 3

General Hygiene

Mrs. E. G. White

THE knowledge that man is to be a temple for God, a habitation for the revealing of his glory, should be the highest incentive to the care and development of our physical powers. Fearfully and wonderfully has the Creator wrought in the human frame, and he bids us make it our study, understand its needs, and act our part in preserving it from harm and defilement.

The Circulation of the Blood

In order to have good health, we must have good blood; for the blood is the current of life. It repairs waste, and nourishes the body. When cleansed and vitalized by contact with pure air, it carries life and vigor to every part of the system. The more perfect the circulation, the better will this work be accomplished.

At every pulsation of the heart, the blood should make its way quickly and easily to all parts of the body. Its circulation should not be hindered by tight clothing or bands, or by insufficient clothing of the extremities. Whatever hinders the circulation forces the blood back to the vital organs, producing congestion. Headache, cough, palpitation of the heart, or indigestion, is often the result.

Inaction of any organ of the body hinders the flow of the vital fluid. The blood becomes impure, and disease follows. Besides the physical effect, foul blood clouds the mental and spiritual faculties, and arouses and strengthens the evil passions.

Respiration

In order to have good blood, we must breathe well. Full, deep inspirations, which fill the lungs with oxygen, purify and electrify the blood. They impart to it a bright color, and send it, a life-giving current, to every part of the body. A good respiration soothes the nerves; it stimulates the appetite, and renders digestion more perfect; and it induces sound, refreshing sleep.

The lungs should be allowed the greatest freedom possible. Their capacity is developed by free action; it diminishes if they are cramped and compressed. Hence the ill effects of the practise so common, especially in sedentary pursuits, of stooping at one's work. In this position it is impossible to breathe deeply. Superficial breathing soon becomes a habit, and the lungs lose their power to expand. A similar effect is produced by tight lacing. Sufficient room is not given to the lower part of

the chest; the abdominal muscles, which were designed to aid in breathing, do not have full play, and the lungs are restricted in their action.

Thus an insufficient supply of oxygen is received. The blood moves sluggishly. The waste, poisonous matter, which should be thrown off in the exhalations from the lungs, is retained, and the blood becomes impure.

Not only the lungs, but the stomach, liver, and brain are affected. The skin becomes sallow, digestion is retarded; the heart is depressed; the brain is clouded; the thoughts are confused; gloom settles upon the spirits; the whole system becomes depressed and inactive, and peculiarly susceptible to disease.

Pure Air

The lungs are constantly throwing off impurities, and they need to be constantly supplied with fresh air. Impure air does not afford the necessary supply of oxygen, and the blood passes to the brain and other organs without being vitalized. Hence the necessity of thorough ventilation. To live in close, ill-ventilated rooms, where the air is dead and vitiated, weakens the entire system. It becomes peculiarly sensitive to the influence of cold, and a slight exposure induces disease. It is close confinement indoors that makes many women pale and feeble. They breathe the same air over and over, until it becomes laden with poisonous matter thrown off through the lungs and pores; and impurities are thus conveyed to the blood.

In the evening extra clothing may be necessary, to guard against chilliness; and one should be careful not to sit in a draft or in a cold room when weary, or when in a perspiration. But all should so accustom themselves to fresh, pure air that they will not be affected by slight changes of temperature.

Ventilation and Sunlight

In the construction of buildings, whether for public purposes or as dwellings, care should be taken to provide for good ventilation and plenty of sunlight.

Churches and schoolrooms are often faulty in this respect. Neglect of proper ventilation is responsible for much of the drowsiness and dulness that destroy the effect of many a sermon, and make the teacher's work toilsome and ineffective.

So far as possible, all buildings intended for human habitation should be on high ground. This will insure a dry site, and prevent the danger of disease from dampness and miasma. This matter is often too lightly regarded. Continuous ill health, serious diseases, and many deaths result from the dampness and malaria of low-lying, ill-drained situations.

In the building of houses it is especially important to secure thorough ventilation and plenty of sunlight. Let there be a current of air and an abundance of light in every room in the house. Air is even more essential to life than is food, but it must be kept in circulation in order to be pure.

Sleeping-rooms should be so arranged as to have a free circulation of air day and night. No room is fit to be occupied as a sleeping-room unless it can be thrown open daily to the air and sunshine. In most countries bedrooms need to be supplied with conveniences for heating, that they may be thoroughly warmed and dried in cold or wet weather. It is not wise economy to stint one's self of air and sunshine, of warmth and comfort.

The guest-chamber should have equal care with the rooms intended for constant use. Like the other bedrooms, it

should have air and sunshine, and should be provided with some means of heating, to dry out the dampness that always accumulates in a room not in constant use. Whoever sleeps in a sunless room, or occupies a bed that has not been thoroughly dried and aired, does so at the risk of health, and often of life.

In building, many make careful provision for their plants and flowers. The greenhouse or window devoted to their use is warm and sunny; for without warmth, air, and sunshine, plants would not live and flourish. If these conditions are necessary to the life of plants, how much more necessary are they for our own health and that of our families and guests! If we take such care for the inanimate things of nature, should we not have even greater care for ourselves and for those who are dear to us?

If we would have our homes the abiding-place of health and happiness, we must give free entrance to heaven's life-giving agencies. Dispense with heavy curtains, open the windows and the blinds, allow no vines, however beautiful, to shade the windows, and permit no trees to stand so near the house as to shut out the sunshine. The sunlight may fade the drapery and the carpets, and tarnish the picture-frames; but it will bring a healthy glow to the cheeks of the children.

Those who have the aged to provide for should remember that these especially need warm, comfortable rooms. Vigor declines as years advance, leaving less vitality with which to resist unhealthful influences; hence the greater necessity for the aged to have plenty of sunlight, and fresh, pure air.

Cleanliness

Scrupulous cleanliness is essential to both physical and mental health. Impurities are constantly thrown off from

the body through the skin. Its millions of pores are quickly clogged unless kept clean by frequent bathing, and the impurities which should pass off through the skin become an additional burden to the other eliminating organs.

Whether in sickness or in health, we can not safely neglect frequent bathing. Most persons would receive benefit from a cool or tepid bath every day, morning or evening. Instead of increasing the liability to take cold, a bath, properly taken, fortifies against cold, because it improves the circulation; the blood is brought to the surface, and a more easy and regular flow is obtained. The mind and the body are alike invigorated. The muscles become more flexible, the intellect is made brighter. The bath is a soother of the nerves. Bathing helps the bowels, the stomach, and the liver, giving health and energy to each, and it promotes digestion.

It is important also that the clothing be kept clean. The garments worn absorb the waste matter that passes off through the pores; if they are not frequently changed and washed, the impurities will be reabsorbed.

Every form of uncleanness tends to disease. Death-producing germs abound in dark, neglected corners, in decaying refuse, in dampness and mold and must.

No waste vegetables or heaps of fallen leaves should be allowed to remain near the house, to decay and poison the air. Nothing unclean or decaying should be tolerated within the home. In towns or cities considered perfectly healthful, many an epidemic of fever has been traced to decaying matter about the dwelling of some careless householder.

Perfect cleanliness, plenty of sunlight, attention to sanitation in every detail of the home life, are essential to freedom from disease and to the cheerfulness and vigor of the inmates of the home.

Colds

Frederick M. Rossiter, M. D.

WHILE colds may and do occur at all seasons of the year, they are especially prevalent in the late fall and during the early spring, due largely to the effect of sudden changes in temperature upon a susceptible body.

Colds are indications on the dial of health of a lowered vitality. An individual who literally puts on "small airs," carelessly or otherwise, and contracts a cold, pays the penalty for his folly at once. This is a time when sentence against an evil work is not delayed, but is promptly executed, with the promise of "more to follow" if the delinquent does not mend his ways.

A cold, whether it be "in the head," "in the throat," or "on the lungs," is a congestion of the mucous membrane of the parts affected, due to a sudden chilling of the skin, either general or local. Because of the exhaustion of the nerve-centers, the skin fails to react, disturbing the balance of the blood, so that one part contains two little blood, while some other part (usually internal organs) has too much. The part of the body that has the least resistance suffers most. This is usually some part of the mucous membrane.

Colds are the earliest and the simplest manifestation of disease, and are a warning that more severe measures will soon follow if the health is not guarded, and the body put in a proper state of resistance.

The healthy body is always in a state of defense, and is prepared to resist any attack from without. Disease can begin its devastation only when the vital resistance is lowered.

Colds go hand in hand with exhaustion of the vital forces, and are followed

quickly by pneumonia, pleurisy, attacks of acute gastro-intestinal indigestion, diseases of the kidneys, the liver, the pelvic organs, and the nerves.

As a matter of fact, persons who have frequent colds are those who spend most of their time indoors. Few colds are contracted in the open air, in wind or storm, that is, when the person is in motion. People who sit in a poorly ventilated or overheated church or theater are much more likely to suffer from colds than they would if standing in the rain, watching a football game. The poisoned air poisons the blood and the nerve-centers, and so interferes with the mechanism that maintains a normal circulation. It is a fact well known to many that a person accustomed to sleeping in the open air during the summer and fall is very apt to catch cold the first night he sleeps indoors.

It has been said that a cold is a filthy disease. From the forgoing facts this would seem to be true. But it may be demonstrated in other ways. Those who habitually overeat are much greater sufferers from colds and catarrh, due to the accumulated poisons and waste in the tissues. Lack of bathing is a more common cause than too frequent bathing. An inactive skin — which may be due to lack of exercise, lack of "cutaneous gymnastics," uncleanness, the absorption of poisons paralyzing the nerve endings and preventing the transmission of proper impulses to the heat-regulating centers — offers many inviting temptations to a "cold."

There are many other conditions that render one susceptible to colds. Persons who have engaged in vigorous exercise, perspiring freely, even saturating

the garments next to the skin, and who then remain inactive, or sit down or stand in the cold or in the wind, have a good opportunity to "catch a cold." The exposure of a small portion of the body, like the back of the neck, the surface between the shoulders, or the chest, to a "blade of cold air" from a key-hole or a crack, or a window let down from above, is a frequent cause of a cold. If we could become as accustomed to "facing the wind" with the back of the neck as we do with the face, we should not be afraid of drafts. Who ever thinks of contracting a cold because a wind blows on the face? Yet every part can be made to resist cold just as well as the face. A big wind is not as dangerous as a little one coming through a window. The wearing of low shoes or of thin-soled ones in cold weather, thus chilling the feet and ankles, and failure to properly protect the feet from dampness, come in for a good share of the responsibility of taking cold.

Overwork and lack of sleep reduce the vitality in an astonishingly short time, and are a prolific cause of colds. Those who habitually have cold hands and feet easily take cold. Muffling the neck in winter is an injurious practise, for it causes relaxation of the skin. The garments about the throat are moistened with perspiration, the evaporation of which chills the skin, and a cold is often the sequence, frequently developing into the most aggravated and serious type. The free use of alcoholic beverages paralyzes the vasomotor nerves of the skin, causing one to become peculiarly susceptible to colds of various types.

The Treatment of Colds

PREVENTIVE.—Any measure that builds up the system and increases the vital resistance will increase the natural defenses of the body against cold, as well as against other diseases.

Sufficient refreshing sleep, wholesome food, and an active condition of all the eliminative organs will do much to insure against colds.

The most effective, inexpensive, easily applied, within-the-reach-of-all measure for preventing colds and for maintaining the integrity of the skin, is the cold plunge, the cold sponge, or the shower-bath, taken upon rising in the morning. Of all tonics, medical or otherwise, this one is unexcelled and unequaled. It can be had without money and without price. Just as the morning shower rejuvenates and refreshes all nature, so the morning bath invigorates the body. The morning bath imparts a new fragrance, a delicious aroma, to life, just as decidedly as a cool shower intensifies the sweetness of the flower.

No elaborate appliance or costly shower apparatus, not even a bath-tub, is necessary in order that one may enjoy the luxury. A basin, a quart of cold water, and a rough towel will give perfect results. Those who systematically engage in this form of "cutaneous gymnastics" will not feel the necessity of burdening the body with extra layers of garments as the cold weather comes on.

If parents watched the feet of children more carefully during cold weather, warming the feet when cold, and changing stockings and shoes when wet, much sickness would be avoided.

GENERAL.—A cold should be taken in hand at once, and summarily dealt with. It is no trivial matter, and therefore to be neglected. It is very frequently the forerunner of tuberculosis, pneumonia, pleurisy, chronic catarrh, rheumatism, and other diseases.

When we speak of "breaking up a cold" we mean, physiologically, that the circulatory equilibrium of the blood must be re-established. But a cold can

not be "broken up" after having a start of twenty-four or thirty-six hours. It then runs a definite course, but may be mitigated in its results by proper treatment.

The common rule of trying to break up colds with quinine and calomel, or hot whisky or brandy, can not be too severely condemned. This treatment is not only irrational and unscientific; but it *never* breaks up a cold, and furthermore it predisposes to more colds. As a matter of scientific fact, both quinine and brandy or whisky not only increase tissue waste, but diminish the elimination of the same, the very conditions that favor colds. Then, again, the theory expressed in the trite and popular saying, "Stuff a cold and starve a fever," should be relegated to oblivion. A cold is a fever, and should be treated as such.

The various measures that may be employed in the beginning of a cold to re-establish the circulation are the following, which may be varied according to the needs and the surroundings of the patient:—

1. Take vigorous exercise, as a long walk for one or two hours, a good run, a bicycle ride, or stand in the open air and take slowly one hundred deep inspirations, rising on tiptoe each time. All forms of vigorous exercise should be followed by a cold shower or a cold sponge bath with vigorous friction.

2. If taken in time, a cold may be checked by drinking several glasses of water, either hot or cold; and the results are almost perfect if with this the bowels are moved freely, and then twenty-four hours are spent in bed. Most persons would prefer to have a moderate cold than to rest for a day; nevertheless this will save much time and inconvenience in the end.

3. A very effectual way of dealing with a cold is to take a hot foot-bath,—

taking pains to keep it hot,—and drink hot lemonade or hot water. The body should be wrapped with a blanket, and a towel wet in cold water put around the head. This treatment should be continued until very free perspiration is induced, then wrap up in a warm sheet and go to bed. The cold wet-sheet pack, continued for one or two hours, or the hot-blanket pack, continued until free perspiration is induced, are effective measures for combating an inflammation of a mucous membrane.

LOCAL TREATMENT.—When a severe cold in the head has been contracted, the fulness may be relieved by applying a hot compress across the face for a few minutes, following this with a cold compress for twenty minutes, and an ice-bag at the back of the head and neck.

For a cold in the throat, give the treatment already described several times a day, and at night put on a cold compress of cheese-cloth, wrung dry, and covered with two thicknesses of flannel. This compress should fit snugly.

Local applications in the form of sprays and inhalations are useful adjuncts in the treatment of colds. Menthol, camphor, and eucalyptus are three excellent preparations, and can all be administered in the form of sprays by inhalers, nebulizers, and vaporizers. In order to make these preparations effectual in the treatment of colds, they should be used from five to ten minutes several times a day.



"IN dealing with bodily disease, the wise physician, while he may make his diagnosis absolute, always recognizes an element of uncertainty in his prognosis. 'While there is life, there is hope,' he says. He might add, 'While there is hope, there is life.' Hope has healed more diseases than any medicine."

Revolutionary Dietetics

For years scientists have maintained that the body, in order to continue in health and efficiency, must be supplied with protein or nitrogenous matter to the amount of one hundred and ten to one hundred and twenty-five grams, with other foods sufficient to furnish about three thousand calories of heat.

These results have been reached partly by observing the amount of food actually consumed by people in various occupations,—by people differing in age, race, sex, and other conditions. These observations (many of which were conducted by Professor Atwater and his associates under the auspices of the United States Department of Agriculture) show that where the diet is not restricted by poverty or inability to secure certain foods, the practise of the people generally is to use foods in about the quantities indicated by the standards given above.

The inference is that the instincts lead to a consumption of about what the system needs; and the fact that under like conditions nearly every one eats about the same amount of nutriment, leads to the conclusion that this amount is just about what ought to be eaten. Professor Chittenden, as quoted below, does not believe this is sound reasoning, and he proves conclusively that it has led to a very serious error regarding the amount of food necessary to support life. But as we shall see later, he himself uses this same kind of reasoning in regard to another matter.

There has been more or less experimental work by other investigators, indicating that a much smaller quantity of food may be amply sufficient for the needs of the body; but these have never had sufficient weight to change the opinion of physiologists that the average

person requires more than one hundred grams of protein daily.

Mr. Fletcher discovered that by thorough mastication he could keep in excellent condition with about one third of the amount of proteid and less than one half of the amount of other food ordinarily supposed to be necessary for good health. He demonstrated this to the satisfaction of Sir Michael Foster in England and of Prof. R. H. Chittenden in America.

His health was greatly improved by his new dietetic habits, and he attributed the improvement largely, if not entirely, to the practise of thorough mastication.

Nutrition Investigations at Yale

Professor Chittenden was inclined to believe that Mr. Fletcher's improvement was due to the decrease in the quantities of food,—especially of the nitrogenous food,—rather than to the thorough mastication. This led him to inaugurate the extensive experimental work which is recorded in his recent book, "Physiological Economy in Nutrition," and which seems to sustain Professor Chittenden in his supposition that thorough mastication was not the most important factor in Mr. Fletcher's improvement.

By a series of experiments, in which the number and the diversity of the men experimented upon, the carefulness in all details, and the remarkable uniformity in the results add great weight to his conclusions, he shows that men do not need the large quantities of food, especially of proteid food, usually considered necessary, and that they are better off on a much smaller allowance.

Undesigned Testimony

The important arguments usually urged in favor of a mixed diet are:—

1. That in order to secure sufficient

proteid from a vegetarian diet, it is necessary to overburden the digestive organs.

2. That man has become so accustomed to a flesh diet that a change would disarrange the digestive system and prove injurious.

3. That vegetable proteid is not so well utilized by the body as animal proteid.

Professor Chittenden's book undesignedly gives some strong arguments against these positions.

1. Man requires only one half to one third as much proteid as has been supposed, and this is easily obtained from a non-meat diet.

2. Some of the experiences related by Professor Chittenden show the fallacy of the second argument. Mr. Beers, mentioned below, was one of the subjects of the experimental work at Yale.

"Mr. Beers came to the writer for advice as to possible ways of improving his health, and when it was learned that he was in the habit of eating large amounts of meat, the suggestion was made to him that it might be wise to ascertain the effect of a diminished quantity of proteid food; and, as a result, Mr. Beers began to cut down the amount of meat consumed daily. The effect of this abstention was so noticeable that voluntarily all meat was withdrawn from his diet. With this change in dietary habits there came about a loss in body weight, which, however, was soon regained."

Another testimony as to the effect of a reduction in the quantity of meat is given in the following quotation from Mr. Chittenden's book: "Several of the persons under observation, who had troubles of a gouty and rheumatic nature in the past, have, during the course of the experiment, experienced relief, with complete and permanent abey-

ance of all symptoms. The writer is firmly of the opinion that ordinary gout and rheumatism are entirely preventable by reasonable care and judgment in the matter of diet." The importance of this testimony will be understood when it is remembered that the cutting down of proteid or nitrogenous foods in these experiments meant the cutting off of the greater part of the meat supply.

"The writer's opinion upon this question has been greatly strengthened by the large numbers of letters he has received—during the course of this inquiry—from persons all over the world, many of whom in their search for health have adopted more frugal methods of living, and have found relief in an abstemiousness which, compared with ordinary dietetic standards, would seem inadequate to support life; yet they have recovered health and strength, and by the judicious practise of physiological economy in their diet have maintained health and vigor, with capability for work that has proved a perpetual surprise to themselves and their friends."

3. Part of the experimental work seemed to indicate that vegetable proteids may be used by the system to much better advantage than has been generally supposed. I quote from Professor Chittenden's comments on the results of observations on Dr. Mendel:—

"Again we would call attention to the thorough utilization of the food in this experiment, emphasizing at the same time the voluminous character of the diet, together with its largely vegetable nature. The contrast between the diet made use of by Dr. Mendel and that used by the subject of the first experiment is quite striking, since the latter employed a much more concentrated diet, with an average fuel value of only 1,600 calories. Yet with a total intake of 57.343 grams of nitrogen for the seven

days of Dr. Mendel's balance period, 10.5 grams only passed out through the rectum, or 18.3 per cent, while in the nitrogen balance of the first subject, with the more concentrated diet, 17.1 per cent of the total ingested nitrogen appeared in the feces. In view of the great divergence in the character and volume of the intake, *it is rather remarkable that there should be so little difference in the relative utilization of the two diets.*" [Italics ours.]

This is still more remarkable when we consider that Dr. Mendel was not, by practise, a vegetarian, and there is a strong presumption that he did not utilize the vegetarian products so closely as one would who had been for a long time accustomed to a vegetarian diet.

This presumption is borne out by experimental work which shows that habitual vegetarians digest vegetarian foods with less waste in the feces than habitual meat eaters when placed temporarily on a vegetarian diet.

Remembering that the digestive organs tend to form habits, and that an unaccustomed diet, especially if it is not relished, is likely to be more or less detrimental, does not the fact that in all these experimental studies there was a decided improvement in health and efficiency coincident with the decrease in meat consumption raise a strong query as to whether meat is beneficial or necessary to man?

The Natural Tendency of the Human Mind

The tendency to run in a rut is observable even in those who have had scientific training. Few men can cut

entirely loose from their surroundings and times. We are all molded more than we mold.

Professor Chittenden has discarded the generally accepted theory that man needs more than one hundred grams of protein per day. He was probably doubtful on this point even before he met Mr. Fletcher. He has seen the fallacy of attempting to base estimates of the *quantity* of food needed by man, on observations of his actual dietetic habits. Is it any more reasonable to argue that man is adapted to eat a certain article of food because a good proportion of the human race is found to use that food?

What is meant by the statement that man is an omnivorous animal? To say he is omnivorous *by practise* signifies nothing. The fact that a large proportion of mankind use some form of narcotic is no argument that it is good for them. To prove that man is omnivorous *by nature*, either from his anatomical relations with other animals or from the account of creation, would be difficult.

The only evidence in favor of man's being omnivorous is in the fact that we find many men using flesh in considerable quantities, and, as usually believed, without injury to themselves.

And evidence is accumulating that while man apparently thrives on a diet including meat, a marked improvement usually follows a diminution or cessation of the meat supply when the diet is otherwise properly adjusted.

Are we not warranted in asking Professor Chittenden how he *knows* man is an omnivorous animal?

Cattle Feeding

J. E. Froom, M. D.

THE subject presents to our minds most pleasing pictures of rural life. Cattle on the Hills, The Lowing Herd, the dairyman's well-kept animals grazing in the meadow, Longfellow's Barnyard Scene, all bring, in delightful review, worthy features of stock farming, such as led Webster just before his death to have his favorite ox team driven past him, that he might smell their smoky breath, and gaze once more into their kind, majestic faces. But these conceptions do not properly represent up-to-date methods of the preparation of beef for the market. These features still constitute an essential part of the cattle industry, but in producing much of the finished product for the meat-eating public, they are merely preparatory steps.

A recent visit to one of the many immense distilleries in Peoria, Ill., was impressive in all its details, but after the courteous foreman had finished a tour through the departments which successively displayed the steps employed in producing car-loads of whisky and alcohol, in conversing upon their care in utilizing every by-product, and the material which would naturally be thrown away, he suggested that we visit the cattle sheds, where, he said, they kept constantly on hand enough cattle to eat the liquid distillery waste, which contains some gluten.

The condition and action of the cattle indicated that they had been long confined, and I inquired concerning their exercise and the time they were kept there. Our guide stated that the cattle were kept there from two to eight months, and, until ready for the slaugh-

ter-house, were never unloosed from the short chain which held them to the feed trough, where they seem to cease to be cattle, and by their repulsive environment, and their occupation of eating liquid refuse, mixed with cottonseed hulls or decomposed hay (so as to supply bulk), they, like swine, eat and lie down, get up, grunt, stretch, and eat and lie down, day after day, week after week. "But do you not provide them any means of exercise?" I asked. The answer was that it was not a practical thing to do, as they would run their flesh off, and moreover, confinement so deteriorates their bones that they can not support the heavy creatures if they gambol about, and that even their teeth are loose and brittle. He said he once saw a large steer of fourteen hundred pounds' weight, break both his front legs by playfully jumping when he was loosed from the feeding shed to be shipped to the packing-house.

In astonishment, some of our party expressed their opinion of the flesh of animals fattened under such conditions. The foreman agreed that he would very much prefer the cattle in the condition in which they receive them from the Western range; but that the popular taste shows marked appreciation of the highly flavored, tender, veal-like beef, fattened at the distilleries. In these facts there is a clear explanation of the source of the stimulating properties in much of the American beef, and why many persons experience a temporary lack when they abruptly change to a vegetarian diet. In these cattle, the entire lack of exercise diminishes the excretory processes until the poisonous

THE MEDICAL MISSIONARY AT WORK

Wahroonga Sanitarium

D. H. KRESS, M. D.

DURING the past six months the sanitarium has had a good patronage, averaging about thirty patients. As a result we have been enabled to pay all our running expenses, including our heavy interest, and have had a surplus to use toward improvements, etc., amounting, on an average, to about seventy pounds a month. We have also been enabled to devote one hundred pounds toward paying off our indebtedness. We feel that we have much for which to thank God. Certainly not one of his good promises has failed.

God has blessed the efforts of co-operation with him in healing. Many have been restored to health, and have gone home to tell their friends of the good they have received. This we consider the best and most honorable way of advertising our work. Letters of appreciation are being constantly received from former patients, telling of continued progress. Our aim as workers has been to cultivate true godliness. While we do not feel we have fully attained our ideal, we are encouraged to press forward.

Nearly all the patients make mention of the Christian influence that pervades the place. Every one, they say, is so kind, cheerful, and thoughtful. This is certainly as it should be. The love and union seen among God's people is their strength in the sight of the world. "By *this* shall all men know that ye are my disciples," said Christ. While no special effort is made to urge doctrinal points upon our patients, as a result of this in-

fluence in our midst, the Spirit of God has been enabled to impress many hearts, and lead many minds to inquire regarding the truths which distinguish us from other people.

A grocer and his wife, of Wahroonga, were among our first patients. While at the sanitarium, they became acquainted with the truth. After beginning the observance of the Sabbath, he felt he must plan for the saving of his house. He sold out at Wahroonga, and moved to Cooranbong, where his children can have the advantages of a Christian school. This is a very happy family, and its members greatly rejoice in the truths brought to them.

Many other interesting cases might be cited. About twelve are keeping the Sabbath as a result of our sanitarium work. The use of rational remedies, and a cheerful, spiritual atmosphere, with God's blessing, will accomplish much.



Leicester, England

THE medical missionary work is making progress in the North England Conference. The sanitarium, although as yet not enjoying a large patronage, is more than paying its way, under the labors of the Drs. Richards. Health schools are being conducted in the different cities, and thus the people are becoming acquainted with the methods and value of the sanitarium in treating the sick.



Belfast, Ireland

DR. J. J. BELL, of the Belfast sanitarium, recently gave an interesting ad-

dress to the Edinburgh Vegetarian Society. There was a good attendance, and considerable interest was displayed in the questions which followed the lecture. The doctor also spoke before the Glasgow Good Health League and the Glasgow Vegetarian Society.



Maritzburg, Natal, South Africa

MEETINGS are held in the health institute every Sunday afternoon, in which the patients take a lively interest. One gentleman in the institute has given his heart to the Lord. This makes the third during the last few weeks. The patients attend the Sabbath meetings at Sweetwaters.

Mr. and Mrs. Armer have settled in their new health home. Circumstances over which the conference had no control obliged the closing of the treatment rooms, which gave such promise of success. The property was sold, and there were no funds with which to start another place. Brother Armer, therefore, decided that he would not let this good work drop, and has opened an institute on his own account. He is doing well. We wish this work success.



Kolo, Basutoland

THE missionaries have a great many opportunities to treat the sick, and find it a help in their work to be able to give the treatments. Those not of their number, who are under the influence of other missions, as well as those who attend the meetings at the mission, come for help. Mr. Chaney took the special course in nursing at Battle Creek, and Mrs. Chaney spent a few months there and in Chicago. During the last six years in Africa, Mr. Chaney has had an experience in that line, and has been

greatly blessed of God, we believe, in saving a number of lives. He also had an experience in nursing during the three years he was a missionary on the West Coast, before he became a Seventh-day Adventist. He accepted the truth there, resigned from the work, and went to Battle Creek for special instruction in the truth, both in Bible and in nursing.



Fiji Islands

WE have now entered another island of the Pacific with the truths of the third angel's message. Brother Stevenson has safely reached Rotuma, and has written of the outlook for the work. He seems pleased with the prospects, and says that he has been well received by the government commissioner. The island of Rotuma is under the Fijian government.

Brother Stevenson has been given the privilege of carrying on his nursing, also simple surgical operations, as pulling teeth, lancing abscesses, etc. We are very glad that the Lord has led to the opening up of the work here.



Tokyo, Japan

THE development of the work in Kobe seems to indicate that they have moved none too soon. The addition to the sanitarium is well under way; but while it is building, the nurses have given up their rooms to patients, and Dr. Lockwood and Brother Burden are rooming in the office. We rejoice in this prosperity.



LET us not miss the meaning of Christianity as it comes to us and claims us. We are chosen, we are called, not to die and be saved, but to live and save others.—*VanDyke*.

Japanese Surgery

THE war has led to a demonstration of the value of the surgical work of the Japanese, and it has been found that they prove remarkably skilful in their care of the wounded.

One hospital ship returned to Japan with two thousand two hundred wounded men aboard, and there was not a single death on the trip. Wounded Russian prisoners have also received similar care.

The temperate and simple habits of the Japanese prove a great aid to the surgeons who have their wounded in charge.—*Selected.*



Workers Together with Him

To be glad of life and the privilege of service;

To ask not for an easier life, but for strength equal to my tasks;

To learn to smile though burdens seem heavy;

To remember always that God's pattern of a beautiful life is made up of commonplace duties;

To be loyal to the Great Physician, and ready to do what he appoints;

To minister from love, and leave results with him;

To prize his honor above worldly success;

To so love that each soul that touches mine, may be stronger for life's battle;

To abide in him always, and rejoice in his will,—

This is service, worship, rest.

—*Charlotte Atkins, in National Hospital Record.*



“THE dowager empress of China has given 10,000 *taels*, or \$144,000, to the establishment of a medical college in Peking. It is a large institution,

founded and sustained by the combined effort of the London Mission, the American Board, and the Presbyterian Board, and is to cost \$50,000. . . . It may show a great change of mind in the empress that she indorses and supports a missionary enterprise. Medical missions are proving the means of conciliating and opening the way to many minds and hearts.”



A NEW hospital was opened in the English mission at Kabarole, the capital of Toro, Uganda, Africa, last spring, and Dr. A. Bond writes: “During the past four months we have had over eighty in-patients. These have been from all classes, some being chiefs and chiefs' wives, others from among the poorest of the peasants. They also represented eight different tribes. We have ten native boys in training as hospital assistants, their ages varying from twelve to eighteen. Our work is chiefly among Batoro, and we are very thankful for what we have been able to do for them. Some come to us because of the loaves and fishes, but others seek to know the truth, and are led to Christ.”



“THE function of the medical missionary is that of the evangelist. He claims to be as truly a missionary, in the ecclesiastical sense of the word, as his ministerial brother; both have been educated and trained for the same great work, and both are equally unworthy of the name they bear if they fail to make evangelistic work the great aim and object of their pretense in the mission field.”



A FRENCH missionary doctor in Africa was setting out to visit a patient

when his little boy asked, "Papa, where are you going?"

"I am going to see a little boy who is very sick; are you not glad that your papa can help the sick little boys?"

"Yes," the child replied, "it's just like Jesus."

This child's remark suggests both the work and the reward of the medical missionary.



THE only religion that can really do anything for me is the religion that makes me want to do something for you.— *VanDyke*.



THE first Chinaman licensed to practise medicine in California, Dr. Chang A. Holt, of San Francisco, has just passed the Board of Examiners. He is a full-blooded Celestial, born in Canton twenty-six years ago, and studied medicine in San Francisco. Dr. Holt, it is said, will return to his native land. He is a Christian.



A C. M. S. MISSIONARY in Japan says: "Reader, do you realize that there are over forty-five thousand sick and wounded in the military hospitals to-day? that in Osaka alone they will soon number more than ten thousand? that every facility is being given to Christians to work among them? in a word, that the opportunity is unique? If so, will you not help us by your prayers?"



THE Moravian Mission and the Berlin Mission to the north of Lake Nyassa have each undertaken to open and supervise two leper asylums. The existence of leprosy attracted the attention of

German officials; isolation with nursing was necessary, and the missionaries are the only people there able and willing to render such service.



THE first medical missionary from America — Dr. John Scudder — was sent to Ceylon in 1819. He later worked in India. His eight sons and many grandsons and granddaughters have followed his example, and devoted their lives to the evangelization of India's millions.



IN Kashmir the native medical treatment is barbarous in the extreme. It resolves itself into starving the patient for five days, and if that does not effect his recovery, then he is bled for the next three or four days.



A TIBETAN afflicted with blindness made a two months' journey to the Kashmir hospital. He was confident that he was going to be healed. His sight was restored, and he went home taking the Word of God with him.



"AN old woman who was medically treated and taught about Christ at the Stewart Memorial Hospital at Hing-hua, in China, was asked what kind of a place our Lord had gone to prepare. She replied, 'A hospital.'"



THE gospel for a world of sin can not be preached by any except those who need it for themselves. An angel could not deliver it aright. Its language is always in the first person plural, drawing the speaker and the hearers into a brotherhood of penitence and forgiveness.— *VanDyke*.



HEALTHFUL COOKERY

AND HOUSEHOLD SUGGESTIONS

The Mistress of a Household

Mrs. M. H. Tuxford

(Concluded)

If the mistress of the house has a clear idea of the work she wishes to have done, she can easily arrange the details with the different workers, and the time for each thing to be accomplished. Household work should always be done in a woman's head before the hands meddle with it.

Valuable, however, as a plan may be, it must be borne in mind that it is only a means to an end — that end being the happiness, well-being, and comfort of all the members of the household. If, therefore, circumstances should arise which make adherence to this plan a hindrance rather than a help, it should be temporarily abandoned. Persons are more than things; yet some mistresses are so wedded to their plans and methods that they make them a perfect burden to those about them.

A Special Duty

It is the duty of the mistress to see that every part of the house is kept clean. Dirt is degrading, besides leading to disease. Every part of the house must receive her attention, and she should not limit her inspection to the showrooms of the house. In fact, a model housewife will have no show-room. Not only should she inspect the bedrooms and living-rooms, but she should acquaint herself with the condi-

tion of the kitchen, the servant's bedroom, the pantry, etc., and lastly, and by no means the least, the scrap tin and garbage tin. The eye of the mistress is worth two pair of hands, and she who understands what ought to be will be able to discover waste from the beginning, and to put an end to it before it becomes serious. Everything must be investigated, and she should make sure that her rules are obeyed.

It is her duty to spend wisely, as well as to save, buying what is best suited to the needs and tastes of the household, and ordering nothing beyond her means. At night she must see that the house is securely shut in, both front and back, and fires made safe for the night.

Nor is the work of the mistress finished when the plan is arranged, and cleanliness and order have been secured: the little finishing touches, the tasteful arrangements, the provision for comfort and pleasure, must all come from the mistress herself, or be absent altogether. She must endeavor to make the rooms comfortable, and as attractive as possible to her children. All the coziness, the home-feeling, and the soothing influences would be gone if these little things were not attended to, and only bare utility would remain. There is the greatest difference between a room that is merely

Lentil Dressing

After you have rubbed your lentils through the soup strainer, reserve one large cupful for your dressing. Add one quart of boiling water, one or two tablespoonfuls of browned flour, after being rubbed smooth in a little water. After it has come to the boiling-point, add salt and a little garden thyme to flavor. This is a nice sauce to serve with macaroni.

Spinach Souffle

Cook some spinach; drain perfectly dry, and chop fine. Add a little flour, and season with salt. Beat the yolks of three eggs with a little milk, and add to the spinach, season with salt; mix and place in a pie dish. Put into a hot oven, and bake until well puffed. Turn out on to the serving dish, when the bottom of the souffle will be uppermost. In the meantime beat the whites of the eggs very stiff. Then pile the stiffly beaten whites on the tops of the spinach. Return to the oven until the white of the egg is well set, and slightly colored. If spinach is not in season, substitute cabbage.

Baked Fig Pudding

One cup of finely grated bread crumbs, one cup of hot (not boiling) rich milk, half a cup of chopped steamed figs, half a cup of honey or sugar, and one well-beaten egg. Beat all together, put in a deep dish, and bake until the custard is set. Serve with lemon sauce.

Lemon Sauce

One cup of boiling water, one level tablespoonful of corn-starch, juice of one lemon, and sugar to taste. When the water boils, add the lemon juice and sugar. Mix the corn-starch smooth in a little cold water, and add to the boiling water. Stir until it thickens, turn into a pitcher, and serve with the pudding.

Melange of Fruits

To many, a mixture of several fruits is a novelty, and few know how to take tasteless winter pears, or an insipid watermelon, and combine it with fruits possessing a fine flavor. In summer the combinations are well-nigh endless. In winter, or if far removed from markets, one may use the Californian dessert fruits in cans.

Choose a can of Bartlett pears of home canning, if not, the Californian ones. To this add a small can of pineapple and the juice of one small lemon. A fine canned peach or too, cut fine, is an additional flavor, but not necessary. Use the sirup from the pears. Very nice.



THERE came a child's shriek, and we saw a small child in the yard dancing about while he fought a cloud of wasps. His mother went to his aid with two wet towels, beating the wasps away, and sent her daughter after some onions. The little fellow was terribly stung, not only about the face, but all over his body; for the wasps had crawled up his trousers, and down his back. He was carried, writhing with pain, into the house, where his mother had him undressed and laid on a table. Each sting was rubbed with a juicy slice of onion. Presently the pain was assuaged, and the little sufferer was sleeping.—*Good Housekeeping.*



COOKERY is become an art, a noble science; cooks are gentlemen.—*Burton.*



EVERY mouthful of food swallowed without appetite is an outrage against the stomach,—an outrage so fearful that every organ of the body is dulled and deadened by it.—*MacFadden.*

QUESTIONS AND ANSWERS

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

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

55. Limburger.—J. K. F., New Jersey: "Is Limburger cheese good to eat? If not, why?"

Ans.—Limburger cheese, like any other cheese, contains a large amount of nourishment in a very concentrated form. It is not fit to go into the human stomach for the reason that it has undergone partial putrefaction, and this renders it unfit for food.

56. Warts.—I. S. A., Pa.: "Will you please advise me how to get rid of warts? My son has quite a number on his hand. I have tried various remedies, but without success."

Ans.—The best and quickest way to get rid of a wart is to destroy it with a galvanocautery. A good physician can do this with but little pain. You can destroy them at home with fuming nitric acid. Apply a little of the acid to the wart with a wooden toothpick. After a few days the top of the wart will come off, and the application can be repeated until the wart disappears. This acid is a very powerful poison, and must be handled with caution.

57. Eye Strain—Cause of Wrinkles on Forehead.—H. P. S., Conn.: "What is the cause of involuntary contraction of the muscles of the forehead, causing wrinkles, and making the person look as if frowning or staring? It occurs unconsciously, not only when using eyes for reading, but also during conversation."

Ans.—It may be due to defect of the refraction of the eye, disturbance of the muscular balance of the eye, to some other reflex nervous disturbance, or to habit. Have the eyes carefully examined by a skilful oculist, and correct any defect that may be found, especially any defect of muscular balance. After removing every possible cause, the habit may still continue. The only cure then is to take yourself thoroughly in hand and quit the habit.

58. Rancid Olive-oil.—A subscriber: "1. Why does olive-oil sometimes burn the throat? 2. If it is because it is old, can it be freshened or sterilized by boiling?"

Ans.—1. Because it is old and rancid.

2. The acrid taste is usually due to butyric fermentation and other chemical substances which have developed in the oil. Such oil is not made sweet nor sterilized by ordinary boiling, for the reason that boiling olive-oil, and other similar oils, produces in the oil various chemical substances of a very irritating character, which give rise to throat burn and indigestion. Olive-oil is a splendid article of diet used in small amounts, but only the very best fresh oil should be used.

59. Sweet Potato: Food Value.—H. C. B., Tenn.: "What is the food value of the sweet potato?"

Ans.—The sweet potato is a food rich in starch, sugar, and mineral constituents, as will be seen by the following analysis as given by Payne:—

Starch	16 per cent
Sugar	10 per cent
Nitrogenous matter	1.5 per cent
Mineral matter	2.6 per cent
Fatty matter	0.3 per cent
Water	67.5 per cent

The food value is greatly modified by the conditions under which the potato is grown; dry soil and abundant sunshine being the most important factors in growing a sweet potato. The sweet potato is an excellent food for those who can digest it easily.

60. Idiosyncrasies.—L. C., Md.: "Milk does not agree with me. Is the fault in the stomach or in the milk?"

Ans.—It may be neither. Because a food is a good food, it does not follow that it will agree with all good stomachs. If a person has

a good stomach, and a particular food, well-prepared and properly eaten, does not agree with it, it does not follow that that food is not a good food, but it does prove that that particular food is not a good food for that particular stomach. In other words, each person should select such good foods as agree with his own stomach, and not eat a particular food because it agrees with some other good stomach. If, after a fair trial, any particular food does not agree with you, change it for some other good food that will agree with you.

61. Twitching of Legs.—H. A. W., Colo.: "Of what is twitching of the legs in the evening a symptom? and what treatment will remedy the trouble?"

Ans.—Twitching of the muscles of the legs and all other incoordinate movement of muscles, are indications of an unbalanced action of the nerve-centers, usually due to some irritation, often in some remote part of the body. Familiar examples are seen in twitching of the upper eyelid from disease of the nose or a bad tooth; twitching of the muscles of the face and neck from the presence of tapeworm or other intestinal worms. Twitching of the legs often arises from some form of rectal trouble. Usually the person is unconscious of any trouble at the source of irritation. In some cases the twitching is of the nature of chorea, and may be due to badly nourished nerve-centers or to an exhausted state of the nerve-centers.

The first essential is to find the cause, if possible, and remove it. Second, improve the nutrition by nourishing foods, better eaten and better digested. Take an abundance of sleep, and, most important, avoid all stimulants and excesses and maintain less nerve tension—relax, lead a simple, natural life.

62. Eczema.—Mrs. H. L. O., Iowa: "I am troubled with moist inflammation on the back of my hands, which is worse in winter. What is it? and what can I do for it?"

Ans.—The trouble is probably a form of eczema. Your general health is doubtless at fault. Carefully regulate the diet as to quality and quantity of food. Regulation of the bowels, and a vigorous hand bath every morning, followed by an oil rub, will prove valuable to improve the condition of the skin.

Locally: wash the hands very clean with soap and water once or twice each day, and apply the following ointment freely:—

Oil of tar2½ drams
Icthyol1½ drams
Benzoinated Zinc Ointment 2 ounces

Cover with a little absorbent cotton or soft cotton cloth, and wear a pair of gloves day and night. The hands can usually be cured in a short time. After they are cured, keep them very clean, avoid all irritation of the skin, and each time after washing apply the hand lotion as given under "Chapped Hands," Ques. No. 50, February LIFE AND HEALTH.

63. Whooping-cough.—C. T. R., Ohio: "1. What is the best treatment for a baby five months old that has whooping-cough? 2. Is there anything that can be done to prevent a child from taking whooping-cough when it is living with children that have it?"

Ans.—Whooping-cough should be considered as a serious disease of childhood. The disease is one of long duration, and the child should be given the most careful attention. If given good general care, most children require but little treatment for whooping-cough. Treatment is only required for the relief of such symptoms as may become serious. These usually arise from exposure, neglect, injudicious feeding, taking cold, etc., all of which should be carefully avoided.

The disease is contagious in all stages. The sputum, being very infectious, should be received either on a bit of cloth or in water, and at once disinfected. It is especially important in this disease that the child should have abundance of fresh air at night, as the accumulation of the poison in the air of a close sleeping-room makes the paroxysms much worse. The inhalation of steam, to which may be added a little turpentine, tar, or carbolic acid, will often prove very helpful.

2. No. Separation is the only advisable safeguard.

64. Irregular Heart, Heart Consciousness, Indigestion, and Spinal Tenderness.—A. B. M., Canada: "For six years I have had a very irregular heart, often slow, but very rapid after meals. I am forty-nine years old, an accountant by occupation. I am annoyed with the consciousness of my heart's beating. Acid fruits, nuts, olive-oil, malted foods, and wheat bread cause indigestion, gas, and pricking in hands, and dizziness. I also suffer from spinal tenderness and constipation. What is the matter? and what should I do?"

Ans.—Your condition is the result of leading an unnatural life—too many hours at close, monotonous confinement, too few hours

(Continued on page 86)



Physical Basis for Crime

ONE of the most interesting papers read before the recent meeting of the American Association for the Advancement of Science, held in Philadelphia, was entitled "Brains of Intellectual Persons, of Individuals of Various Races and of Criminals." The writer, Dr. A. Spitzka, of Columbia University, attacks vigorously the old idea that the brains of criminals differ in any material aspect, either in size, shape, or appearance, from the brains of other classes of individuals. He maintains that criminals can be properly classified only by observing each individual criminal.

This able paper impresses anew the truth that the criminal tendency and criminal character is not dependent upon the physical development; that "the physical basis for crime," about which we have heard so much, has been overdrawn. While physical suffering, hunger, and bad environment, such as is seen in tenement districts, encourage the development of the criminal tendency; and while the improvement in these conditions lessens the display of this tendency, and renders it easier for the individual to decide on a right course of life, the physical environment and development is a thing quite separate and distinct from deciding on a right course of life. This decision lies at the foundation of any transformation of character, and requires something more than change of food, clothing, and environment.

The recognition of personal accountability to God, and the acceptance of divine power as the essential factor in the transformation of character, will enable any individual with any shaped head, or any development of brain, to make a clean-cut decision and to lead an upright life. The criminal tendency is in every human being, and nothing but divine power can remove it.

G. A. H.



Extreme Positions

OCCASIONALLY some periodical volunteers the information for its readers that microbes are perfectly harmless, and even beneficial, and that the doctors who keep microbes before the public as a scarecrow are censurable.

This we believe is pernicious teaching. There is much that is taught that can be ignored as harmless foolishness or ignorance, but the statement that there is no danger from microbes, if heeded will be productive of much mischief. It is true, we are not acquainted with the germs causing some of our most common diseases, but their similarity to other diseases which have been proved beyond any reasonable doubt to be germ diseases is satisfactory to any enlightened person.

It is true, also, that some enthusiasts have carried the matter of germicides and antiseptics and serum treatment of disease to a ridiculous extreme, and it may be this that has led to the reaction which denies altogether the agency of germs in disease.

It is now known positively that certain germs cause certain diseases. It is known how these germs are transmitted from one person to another. Yellow fever has been stamped out in some places, and malaria in others, as a result of discovering the part the mosquito plays in transmitting the germs of these diseases.

To ignore the action of germs is to neglect proper precautions and to invite disease. This is one extreme. The other extreme is to regard disease as due entirely to the germ.

Before a germ can grow, it must find a favorable soil. Wheat, oats, or thistles will not grow on the kitchen floor, neither will they grow in the rocks. Germs will not grow under unfavorable conditions. There must first be a favorable soil, caused, it may be, by careless or irregular habits, overeating, undue indulgence, exposure, exhaustion, etc. The fact that a germ will not grow on unfavorable soil has led some to take the extreme view that the germ is not in any way responsible for the disease.

The more rational way is to recognize two factors in disease — the predisposing cause, the state of the body, and the exciting cause, the germ. Both of these causes must act in conjunction in order to produce disease.

The person who flatters himself that he can keep himself on such a high plane of health that he can defy all germs, and on this supposition neglects to take ordinary precautions against infection, may learn his mistake when it is too late.

On the other hand, the man who neglects all rules of diet, rest, etc., and trusts in antiseptics, germicides, anti-toxines, and the like, to keep him from disease, will probably meet with a like disastrous ending.

Truth usually lies between the extremes.



Microbe Maniacs

CERTAIN Chicago people object to the use of table linen because of the danger of infection from germs, which leads the *Washington Times*, under the above heading, to make some pertinent remarks concerning people who "make themselves unhappy by belief that every substance with which they come in contact reeks with germs capable of killing them and anxious to do so."

Superstition is a weed indigenous to the human mind. Now that the evil spirits, spooks, and hobgoblins of the ancients are robbed of their terror, the modern diabolophobe (you'll not find it in the dictionary) must have some other object for his superstitious fear.



Regarding Ventilation

I AM requested by a correspondent in Manitoba to answer a question regarding ventilation. There the thermometer ranges from zero to forty degrees below in the winter season, and it is exceedingly difficult to secure good ventilation without losing an immense amount of heat.

He wants to know whether a hole in the stovepipe will not make as good a ventilator as a ventilating chimney. In his stovepipe he has a hole with a sliding door, so it can be opened or closed at pleasure. While the fire is going, there is a strong suction of air into the stovepipe through the hole.

Evidently he has a splendid draft to his chimney. In many cases, such an opening would allow smoke to enter the room. An opening above, where the draft is good, would increase the outgo

of air from the room, without cooling the fire and carrying away so much heat as if it passed through the stove. The draft would necessitate the entrance of air into the room from the outside, which would be good, unless the air is sucked up through the floor from an unhygienic cellar.

A plan which might prove to be as effective and more economical is to have an opening allowing air to enter the stove just above the fire. This will help to burn up some of the gases in the smoke which would be otherwise unconsumed; or, possibly, a combination of the opening in the stovepipe with one above the fire, adjusted according to the state of the fire and the amount of draft.

The ideal system of ventilation would be one in which pure air is brought into the room at the proper temperature, and only the impure air taken out. This can never be realized; for it is impossible to keep the impure air separated from the pure. There is a constant mixing of the pure and the impure air, so that, to keep the air up to a good standard of purity, it is necessary to dilute the impure air with large quantities of pure air. If we could breathe out each time into a tube going outside, the air of the room would remain pure, and it would require only fifteen cubic feet of air per hour for each person. But where we breathe into the room, it requires a very much larger supply of air to render the air reasonably pure. Sanitarians usually estimate three thousand cubic feet per hour for each individual in a room.

Such ventilation would be impossible in a country like Manitoba without reducing the temperature far below the point of comfort and safety; that is, by means of ordinary window ventilation. People find they can get along on less than three thousand cubic feet of air in

winter, especially when the air must come in cold from the outside. The furnace has the advantage that it delivers the air to the room warm, and if the furnace has sufficient capacity, the more air you get, the warmer you are. So the only temptation to limit the supply of fresh air is the coal bill.

No doubt we have more to learn yet regarding air requirements, as we have been learning about food requirements. But this we can remember, the danger is in the tendency to supply *too much food and too little air*.



All Roads Lead to Rome

ALL systems of health culture, however diverse they may be in detail, seem to include an effort to reduce the amount of food, especially the nitrogenous food, taken into the system, or to burn it up more perfectly, or both.

These systems all testify that man is prone to overeat, especially of nitrogenous food.

Carnaro, the almost hopeless invalid of forty, who by reducing his allowance to a minimum, regained and preserved his health to an advanced age; Dewey, who improved his own health and that of many followers by the two-meal plan, or by fasting; Miles, who greatly improved in physical and mental ability by discarding meat and other heavy and exciting foods; Fletcher, who, by thorough mastication (resulting in the use of a smaller quantity of food) changed himself from a "bad risk" to a "good risk" for life insurance; Page, who cured colds by fasting, and who found it impossible to contract a cold while in the fasting condition — all show that man habitually eats too much for his own good.

Chittenden, with his extensive experimental work on men of various classes,

occupations, and ages, has demonstrated the same thing.

The "Authorities" will continue, for some time to come, to maintain 118 to 125 grams proteid as the necessary daily amount for one man at ordinary work.

The people will probably continue, for a much longer period, to overeat. The human animal does not take kindly, as a rule, to a cut in his diet. He enjoys eating — three meals a day, with a good proportion of meat and other "nourishing" foods, and if rheumatism or gout or some other disorder results, will take chances in being able to remedy the evil by a liberal use of mineral water.

Say! couldn't we, who are supposed to have minds to control our bodies, learn some lessons from the lower animals, who, in a natural state, rarely, if ever, overeat?

Which shows the "animal" propensity — the unreasoning desire to gratify taste, even at the expense of health — the most, man or the other animals?



One Way to Cure a Cold

IN December a middle-aged man found himself coming down with a severe sore throat, which, from experience in the past, he knew was the precursor of a hard cold. In his heated office he sat, viewing with dismay the gathering storm, first rain and afterward snow. He was without rubbers, and as it was Sunday, he could not obtain any. Going out into the street was equivalent to wading in about two inches of ice-water; so it was with much misgiving that he started on his journey home.

His feet were soaked by the time he had crossed the sidewalk. He had a six-mile ride in unwarmed street-cars, with the necessity of wading in the wet snow

at two transfer points and a half-hour's stay in a cold waiting-room. He became thoroughly chilled, and feared he would have the worst cold of his life; but to his surprise, his symptoms began to ameliorate when he became chilled, and by the time he arrived home, though he felt about frozen, his cold was completely cured.

In another case a girl had caught a hard cold, and in going to school had to be out for some time in the severe blizzard of January, this year. To the surprise of herself and others, she came home with her cold entirely cured.

The writer would not want to recommend this as a good method to try in beginning pneumonia; but it illustrates the fact that severe cold may serve so to start up the resistant powers of the body that a beginning cold may be broken up.



What is the Motive?

WHEN you find a newspaper ridiculing the statements of the government chemist regarding the harmfulness of preservatives in foods, it may throw some light on the motives of the paper to examine its advertising columns.

It is not surprising that Dr. Wiley, after stating the results of his carefully conducted experiments should meet with marked newspaper opposition. The food producers who add preservatives to their products, or who use adulterants, or the manufacturers of alcoholic liquors and patent medicines are liberal advertisers. Anything which affects these interests may expect more or less newspaper opposition.



DOST thou love life? Then do not squander time, for that is the stuff life is made of.—*Franklin.*

Books

[It is the aim of the Editor to notice in this department only such books as have a bearing on health, and which, as a whole, he can recommend. It is not to be understood, however, that he indorses everything in the books here noticed.]

PHYSIOLOGICAL Economy in Nutrition with especial reference to the minimal proteid requirement of healthy man. An Experimental Study. By Russel H. Chittenden, Ph. D., LL. D., Sc. D., Director Scheffield Scientific School of Yale University and Professor of Physiological Chemistry.

Cloth, 478 pages, 16 full-page half-tone illustrations. \$3 net. Frederick A. Stokes Company, Publishers, New York.

If the propositions laid down in this book are true, the present teachings regarding the dietetic needs of man will need a complete revision. Is it a fact that civilized man habitually eats more food than he needs, more than he can use to advantage, or with safety to himself? Can it be that the standards set by students of dietetics are all too high, and that the methods of arriving at these standards have been erroneous? Can we believe that there would be such an apparent agreement between the appetites of men under various situations and the present accepted standards if these do not represent a close approximation to the actual needs of man?

Professor Chittenden makes statements which, if true, are of the utmost importance to every living person; for if the body can be maintained in health and efficiency on a diet containing less than one half the amount of proteid usually used, the adoption of the new standard will mean a gain physically,

mentally, and financially. Incidentally his investigation seems to show that much of the disease, such as gout, rheumatism, and diseases of the liver and kidneys, is due to overindulgence in proteid food.

What have we in evidence of the correctness of Professor Chittenden's propositions?—We have the eminence of the professor himself in this line of study, the care with which he conducted all his investigations, the large number of men experimented on,—men of various walks of life, nationality, age, and condition. The experiments were continued for a period of several months. Comparative tests were made of the physical and mental efficiency of the men at intervals during the investigation, and everything goes to show that the men, whether professional men, or soldiers under moderate exercise, or athletes under severe exercise, were as well off under the diminished proteid diet as under their ordinary diet; and some were decidedly better off.

While a few lost weight, it seemed to be an advantage rather than otherwise. Nitrogen equilibrium was maintained, in some cases with one third the proteid ordinarily used.

But it will be impossible here to go into details. Mr. Chittenden explains how he came to take up the work, how he experimented first on himself, and then on his associates, and then on larger bodies of men.

Probably no such extensive experiment had ever before been attempted in this line. All the details of the experiments are given, with the diet lists, the balance of nitrogen intake and outgo,

the results of the strength tests and other tests of efficiency.

Every physician and every layman who desires to be intelligent regarding the dietetic needs of the body should have a copy of this book.

"HOME CARE OF THE SICK," *lesson* books of the American School of Household Economics, Chicago. By Amy Elizabeth Pope, Instructor in Trained Nursing, Presbyterian Hospital, New York City. 5½ x 8. Two parts, paper bound. \$1 net.

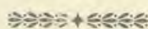
These lesson books were prepared as a part of the correspondence courses in domestic science. They are written from the standpoint of the home maker and mother, and give in concise form clear descriptions of the simpler duties of the trained nurse. Special emphasis is laid on the proper way to lift and handle the patient, to change the bed-clothes and the mattress, and to change the patient from one bed to another.

Other topics taken up are baths and bathing, sick-room methods, asepsis, disinfection, food for the sick, first symptoms of disease, bandaging, emergencies, and first aid to the injured. The text is well illustrated, and gives information which every mother and house-keeper should know.

The directions for preparing foods are, of course, based on the usual assumption that the invalid needs flesh foods.

In the directions for applying bandages it would have been much better to have described the simple, rapid, easy-to-learn, easy-to-apply triangular bandage, and the various tail bandages, instead of the more difficult roller bandage; but the author has had hospital training, which of course means a practical course in the roller bandage, with, perhaps, little attention to the emergency bandage.

But on the whole, we can say that these text-books are an excellent addition to an excellent course.



(Continued from page 80)

spent in enjoyable, invigorating exercise in the health-giving sunshine and free air. This has caused partial exhaustion of the nerve-centers, with weakened digestive power. Your heart trouble is wholly secondary and unimportant. It will disappear with change of habits and proper treatment of nervous and digestive trouble.

Inaugurate a radical change in your habits of life, with fewer hours of confinement. Every day take enjoyable exercise in the open air till you perspire, and follow this with a cold rub. Take a cold hand bath every morning. Take

one of the following treatments each day in rotation: hot and cold to spine, hot and cold to stomach and liver, and salt glow. Take a cold enema each day for one or two weeks. Sleep nine hours in a cold room with abundance of fresh air. If the feet are cold, keep them warm with a hot bottle.

Select good, wholesome foods that will agree with your stomach, chew them thoroughly. Have them served in an attractive manner, and eat only under pleasant surroundings and with a happy mental state. If possible, spend three months at some good sanitarium.

News Notes

Pure Foods

DR. WILEY believes that antiseptics should never be added to foods except when absolutely necessary, or when ordered by the customer. He makes an exception of the use of sulphurous acid in drying fruits.

THE new food law requires that all food products coming to this country artificially colored must so state on the label, and if sulphate of copper is used, this fact must also be stated. Dr. Wiley's advice to food producers is to cease coloring their products.

MAYOR HARRISON, of Chicago, states in his annual report, that Chicago has the best record for healthfulness of any city having a population of more than three hundred thousand. This excellent showing is attributed largely to the purity of the water and milk supplies.

A BILL is before the Pennsylvania Legislature to prohibit the manufacture and sale of foods containing formaldehyd, sulphurous acid, boric acid, salicylic acid, with their salts, and all other preservatives injurious to health. Salt, saltpeter, sulphur, wood smoke, and vinegar are permitted. The penalty for violation of the law may be a fine of from sixty dollars to one hundred dollars with costs, or an imprisonment up to sixty days, or both.

EXAMINATION of the Boston milk supply show that nearly one tenth of the milk has between 500,000 and 1,000,000 germs to the cubic centimeter, more than one eighth of the milk has between 1,000,000 and 5,000,000, and one twentieth has more than 5,000,000. The law permits 500,000 to the cubic centimeter in Boston. It has been shown that with careful scrutiny of the dairies and the handling of the milk, the bacteria can be reduced to less than one tenth of this amount.

Communicable Diseases

GERMAN sanatoria are now being constructed with departments for the care of tuberculous children.

IN New Jersey a resolution has recently been passed, providing that teachers suspected of having tuberculosis must submit to an examination, and if found to be tuberculous, must give up teaching.

A FEW cases of yellow fever have developed in the canal zone, but the medical men in

charge say they are sporadic, and it is expected that the measures now being used will stamp it out completely.

AT Govan, England, there was an outbreak of typhoid fever, resulting in twenty deaths, which was traced directly to some ice-cream that had been made by a man who, three weeks before the outbreak, had had typhoid fever in the ambulant form, commonly known as "walking typhoid."

VERMONT has a State tuberculosis commission, which will hold, in all the principal towns, meetings for the purpose of instructing the people on the prevention of tuberculosis. At the same time special instruction will be given the physicians as to the most approved methods of combating the disease.

THERE is a resolution before the State Legislature of Massachusetts authorizing an expenditure of two thousand dollars by the State Board of Health, in making "public exhibition of the various means and methods used or recommended for treating or preventing tuberculosis."

A MEDICAL school inspector in Germany is of the opinion that vacations do not have any effect on the prevalence of diphtheria or scarlet fever. But measles promptly lessens in its activity at the beginning of vacation. His explanation is that scarlet fever and diphtheria are not very contagious until a child is sick enough to be home and in bed, while measles is contagious from the beginning.

Drugs and Poison Habits

DR. WILEY says that there are in the United States at least five thousand fraudulent drug manufacturers who should be compelled to go out of business.

AN appeal was made to the Supreme Court of the United States against the Iowa anti-cigarette law, on the ground that the law interfered with interstate commerce. The Supreme Court has upheld the law.

SPANISH officials are beginning to sense the evil effects that follow the use of tobacco by the young. The minister of the interior has drafted a bill prohibiting the sale of tobacco, cigars, or cigarettes to any person under seventeen years of age.

A CHILD recently died "as the result of eating two pills, which had been left as medicine for his mother, who had been sick for several weeks. The pills contained strychnin, and had been left on a table. The boy was playing in the room, and managed to get hold of the pills, and ate two of them. Although a doctor was called, the boy died before he arrived."

A MERCHANT in Greenville, Ill., was recently fined twenty dollars for selling Peruna (containing about twenty-five per cent of alcohol) without a license. Good! There is no more reason why a man should be allowed to sell Peruna and some other nostrums without a liquor dealer's license than to sell wine and beer without a license. Calling these concoctions medicines does not change their character.

THE *New York Times* having published a statement as from Dr. W. H. Wiley, of the Department of Agriculture, that "among the food material which had justly attained a high place as nutriment for persons troubled with tuberculosis, was alcohol." Dr. S. A. Knopf, the eminent tuberculosis specialist, protests as follows: "Whether the distinguished scientist has been reported correctly or incorrectly, the harm that is done by such announcements in the public press seems to me to be incalculable. As one interested in the solution of the tuberculosis problem I feel it my duty to protest, and, if possible, correct an erroneous impression before it takes a stronger foothold in the minds of the people. Extensive experience in the treatment of tuberculosis has convinced me that alcohol can never be considered a food for the consumptive. There is so little food value in alcohol, and it is so easy to overstep the amount that can be assimilated in the system, in which case the deleterious effects far exceed the benefit derived, that it is not safe to recommend it as a food at all."

"To preach to the masses that alcohol is a food in tuberculosis is to my mind an error so grave, so fearfully dangerous, that I can not let it pass without the strongest possible protest."

"We are only just beginning, in our anti-tuberculosis campaign, to educate the people to the fact that alcohol never was a food for consumptives, never cured and never will cure tuberculosis. We are cautioning all our consumptive poor against the use of alcohol."

Sanitation

PART of the water supplied to the city of Philadelphia is filtered. According to the Chief of the Filtration Bureau, there was 59.6 per cent less typhoid fever per 100,000 inhabitants in the district supplied with filtered water than in the district supplied with unfiltered water.

THE Central Railway of New Jersey has inaugurated a plan of car cleaning,—the vacuum sweeping system,—which, in addition to being more economical for the railway, is likely to prove far more hygienic than the older methods. The dirt is drawn from all the surfaces of the car by suction through a pipe.

IN the public schools of Buffalo, N. Y., where the school-books are furnished in the lower grades out of the public funds, the health authorities three years ago adopted the plan of disinfecting the books at intervals, by means of formaldehyd gas. The result has been a notable diminution in the number of scarlet fever cases in the city.

IT was reported at the recent Havana meeting that a remarkable lessening of epidemic colds and other dust-borne diseases has followed the occasional use on schoolroom floors of formaldehyd in solutions too weak to produce a disagreeable odor. This hint may suggest to many teachers a way to stop that everlasting cough that is going through the schoolroom.

GOVERNOR HIGGINS, of New York, in his recent message recommended that all sources of public water supply be analyzed at frequent intervals; that the private water supply of public resorts be subjected to State analysis, and the results be made public; that a system of State inspection of domestic water supplies be maintained at the cost of the municipalities, corporations, and private owners affected thereby.

THE American Public Health Association held its thirty-second annual meeting at Havana, Cuba, January 9 to 13, inclusive. The topics considered included the purification of drinking-water, disinfection, sources of infection, school hygiene, and control of milk supplies. Considerable time was devoted to the problem of controlling the spread of tuberculosis. The association passed a resolution commending the authorities of Havana for their greatly improved sanitary conditions.

THE State of Pennsylvania is making an advance move in the line of State medicine. It is purposed to divide the State into a number of health districts, which will be in charge of about fifteen hundred physicians having an accurate knowledge of hygiene and sanitary science. This calls for new qualifications possessed by few physicians. The Medical Department of the University of Pennsylvania, in order to supply this new demand, has inaugurated a course of instruction in public health, to begin next October.

Miscellaneous

THE latest in the line of antitoxic serums, we are told, is one to cure "that tired feeling." Such a serum would certainly "fill a long-felt want."

PROFESSOR WILDER, of Cornell, is making known his opposition to intercollegiate football games. It is refreshing to know that there are still some university men who have not been carried away with the football mania.

THE Henry Phipps Institute is endeavoring to educate the textile workers of Philadelphia, by means of lectures, in regard to the danger of spreading consumption, the means of preventing its propagation, and the home treatment of the disease.

A BILL is before Congress providing for the punishment of wife beaters by whipping. It may seem inhuman to return to the whipping-post; but when it is necessary to inflict this punishment on a wife beater, the right man will be whipped.

DURING the congress of the British Royal Institute of Public Health, Dr. J. S. Turner dwelt upon the evil of soft food for children. He called attention to the harmfulness of starch and sugar, which, by undergoing lactic acid fermentation, prepare the way for germ action on the teeth. His remedy is hard food which requires thorough mastication, so that the mechanical action and the flow of saliva cleanse the teeth.

IN 1904, 2,142 physicians died in the United States. According to the *American Medical Journal* the average age was 60 years; average length of practise, 30 years; 596 lived past the age of 70, 241 were over 80, 19 were past the age of 90, and 33 lived beyond the age of 100 years. In view of the irregular life of a

physician, the taxing care and broken rest which are his daily experience, this is a remarkable showing.

SUPERINTENDENT COOLEY of the Chicago public schools calls attention to the danger involved in the present tendencies of high schools to imitate the athletic vices of colleges and universities. When this is done, Mr. Cooley says, athletics, instead of being a vital factor in the training of hand, head, and heart, become a demoralizing influence, not only to those taking part in the games, but to the entire school.

A BILL has been presented to the Pennsylvania Legislature providing that it shall be unlawful to employ any child under the age of thirteen years in any factory, workshop, laundry, store, office, hotel, etc. No child under thirteen shall work at any employment whatsoever during the months that the schools are in session. Other provisions are made for the benefit of children under sixteen. For instance, it is unlawful to employ a child under sixteen between 9 P. M. and 6 A. M. No such child shall work more than ten hours any day, nor more than sixty hours in any week. Employers of such children must keep on file a certificate signed by the school superintendent or principal, showing the amount of schooling and the extent of his or her education in the common branches.

ACCORDING to the statistics of certain cities where records have been kept, there is an alarming increase in the number of deaths from cancer. In forty years the deaths from cancer per 100,000 population have increased in Boston from 28 to 85 (threefold), in San Francisco from 16.5 to 103.6 (more than sixfold), in New York from 32 to 66, in Philadelphia from 34 to 70, in Baltimore from 18 to 63, in New Orleans from 15 to 82.

DURING July, August, and September, 228 passengers and 183 employees were killed and 2,154 passengers and 1,593 employees injured in train accidents in the United States. Compare this with the statement that on a section of the Erie Railroad, which carried 228,000 people during the World's Fair, and on the Vandalia Railway, which handled during the same time an enormous traffic, there was not a single individual injured. These two roads use the block system of signals.

LIFE AND HEALTH

(Continuing Pacific Health Journal)

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

G. H. HEALD, M. D. - - *Editor*
G. A. HARE, M. S., M. D., *Associate Editor*

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WHILE Mrs. Tuxford's articles are written with especial reference to house-keepers who direct in the household work, they may be read with equal advantage by those who perform their own housework.



IN this issue appears the first of a series of articles by Mrs. E. G. White on healthful living. These are from the manuscript of her forthcoming book, "Ministry of Healing."



THE menu furnished in this number is from Mrs. Tuxford's forthcoming book.



Have You a Cold?

WE call the attention of all our readers to the booklet on "Colds" advertised on the second cover page of this number.

Of all the ills that flesh is heir to, colds are, perhaps, most frequent, and especially so at this season of the year. Even a cold should have immediate and proper treatment, and sometimes the

symptoms of a more serious disease are mistaken for a cold.

This booklet tells all that the ordinary individual cares to know about colds, their causes, prevention, and cure. It is written in the simple, direct, understandable language of the Editor of this magazine, with which all our readers are familiar. This of itself is a guaranty of its value.



THE November, 1904, and the January, 1905, numbers of LIFE AND HEALTH are all sold out, so the offer to furnish free to all new subscribers for 1905 the November and December numbers is withdrawn. Subscriptions can not now begin back of the February number. We can still supply the December number, if desired.

Our subscription list is growing rapidly, and many are the kind words of appreciation which we receive continually.



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PHYSIC, for the most part, is nothing else but the substitute for exercise or temperance. Medicines are indeed absolutely necessary in acute distempers that can not wait the slow operations of these two great instruments of health; but did men live in a habitual course of exercise and temperance, there would be but little occasion for them.— *Addison.*



PATIENTS will take medicine when they will not take advice, and too often it is advice they need, and not medicine. The physician whose force of character makes his advice sought after and followed is the one who accomplishes the most. He can not ignore drugs, but his success depends on the extent to which he can dominate his patients, and correct the omissions, errors, and excesses of their lives.— *Vermont Medical Monthly.*

THE brain must be fed, or it can not work. Four great vessels flood every part of it with hot scarlet blood, which carries at once fire and fuel to each of its atoms. Stop the supply, and we drop senseless. Inhale a few whiffs of ether, and we cross over into the unknown world of death with a return ticket; or we prefer chloroform, and perhaps get no return ticket.— *O. W. Holmes.*



DISEASE is one of the things that can be controlled to a much greater extent than most people seem to realize.— *Dr. Keightley.*



THE normal tendency of the body is toward health, not toward disease. Even when unhealthy conditions have been established, the underlying effort of nature seems to be in the direction of health.— *Dr. Keightley.*

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