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During the summer, windows are kept open day and night, and we have fresh air in abundance; but as cool weather comes on, there is a tendency to economize fuel by closing the windows. This issue contains an article on how to sleep comfortably in the fresh air during the cold months. In the next issue E. C. Jaeger, who has contributed a number of articles to parents, has a message on "Fresh Air as a Cure."

Those who read Mr. Lome's article in this issue, "Physical Culture: What It Is, and What It Is Not," will want his next illustrated article, "Physical Culture for General Development." Mr. Lome deals, not in theories and glittering generalities, but in facts and practical directions.

Dr. Mason's forthcoming article, "The Moderate Drinker," which takes issue with the proposition that the evil lies in the abuse and not in the use of alcoholic liquors, should be read by every one interested in the drink problem, which means it should be read by every one, for the drink curse affects, directly or indirectly, every man, woman, and child.

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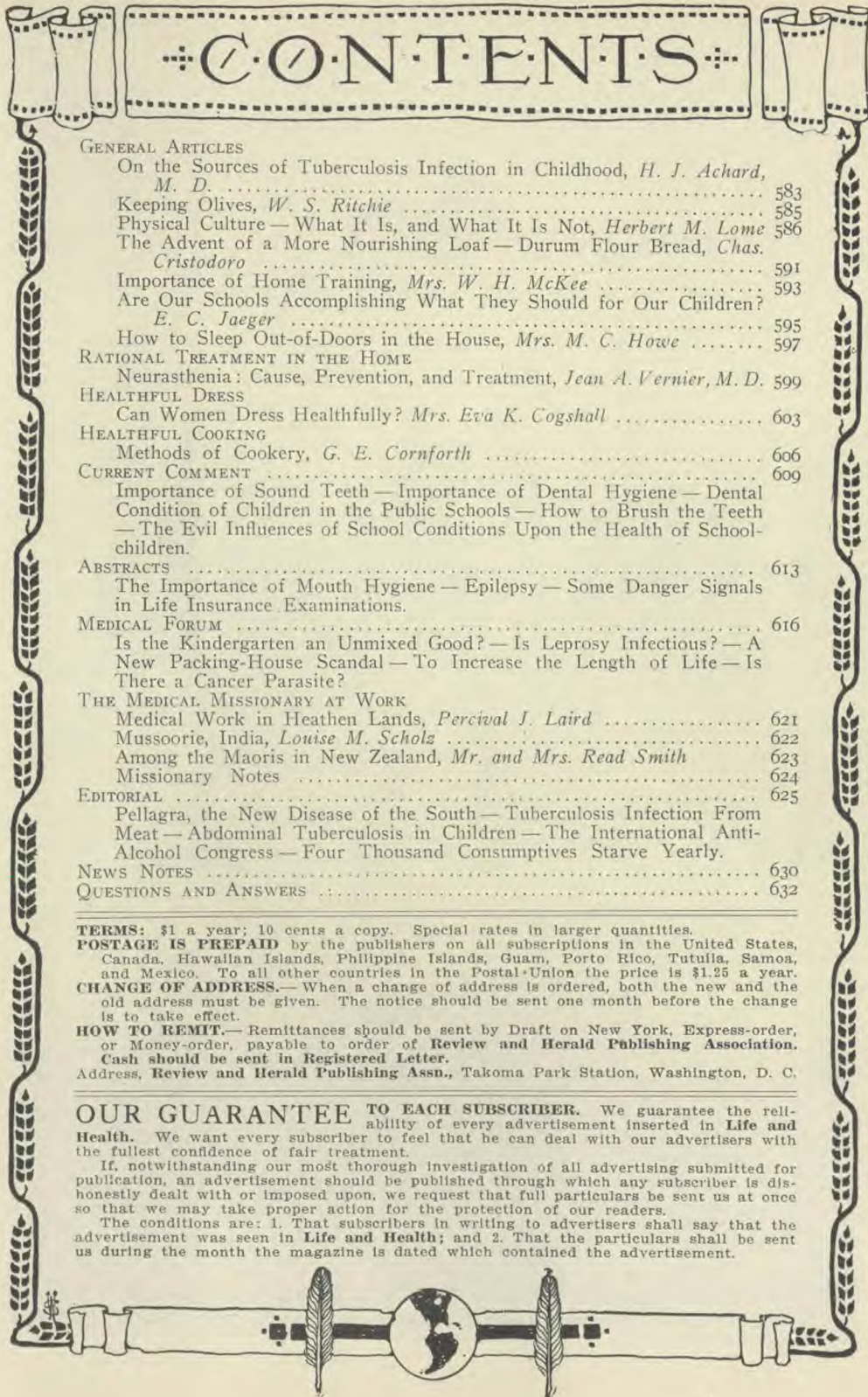
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Vol. XXIV Takoma Park Station, Washington, D. C., October, 1909 No. 10

## On the Sources of Tuberculosis Infection in Childhood

H. J. Achard, M. D., Asheville, N. C.

**T**HE editor having asked me for a paper on the route of infection in tuberculosis, it has seemed to me advisable to precede that subject by a consideration of the sources of infection, more particularly with reference to childhood, the more so as tuberculosis, like other infectious diseases, is best treated by prevention, which is only possible with a full appreciation of what is to be prevented, and how.

Von Behring, who has such a great claim on our gratitude through his anti-toxic serum for the successful treatment of diphtheria, has claimed that the seed of consumption is sown in early infancy, and that nurslings are infected by milk contaminated with tubercle bacilli, generally of bovine origin. Against this, Koch has, wrongly, been said to have asserted that bovine tuberculosis is not capable of producing a tuberculous disease in man, and this misconception of Koch's actual statement has undoubtedly led to some carelessness in the handling of milk. As a matter of fact, Koch affirmed, what is undoubtedly true, that bovine tubercle bacilli are, if at all virulent for man, less dangerous than are

the human bacilli, but he was careful to emphasize that the question could not yet be definitely decided. However that may be, we must concede that in bottle-fed infants the infection may be so frequently repeated, if the milk is contaminated, and a number of other factors may come together to such an extent, that the food may indeed become a source of danger, whether it be contaminated with tubercle bacilli from bovine sources, or whether it be infected by careless handling from dairymen, or from the attendants preparing the milk for the baby.

The fact that tuberculosis is a contagious and infectious disease is so well established that it is now fully understood by the laity, and it requires only to point out some of the sources of infection, in order to eliminate them. Those children are, of course, in the greatest danger of infection who live in the same house with consumptives, and this danger is the greater in proportion to the near contact in which the consumptives come with the children, and in inverse proportion to the care which is taken in the disposal of the consumptive's sputum. Cases are re-



ported where infants have been infected because the consumptive mother or nurse tasted the milk or "pap" before feeding, thus contaminating the nipple of the bottle or the spoon with tubercle bacilli. Other children have been infected by having their faces wiped with handkerchiefs moist with bacillary expectoration; again, some women have the dirty habit of wiping their children's faces with a handkerchief moistened with saliva, which, immediately after expectoration, may contain tubercle bacilli. Many children have become tuberculous through having been kissed on the mouth by consumptives.

If a consumptive does not carefully cover his mouth while coughing, or use a proper cup for the reception of the sputum, tubercle bacilli will be sprayed all about him in fine droplets, and will remain suspended in the air for some time, after which they will settle on the floor and elsewhere, to be distributed with the dust during sweeping, walking, etc. Children old enough to crawl on the floor have a habit of putting their dust-soiled fingers, as well as every object they get hold of, into their mouths, and thus become subject to what has been graphically called dirt-infection. As they grow older and go about, especially when old enough to go to school, the exposure to infection increases in the degree in which they come in contact with consumptives who cough and spread tubercle bacilli carelessly. If they inhale such bacilli, these may localize in the tonsils, or they may be carried into the lymph glands from decayed teeth, or from injuries to lips, gums, tongue, etc. In many cases the result is an attack of what is conveniently called scrofula, which manifests itself by swelling of the glands of the neck, by sores and eruptions on the lips and in the nose, by snuffles, and in various other ways. If such eruptions or sores are

contaminated by the dusty and dirty fingers, or if they are moistened with bacillary sputum, they offer an excellent point of entrance for the tubercle bacilli, which in the organism weakened by the scrofulous lesions find a condition of diminished resistance, and possibly even of an actual susceptibility, and may then lead to progressive tuberculous disease.

It is impossible to describe in a short paper of this sort all the possible ways which may lead to a tuberculous infection in children. What has been said will suffice to guide careful mothers in protecting their little ones, and those who are careless can not be taught. The whole subject of childhood prevention of infection resolves itself into a question of cleanliness and hygienic care, with plenty of fresh air and plain, wholesome food, to which, as a matter of course, is added the requisite that the children must be guarded from all known sources of infection.

In a family where there are consumptive members, these should not have the care of small children, above all, should not sleep in the same bed, not even in the same room with them. If the mother is consumptive, and can not employ a nurse, or if the consumptive member of the family must, through stress of circumstances, share in the care of the babies, they should be careful to attend to the following "Don't's," which might easily be multiplied, and with which I will close my paper:—

Don't kiss children on the mouth, and don't permit strangers to kiss them at all.

Don't let children creep on the floor covered with dust or contaminated with sputum. If you have to spit, use a cup, or a rag which can be burned. Wipe the floor with a damp cloth, or, better, put a clean sheet on the floor if the baby must be left to himself and can not be kept in the chair.



Don't sweep the floor, or carpet, or rug with a broom. If you do not have a carpet-sweeper, scatter moist tea leaves or moist bits of paper, and sweep them up; if the floor is bare, wipe it with a moist cloth.

Don't permit children in a room occupied by consumptives, while the beds are being made, or while the room is being cleaned. Any tubercle bacilli deposited in the dust are then disturbed and float in the air.

Don't permit the baby to have a rubber nipple or any other kind of "comforter." It will fall on the floor and become infected.

Don't taste the baby's food with the

same spoon with which he is fed; use another spoon, and then wash it in boiling water. If baby takes the bottle, pour a few drops into a spoon for tasting. Let nobody else put the nipple into the mouth.

Don't allow bottle and nipples to lie around and get dusty. Prepare the milk or other food in accordance with the doctor's directions; after feeding, keep bottle and nipple in clean water, in weak soda or borax solution, and boil them once a day.

Don't permit your baby to be without a physician's care. If you can not afford to pay for his services, go to a dispensary, get advice, and follow it.

---

## Keeping Olives

W. S. Ritchie

**W**HEN olives arrive, if they are in square cans, the sides of the cans should be somewhat shrunken or concave. Straight or bulging sides indicate that air has entered, and that the cans should be attended to at once. Properly sealed cans will keep for years.

When a can is opened, it is not necessary, in order to avoid poisoning from the tin, to remove the fruit, as there is no acid present. In order to keep the opened olives fresh as long as possible, the can should be placed in the cellar or other cool place; preferably in a barrel or tub containing enough cold water to cover about two thirds of the height of the can.

As olives deteriorate very slowly, time is given to attend to them. A scum may

form on the surface some time before the olives are injured. If it is desired to preserve the olives for an indefinite time after they have been opened, they may be recanned in their own juice in Mason jars, the same as fruit. Olives may be repeatedly recanned. Another way to keep olives is to make a very strong brine with boiled water, place the olives in it while hot, and freshen them as used.

The appetite for olives cloys somewhat when it is warm, and olives that would be relished in cool weather are sometimes criticized in warm weather. They should be put aside until the first cool fall months bring a sharp demand for them. At this time they are scarce, as the new crop does not come until November.



# Physical Culture—What It Is, and What It Is Not



*Herbert M. Lome*

**A**LTHOUGH there is a growing understanding of the truths and benefits of physical culture, yet a large portion of the public still holds erroneous beliefs regarding its practises and principles. Curiously enough, among these mistaken ones are those who advocate it and its methods. It is the purport of this article to indicate what physical culture actually is, and what it certainly is not.

The science, then, may be defined as the application of exercise, diet, bathing, ventilation, and other hygienic observances, to the physical needs of the individual. Individuality is its key-note; and if this be ignored, but little benefit ensues, and often positive harm. Hence it is that if, with its aid, the intention is to remedy a bodily defect, develop a limb or a set of muscles, or bring about a normality of strength and health, there must, in the first place, be a clear understanding of what is wanted, why it is wanted, and the way in which physical culture supplies the want—all in accord with the special requirements of the case.

There are various ways of ascertaining these requirements. The most practical, it has always seemed to the writer,

is to obtain the assistance of some one who is qualified to give advice based on personal experiences. Then again, physical culture literature of the better sort will be found of value. A common-sense study of one's case, too, will often furnish a clue to the treatment needed. Some professional physical culturists

have "systems" which include praiseworthy features; but it must not be forgotten in this connection that these men, for the most part, prescribe for the multitude, and that, in consequence, there is more or less elimination of the factor of individuality. Naturally, there are many charlatans posing as physical culturists, and against these the reader is especially warned. They have nothing in common with the genuine members of the cult, except the "nerve" with which the science endows its followers.

Let it be repeated that while physical culture is a panacea for practically all maladies and deformities, it can not be used haphazard in the matter of quantity and quality. When used by the uninstructed or the ignorant, it is likely to be barren of beneficial results at the best, and may be productive of positive harm at the worst. The mere



Illustration No. 1. Stand upright, face to the front, heels touching, the toes pointing outward at an angle of about forty-five degrees. Throw the head well back. Extend the arms forward until the palms and finger-tips touch. Then throw the arms smartly back as far as possible, at the same time raising the chin and forcing the head back. Strain the arms back for a moment, then bring them to the forward position, and repeat the movement. Continue until slightly tired; rest while you count twenty, and repeat.



fact that it is a science of a potential sort suggests that its forces may be wrongly directed, and that disaster may follow in consequence. One of the reasons why its possibilities have not obtained that recognition to which they are justly entitled is that it has suffered at the hands of the amateur. To undertake to doctor one's self either with drugs or with exercises, is a questionable occupation, unless experience precedes experiment. For example, fasts of varying duration are excellent things in their way, and as such form a component part of the physical culture doctrine. Yet the layman who attempts one, does so at his peril, unless he has a clear understanding of his physical condition, and why and wherefore he is depriving his constitution of nutritives. The fatal terminations of a number of these unauthorized fasts have been due to the ignorance which prompted their inauguration, and the stupid belief that as they "were physical culture," they must therefore be beneficial. And what applies to fasts in this regard, applies equally to exercises, diet, etc.

The truth is that, as intimated, physical culture is an interchangeable term

for common sense as applied to the restoration and maintenance of health. This statement includes the proposition that hygiene in all its forms shall be used. If this be clearly understood by

the layman, many of the objections connected with his self-treatment will disappear. Let us take an illustrative instance of what is meant in this connection. One of the most common of the deformities from which dwellers in cities suffer is "round shoulders." This, for the reason that cities foster sedentary occupations, and that these are mainly responsible for the defect in question. Now how can the round-shouldered man cure himself with the aid of physical culture? — First, by ascertaining the cause of his trouble, and, second, by applying counter-treatment. Take a book-keeper, for instance. His vocation leads him to bend forward over his desk for many hours of the day; to use only the muscles that enable him to so bend; to contract his chest, thus bringing about



Illustration No. 2. Stand upright as before. Place the hands on the hips, and sway the body from the hips up from right to left with a circular motion. Let the head and neck follow the swing of the body. Do not move the feet while performing the exercise. Sway the body as much as possible. After a while reverse the movement, going from left to right. The probability is that, on the day following, you will feel somewhat sore in the neighborhood of the waist-line. This shows that you have exercised a set of muscles which hitherto you have neglected. The same remark applies to all the other exercises which will be described.

semiatrophy of the forward muscles of the throat, and interfering with the work of the organs of digestion. A physiological authority of European reputation asserts that any position which tends to



mar the natural equilibrium of one part of the body will, if persisted in, result in the upsetting of the equilibrium of all parts and organs, which is equivalent to saying that ill health is bound to follow.

So with our bookkeeper. His unnatural pose during working hours disturbs his normal equilibrium. His cramped lungs can not supply his body with its requisite amount of oxygen. His stomach suffers for the same reason, causing indigestion. There is an interference with his circulation. His nervous system will, in the long run, feel the effect of the continued curvature of the upper portion of the spine.

Now all this, and more, comes from his failure to use the muscles at the back of the neck and around the upper part of the shoulders, which are intended to keep the head upright and the back straight; in other words, to "set-up" the man, to use an army term.

Obviously, then, the only thing to do is to exercise these neglected muscles. Such exercises are of a simple sort, as one of the illustrations which go with this article shows. (Illustration No. 1.) At the same time the patient should take appropriate breathing exercises. His digestive apparatus will be all the better for a little intelligent dieting, and he should determine to adopt other physical

culture habits that will offset the conditions of his daily toil. If he will persevere in this well-doing, he will assuredly reap the benefit thereof. But it must always be remembered that the effects of years of harmful habits can hardly be overcome in two weeks or in one month. Physical culture is not a work

of sudden miracles. It rewards only those who faithfully put its principles into practise, believing that the reward is certain, although it may be deferred.

That which applies to the bookkeeper, also applies to thousands of others who suffer by reason of the abnormal conditions thrust upon them by their daily occupations. To these, physical culture offers a ready and effective means of relief, provided always that, as already said, it be intelligently used.

Apart from actual bodily defects

brought into being by many of the vocations of daily life, there are abnormal physical conditions due to the same causes that are of an unsatisfactory sort. Comparatively few persons are possessed of the health which nature intended should be theirs. There is a large distinction between the abounding vitality which is man's normal endowment, and the so-called health of the average individual. In the latter instance, he may be able to discharge the duties of exist-



Illustration No. 3. Stand upright with the feet about six inches apart, the toes pointing nearly straight forward, the hands resting on the hips. Lower yourself gradually and *on the toes* until you have assumed the position shown in the illustration. Remain in this position until you count five, and then gradually rise. When so doing, put the strain of the effort on the abdomen as much as possible. It is somewhat difficult to describe how this last is done, but you will understand how it can be accomplished when you try it.



ence in a fairly thorough manner, and yet know but little of that joy of life which comes from a physique every part of which is fit. The "quick lunch," the lack of ventilation in homes and offices or stores, the failure to take sufficient exercise of the proper kind, which are the besetting physical sins of our mod-

As has been said, the experience of others will stand the would-be physical culturists in good stead. But beware of physical culture of the "freak" sort. Remember that true physical culture goes hand in hand with physiological and hygienic sanity. Anything which violates the tenets of one or the other is *not* physical culture, but can be referred to as quackery. The offenders in this respect are chiefly members of the class of professional natural healers, who have to give an excuse for their existence through the medium of "systems" or "stunts," which are often ludicrous and not infrequently harmful.

The illustrations which go with this article will, in a way, give point to that which has been said about the common sense that is allied with genuine physical culture. They deal with some of the every-day troubles of the external body or its organs, due, for the most part, to conditions incidental to civilization. Thus we have the round shoulders, the flabby, fleshy waist, constipation, interference with the action of the kidneys and the lungs, a sluggish liver, and indigestion. The captions which are attached to the illustration will explain the exercises in detail, but just a word here in relation to the



Illustration No. 4. Stand with the feet about twelve inches apart. Inhale deeply, and, holding the breath, bend over sideways from left to right, extending the right arm downward and the left arm upward in the manner reproduced. Touch the floor with the finger-tips of the right hand, and after a momentary pause, rise slowly until you have assumed an upright position, then exhale. Then inhale and repeat the movement to the left.

ern civilization, lead to the lowering of the vitality far beyond its natural limits. It is in regard to these and similar matters that physical culture acts in an educative sense, calling attention to the dangers of such a condition, and suggesting the remedies. And as such remedies are within the reach of everybody who has a desire to take advantage of them, therein lies its simplicity and value.

troubles with which they deal; and in this connection, there will be no use of technical terms or phrases. Round shoulders we have already dealt with. (Illustration No. 1.)

In the case of the waist-line which is of an abnormal size (Illustration No. 2), usually produced by a sedentary occupation, which includes much use of the chair or office stool, allied with a diet



that makes for adipose tissue or fat. Apart from the unsightliness of an abnormal abdominal development, it leads to a number of disorders of a more or less dangerous nature. Exercise and proper food are the only remedies.

It is hardly necessary to state that constipation is one of the most common affections, as well as one of the most harmful. The retention of effete and poisonous matter in the body is productive of maladies which destroy comfort and breed trouble. Fifty per cent of all diseases, I believe, have their beginning in the sluggish action of the bowels, such belief being based on the experiences of certain medical authorities with whom I have discussed the matter, and my own observations. There is not wanting evidence that appendicitis is, in the majority of cases, the direct outcome of a continued state of constipation. Improper diet and a lack of exercise are the primary causes of this affliction. (Illustration No. 3.)

Trouble with the kidneys is another frequent accompaniment of our daily lives. Here again, the position assumed during office hours, the alcoholic beverages that form a part of the diet of the multitude, and the total lack of exercise

that characterizes the habits of most people, are to blame. (Illustration No. 4.) This exercise is also good for the chest, which is the same as saying that it is beneficial for the breathing apparatus.

Indigestion and sluggish liver are the direct results of an unsuitable diet and failure to exercise. The illustration dealing with these afflictions (illustration No. 5) shows

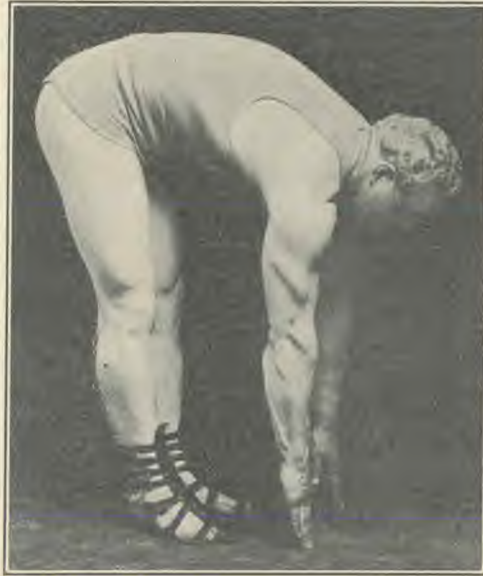


Illustration No. 5. Stand upright, the toes pointing straight forward. Extend the hands and arms above the head, the palms forward, the thumbs touching. Now bend forward, letting the arms follow the inclination of the body. Go down as far as possible. In the first instance you may have some trouble in touching the floor with the finger-tips, but persevere in attempting to do so. Next, raise yourself, the hands again following the movements of the body, and bend backward as far as you are able. The extended arms will help you in this part of the movement and also assist in keeping your balance. Then repeat the number in toto.

a movement that will greatly assist in overcoming these conditions, provided it is practised regularly and with perseverance. These exercises should be practised two or three times daily. As a matter of fact, all of them can be used with benefit, although in the first instance, only those that have a direct bearing on the case of the patient need be used. After a week or so, the others may be adopted, by degrees. The most appropriate times to practise are just after rising, before mid-day meal, and prior

to retiring. The noon exercise may be omitted. The duration of each exercise will depend upon the condition of the exerciser. Perform the motions until *slightly* tired, then rest, and repeat. Don't overdo. Ten minutes' work will be sufficient for the first few times, and one can lengthen his efforts as he becomes habituated to the movements.



# The Advent of a More Nourishing Loaf—Durum Flour Bread

Charles Cristodoro

**E**IGHT years ago Secretary Wilson was confronted with the problem put before him by the farmers of the dry lands in the Dakotas, who were struggling with the elements,—a scanty rainfall, dry winds, and hot sun,—to wrest a crop of wheat from the parched prairie soil.

It was a "wheat country," provided they could find a wheat that would grow in it. The ordinary soft wheats shriveled up under the scant rainfall and drought. A crop must be found to fit existing conditions, or the land must be abandoned.

Secretary Wilson began an agricultural quest that led into far-distant European agricultural districts, in fact, he all but scoured the earth, finding at last in the semiarid steppes the dry-land wheat that might solve his problem.

Professor Carleton brought home some of this Russian drought-resisting, rich-in-gluten wheat, the seed and trip costing ten thousand dollars.

The durum seed wheat was scattered

freely among the dry-land farmers, and it proved a revelation, a complete surprise, to them. Not only did it subsist on a scanty rainfall, but it resisted the drought and other "wheaten" ills only too well known to the farmers. The yield was more than satisfactory, being from twenty-five per cent to one hundred per cent more per acre than the yield of ordinary wheats of the spring variety.

The flour was a surprise to all who used it, being rich in gluten, which corresponds to the lean of meat, and at the same time carrying an excess of natural sugar over ordinary wheat. It was so nourishing, so strong in gluten, that a barrel of durum flour gave twenty more loaves

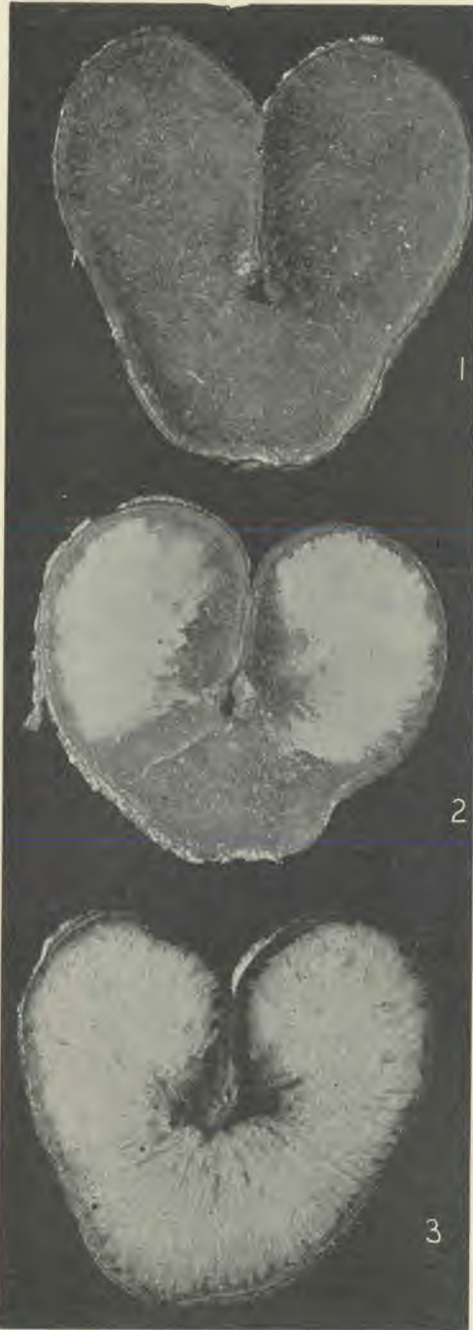
than did a barrel of the ordinary flour. The government, through the United States Department of Agriculture, put this flour to a crucial test, sending out four hundred loaves, two hundred from a superior Minnesota flour and two hundred from durum flour. The baking was done by a prominent



*Year Book, 1906, U. S. Dept. of Agriculture*

DURUM WHEAT AT LEFT





*Year Book, 1906, U. S. Dept. of Agriculture*

DURUM WHEAT AT TOP. NOTE LARGE PRO-  
PORTION OF STARCH IN SOFT  
WHEAT (NO. 3)

Washington baker, under government supervision. Of the replies received from housewives, domestic scientists, sanitarians, bakers, millers, and chemists, to whom the four hundred loaves were sent, two to each person, inviting comparative criticism, seventy-four per cent preferred the durum loaf.

Gluten being the basic food element in all bread, the excess of gluten in the durum flour, as compared with the soft wheat flours, made itself manifest, and hence the verdict for the rich, highly nutritious, and finely flavored durum loaf. It is the free presence of this gluten that makes the durum flour loaf such a well-balanced food ration, and that commends it so highly. The ten thousand dollars' worth of durum wheat seed so wisely scattered among the dry-land Dakota farmers has yielded during the past eight years, in aggregate total returns, two hundred million dollars in crops! A phenomenal record, outranking every agricultural feat of record in the Bureau of Agriculture! It is like an Aladdin Lamp story, this putting ten thousand dollars' worth of durum wheat seed into the semiarid, cactus-grown, coyote-breeding, jack-rabbit-preserving and rattle-snake-conserving soil, and in eight years digging up, as it were, two hundred million dollars. The introduction of this durum wheat into this country is to be far-reaching indeed, for Secretary Wilson says the dry lands of the West are to feed bread to the great States of the East. In support of this the millers come forward and state that the wheats from the dry lands are the richest of all in gluten, and therefore the best bread wheats. And as this durum flour is the richest of all flours, it is fair to presume, because of this excess of gluten, it is to become the leading bread flour of the future, and durum wheat being the ideal

*(Continued on page 629)*



# Importance of Home-Training

Mrs. W. H. McKee,

Matron of the Michigan Home for Girls



**T**HE home is the bulwark of society. It is here that most powerful influence is exerted for good or evil, that character, lovely and admirable, or unlovely, dwarfed, and distorted, is formed. Here young minds receive the impress of thoughts, words, and deeds stamped indelibly upon them for good or ill.

Few parents realize the solemn responsibility of parenthood. In many homes are those who, though under the same roof, are utter strangers to each other, knowing nothing of the real inner life that holds the secret thought and purpose. This deplorable lack of confidence is accountable for the wide-spread wickedness that almost engulfs the young. If children are not free to give their confidence to their parents, they make confidants of others who are perhaps evil-minded, and who use their influence to mar and destroy the souls of those whom the parents would lay down their lives to save.

The days go by, then months and years; the gulf widens, and the "drifting apart" goes on until the dear ones pass out into the great world beyond the home walls, and enter upon their various vocations or experiences; and the heart's door of neither parent nor child ever opens to tell the love and tender solicitude, the hopes and fears, that lie locked within,—loving expressions that might have meant a world of happiness, hope, and courage had they been made known. Many broken-hearted parents mourn today the loss of the love and regard of their children, all because at the begin-

ning of each little existence in the home, its confidence was not gained and held.

Many parents are either too busy, or too ignorant, or have too much false modesty, prudery, or indifference to perform their duty toward the little lives for which they are responsible. The "wisdom that cometh down from above" is most seriously needed by parents; yet few have erected the family altar where the principles of God's Word are taught by precept and example. Isaiah (28: 9, 10) has given instruction as to the need of beginning early to influence aright the young life. Abraham and Eli are examples of two kinds of parents. Abraham "commanded his household after him;" Eli, without firmness of character himself, allowed his sons to bring on him and themselves dishonor and ruin.

In every home intelligent discipline, with the proper admixture of kindness and firmness, brings the richest blessing into the home life. Failure to direct the mind of the child into useful occupation is in after-years a great cause of sorrow to parents. Idleness is a curse, and is truly "the devil's workshop." Boys and girls should be taught to enter into the home duties with interest and individual responsibility. To have them imbibe the idea that work is to be avoided as much as possible, to shift it onto father and mother, is fatal to future uprightness. Many mothers say, when the little ones "want to help," "Go away! I'm too busy to bother with you now!" They do go away, often never to return with any desire to help or take any interest



whatever in home affairs. Children are sent into the street to play with questionable companions "to get rid of their noise and bother." O that mothers could realize the mistake of such a course!

Girls have told me that they were sent away by their own mothers to the companionship of others when they really longed for the companionship of mother. Others have said: "I knew I could have my own way. I could as a child work my parents as I chose, and have things my way." This is a secret few parents sense. The little one in arms learns soon that if it cries hard enough and long enough, it will get what it wants. It soon learns to "have its way," and the little one lays plans by which to conquer its parents. If the parents were equally wise, and would firmly yet kindly train the little ones to obedience and consequent respect for parental authority, there would be far less sorrow in homes as the children come to maturity.

A writer says, "The time to begin to control the child is when it is an infant in arms," and I believe this to be good advice: but the prenatal preparation is important, and the mother should consider three important conditions as she contemplates parental responsibilities: first, heredity; second, prenatal influence; and third, environment. With the two latter, she has the power, by God's blessing, very largely to control and overcome the former influence.

The mother love, intelligently directed, is the most potent power on earth, the nearest to the divine love of any earthly love. The Lord recognized this when he said, "Can a mother forget her sucking child? . . . yea, they may forget, yet will I not forget thee." Here he compared the divine love to the strongest human love known. But alas! too many mothers allow that love to become simply a weak, sentimental emotion, rather than a principle. To look upon the child of her love as merely a plaything to enjoy in its babyhood, regardless of the impressions it is receiving by daily association with her, is to manifest a selfish love, weak and unprofitable to the child. Here is where so many mothers make their fatal mistake in training their children.

No child sincerely respects in after-life the parent it can control as it pleases by ingenious and pretty devices. All parents do not realize that even little babes have sense beyond their days, and that very early they seek to assert themselves—and the next step is to outwit the parent. Great wisdom is needed at this most critical period in the child's life. And to be wise in the daily management of one's household, dealing with the varied temperaments and dispositions, one needs the aid of the only wise One, who has promised to give liberally the necessary wisdom to all who ask, feeling their need.

*Byron Center, Mich.*







## Are Our Schools Accomplishing What They Should for Our Children?

*E. C. Faeger*

**I**S it to teach reading and spelling and arithmetic that we establish schools? Is it to keep the child busy and out of mischief that thousands of parents tax themselves to maintain educational institutions? or is the end of all educational effort to fit the child for life here and hereafter?

"Education is the harmonious development of the physical, mental, and spiritual." Too often, parents, and especially teachers, think of the child as an intellectual being only. In the wear and grind of school life they do not think of him as the real child he is with all his little sorrows, his pains, and joys. As an educator not long since remarked, "I would that once for all we would remember that every child comes to school in a body; that the head is not the whole body, and also that the physical condition of the body, determines to a large extent the receptibility of the mind."

The beauty of a suit of clothes depends upon the material, and the character of the work. No matter how much painstaking effort the tailor puts forth in making it, he can not produce out of shoddy material a garment of neat appearance and good wearing qualities. So a human being is what he is because of what he inherits, and what his surroundings help to make him. James and Mary may not learn as quickly as Susie; it can not always be

expected. The delicate organism inherited at birth is not the same in all children, and will not respond to the same stimuli. Nor have the home environments been the same. An ill-fed or ill-clothed child can not compete with the properly cared-for child. What a wonderful responsibility devolves on parents to see that their children have bestowed upon them "a sound mind in a sound body," and that they receive their education under proper conditions. A maladjustment of a seat and desk to the child may result in a form of spinal curvature. Eulenberg found that out of one thousand Germans between the ages of one and thirty years afflicted with this deformity, nine hundred twenty occurred between the ages of five and fourteen, an evidence that there is a serious lack of hygienic treatment of children by the school.

The school not only contributes largely to the number of cases of near-sightedness, spinal curvature, and other disorders, but is an important means of spreading contagious disease. Poorly ventilated rooms, careless sweeping and dusting, the common drinking cup and towel, and soiled text-books play an important part in transmitting contagion. If parents would empower school authorities to build sanitary schoolhouses and keep them perfectly clean, and if they would visit the schools to see that they are kept in good condition, the



saving in doctors' bills would more than balance the outlay.

When parents and teachers look into the physical and moral and spiritual interests of the child in school, as well as the intellectual, we may more truly say they have done their duty.

In Charlottenburg, Germany, an outdoor school has been established for sickly and deficient children. The schoolroom is God's great outdoors among the pines. An electric tram carries the pupils to the entrance of this novel school. After walking through a winding path, you come to the ideal school, draped with festoons of leaves and flowers. The children come at 7: 15 A. M., and leave at 5 P. M. They are fed with good food, at the cost of about twelve cents a day. The session lasts from September through October,

and often November, and the children grow strong and healthy. It has been found that an average gain in weight of seven pounds is made per child. The autumn weather does not seem to hurt them, for in almost ninety-five per cent of the cases, the children return to the indoor schools stronger mentally and physically. Most of those who before were backward are now able to keep up in their classes. The city feels that it has made a good investment. I understand that London is soon to consider the bodily needs of some of her children by establishing an outdoor school also.

[Wherever the outdoor school has been tried, it has proved a success, and it is now being adopted in many cities.—  
ED.]

*San Fernando, California.*



*Copyright, Underwood, New York City*

A country school in Ireland. One might take it to be in America



# How to Sleep Out-of-Doors in the House

*Martha Cony Howe*



**M**Y husband and I have long been interested in the subject of fresh air. In summer we have no trouble; but in the winter, especially in Maine, where the thermometer sometimes goes down to forty degrees below zero, it becomes something of a problem to secure fresh air at night without suffering from the cold.

Our work is such that we are confined indoors during the day, and we decided that our health demanded that we have pure air at least during the hours we spent in sleeping.

In our search for some arrangement for our sleeping apartment which we could adapt to our needs, we visited various tuberculosis exhibitions, read the advertising section of countless magazines, and sent for and devoured innumerable catalogues, and also read everything on the subject that came our way or could be procured.

We found many excellent arrangements if one could buy the outfit and have it at once installed, and also many seemingly simple devices which one could manage at home if time could be found to construct them; but for one reason or another we never seemed to find the money to send for an outfit, or the time to make something for our-

selves, and so we slept with our two windows wide open all the year round, until we perfected a device which, because of its simplicity and practicability, has ever been a source of delight to us.

The open-window method, while excellent as a means of supplying fresh air, has disadvantages.

So many coverings are required—even more than if we were entirely out-of-doors—as to be burdensome, and it cools the whole house quite perceptibly, especially if the house is small.

Many, doubtless, who, like ourselves desire pure

air but can not afford a fresh-air cabinet, and are too busy to make anything for themselves, will hail with delight this simple suggestion:—

Use a couch-bed without a headboard. Place the head close up to a window with south or east exposure. Hang a single all-wool blanket to the molding at the top of the window by two loops sewed to the selvage edge the width of the window apart, leaving the same length to hang down on each side. Two small screw-hooks may be driven into the ends of the molding from above for the loops. Then, with a nice warm nightcap and plenty of bedclothes, you are ready to sleep “out-of-doors in the house” all winter.



BLANKET RAISED



The folds of the blanket which hang down can be tucked in around the shoulders to keep the cold air from creeping in under the bedclothes. This leaves only the head in the fresh air, while the



BLANKET IN POSITION

body is in the room, which is practically as warm as if the window were closed, so closely does the blanket shut out the air.

An awning over the outside of the window is an improvement, and we planned to have one, but did not get at it. This would keep the storm from beating in should the wind blow from the east or south, but we slept delightfully all last winter, having no trouble of this kind, with the exception of a part of one night.

When the moon shines, we draw down the curtain enough to shade the eyes without excluding the air.

The ideal sleeping-place is out-of-doors, with only the heavens for a canopy, but in effect this arrangement is almost identical with that of sleeping out-of-doors. The twinkling of the stars, the murmuring of the wind, and the rustling of the trees, together with the pure, fresh air, are wonderfully conducive to healthful sleep. Some way God seems nearer, and the house, with its

cares and duties, seems shut away for a season.

For years I have been troubled with catarrh, seldom being able to breathe freely through my nose, and at first I feared that so much cold air might have a bad effect, but my fears have proved groundless, for the catarrhal conditions have so greatly improved that I believe it is only a question of time when they will entirely disappear.

The only cold I had last winter was the result of sleeping without sufficient air while away from home, but it disappeared at once on my return home. I am very susceptible to infection from those who are suffering with colds, and several times it seemed as if I was coming down with a cold induced in this way, but the symptoms always disappeared after one night's sleep in the fresh air.



CUT AWAY (IN PHOTOGRAPH) TO SHOW FACE OF SLEEPER

Fresh air is not only a curative agent but a preventive agent as well, and we are working on the basis that "an ounce of prevention is worth a pound of cure."

May others find a blessing even as we have in this simple device for "sleeping out-of-doors in the house."

*Portland, Maine.*



# RATIONAL TREATMENT IN THE HOME

## Neurasthenia: Cause, Prevention, and Treatment<sup>1</sup>

*Jean A. Vernier, M. D.*

**T**HIS name—literally nerve weakness—is being used less by nerve specialists than it was a few years ago, except as a convenient term.

### Causes

This disorder is caused, first, by hereditary nerve sensitiveness; second, by overwork and worry, severe shocks, stimulants or narcotics, abuse of the digestive function, etc.; in other words, by bad heredity and foolish living.

We do not all start in life with the same amount of capital in nerve force. Parents who have lived irrational lives and indulged in various excesses, or who have themselves been subject to nervous complaints, bring children into the world who are handicapped from birth, and who furnish a large proportion of neurasthenic patients.

It is not uncommon to find neurotic manifestations in the babe or in the boy of six or ten years of age, and the frequency increases in both boys and girls after the age of puberty. These persons with defective nerve organization succumb more readily to the cares of life. The strain becomes excessive, and is manifested as worry. The individual loses the distinction between essentials

and non-essentials. Trifles cause annoyance. If such a condition is taken early, and the patient is given rest, the balance is quickly restored. This class includes a large proportion of the business men, teachers, and journalists seen in our large cities.

The brain is an organ which, under proper training, is capable of performing an immense amount of work, provided the work is of a varied character, and does not produce a corresponding amount of mental disquietude. The importance of the emotions, especially the depressing emotions, such as grief, anxiety, and worry, as factors in brain exhaustion, can not easily be overestimated. The constitutional worrier is likely to break down under an amount of work which produces no such effect upon the average normal individual.

Misdirected energy, rather than weakness, is the difficulty with one who is ready to walk miles to satisfy a doubt, or to avoid crossing an open square, and who will climb a dozen flights of stairs rather than be shut in an elevator. Even the exhaustion that follows long attention to business is quite as often due to worry and other faulty mental habits as to the work itself. In most cases the worries and doubts, instead of being the result of breakdown, must be counted among its principal causes.

<sup>1</sup>Read at the medical convention, Seventh-day Adventist General Conference, Takoma Park, D. C., 1909.



This is why simple rest from work so often fails to cure. Rest often only redoubles the worries, doubts, and anxieties. The overwrought business or professional man or woman, in order to maintain a healthy nervous organism, must realize the importance of undertaking no more than can be accomplished without fret or worry, of taking proper vacations in time to avoid exhaustion, of learning to direct the mind into channels other than those connected with the routine of business, and above all, of cultivating the faculty of relaxing and of dismissing doubts, indecisions, and fears. One must cultivate what Dr. Paul terms "the art of living with yourself as you are." If he "would last out," he must proceed with single-mindedness upon whatever work or recreation he undertakes. Communion with nature and nature's God has a peculiar soothing effect upon tired and jangled nerves.

Bad methods of education and excessive study predispose to nervous exhaustion; this is usually seen in ambitious college students, or in young men who are forcing their way under great disadvantages through professional schools and into professional practise. Young women who are excessively devoted to study, and yet can not refrain from social indulgences, sometimes break down with nervous exhaustion.

Neurasthenia is frequently brought on by excessive child-bearing, the strain of lactation, and domestic worry. Prolonged dyspeptic disturbance is an exciting cause.

The symptoms of neurasthenia are as varied as are the causes.

### Symptoms

The appearance of the patient is suggestive, sometimes characteristic, but difficult to describe. Hyperesthesia,

tendency to the sensation of pain, headaches, or pressure in the head, and spinal irritation with one or more "phobias," or unreasonable fears, are common characteristic symptoms of nearly all neurasthenic patients.

The symptoms of the neurasthenic may be general or localized; if general, the physician can prepare himself for a new class of symptoms at each visit; if localized, for the same repetition of the same condition each day, month in and month out. To the hypochondriac who concentrates his attention upon the digestive tract, this part of his body occupies the foreground of all his thoughts. He exaggerates its structure, and the serious consequences of disturbing it even by an attack of indigestion. A patient to whom a certain fruit was suggested, said she could not eat it; when asked what the effect would be, she replied she did not know, she had not eaten any for twenty years, and dared not risk the experiment.

### Preventive Measures

The automatic processes of the body are in general performed best when the attention is directed elsewhere. After ordinary care is taken, too much attention to the digestive apparatus, for example, may retard rather than aid it. Watching the digestion too closely is like pulling up seeds to see if they are growing.

It is quite possible that the pressure of part upon part in the body, even the ordinary activity of its organs, would give rise to sensations if we encouraged them. If a person living near a waterfall ignores the sound, he soon ceases to notice it; but if he listens for it, it increases, and becomes finally unbearable. Common sense teaches him to concentrate his attention elsewhere, to disregard his various sensations, and devote his attention to outside affairs,



unless the sensations are accompanied by obvious physical signs. Let him devote himself to exercise, and thus substitute the healthy sensations of fatigue and hunger for the exaggerated pain that is fostered by self-study.

### Treatment

The measure of leading importance in the treatment of neurasthenia is rest. In young women the application of "rest cure" is undoubtedly the best treatment. I do not find that men submit themselves readily to this treatment; however, they may submit to a modified rest cure. This can be obtained by keeping the patient in bed until midday, then allowing him a few hours at business, returning to retire early. I do not believe, however, that half-way measures are desirable. It is better to impress the patient at once with the importance of getting well, that he may again take his place in the world.

Many patients come under our care a generation too late for satisfactory treatment. But the greatest care should be taken in rearing the children of nervous parents. A restless, complaining mother will wreck the nervous system of a delicate child. In infancy the child should not be pampered, and due care should be exercised as to food, sleep, and school work. Complaints of children should not be too seriously considered.

Change of scene is very beneficial to the neurasthenic patient, but the usual trip abroad has proved detrimental. The proper environment for a neurasthenic patient is in a sanitarium properly equipped for the administration of rational treatment, such as hydrotherapy, massage, and electricity, with a properly regulated diet and exercise,—a rural institution with a strong, wholesome Christian influence, which will help to restore confidence to a doubtful, worrying, fearing patient. Every case must

be handled upon its own merits, no two, as a rule, requiring exactly the same methods. The character of the individual, and his physical and social status, must be taken into consideration in planning the course of treatment. If the patient is unable to go to a sanitarium, much can be done at home.

### Sleeplessness

The cold-sponge bath in the morning, and the wet-sheet pack or the neutral bath at night, are excellent for sleeplessness. Treatment by drugs should be avoided in these cases. A placebo ("make believe" remedy, such as bread pills, etc.) is sometimes necessary for its effect on the mind. Morphine, chloral, cocaine, should never be given. The family physician is often responsible for the development of the drug habit in these cases. When sedative drugs, such as the bromides, antipyrin, phenacetin, sulphonal, and trional, would seem to be necessary, sedative water treatments, such as fomentations to the spine, hot foot-baths, neutral galvanic baths, neutral sheet packs, and heating compresses to spine or abdomen, can be most effectually used. Many patients respond to static treatment or to a sedative massage without percussion, given at night.

### Tonic Treatment

Tonic cold applications have to be carefully graduated, as the neurasthenic patient is especially sensitive to cold, and with the poor, unequalized circulation, does not react well. The wet-hand rub is the lightest of all water treatments, and the weakest patient should react; then follow, as condition indicates, cold-mitten friction, wet-towel rub, wet-sheet rub, dripping-sheet rub, shallow bath, pail douche, cold douche with H. C. percussion to the spine. These tonic treatments should always be given in the morning.



### Eliminative Treatment

The elimination is assisted by sweating procedure, such as the electric-light bath, of short duration, twice a week, and by copious water drinking and high flushing.

### Diet

The diet of neurasthenic patients, according to American physicians, should be largely a nitrogenous one. My directions are milk, eggs, nuts, and cereals. Milk is not tolerated by many of these patients, while koumiss or lactic-acid milk is readily digested by the majority. As a rule, meats of all sorts, oysters, fowl, game, meat juice, and beef tea are rigidly excluded because of the presence of uric acid and other tissue wastes.

### Mental

Nine tenths of all disease is produced

through the mind, or by wrong thinking, therefore, in addition to all that has been mentioned as to the proper physical environment, a training in proper thinking, which can come only through a close communion with the divine, is essential. Let the Christian physician and nurse point these patients to him who has made the lofty trees, the grass, and the flowers, helping them to realize that he who cares for the birds and flowers will care for beings formed in his own image. This restored confidence in an all-wise, all-powerful, and loving Father who rules the universe, will soothe the nerves and cast out all fear. The leaves of the Bible are as a medicine. Psychotherapy belongs to the Christian physician and nurse, and should be prescribed and administered conjointly with other remedies to all neurasthenic patients.

*Detroit, Mich.*



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Manufacture of cane-sugar in the West Indies. Unloading cane at the mill.





# HEALTHFUL DRESS

Conducted by *Eva K. Cogshall*  
*Takoma Park, Washington, D. C.*

Mrs. Cogshall will answer questions pertaining to the subject of healthful dress if accompanied by return postage.

## Can Women Dress Healthfully?

*Mrs. Eva K. Cogshall*

**M**ANY women are in the habit of looking upon health reform — and dress reform in particular — with indifference; and when nervous prostration, chronic dyspepsia, or some other retribution lays them low, they blame Providence. This is not just; for disease has a definite cause, in wrong habits of life. But there are women, anxious to save their sisters from suffering and untimely graves, who go forth to herald the gospel of health. Teachers of physical culture have sought to bring about a reformation in dress in order that their exercises might be taken to advantage. Then the next step was to show the blessing of a comfortable dress outside, as well as inside, the gymnasium. Madame Jenness-Miller, that apostle of healthful dress, taught many excellent principles. Dr. Mary Wood-Allen has added a rich contribution to health ideas and practical principles. For years Dr. Lauretta Kress has exemplified in her own wardrobe and that of her children the reasonableness of reform, and by word of mouth and pen she has also ably portrayed the evil effects of conventional dress.

The thinking public is giving much attention to the religion of the body, and new converts are being daily added to this forward movement. Popular inter-

est in golf, summer outings, gymnasium exercises, and the like, have done wonders in the work of reforming in dress and health. The coming woman will be as free to act as her brothers. Why should she not? She has just as good a right to the full control and use of her lungs and limbs. "Nerves" and the smelling-bottle will, ere long, by this awakened civilization, be relegated to the past, as things of ignorance and blind folly.

Reform takes very positive and practical turns sometimes; as, for instance, a few years ago, when, in the public square of an Illinois town, the corsets of the women were burned *en masse*. By such incidents women are everywhere saying, "Whereas I was blind, now I see!" And, as expressed by medical men, if a generation of women could be raised up naturally, without corsets, and with the same freedom as men, the doctors would soon be without practise. This statement is based upon investigation among the women of uncivilized and savage tribes. The strength, endurance, and perfect physique of these — the Carib women for instance — are astonishing. Their waists are like men's — firm and powerful. Wherever civilization has not affected savage women, they remain as they were created — with natural waists



and perfect health. Contrast a straight, lithe, strong-limbed, muscle-free woman of the Caribbean Islands, or the east coast of Central America, with a pale, weak, wasp-waisted, gasping-for-breath, civilized American woman. The comparison will speak for itself.

We need to educate ourselves to appreciate the real truth of this question, and then, by precept and example, help our sisters to freedom and health. Now that the question of the new dress is before us, and reform is agreed upon,—

#### How Shall We Proceed?

In answer to this query, it will be necessary, in the first place, to discard the corset, tight belts, heavy skirts, high heels, pointed toes, pads, and tight collars.

Let us dress an imaginary woman. Remove all her garments. Have her stand erect, chest up, weight forward on the balls of the feet, that the form may be noticed as to characteristics of physique. If she be a fair sample of womanhood, you will see that from the breast-bone to the pubic bone the line is convex. The curve of the spine, or "double beauty curve," as Hogarth describes it, is, at the waist concave. This curve of beauty in the spine is destroyed by the corset, as its effect is to straighten the spine, and grace is sacrificed for stiffness, and freedom for physical bondage.

The height of our model is five feet six inches; bust, thirty-six inches; hips, forty-two inches; upper arm, twelve inches; calf, fifteen inches; neck, fourteen inches. This beautiful work of art in flesh and blood should not be disfigured. We sigh for the Greek style of dress, with its classical drapery and opportunity for freedom of movement. But as it is not suitable for a climate where the wind blows and weather is severe, we can only plan for our lady an attire on Greek principles, which are to *pre-*

*serve the natural lines of the human figure.* Appropriateness, honesty, simplicity, and modesty were the noble qualities of the Greek garment. The dress must express a beautiful body in perfect health, and a beautiful mind, and be so comfortable that stiffness will be replaced by ease and grace. No corseted woman was ever graceful—for the undulating sway of the curved back-bone is simply impossible to "the modern ramrod." No Greek woman ever wore "stays," and large busts were supported by other means than that of the corset.

But to return to our model. She must be clothed so that the vital organs in the central part of the body shall have free, unimpeded action; and so that a uniform temperature of the body shall be preserved; and this is impossible in ordinary modern dressing; for the heaviest covering of the body is over the vital organs, producing heat that is injurious. To be really healthful and sensible, the clothing should be uniform all over the body. If any part needs warmth more than another, it is the extremities, for they are exposed to dampness and cold more than any other part of the body. If they are thinly clad, the cold chills back the blood from the surface into the large arteries and veins, thus producing a tendency to congestion. The blood should circulate freely at the surface, hence warm clothing in cool weather is essential to health. The weight of clothing should be reduced to a minimum. The shoulders, and not the hips, should form the base of support.

In cool weather a union suit of soft wool is advised; in summer a garment of linen or silk is comfortable; next to this an adjustable waist with elastic just back of the bust for expansion in breathing should be worn. With this waist our model can breathe, can expand her waist from four to six inches, and bend forward or backward without restriction,



while a corseted woman can expand only about one quarter of an inch when taking a deep inspiration. This waist should be made to fit the figure, *not* the waist made, and then the figure made to fit it! There should be elastic in the shoulder strap to allow the hands to be raised above the head easily. This waist should be so constructed that there will be support for the bust; this does not destroy the outlines of the figure, but gives grace and ease.

The stockings are held up by elastics fastened in front and at the side of the waist, removing to a great degree danger of varicose veins or restriction in circulation.

Over the waist is worn princess or circular drawers; if the latter, the garment should be attached to a neat muslin waist, or corset cover. The drawers fit smoothly around the hips, but are full at the knee, taking the place of a short skirt. There are buttons on the muslin waist, to which is fastened the long petticoat. This outer skirt may be of muslin, sateen, or silk, and it should fit smoothly over the hips.

If a princess petticoat is worn, no other is needed.

Clothing worn next the skin during the day should be changed not less than once a week, for it becomes saturated with waste matter thrown off by the skin. The clothing worn at night should exclude every article worn during the day, the latter being allowed a thorough airing before wearing them again.

Now our lady is ready for her *dress*, which may be what her taste suggests, and complexion indicates. To be always *au fait*, and allow the body to be expressive, the gown should be in harmony with the character of the wearer, and conform to her figure. Dr. Oscar Moss says on this subject: "I have no war to wage against the true, the good, and the beautiful, but I would defend woman

against customs that outrage the laws of physical beauty and health. The questions for us to consider, do not stop with artistic taste respecting the harmonious combinations of fabric, color, and drape, but deal with those elements of dress which are vital to beauty, vital to health, and therefore vital to the race. The leaders of fashion have overlooked the two primary considerations of woman's dress — the preservation of the natural outlines of the body, and the promotion of health. These errors must have grown out of ignorance of physiology, and the wilful or thoughtless sacrifice of bodily comfort to external appearance." This "appearance" the fashionable demi-monde have decided is the "proper thing."

The dress of women is not constructed in view of the needs of the body, but rather in view of the needs of speculative manufacturers, who think, and rightly, that women will wear *anything*, if only "fashionable," no matter what she sacrifices. Alas! too many women have sacrificed home, loved ones, honor, health, and *soul* for the vanities of fashion. God help every true woman to rise above such slavery, and glory in her independence and God-given rights! But, being taught that raiment is more than the body, as a matter of course, they fit their bodies into their raiment, however much it cramps them, until after a while the physical sensibilities are so deadened that they are insensible to the outrage committed on the temple of the Lord. See 1 Cor. 6: 19, 20.

So then we find (to return to our model) that the three requisites for proper dress are: first, *health*; second, *comfort* (the physical and mental consciousness of it, with perfect freedom of movement); third, *beauty*, or symmetry of outline and harmony of color.

Liberated from bondage, freedom  
(Continued on page 608)





## Methods of Cookery

*George E. Cornforth*

**P**ROPER cookery should change all the food elements with the exception of fat, in much the same manner that the process of digestion changes them, thus rendering them more digestible. Poor cookery, while it may make food please our perverted tastes (and that is practically all that most cookery aims at), often renders food less digestible, and sometimes wholly unfit to enter the stomach, and results in digestive and other ills.

Cookery is the art of preparing food for the table by the application of heat and by dressing. The ways in which heat is applied to food are roasting, baking, broiling, boiling, simmering, stewing, steaming, and frying. Roasting is cooking by radiant heat before an open fire. Baking is cooking in an oven. Broiling is the same in principle as roasting, but is a term applied to the cooking, over glowing coals, of a small piece or slice of the food. What is called "pan-broiling" is cooking on a hot griddle which has been oiled just enough to prevent the food from sticking to it. Boiling is cooking in water at 212°F. Simmering is slow, steady boiling. Stewing is prolonged cooking in a small quantity of liquid slightly below the boiling-point. A double boiler is convenient to use in stewing, because the temperature of the food in the inner cup never quite reaches the boiling-point.

Steaming is cooking in steam over boiling water or in any way in which the heat is applied to the food by means of steam. Cooking in a double boiler is sometimes called steaming. Frying is cooking in deep fat. The objection to this method of cooking is that it coats the food over with fat, thus sealing it from the action of the digestive juices.

By cooking, six changes in food may be brought about; namely, chemical changes, as the changes which starch undergoes; the breaking up of the organic structure of food; the destruction of parasites; the production of temperature changes, and changes in the appearance of the food; and the development of food flavors.

Water boils at 212°F., and no matter how hot the fire, or how rapidly the water boils, the temperature never goes higher, so it is a waste of fuel to build a still hotter fire after food is boiling, in the hope of hastening the cooking process. Too rapid boiling may break up the food by the vigorous action of the water, thus rendering it unsightly; also some of the delicate flavor of the food may be driven off, and it should be our aim not to lose this.

When it is desired to draw the nourishment, or flavor, out of food, as in making soups, the food should be put to cook in cold water, but when it is desired to retain the nourishment and flavor in



the food, it should be put to cook in boiling water. Hard water hardens the food. It may be used when it is desirable to retain the nourishment in the food; but if one desires to draw out the flavor and nourishment, soft water should be used. Beans and peas can not be properly cooked in hard water, because the lime in the water hardens vegetable casein.

It will be well to observe the following points in measuring:—

When a recipe calls for a tablespoonful, use a tablespoon, not a dessert-spoon, in measuring. Always sift flour before measuring it, and either sift it into the cup with which it is to be measured or carefully dip it into the cup with a spoon after it has been sifted. Use a tin measuring cup to measure cups or fractions of a cup. In measuring dry material fill the measure level full, do not round the measure or pack down the material.

A level spoonful is obtained by filling the spoon, then scraping off with a knife all that is above the level of the edge of the spoon. A round spoonful is twice a level spoonful, that is, there is as much above the level of the rim as there is below it. A heaping spoonful is all the spoon will hold.

In measuring liquid fill the measure *full*. The measure may be set in a saucer to prevent spilling the liquid.

Do not use more of any ingredient than a recipe calls for. Do not think that because a little is good, more is better; for while a little of some things is good, more would spoil the result. For instance, do not use too much shortening in bread, or too much sugar in desserts, or make foods unduly "rich" in any way. A good cook shows his ability not by using good things freely, but rather by using them sparingly; not by seasoning highly, but rather by giving foods such delicate flavors that it is difficult to tell

what the flavor is. In fact, it seems to us to be vulgar (if we may use that word in this connection) to give food a strong flavor of any seasoning, in just the same way that refined people consider it vulgar to use large quantities of perfume.

#### Weights and Measures

2	teaspoonfuls	=	1	dessert-spoonful
3	teaspoonfuls	=	1	tablespoonful
2	tablespoonfuls	=	1	ounce
16	tablespoonfuls (8 ounces)	=	1	cup
2	cups (16 ounces)	=	1	pint
4	cups (2 pints)	=	1	quart
1	pint	=	1	pound of sugar, water, and most liquids
2	pints (4 cups)	=	1	pound sifted flour
1	ounce	=	2	round tablespoonfuls sifted flour
1	ounce	=	1	round tablespoonful sugar

With the common methods of combining ingredients—stirring, beating, and kneading—all are familiar. Cutting and folding are used in putting beaten whites of eggs into a batter for the purpose of making it light, cutting down through the whites with a spoon or wire folder into the batter and lifting some of it onto the whites; or in carefully putting flour into a light batter by folding down at the sides and up through the center of the batter, putting the batter which is lifted onto another part of the batter.

#### Utensils

Really the kitchen, or what is produced there, is the foundation, or at least a very important part of the foundation, of the health, happiness, and success of the family, and the equipment of the kitchen should not be sacrificed for the sake of display in some other part of the house. It has been said that "a well-appointed hotel is judged not so much by the elegance of the entrance or the style of the clerk as by the presence or absence of grit in the strawberries," which means that a house is judged very much by

<sup>1</sup> A level teaspoonful or tablespoonful is meant; when rounded, they hold twice as much.



what comes out of the kitchen. "A workman is known by his tools," and this is true of cooks as well as of other workmen; and besides the convenience of having the proper utensils to work with, better work can be done, and time can be saved, especially if one has a place for every utensil, and every utensil in its place.

There is little use in trying to make gems and cakes without baking-powder unless one has batter-whips and wire folders, and though weighing ingredients may seem unnecessary bother, yet it is more accurate than measuring, and better results will be obtained by weighing in using some recipes. Moreover, weighing seems to the writer to be handier than measuring in some cases, and a pair of scales in the kitchen will be found useful in many ways.

Double boilers are not merely a convenience, but are necessary for the proper cooking of cereals, and also for the making of some kinds of desserts.

Earthenware mixing bowls are needed for making gems and cakes which require beating.

The stove or range must be thoroughly understood. The amount of heat given and the temperature of the oven under different conditions of fuel and draft must be known so that the proper temperature can be obtained for what-

ever is to be done. And remember always to keep the draft closed when a hot fire is not needed. Attention to this will result in great saving of fuel and of unnecessary heat in the kitchen.

Aluminum cooking utensils are best, being light and practically indestructible. They have no coating to chip off, they are not acted upon by acids, and when properly cared for, remain bright and clean. Next to aluminum in desirability is graniteware. Iron, copper, and tin are not so universally suitable for cooking utensils.

It is better to have the work-table made to suit the size of the person who is to use it than to work at a table that is too high or too low simply because it is the conventional height.

It will be found convenient to have a thick piece of glass, with the edges bound, to lay over the cook-book to hold it open at the proper place, and also to keep it clean. A small brush, to use in brushing lemon rind from the grater, is a convenience; and other brushes are needed to scrub vegetables and to use in cleaning utensils.

A white enameled sink, with no enclosure under it, is much more sanitary than an iron or wooden sink, with a damp, ill-smelling cupboard underneath, to be a storage place for various kitchen utensils, and a breeding-place for germs.

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## Can Women Dress Healthfully?

(Continued from page 605)

brings joyousness, and life becomes a pleasure, health a blessing to each liberated soul; and the effects of this become so far-reaching as to benefit others, loved ones, friends, and society at large.

Then let us remember this maxim: "Artistic dress will always be true to nature," for ancient and modern artists agree that the outlines of the perfect female form constitute the highest type

of beauty to be found anywhere in nature. Then as lovers of the beautiful in nature, as artists, as students of flower growth, needlework, and all that is lovely, let us remember that the human form is the highest work of art in nature, and should be as *true* to nature as the flower we strive to reproduce so accurately on our china, or linen art work.

Takoma Park, D. C.





## Importance of Sound Teeth

**A** BOSTON physician has admirably expressed the proposition in the following words: "Good health is dependent upon good nutrition, good nutrition is dependent upon good mastication, good mastication is dependent upon good teeth."

"The teeth are the keys which unlock the nutriment of the food." It is not popularly known that the loss of a molar tooth in either jaw partly disables the two opposing teeth. One of the tragedies of the day is the promiscuous extraction of teeth which, by a little time and patience, could be restored to their original value. Ask the miller how his meal would look if there were breaks in his millstones. He must repair these deficiencies immediately, or his product would be unmarketable. He will tell you that the larger the stone, the finer the meal. The same is true of our mouths. If we expect to provide food for the stomach in the proper form for digestion, we must have no gaps in our millstone, and we should retain the abused third molar in order to make that stone as large as possible.

A word about how teeth decay: it is a fact that in places where food can find a lodging, disintegration is most likely to set in. If food is allowed to remain in the mouth for any length of time, putrefaction sets in, and an acid known as lactic acid attacks the hard enamel and causes it to soften. The door is then open to invade the softer tissue, undermining slowly but surely the whole tooth. When this has gone far enough,

the top caves in, and then we hear the cry, "Our teeth have gone to pieces all at once!" Teeth never go to pieces in that way.

Then comes the critical stage and the most dangerous condition. The ragged hole in the tooth becomes a hotbed for the growth of all kinds of disease germs. We have warmth, darkness, moisture, and filthiness,—conditions dear to the heart of the microbe. We can not clean the microbes out, and so they are waiting for a time when the system is in a lowered state of resistance to set up tuberculosis, typhoid, or one of a host of diseases known to us all.

The one thing which all of us must do is to teach our children, our families, everybody, to allow particles of food to remain only the shortest possible time between the teeth. This is the key to the whole situation; it should be our slogan. Our mouths are the portals of our digestive tract; therefore it is of greater importance that they should be healthy and clean than that our faces should be. Some people think no dirt exists where it can not be seen. Clean the teeth often. If we have constantly in mind that the food must be removed from between the teeth, we shall bring about a good result. Use silk floss so as to "take hold." Use a good, pure, finely powdered dentifrice. A little cooking soda, used several times a week, will destroy any acid condition. —*Wm. W. Marvel, D. M. D., Extract from Paper Read before R. I. Dental Hygienic Conference, April, 1909.*



## Importance of Dental Hygiene

IN order to make clearer than ever before the fact that a clean mouth is closely related to efficient living, and to bring an illuminating and close-range vision of its importance, the recent Boston Conference of Oral and Dental Hygiene was planned and accomplished. This conference was noteworthy in that it was the first series of meetings to go on record as giving serious and exclusive consideration to the care and use of the mouth and teeth. The dentist, the physician, the nurse, the social worker, the educator, the teacher, the sanitarian, the layman, each and all gave the public at these meetings first-hand and convincing testimony that much preventable and wasteful damage to health, efficiency, and happiness now comes from neglect of the gateway to the body, the mouth and teeth. In the call to health the den-

tist, until within very recent years, has not been summoned. But now a clear summons comes for him. He knows better than any one else the havoc that neglect and decay of the teeth is working, and the alarming prevalence of disease and inefficiency resulting from it — a waste that can be greatly checked.

Every other organ of the body is safeguarded with the minutest care, and helped to perform its particular function, and is thus saved. The teeth alone are neglected, and oftentimes knowingly sacrificed. And yet the fact is, decayed, diseased, and inefficient teeth are important factors in the origin of many diseases, besides being themselves the cause of much ill health, with the resulting loss of time and money. — *Wm. R. Woodbury, M. D., in Boston Medical and Surgical Journal.*



## Dental Condition of Children in the Public Schools

IN no part of the human body is the practise of hygiene more important than in the mouth. It is hardly credible what a great number of diseases find their origin there, but let me enumerate a few of the most common sequences of an unhealthy oral condition: indigestion, heart-disease, tuberculosis, typhoid fever, scarlet fever, diphtheria, many diseases of the eye, ear, nose, and throat, and many so-called nervous diseases.

I believe that the chief causes of nervous diseases in schoolchildren are defective teeth and abnormal oral conditions. No one can properly masticate with bad teeth; and a child who can not properly prepare his food in the mouth is inducing abnormal conditions of the stom-

ach, which retard physiological development and produce faulty metabolism: the result being that the child becomes anemic. Conditions will arise, such as peculiar sensations in the head, vertigo, dyspepsia, chorea, insomnia, epilepsy, hysteria, nervous prostration, and not infrequently insanity.

Time will not permit me to enter into detail in the morbid, far-reaching influences of an unhygienic condition of the mouth and teeth. . . .

It is most surprising to meet children who are the very quintessence of cleanliness as far as dress and pink hair ribbons are concerned, but whose mouths are veritable culture tubes for disease germs; the parents of the children never



give the matter a thought, and not until the pangs of toothache disturb the peace of the child do they realize that this condition exists. If the parents can afford dental treatment, the child is given re-

lief, but if the parents are poor, the child is in many instances allowed to suffer without even sympathy.—*Dr. Jas. C. Colton, before Rhode Island Dental Hygiene Conference, in Dental Cosmos.*

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## How to Brush the Teeth

ACCORDING to Dr. Albert M. Wilbor, this is not so simple a matter, if one wishes to keep his teeth in perfect order, as it is generally supposed. In an address in New York a few days ago he made the statement that very few persons understand the proper use of a tooth-brush. He said, among other things:—

“Do not get a stiff tooth-brush and file away at your teeth with some gritty powder. Choose one of medium strength, and after sifting on it some soft powder, which should not be used oftener than once a day, move the brush from the root to the crown and never from the crown to the gums. After the walls of the teeth have been brushed in this manner on both tongue and cheek surfaces, give the brush a rotary motion across the grinding surfaces, and then brush thoroughly the gums, palate, and tongue. What good does it do to cleanse the teeth and leave enough material lodged in the surrounding soft tissues to

corrupt the morals of ten thousand teeth? It is plain to see that the space between the teeth can not be reached by the brush. Here the floss silk plays its important part. These operations should be followed with a good mouth wash of alkaline reaction. Then with the thumb and finger treat the gums to some good rotary massage. The mouth may now be considered clean; and if this treatment is kept up regularly, the gums will preserve their natural pink color and hardness. This thorough cleaning is most necessary just before retiring, for it is in the sleeping hours that decay is most active.”

Dr. Wilbor adds that the common idea that polishing the teeth injures the enamel is erroneous. On the contrary, he says a highly polished surface is less likely to decay. He thinks that it is the business of the dentist to instruct patients in the care of their teeth, but he has found that they commonly neglect the duty.—*Examiner, New York City.*

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## The Evil Influences of School Conditions Upon the Health of Schoolchildren

THE trouble with our schools is not that they teach the child too much, but that they teach him so little in proportion to the outrageous amount of his time that they waste. Two thirds of our purely mental drill and disciplinary training in the schoolroom is as effective and as rational as trying to develop

a flower by massaging its petals instead of tending its roots.

The next defect of our school system is that it confines the child too exclusively to talking about things, reading about things, and writing about things instead of *doing* things. Considered purely as a system of mental training, few things



could be more absurd and ineffectual. We speak frequently of the written word, the printed word, the spoken word, as "the tools of the mind." Suppose we were to deal with the tools of the body after the same fashion, say in a class in carpentry. "See, children, here is a saw — s-a-w. Let us write it on the blackboard. It is derived from the Latin, *serratus* — notched or toothed; here are the notches. It is, as you see, of an oblong shape, and presents an oval-shaped aperture at the wooden end, into which I can thrust my hand, hence this is known as the handle — h-a-n-d-l-e. Let us write that upon the board. Already familiar to you is the phrase, 'Touch not, taste not, handle not the unclean thing.'

"Can you give me a sentence in which the word 'saw' occurs?" "See-saw, Marjory Daw!" "Very good! Remember that you must distinguish this from the past tense of the verb 'to see' — frequently, but *most incorrectly* given as 'seen.' I hope none of you will ever be guilty of his vulgarism." And so on, *ad infinitum*, instead of, "Here's a saw and a hammer and some nails. Set to work and make a box!"

We should develop the tools of our minds, not by *reading* about them and *talking* around them and *writing* all over and around and across them, but by *using* them on something we are interested in and can understand. Our present system of culture is chiefly occupied with teaching children to express their ideas — without giving them any ideas to express.

Its primitive prototype was a Pharaoh of Egypt, when he demanded bricks without straw. From a physical point of view, lessons and formal instruction in reading, in writing, in spelling, and in arithmetic, are not only unnecessary but absurd. The rational method of teaching them is to put the children at work at something which they are interested in, and can understand; then urge them to talk, write, and figure about it, correct their mistakes, and set them a good example. This is nature's royal road to real learning.

In short, the ideal school of the future should be about one fourth book work or schoolroom, one fourth workshop, one fourth garden, and three fourths play. "But," objects some one, "this would deprive education of all disciplinary value." President Eliot spitted that heresy, and pinned it to the wall for all time, the other day, in the statement: "You can not train a child for life by teaching it to do what it hates." The best preparation for success in life is not to teach a child to work, whether it likes it or not, but to teach it to love its work, to take a joy and a pride in learning and doing. This the unspoiled young of the human species is ready and eager to do, if he is only given a chance to grow into it naturally. Our present method of forcing things down his throat, months and years in advance of his appetite for them, indeed of his ability to digest them, serves simply to disgust him with the whole process.— Woods Hutchison, A. M., M. D., in *Hygiene and Physical Education*.







# Abstracts



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In this department, articles written for the profession, which contain matter of interest to LIFE AND HEALTH readers, are given in abbreviated form. Where practicable, the words of the author are given, but often the passage is abbreviated, or else paraphrased in popular language. Technical matters and portions of articles having no popular interest are omitted.

## Importance of Mouth Hygiene

**T**HE fact that decayed teeth are more common in civilized man than in uncivilized man or animals is strong evidence that something is wrong with what or how man eats, or with both. The average man does not chew enough. Instead he takes his food in a pulverized, liquified, or pappified form, using liquids to wash down his nourishment. He eats too fast, as is proved by the fact that those who eat slowly generally have better teeth, and reduces his general health and efficiency.

The working power of the so-called well man is but a small fraction of what it might be if all the factors which increase efficiency could be fully utilized. Mastication is important among these influences.

The great health reform wave, particularly in the matter of diet and thorough mastication, gives an excellent opportunity for dentists to co-operate, not to make larger fees, but, as with medical men, to do work tending to dispense with their services. Many dentists are turning from the work of mere tooth-mending to prevention. The most important message the dentists have to bear is thorough mastication.

Nearly all forms of germ life, good and bad, get into the mouth. Healthy gastric juice destroys germs, hence the

importance of a healthy stomach. In order that the stomach may be healthy, and the germs be reached by the gastric juice, the food must be finely ground before entering the stomach.

If by reason of diseased teeth or indigestion, the lining membrane of the mouth and digestive passages becomes unhealthy, it permits the entrance of germs and their poisons into the blood current.

Disease germs found in filthy mouths or mouths containing decayed or broken-down teeth have a much greater disease-producing power than germs found in a clean mouth. A clean mouth and sound teeth furnish one of the best protections against disease. Among the results of bad teeth are diseased ears and eyes, disease of the bony cavities of the face, and swelling of the neck glands.

Between the sixth and twelfth years the teeth need special care, because during this period there is a tendency to rapid decay. The discharges from the decayed teeth lower the vitality, and make the child more susceptible to infectious diseases. One reason why poor children succumb to disease more readily than children of the well-to-do is the lack of proper dental care.—*Wm. R. Woodbury, M. D., in Boston Medical and Surgical Journal.*



## Epilepsy

THE three great essentials in the management of epilepsy are diet, general hygiene, and occupation.

To ascertain the proper diet, it is necessary to make complete examination of the secretions. Such examinations will, if carefully prepared, reveal disordered metabolism [including digestion, assimilation, tissue changes, etc.], which may be remedied by proper diet and treatment. With proper digestion, the formation of poisons causing the attacks will be prevented.

All epileptics should avoid alcohol, and should receive nothing but fresh, properly cooked food; and often [the "often" might have well been omitted] tea and coffee, rich, greasy, highly seasoned foods, or a too liberal allowance of good foods, must be avoided.

If, in spite of corrections in the diet, intestinal putrefaction continues, the

lactic-acid cultures may be tried, and radical changes in diet, such as a vegetarian diet [I would recommend this as an excellent diet for *all* epileptics.—ED.], a milk diet, or a temporary buttermilk diet, may aid in eradicating the intestinal disturbance.

Constipation must be prevented at all hazards, if possible by diet, exercise, and liberal water drinking. For persistent constipation, remember the use of sweet oil by mouth, and the high injection of warmed sweet oil.

The use of bromids is far more effective when salt is removed from the diet.

As measures of prevention, adenoids and enlarged tonsils, and hemorrhoids, if present, should be removed; decayed teeth cared for, and eyes fitted with glasses when necessary.—*Dr. Wm. T. Splanhan in Dietetic and Hygienic Gazette.*

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## Some Danger Signals in Life Insurance Examinations

RECENTLY a prominent company paid a large amount of money on the policies of two men just insured. The examiner had failed to recognize the character of the risk, and to forecast the early and almost certain death of the policy-holders.

The applicant for life insurance often presents no general symptom from which to anticipate anything unusual, when a closer study would bring out facts having a marked bearing on the health of the applicant.

Within the last few years, as a result of statistical studies, the use of alcohol in moderation or excess has been recognized as a source of danger, and a most active agent in the production of fatal diseases.

One of the most recent studies is that of three British life insurance companies, covering a period of nearly twenty years. Those who were insured as moderate or occasional drinkers had fifty per cent higher death-rates than those insured as total abstainers.

The experience of these companies indicates that ninety per cent of the general mortality expectation occurred in moderate drinkers, and only sixty-six per cent occurred among those insured as total abstainers. These studies call new attention to the fact that one of the greatest perils to life insurance companies is losses due to the habit of using alcohol or some other drug.

A very active business man carrying great responsibilities, but careless of the



ordinary rules of hygienic living, is a bad risk, no matter how negative all the symptoms may be. Business men whose diet is irregular, and who fail to exercise properly, and neglect rest, wear out rapidly.

Such persons may be abstainers from spirits, but they consume irregular quantities of food, drink tea and coffee excessively, and use tobacco freely. These are the men who die suddenly and unexpectedly. They continually draw on the vital resources, with no time for restoration and repair. These turn to some proprietary medicine, or find relief in wine and beer at meals, and are deceived with the hope that they are rested. In fact, they are simply narcotizing themselves, the drug covering up the fatigue symptoms. They are on the border of physical and mental bankruptcy, with the certainty of early disease and death.

Many of the men doing the world's work in whom the physical examination and family history are good, use wine at the table, or beer or spirits at intervals, drink coffee, use tobacco, and are perhaps heavy and irregular eaters. While their habits of life are not particularly dan-

gerous, they are known to be working up to the fullest limit of their vitality. Many of them claim to be moderate drinkers, and some go off to the mountains or sea, ostensibly for a recreation, but really for a drinking bout.

As a rule, active brain workers holding positions of responsibility who are so-called moderate drinkers, have periods when spirits or drugs are taken to excess. While caring for their trusts with the greatest faithfulness, they manifest the strangest neglect of themselves.

The meat eater who believes that no other diet can give strength to the body, and the vegetarian who reasons that starch and sugar are the only natural foods, should both be studied, particularly if they are engaged in the active affairs of life.

If to this history is added evidence of the use of coffee, tea, or tobacco and chemical drugs, the expectancy of life is diminished, and the possibility of disease increased. — *T. D. Crothers, M. D., Supt. Walnut Hospital, Hartford, Conn., read before the Association of Life Insurance Examiners, Atlantic City, June, 1909.*





# THE MEDICAL FORVM



## Is the Kindergarten an Unmixed Good?

**D**R. ISAAC A. ABT, of Chicago, has made a careful inquiry into the status of the kindergarten, interrogating, for this purpose, physicians, educators, kindergarten teachers, first-grade teachers, and mothers. From each of these classes replies were received, some favorable, some indifferent, some unfavorable.

"It is impossible from the answers received to decide whether kindergarten children make better progress and are more amenable to discipline in the first grades. After a mature consideration I have come to the conclusion that the usefulness of the kindergarten instruction does not lie in the fact that it increases mental activity, and I am satisfied that a child gains no intellectual advantage in later life because it has attended kindergarten—for the same reason it suffers no disadvantage because it has not attended kindergarten."

While the report makes the statement "that the kindergarten offers opportunity for social contact with children of like age and gives the child occupation," it admits, nevertheless, that "many mothers comment on the fact that their children became more restless and were more difficult to entertain at home after kindergarten attendance. The little one desired frequent change of amusement and lacked initiative."

As to hygiene, the kindergarten is a distributing point for infectious diseases, especially children's diseases. Many of the rooms are overcrowded and ill adapted to their purpose. Some are

improperly heated and ventilated, or untidy. These facts enforce the opinion of some of the correspondents that the children should be outdoors as much as possible.

Dr. Abt finds that there are good and bad kindergartens, and some had better be abolished. In general, he expresses the belief that—

"the kindergarten has its place. It is not necessary to all children; it is unsuitable to some."

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### Is Leprosy Infectious?

**I**T will be remembered that somebody blundered. A man with a harmless skin disease was held a prisoner for one year on the supposition that he had leprosy. Finally the New York skin specialist, Dr. Bulkley, examined the man, pronounced him free from leprosy, and he was given his liberty.

Now Dr. Bulkley, realizing that not only the laity, but also medical men need enlightening on this subject, has published a paper on leprosy, in the *Medical Record* of July 10. For some reason leprosy is generally considered to be a dangerous, communicable disease. As Dr. Bulkley says:—

"It may safely be said that the word 'leprosy' strikes more terror in the heart of its victim or suspected victim, and also in the mind of the average layman or even physician, than does the name of almost any other disease known."



Some will remember that two or three years ago a man with leprosy, or supposed leprosy, was bandied around from one State to another in a box car, no official caring to risk having such a dangerous creature within his jurisdiction. Leprosy, in fact, is considered by physicians, as well as laymen, to be a horrible and most intensely infectious disease. Now there are some who believe that this is all superstition. As Dr. Bulkley says, speaking of this disease:—

"To those who are really well informed, it bears no comparison to either cancer or tuberculosis in the mental distress which it causes in those affected, while syphilis and many other diseases should inspire far more dread of contagion."

But more positive even than this is his statement that—

"in this climate at least, leprosy is really a harmless infection to those who may come in contact with it."

But this is only a confirmation of the statement made years ago by the Leprosy Commission of the Royal College of Physicians, London:—

"All the unanimous convictions of the most experienced observers in different parts of the world is quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the disease."

Perhaps the popular belief that leprosy is a highly contagious disease comes from the Biblical accounts; but as Dr. Bulkley and others show, the disease or diseases there called leprosy are evidently not the same as the disease we call leprosy. The manifestations and symptoms of the Bible leprosy are entirely different from the modern leprosy.

Remarkable is the testimony of nurses and workers in leper hospitals. In the Trinidad leper asylums nuns have had charge of the patients since 1868.

"These sisters are in daily contact with the patients, washing their sores, applying poultices, and bandaging their crippled limbs; yet no sister or any other of the attendants has yet developed the disease."

An old theory that the disease is transmitted through fish seems to have much in its favor, especially since we now know that many diseases are transmitted to man through the lower animals used as food. Dr. Bulkley says:—

"I know that Mr. Hutchinson's continued and warm advocacy of the fish theory has been subjected to much ridicule, and it is not generally accepted; but to my mind, it offers the most satisfactory solution of the problem."

Some of the reasons given by Mr. Hutchinson for believing leprosy to be transmitted from fish to man are:—

"No other article of food can be mentioned which is in use in all leprosy districts. Most of the places where leprosy is largely prevalent are on the seacoast, and it is especially prevalent on the islands. Wherever a community is found that subsists largely on fish, there leprosy is present. Almost all the large fish-curing stations are the homes of leprosy, and it is often met with, also, in the countries to which their products are most freely exported. It is not necessary, of course, that a large quantity of fish be eaten, for the smallest portion, if it contained the germ, can introduce the disease. Thorough cooking of fresh fish probably destroys its power of communicating leprosy if it chanced to be infected; but it is known that fish are often eaten raw or improperly cooked, and also that very large quantities of dried fish are consumed throughout the world, often as a condiment with vegetable food, and even by those belonging to religious castes who will not take animal life."

Not long ago Mr. Hutchinson made a careful study of the subject in the leprosy district, and was more than ever confirmed in his belief that fish is the means of leprosy transmission. Dr. Bulkley concludes:—

"There is certainly enough reasonableness in the theory to warrant careful scientific inquiry along modern lines of bacterial research."



### A New Packing-House Scandal

A GOVERNMENT inspector stationed at East St. Louis has resigned his position, it is said, because



of the disgusting conditions, beyond his control, that came under his observation in the packing-houses. The *Medical Fortnightly*, commenting editorially on this episode, says: "The cause of vegetarianism has been given a new impetus." We quote further:—

"Aside from the menace to health, there is something so distressingly disgusting in facts which could lead to such revelations; the facts, if established, seem so nearly on a par with the fiendishly criminal, and if not established, still leave such doubt in the general mind that it is doubtful if any degree of investigation and exoneration will be accepted as more than official whitewash."

"The agitation against the . . . addition of preservatives . . . pales in significance when compared with the thought of having sick cattle slaughtered and their flesh approved by government officials for human food."

"Even the thought of meat food otherwise fit for ingestion spilled on dirty floors and into sewers, but rescued and put on the market, is enough to convince almost any one who has a fair stomach that it is time to cut out our meat and animal products entirely."

This is especially significant, coming, as it does, from a magazine that does not stand as an advocate for vegetarianism. The article concludes:—

"We do not know what will be the outcome of investigation. We have lately seen whitewash applied in the face of damning evidence in an entirely different line, and that by people whose ideals are supposed to be as high as the highest, but we believe that public apprehension will be allayed in this case by the usual statement that 'all is well, and a little better than we had reason to expect.'"

It is not the diet reformers, but the food inspectors, who are just now proclaiming most effectively the gospel of simple living.



### To Increase the Length of Life

NASCHER, in the New York *Medical Journal*, gives the physical phenomena which accompany, and are the cause of, what we call "growing old." He believes that this aging proc-

ess is materially hastened or retarded by the manner of life and the habits. One cause of the early advent of "old age" is the attempt to force the development of children.

In natural life, whether in the savage or in the peasant, there are three periods of about equal duration, and in the country and in natural life maturity comes later and lasts longer.

"The tendency of the present day is to shorten the period of development and increase the mental and physical capacities, pass over the period of maturity with indifference, and endeavor to lengthen the period of decline. We ignore the mode of living of those who lead a natural life terminating in a natural death. We all want to live long, yet we adopt the mode of life which shortens the periods of life and maturity, and then try to retard the last, or declining, period."

"In other words, *forced development shortens life*. In our schools children are urged to learn more and faster, the curriculum is constantly enlarged, necessitating greater mental exertion. . . . If activity is forced beyond its capacity, the mental faculties become weakened or perverted."

Reconstruction and repair occur most rapidly during sleep. Mental and physical activities being most marked during the period of development, a correspondingly large portion of time should be devoted to recreation and rest; but—

"in the hurry and activity of present-day city life the rest is not commensurate with the work which necessitates it, while the recreation itself is intensified until it becomes exhausting work. Instead of mild physical exercise, like simple gymnastics, as recreation for mental work, school-children take up strenuous athletics, like running and football."

Cramming the mind to its full capacity, as required in the present school curriculum, and developing the boy into an athlete, do not conduce to a sound mind and a sound body.

Instead of trying to shorten the period of development, we ought to do all in our power to lengthen it. Fatigue, both mental and physical, should be avoided. When tasks begin to cause strain, they



should be exchanged for recreation. There should be more frequent recreation periods in school.

"Too many subjects are taught at present, and the child leaves the school with a smattering of many useless subjects."

Subjects requiring the reasoning faculties should not be taken up till puberty. The age for admission to high schools and colleges should be raised. The mental faculties should thus be developed more slowly until they are mature. The physical development should also be general. Especially should there be no violent exercise on the part of unseasoned and untrained youngsters.

The amount of sleep should be governed by the person's natural requirement, as shown by his inclination to sleep.

"The child sleeps naturally as long as the system finds it necessary. It awakes, plays, learns, and when overcome by mental or physical fatigue, it falls asleep again."

But man habituates himself to certain hours of rising and retiring, in accordance with what his other duties will allow, rather than in accordance with his needs. Few are so situated that they can sleep whenever the system demands it, or until the forces are completely recuperated.

"Insufficient sleep causes insufficient reconstruction, and the body does not develop to the full extent."

Diet plays an important part in development. While "a meat diet imparts vigor, energy, activity, and irritability," "a vegetarian diet produces the best-built individuals and conduces to longevity." The meat eater will manifest more energy, will stand up under more hardships, but he will not live so long. Activity increases waste, and meat increases activity.

"Since mental rather than physical vigor is necessary in the battle of life, meat should be used sparingly and cereals freely during the developmental period."

The period of maturity, when one feels well and strong, is passed over with indifference, without any attempt to provide for the future. Excesses, though seemingly indulged with impunity, are surely borrowing vitality from the declining period of life.

Sleep should be regulated by one's requirements, and not by the clock. Diet should be regulated by one's demands, and not by the palate. Recreation should be an actual diversion.

"The city man lives too fast. He does not sleep enough, he works too hard mentally and physically, he drinks and smokes to excess, he is irrational in his recreations, and he does not believe in sexual continence."

"Alcohol, tobacco, and sexual excesses as agents predisposing to early decline are too well known to need elaboration."

As long as he does not actually feel the effects of his indulgences, he can not realize that he is injuring himself. Only when his excesses have gone so far as to bring on some diseased condition involving disability or pain, does he realize that his course may shorten his life.

It is during the period of vigor that these processes begin,—actual degenerations, etc.,—which, imperceptible at first, gradually change one from a vigorous man into an "old man."

Care of self and avoiding excesses prolong the period of maturity and postpone the period of decline. Usually no effort is made to prevent the aging process until it is well under way; and then it is a little too late to do efficient work. But we can do something, even then.

Those growing old are advised to take vacations that are really vacations, that involve changes in scene which bring a sense of exhilaration. A long-continued routine, even if it be a pleasant occupation, is monotonous, and finally causes mental and even physical fatigue.

The housewife changes the position of the furniture because she is tired of looking at the same thing all the time. The



workman, changing his position, works with more ambition. Moving into a new home after years has an exhilarating effect upon mind and body.

Of the mental factors that cause quick aging are fear, fright, and the like; but more important is the enforced seriousness and dignity which become habitual, and which restrain from recreations that would be beneficial. An elderly physician went to a masked ball disguised as a schoolboy, played marbles, spun tops, and in general was a boy again.

"For weeks afterward he was in a joyous humor, more active and brighter than he had been for years."

"A powerful mental stimulus without deleterious effects is association with the young."

The condition of the digestive organs can not be much improved, but by a proper dietary much can be done to retard the progress of degeneration of these organs. Fresh air, proper diet, sufficient sleep, rest periods, mild exercise, and methodical life will do much to increase the length and efficiency of the declining period. The best exercise is walking up a moderate incline with frequent rests. Sleep is not needed as much as with younger persons, but there should be frequent periods of rest.

While intestinal autointoxication may be a contributing cause of old age, Dr. Nascher believes that "fast" living is the principal cause.

"The whole question of longevity hinges upon the mode of living. If we favor the unnatural precocious development of youth, and maintain indifference during the period of maturity, thus shortening both periods, we shall have an early and short period of decline."

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### Is There a Cancer Parasite?

**I**N the London *Lancet* of June 5, 1909, Dr. Robinson brings additional evidence that cancer is transmissible from man to the lower animals, and that it is caused by a parasite. He believes that the failure to transmit the disease in the past has been due to improper methods. If Dr. Robinson's theory proves tenable, it will add weight to the theory that cancer is caused largely by the consumption of meat from cancerous animals. If the disease is transmissible from man to animals, there is good reason to believe it to be transmissible from animals to man.

Commenting on Dr. Robinson's work, the *Medical Record* of July 10, 1909, says, editorially:—

"To unprejudiced observers, it seems as if the supporters of the parasite theory were slowly gaining ground, but they have a great deal of hard work to do before they can definitely establish their position. One can only wish that they may succeed, for it is this theory that holds out the greatest hope of the final triumph of therapy over this most formidable, because most mysterious, foe of mankind."





# The Medical Missionary At Work



## Medical Work in Heathen Lands

*Percival F. Laird*

**P**ERHAPS China stands second to none in her dire need of instruction in the principles of health. It may be that this vast concourse of people fell an easy prey to the pernicious influence of the curse of opium because of the almost inherent desire for medicine which is evidenced on all sides. If the first step was to order the opium shops to be closed after a certain period, the second should have been for the apothecaries' stores to be closed pending their owners' qualifying to operate the same.

Three days ago, on one of the three great festal days in China, the Dragon Boat Festival, we were taking lunch with our evangelist and family. Along came an attempted opium suicide. God heard and answered prayer for blessing upon the treatment given, and from inquiries yesterday we rejoice that the victim, a slave girl, has recovered. But the reader is left to judge of her chances for life had she first waited several hours while the following recipe was being prepared, and then swallowed the prescription usually given in such cases. Its composition would be about as follows:—

Rx.  $\frac{1}{4}$  oz. dried ginger; 1 oz. walnuts; 3 each, of male and female grasshoppers; 2 each, of male and female salted lizards; 2 oz. snake soaked in rice whisky; 2 oz. black dates;  $\frac{1}{2}$  oz. rusty iron;  $\frac{1}{2}$  oz. bark of elm tree;  $\frac{1}{2}$  oz. hartshorn;

$\frac{1}{4}$  oz. bird's claw;  $\frac{1}{2}$  oz. lotus leaves. This is to be boiled down together in plenty of water until there is enough to fill a rice bowl. To be taken in one dose.

If our Chinese friends are antforeign in some things, it does not apply to nostrums. These find a very ready sale in most parts of the empire. If the Japanese are late in the field, they are making vigorous efforts to advertise their patent medicines on every available and permissible spot. Their gorgeous placards are hung outside almost every gate of this city. Recently we received a catalogue containing no less than twenty-two patent medicines specially prepared for the Chinese market by a German firm at Shanghai. Many others are to be added, and a Chinese list sent out later.

When we told a gentleman the pernicious effect these nostrums would have, he replied: "But you surely can not imagine what a boon they are. Think of their convenience only. People must take medicine. We are not too sure of our own, but these foreign drugs are able to cure such a great variety of diseases. One needs to keep but one bottle on hand for about one hundred complaints." I am not sure that the individual did not think me prejudiced when I tried to explain to him that these things would only tend to an increase of their complaints.

That instruction on health topics is



not without good results, may be gathered from the numerous testimonies received telling of the good effects produced by the sale of about ten thousand tracts on the evils of tobacco. There are two general hospitals, and one for women and children, here. Visiting one of the former, we were not a little surprised to see patients who were there to break with the opium habit, still permitted to use tobacco in the wards.

In Japan the Y. M. C. A. prohibit

smoking in their institutions, but at Shanghai and Hongkong no objection is raised to this pernicious habit.

Hence there is a large field for instruction in health reform principles in China. But it will need to be done along the line of least resistance. With God's blessing we hope to proclaim the whole truth to this people, that many may be cleansed and purified to meet Jesus at his coming.

*Chang-sha, Hunan, China.*

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## Mussoorie, India

*Louise M. Scholz*

**I**T has been decided that I work at the dispensary just opened here. And as I brought along with me from Germany a good outfit of surgical supplies, and they did not have many here, it seemed to be an opening for me to work right among the natives. Brother and Sister Burgess sent a native man, who speaks a little English, to help me. So we started the work, trusting God to make it a success; and he has. In the first three days we had each day two patients; the next three, up to twelve; and the first eight days, twenty-three patients altogether; the second week, sixty-two; and the third week, one hundred fourteen; and in this fourth week we had one day forty-eight patients; and in the whole month of June, four hundred four.

I am very thankful to the Lord for his help, and am praying that I may acquire the language quickly, so that I can talk to the people. I expect to get a native girl to help me in the dispensary in treating the women, and I hope that I can teach these two native helpers to give treatments. Brother and Sister Burgess think it marvelous how these natives take the water treatments. I have not had

difficulty in any case. A man who had taken medicine from the hospital came and told me he experienced pain from taking medicine, and had trouble with his ear. I gave him some vapor baths, and fomentations for a short time, and he felt much better.

One of the first patients I had was the wife of a native Methodist minister. The poor woman was in dreadful pain with rheumatism. I gave her treatments, and we prayed for her, and she felt relieved. My heart is longing to help these poor native women. The other day a well-dressed native man came to the dispensary, and said: "I would be thankful if you would come to see my wife. She is ill." He spoke English. I went with him, and as we reached the house, I had to go through a long, dark hall, only wide enough for one person, and then down a long flight of steps. I did not know what place I might reach at the foot of the stairs. There was a roomful of all kinds of dirty-looking objects, and very dirty children played on the floor. From there the man took me to another entirely dark room, where his wife was lying on dirty, ragged quilts. There was no window, and no air. The woman



seemed frightened by my appearance, and was very timid. How I would have liked to talk to her! But she did not understand English. Her husband would not let me bring Sister Burgess along. He stood not far behind me while I examined her, so that he might see and hear everything I did and said.

I give treatments in the dispensary to two very nice women. A woman came three miles yesterday with her sick baby.

I love these native people, and want to live so close to the Lord, and be so humble, that he can use me in helping them. I long to have a good talk with them about Jesus. What we need most in this work is the fruits of the Spirit — kindness, sympathy, and love, and patience. May God help me to develop such a character that I may be a blessing to every one with whom I come in contact. Pray for me.

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## Among the Maoris in New Zealand

*Mr. and Mrs. Read Smith*

**E**VER since our arrival in Tokomaru from Tolago Bay we have been exceedingly busy. We had been here only two days when the Maoris began to appeal to us to help their sick. We were not yet settled; in fact, we had not even taken our household goods from the sheds; but we had to make a beginning, and from that day to this we have been kept going.

The patients are of all ages, from one or two weeks to, perhaps, one hundred years old, and the complaints are as varied as the ages. Some cases have been very serious. We have treated as many as ten a day for some time. As we had to visit them at their homes, and work with many inconveniences, we have been busy from early morn until late at night. But we love the work.

After a fortnight, we had so many callers that we found it necessary to partition off the greater part of one room in our little cottage as a treatment-room, and we find it facilitates the work.

Among the cases was a Church of England minister. His doctor sent for us, having declared him to be seriously ill with pneumonia. He was very ill, with a high temperature and great pain. But after a week's constant nursing, the

fever abated, and soon he was convalescent. He at once became interested to know who we were. On learning our faith, he inquired more of us, and although the Sabbath question is a hard one to a Church of England minister, it was good to see the Christian spirit he maintained. We have reason to hope that he will investigate further, and act upon his convictions. In fact, he told us that after studying the Scriptures on the subject he would do what he found to be right.

Another case of pneumonia was of a more serious nature. The patient was a Maori of about twenty years of age. He was about as ill as a man could be. He had a temperature of 106°, a pulse of 125, and a respiration of 40. We prayed for divine help, and treated him constantly for over a week. We are thankful to report that God blessed our labor; the young native is well, and gladly knelt with us in thanksgiving to the Healer of all diseases for his recovery.

We are gaining the confidence of the natives, and long for the time when we can tell redemption's story to them in their native tongue. Now we communicate with them to some extent through a child interpreter.





## Missionary Notes

**Dr. Riley Russell**, laboring at Seoul, Korea, reports an abundance of work, but hopes he may soon be able to have better quarters. His one-room mud house is ill adapted to the giving of treatments, and affords him no seclusion from the natives. It may be added in this connection that one brother here in the United States has offered to help to the extent of raising six thousand dollars to provide suitable quarters for the work in Korea.

**There is a hospital in Aintab, Turkey**, which is famous throughout all northern Syria. It was established and is presided over by **Dr. F. D. Shepard**, a medical missionary under the American Board. He was once asked what he considered his most successful surgical operation. He replied: "An operation I once performed for strangulated hernia, in the night, in an old hovel without floor or bed or window; the patient a man lying upon a mass of filthy rags upon the ground that had been trodden by the feet of ten generations at least; my only assistant an old, ignorant woman who held the native oil-lamp that gave off ninety per cent of smoke and smell to ten per cent of light. The operation had to be performed at once, or the patient must die. He made a good recovery, thus proving the uncertainty of the microbe theory as applied to those conditions." [Not the uncertainty of the microbe theory, but the wonderful resisting power resident in the human body.—Ed.]

**Bret Harte** once characterized the ways of the "heathen Chinese" as "peculiar." In nothing are his peculiarities more manifest than in the treatment of bodily ills. The only hospitals in the empire are those connected with the foreign mission boards, or organized through their influence, and the physicians in charge have many amazing and amusing illustrations of Chinese ideas and methods. For instance, a boy bitten by a mad dog was lately brought to an American Board hospital by his parents, who proudly informed the doctor, as proof that they knew precisely what to do, that they had caught the dog, pulled out some of its hair and steeped it in oil. This pleasant brew was then rubbed into the wound. Shades of Pasteur! Another patient was a man who became angry because the boil on his arm would not heal. He snatched up a great cleaver and gave it a slash. Months later he came to the mission hospital, where amputation was advised. He refused, and, though the arm healed, skin grafting had

to follow, and the arm is useless, the cleaver having severed tendons and nerves. These are common, every-day illustrations of the unlimited field of service offered to a medical man in China to-day.

**A unique movement has been inaugurated** in the city of New York. **Pastor George B. Starr**, recently from Australia, a Bible worker of long experience in city work, began services a few weeks ago for the up-town residents, in a neatly arranged and comfortably seated pavilion of moderate size. Connected with these evening services, **Dr. D. H. Kress**, of the Washington (D. C.) Sanitarium, has united his services, giving practical health talks each evening. **Pastor Starr** devotes about thirty minutes to the study of some live Biblical subject, following which the doctor uses about an equal length of time in giving instruction on how to live and maintain the health. These services have been greatly appreciated by the public. Another helpful feature is a series of lessons by **Dr. Mrs. Kress**, on healthful cookery and healthful dress, especially adapted for wives and mothers. In this feature of the work there is also much interest being manifested by the people. For a like work there is great need in many other large cities, aside from our populous metropolis of New York.

**Dr. H. N. Greaves**, after having procured his British medical degree in England about a year ago, entered upon work among his own countrymen in British Guiana, South America. The doctor is accomplishing a good work in his chosen field, being able to exert an uplifting influence along the line of right living. We note from a clipping from a local paper that a temperance lecture, or a lecture upon alcohol, which he delivered before the British Guiana Union at Georgetown, was received with deep interest. **Sir T. Crossley**, the attorney-general, **Archdeacon Gwyther**, and other leading citizens were in attendance. Convincing arguments were brought forward by the doctor, showing that, viewed from every standpoint, alcohol is no friend to the colony. A vote of thanks was given the lecturer, and the chairman took occasion to enlarge upon the remarks of the doctor and urge all to profit by the arguments presented in favor of teetotalism, and to help arrest this terrible evil that is gaining ground in their midst. Such efforts can not fail to accomplish much good in every intelligent, progressive community.





Unsigned articles are by the editor

## Pellagra, the New Disease of the South

**T**HIS disease, supposed to be quite rare, has been making considerable headway recently in certain sections, especially in the South; so much so, that the authorities are very much concerned. In Mississippi it is proposed, as a preventive measure, to submit to rigid inspection all the corn imported into the State.

It is possible that the disease has been more common than was supposed, and that it was mistaken for some other disease. Report comes from one section that doctors in that vicinity had been mistaking the disease for tuberculosis.

Once seen, the disease should be easily recognized, especially in its severe form. Pellagra begins in an insidious, rather ill-defined manner, not readily distinguishable from an ordinary fit of indigestion. The patient feels out of sorts, and finds it an effort to do his ordinary work. The digestive system is out of order, and pain in the back and head are constant. The patient sleeps poorly, and gives evidence of more or less mental disturbance; that is, the characteristic symptoms of this period are indigestion, pain in the back and head, sleeplessness, and disturbed mind.

As spring comes on, the disease assumes a more severe form. The digestive disturbance is marked with

loss of appetite, gas on the stomach, and perhaps diarrhea. The skin exposed to the light develops a marked redness and puffiness, accompanied by an intolerable itching.

The symptoms ameliorate during the summer, to become more severe the following spring, the condition gradually becoming more chronic, and the patient more of an invalid.

Among the nervous symptoms accompanying the disease are paralysis of the legs associated with stiffness, and tendency of the muscles to shorten.

There is intense itching in spots, and a bandlike pain encircles the trunk; often there are disorders of taste and sight; and not infrequently insanity develops.

The disease is supposed to be caused by food prepared from musty corn. It is therefore an intoxication or poisoning rather than an infection. Corn gathered in an immature condition is said to undergo fermentation, producing the poison which causes this disorder.

Pellagra is quite common in parts of Southern Europe; and it has been noted in some quarters that the disease is spreading in the United States in localities to which emigrants are coming from the pellagra districts. Whether this be so, or whether the disease has not attracted more attention in the past



because not recognized, remains to be determined.

From what is now known of the disease, prevention would seem to be a matter of guarding the food supply, especially the corn products. Corn for human consumption should not be harvested until it is mature, and should be stored in dry, ventilated buildings.

Where the disease has a foothold, it

is all the more necessary to avoid injured corn food, and sufferers should avoid all use of alcohol in any form.

Patients should, of course, be under care of a physician. Massage, baths, and electricity have been used to advantage for the nervous symptoms. Ointments containing carbolic acid, salicylic acid, and chloral are used to control the itching.

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### Tuberculosis Infection From Meat

WHILE it is admitted that there is more danger of tuberculous infection from milk than from meat, because the former is more apt to be eaten raw, and that infection is not so probable in adults as in children, yet there is a real danger of tuberculous infection from meat.

As a rule the lean meat contains few, if any, tubercle bacilli, but adjacent structures are often included in a cut

which contains the germs. Moreover the same knife that cuts into some tuberculous focus, afterward cuts through meat that is to be eaten; and often butchers include in the edible part portions of lung, mesentery, etc., which are alive with tubercle bacilli. It has been proved by experiment that when meat is roasted in joints of three pounds or over, the interior is not heated sufficiently to destroy the tubercle bacilli.

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### Abdominal Tuberculosis in Children

FOR a number of years it has been asserted that the proportion of primary intestinal tuberculosis is much greater in England than in the United States and on the Continent, so much so that some have been led to believe the discrepancy was due to a difference in the method of making observations.

When an American physician, Dr. Bovaird (David, Jr.) was visiting in Scotland, he was shown in one hospital, one morning, more cases of unquestioned abdominal tuberculosis than he had seen in ten years in the dispensaries and hospitals of New York City. This led to some comparison of hospital statistics in

the two countries, which he has given in *Archives of Pediatrics* for the month of June.

From this paper it appears that there is an average of 3% of abdominal tuberculosis in British hospitals, and .21% in American hospitals. In other words, abdominal tuberculosis, that is, tuberculosis of the mesenteric glands and peritoneum, is fifteen times as frequent in Great Britain as it is in this country. This being the case, there is no doubt that the difference in primary intestinal tuberculosis would also be marked.

Another comparison from the post-mortem examination of children in the



two countries shows twenty per cent of primary intestinal tuberculosis in England as against three and one-half per cent in the United States.

The data being taken from some of the most representative hospitals in the two countries, without selection, the figures probably show a fair average for the entire country. As the British averages are higher than those of the United States, Germany, and France, it may be readily understood why British physicians and investigators are, as a rule, more insistent in their cry against the danger of bovine infection than Amer-

ican, German, or French physicians.

It will be remembered that while bovine tuberculosis is, with comparative frequency, found in children, it is rarely found in others, and also that tuberculosis of primary intestinal origin is very apt to be of the bovine variety, originating from the milk. It would seem, then, that either (1) there is much more tuberculosis in English dairies, or (2) there is more care exercised by American mothers in the matter of Pasteurizing the milk, or (3) British children are especially susceptible to abdominal tuberculosis.

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## The International Anti-Alcohol Congress

**T**HIS congress was held in London the last of July, and was the largest gathering ever held for the study of the alcohol problem. This is the twelfth congress held in Europe, and is an assemblage of reformers, philanthropists, physicians, and clergymen, for the discussion of problems relating to alcohol and its use as a beverage.

It passes no resolutions, indorses no dogmas or theories of any of its members, but is simply a great free parliament for the discussion of every phase of the subject.

This meeting was memorable because it was projected and held under the patronage of the British government. Formal invitations were issued to every civilized country of the world, to send delegates to this Congress, and sixty delegates were appointed, and came, officially representing seventeen governments of Europe and America.

There were fourteen hundred members and delegates altogether, constituting a most distinguished company of leading men,—physicians, clergymen,

and statesmen from all over the world. The British government gave three receptions welcoming the delegates.

Forty-four papers were read and discussed in three different languages. Sermons were preached in the great cathedrals in London. Six days were given, of two sessions a day, to the discussion of almost every phase of the subject.

It is needless to say that the danger of alcohol to both the individual and the race was the great central theme; some very startling papers were read, which will appear in the printed transactions later. Undoubtedly the next issue of the *Journal of Inebriety* (Boston, 50 cents a copy) will contain an extensive report of the congress.

Among the delegates from America were four physicians, who took a very active part. They were Drs. T. D. Crothers, of Hartford, Conn.; Surgeon Pleadwell, of the U. S. Navy; Reid Hunt, M. D., of the Marine Hospital Service at Washington, D. C.; and Dr. C. H. Hughes, of St. Louis, Mo. C.



## Four Thousand Consumptives Starve Yearly

**C**RUEL and inhuman practises are alleged in a statement given out by the National Association for the Study and Prevention of Tuberculosis against the Eastern doctors who persist in sending dying cases of consumption to the Southwest.

Fully 7,180 persons hopelessly diseased with tuberculosis annually come to die in the States of California, Arizona, New Mexico, Texas, and Colorado, most of them by order of their physicians. The statement, which is based upon the testimony of well-known experts, and all available statistics, show that at least fifty per cent of those who go to the Southwest every year for their health are so far advanced in the disease that they can not hope for a cure in any climate, under any circumstances. More than this, at least sixty per cent of these advanced cases are so poor that they have not sufficient means to provide for the proper necessities of life, which means that 4,315 consumptives are either starved to death or forced to accept charitable relief every year.

It is not an uncommon thing, the National Association declares, for whole families, who can hardly eke out a living in the East, to migrate to the West in the hope of saving the life of some member of the family. In most instances, the abject poverty of such cases forces them to beg, or to live on a very low level. Often consumptives who can

not afford the proper traveling accommodations are found dead on the trains before reaching their destination. The resources of almost every charitable organization in the Southwest are drained every year to care for cases which would be self-supporting if they remained in their Eastern homes.

It costs, on an average, at least fifty dollars a month for the support of a consumptive in the Southwest, including some medical attention. The National Association strongly urges no one to go to this section who has not sufficient funds to care for himself at least one year, in addition to what his family might require of him during this time. It is also urged that no persons who are far advanced with tuberculosis go to so distant a climate.

Consumption can be cured, or arrested, in any section of the United States, and the percentage of cures in the East and the West is nearly the same. Any physician, therefore, who sends a person to the Southwest without sufficient funds, or in an advanced or dying stage of the disease, is guilty of cruelty to his patient. Renewed efforts are being made to stop this practise, and to encourage the building of small local hospitals in every city and town of the country. Attempts are also being made in Southern California and in Texas to exclude indigent consumptives or to send them back to the East.





## The Advent of a More Nourishing Loaf

(Continued from page 592)

dry-farming wheat, the proposition bids fair to work out on the lines laid down by Secretary Wilson.

It is this durum wheat that is to fit the two hundred millions of acres of semi-arid lands, above irrigating influence, now awaiting the coming of the farmers to the great southwest.

Gluten in wheat needs nitrogen in the soil to produce it. Sage-brush land is three and one-half times richer in nitrogen than humid lands. If an acre of sage-brush land is plowed deep, and the rains allowed to soak in, and then harrowed so as to produce a dry mulch of earth over the surface, the moisture can be kept in the ground, if the mulch is kept in good order by occasional tilling. The dry farmer allows half of his land to lie idle through the summer, tilled as above, awaiting the next rainy season, when he plants. All during the summer, because of the combination of water and air introduced into the rich soil, in further combination with a warm sun, bacterial growth goes on, and plant food in abundance is manufactured, ready for the planting to come.

An acre tilled in the ordinary way, and an acre scientifically dry-farmed alongside, both planted with the same durum wheat, the one yielded four bushels, the dry-farmed acre yielded twenty bushels.

But despite all of the above facts, durum flour is only now being brought into general use. Heretofore the millers have refused to grind the flinty, gluten wheat, because their machinery was not adapted to do so. The illustrations herewith given show the gluten wheat berry, grown on dry lands, and on moist lands, and the flint-like character is well marked. That explains why the first crop

of one hundred thousand bushels raised eight years ago remained unsold, and was used by the farmers as hog feed. Too hard to grind, so the millers said. But for the export trade, which helped out the durum farmer, things would have gone hard with him. Much of this wheat goes to France, to make the best bread in the world,— French bread, more easily digested and more nutritious than any other bread. Secretary Wilson was right to protest against this flour going abroad to make bread, etc., instead of being used in our American homes.

If ground into a granular form, a rich golden-colored grainy flour results, from which bread can be made to perfection, and all else that can be made from a standard flour.

Durum flour in this grainy form can be used as a breakfast food, and no breakfast cereal equals durum in both nutritive and economic value, and in flavor as well. When you pay fifteen cents to your grocer for ten ounces of breakfast cereal, you are paying at the rate of over forty dollars a barrel for the same, while durum flour, so used, richer in nitrogen, sweeter in natural sugar, and finer flavored, costs less than one fifth the price. The use of durum flour in the preparation of desserts would give them a nutritive value not usually present.

Until of late, when the millers began grinding durum flour, it was passing away to Europe unnoticed and unconsidered by the American housewife, the physician, and the sanitarian. It is this wheat that is to be grown on the desert lands heretofore looked upon as soil destined for all time to grow only cactus and sage-brush and harbor coyotes, jack-rabbits, and rattlesnakes.





**Korea Progressive.**—The emperor of Korea has been vaccinated, and has ordered that the members of his cabinet follow his example.

**Abolish the Public Drinking Cup.**—The Boston and Maine railway system has provided individual paper drinking cups for its patrons, in place of the time-honored cup with a chain.

**School Hygiene Congress.**—The Third International Congress for School Hygiene will meet in Paris, March 29, 1910. Dr. T. A. Storey, 611 W. 137th St., New York City, is the American secretary.

**Tuberculosis Instruction.**—The New York Board of Health is making extensive preparation for a campaign of instruction regarding tuberculosis, including stereopticon exhibitions in the public parks and on the recreation piers.

**Journal on the Heart.**—As an indication of the extent to which the medical sciences are specializing, it may be stated that a new magazine is published in England, entitled *Heart*, and devoted entirely to a consideration of the heart and the circulation.

**Sweet Valley Wine Confiscated.**—Uncle Sam has confiscated two hundred twenty barrels of "wine" which was made in Sandusky, Ohio, by fermenting commercial glucose, artificially coloring it, and preserving it with benzoic acid! Truly this wine was a mocker.

**Tuberculosis in Schools.**—It is said that in Indiana tuberculosis is fifty-one per cent more prevalent among school-teachers than the average in general life. Dr. Hurty attributes this to poorly ventilated school buildings, and strongly urges a law to compel sanitary construction.

**Sanitary Drinking Cups.**—The Pennsylvania Railroad has begun the installation, at its drinking fountains, of slot-machines delivering, for a penny apiece, sanitary paraffin drinking cups. This practise will probably soon become universal on railways, and, it is to be hoped, will do away with the public drinking cup.

**Whisky Allied to Tuberculosis.**—Dr. Huber recently reported to State Health Commissioner Porter of New York that tuberculosis among Indians is greatly increased by bad whisky, and the effort to live after the manner of the whites. Tuberculosis causes half the deaths among reservation Indians.

**Venerable Medical Instruction.**—It is said that a hand-book of medicine, published in the Hermit Kingdom a thousand years ago, contains this information: "Illnesses are due to man's malice, ignorance, and inability to curb the passions, for these things interfere with the proper nourishment of the human organs." Couldn't be much improved.

**A Crusade Against Spitting.**—The Pennsylvania Society for the Prevention of Tuberculosis has begun an active antispitting crusade. A law is in force subjecting those who spit on street-cars and in other public places to a fine of one hundred dollars. Constables have been sworn in for the purpose of detecting offenders and bringing them to punishment.

**Fifteen Million Tuberculosis Stamps.**—From the sale of Christmas Red Cross tuberculosis stamps last winter a total of \$138,244.51 was realized. The money raised by this means is all used in the warfare against tuberculosis. Be prepared this winter to aid your local antituberculosis campaign by the purchase of Red Cross stamps to attach to all your correspondence.

**Twelfth International Congress on Alcoholism.**—This important gathering, held in London in July, was attended by fourteen hundred members, of whom four hundred were from other countries. Norman Kerr, in a paper based on blood examinations of two hundred twenty-three abstainers and non-abstainers, asserted that alcohol weakens the normal resisting power of the body against disease germs. The reports by Dr. Doczi, that in Budapest no children are abstainers, and that not infrequently a child goes to school intoxicated, created a sensation in the congress.



**A Model Milk Company.**—A company is being organized in New York in order to demonstrate that milk can be produced under satisfactory sanitary conditions, and sold at a moderate price. The plan is to purchase a creamery, and utilize the milk of neighboring farms. Undoubtedly the plan will include the inspection and sanitary control of all farms furnishing milk to the company.

**Radioactive Charcoal.**—It has been observed that charcoal will absorb radium emanative, and that, thus charged, it is radioaction, and presumably has some value as an internal remedy. What a field for exploration by the patent concerns! Charcoal, at a cent a pound, and printer's ink equal "radioactive" charcoal, salable at any price per grain according to the gullibility of the sucker!

**Insurance Company Sanatorium.**—Recently we published an article descriptive of the tuberculosis sanatorium conducted by the Modern Woodmen of America. Insurance men have been intently studying the feasibility of opening sanatoria for policy-holders. One large company has planned to build such a sanatorium, but there is some doubt whether the New York State law will permit it.

**A Life Insurance Company in the Life-Saving Business.**—One of the regular life insurance companies has begun a campaign of education, issuing bulletins to its policy-holders, giving them the benefit of the latest researches in regard to the prevention of disease. In addition, it offers to give every policy-holder a free medical examination for the purpose of detecting incipient disease and advising as to the appropriate preventive measures.

**Malaria Without Anopheles.**—From an archipelago in the Indian Ocean comes information that leads to the supposition that malaria may be transmitted without the agency of the anopheles mosquito. The Picard Island was free from malaria until the disease was brought there by a vessel from a malaria-infected port. There followed an epidemic of malaria in mild form, with no deaths. Careful examination was made for the presence of anopheles on the island for five months without revealing any, although the culex (common mosquito) and the stegomyia were present. It is possible there were anopheles mos-

quitoes on the vessel, which went ashore, infected some of the natives, and not finding favorable conditions, failed to establish themselves on the islands.

**Day Camps for Consumptives.**—Among the cities which have opened up day camps for tuberculous patients are Albany, Buffalo, Poughkeepsie, Rochester, and Schenectady, N. Y.; Boston, Lowell, Lynn, Salem, and Springfield, Mass.; Camden, Newark, Plainfield, and Providence, N. J.; Portland, Maine; and Brattleboro, Vt. Most of these camps are run on funds supplied by the sale of Red Cross stamps.

**Canadian Railways Must Be More Sanitary.**—So says the Canada railway commission, which has issued an order requiring all Canadian roads to observe proper cleanliness and to give adequate ventilation in passenger stations and cars. Every train must carry at least one employee whose duty it is to supervise the sanitary arrangements, cleanliness, ventilation, etc. Spitting must be prohibited, except in receptacles. Cuspidors must be provided. Cars must be fumigated monthly.

**A dispensary was opened** a few months ago by Dr. Lester H. Beals, a missionary of the American Board, in Wai, a city about one hundred miles south of Bombay. Without any advertising, ninety patients came the first day, and since then the daily attendance often exceeds two hundred. A considerable number need operations, especially for removal of cataracts, and more careful and prolonged treatment than is possible at a dispensary. Dr. Beals writes: "The medical destitution far exceeds anything that I supposed this part of India could furnish."

**Embalmed Tomato Catchup.**—Notwithstanding the vehement assertions of the food preservative men that their goods are first class, they sometimes get "caught in the act." Recently Uncle Sam grabbed a lot of tomato catchup preserved with benzoate, on which was the statement, "This catchup is superior on account of its fine zest and true tomato flavor. Made from choice ripe tomatoes." The investigation showed the product to be made from the pulp screened from the peelings and cores of tomatoes, and the waste material of canning factories. Uncle Sam ordered the catchup destroyed.



# QUESTIONS AND ANSWERS.

**Worms.**—What will cure worms in children?

*Ans.*—Pinworms are successfully treated by giving a dose of castor oil at night and a turpentine enema in the morning, using four drops of turpentine to half a pint of water. This will bring the worms away if present.

LAURETTA KRESS.

**To Increase Lactation.**—Is there any food I can take to increase my flow of milk?

*Ans.*—The ability of the mother to give milk is increased by building up her general health. Abundance of sleep, rest, and quiet, with good, nourishing food, such as milk, cereals, bread and cream, eggs, fresh vegetables and fruits, will bring a good flow of milk. Worry, weariness, and anxiety reduce the flow of milk.

LAURETTA KRESS.

**Beer for Mothers.**—I understand that beer is recommended for nursing mothers as an excellent food to produce milk. What is your opinion of it?

*Ans.*—It may produce a larger amount of fluid, but such milk is unfit for the babe. In the first place, it is inferior as a nutrient, and in the second place, it may foster in the child the alcohol appetite. Mothers and babes are far better without it.

LAURETTA KRESS.

**Typhoid From the Cow.**—Is typhoid fever transmissible by means of a cow's drinking infected water?

*Ans.*—Such a thing is possible, but not so likely to occur, however, as the infection of the milk utensils by means of the water in which they are washed, or the infection of the milk by means of flies. There is a possibility that typhoid germs may pass through the intestines of the cow, and reach the milk by means of the barnyard filth.

C. F. BALL.

**Substitutes for Mother's Milk.**—I am unable to furnish sufficient milk for my baby. What should I feed it?

*Ans.*—Cow's milk, properly modified, is the best substitute for mother's milk; but it should be modified under the direction of an experienced physician, for the baby's nutrition and health depend on the composition of its food. The milk should be clean and from a healthy cow. The condition of

the milk is usually so uncertain that it is better to Pasteurize it. There are a number of proprietary infant foods that sometimes serve an excellent purpose, alone, or in combination with milk.

LAURETTA KRESS.

**Boiled Milk Disagrees.**—Fearing tuberculosis, I have been boiling my milk, but it does not seem to agree with me. What would you suggest as a remedy?

*Ans.*—You should, if possible, secure milk from a tuberculosis-free herd as determined by tuberculin test. Immediately on receiving your milk, place it on ice, or otherwise cool it to as near 50° F. as possible, and keep it there until used, always covered. Milk kept cold and away from filth will keep a long time, and cause but little bowel trouble. Pasteurization is better than boiling. Any process that subjects milk to heat interferes with its food value. City folks dependent on uncertain dairy conditions do well to Pasteurize their milk, though this process is not wholly reliable. To Pasteurize milk, place it in the inner container of a double boiler, bring it to a temperature of 170°, and keep it there for twenty minutes; then cool it immediately, as above.

C. F. BALL.

**Scalp Disease.**—I have a scalp trouble. The itching is intolerable. Watery fluid runs very freely, and later a crust forms. It was at first confined to a small portion of the scalp, but has now spread badly. Whenever the fluid runs, it seems to start a new spot, and the scalp is hard and dry. What treatment would you suggest?

*Ans.*—The above conditions are such that, apparently, the disease will be a stubborn one to cure. Nevertheless, the following suggestions, if thoroughly carried out, ought to give relief: First, clip the hair over the diseased parts as closely as possible; give scalp, once only, a good thorough cleaning with soap and water, and then apply daily unguentum aqua calcis, containing three per cent zinc oxid. Keep all water from the scalp, except as above stated, and if necessary to wash same, use sweet oil. The unguentum aqua calcis is made in the same manner as unguentum aqua rosae, with the exception that lime-water is used in the place of rose-water. Any good druggist can make this for you.

W. W. WORSTER.



**Wrinkles.**—What causes wrinkles of the forehead, and what can I do to remove them?

*Ans.*—Anger and other unpleasant mental states cause contraction of the brow muscles, and if frequently repeated, will cause the wrinkles to be habitual. Age causes the fatty tissue to depart, and the muscles to lose tone, so the skin folds on itself. The effort to see clearly when there is some error of refraction may cause a permanent frown. There is no better treatment than facial massage, especially the kneading movements, stretching the skin and increasing the flow of lymph. Some of the vibratory machines are very good. In chronic cases one can smooth out the wrinkles and put adhesive plaster over in order to hold the part smooth for a few days. Alternate hot and cold applied with a sponge is a great help in improving the circulation. It may be necessary to have the eyes properly fitted with glasses; and if the cause is a wrong mental state, that must be remedied.

H. F. RAND.

**Have I Tuberculosis?**—I have a cough which has persisted for some time, though I do not know that I am losing weight. I live some distance from a physician. I am rather anxious as to my condition, and wish to know how I can be certain whether I have tuberculosis.

*Ans.*—The only way you can rightly determine your condition is to consult a physician, and you should do it at once. If it is impossible for you to see a physician, you may gain some knowledge by saving the early morning sputum in a wide-mouthed bottle, and sending the same immediately to a laboratory for examination. This, however, is not satisfactory; for a negative report does not prove that you are free from tuberculosis. In fact, after such a report, you will know no more than you do now; for frequently the disease is present when it can not be detected in this way. If, on the other hand, the report shows the presence of tubercle bacilli, you may be sure you have the disease.

C. F. BALL.

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