

LIFE & HEALTH

THE NATIONAL HEALTH MAGAZINE



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Geo. H. HEALD, M. D. - - - Editor

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Questions or correspondence relative to any of the departments should be sent to the head of that department.

Question Department

The editor can not treat patients by mail.

Those who are seriously ill need the services of a physician to make a personal examination and watch the progress of the case.

But he will, in reply to questions, give brief general directions or state healthful principles on the following conditions:—

1. That questions are WRITTEN ON A SEPARATE SHEET addressed to the editor, and not mixed in with business matters.

2. That they are LEGIBLE AND TO THE POINT; long letters most likely go into the wastebasket without reply.

3. That the request is ACCOMPANIED BY RETURN POSTAGE.

MRS. W. H. MCKEE, whose life has been devoted to the problem of helping unfortunate girls and of lifting the standard of womanhood, has been giving to LIFE AND HEALTH readers a series of articles whose true value, perhaps, can be fully appreciated only by those acquainted with the conditions which conspire to lower the standard of morality. It is hoped that many parents, through these articles, may have been put on their guard concerning certain dangers which their daughters will meet. Undoubtedly many a girl who has fallen, might have

been saved if at the proper time her parents, particularly her mother, had recognized the danger and known how to caution her. Mrs. McKee has other articles in preparation.

REV. H. T. MUSSELMAN, a man thoroughly sympathetic in his nature, who has devoted much study to THE BOY, is preparing for LIFE AND HEALTH a series of articles on the boy and his training. Dr. Musselman believes in the boy. He says, emphatically, that though the boy is no saint, he is more often sinned against than sinning. The boy goes to the bad nine times out of ten because he is not understood. This series of articles, which will probably be continued through the year, could be read with profit by every parent, teacher, director of a boys' club, or any one who has to do with boys in any capacity.

The following is a list of the titles:—

1. The Background of Boyhood.
2. What a Boy Is Made Of.
3. The Instincts of a Boy.
4. The Sins of the Boy and Sins Against the Boy.
5. The World Your Boy Lives In.
6. The Gang Instinct and What It Is Worth.
7. Boys' Clubs Within and Without the Church.
8. The Place of Play in Boyhood.
9. The Big Brother and the Boy.
10. Altruism—The Gospel of Boyhood.
11. Purity and the Boy's Preservation.

THIS month we give an important paper—an appeal to the mothers of infants—by Dr. John M. Connolly, the babies' friend. Dr. Connolly is doing excellent work for the babes of the poor in Boston, and of this work we will give an illustrated account in the next issue.

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If, notwithstanding our most thorough investigation of all advertising submitted for publication, an advertisement should be published through which any subscriber is dishonestly dealt with or imposed upon, we request that full particulars be sent us at once so that we may take proper action for the protection of our readers.

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"Around the Fire Place"

"Then, hovering near,
We watched the first red blaze appear,
Heard the sharp crackle, caught the gleam
On whitewashed wall and sagging beam,
Until the old, rude-furnished room
Burst, flower-like, into rosy bloom.

Shut in from all the world without,
We sat the clean-winged hearth about,
Content to let the north wind roar
As baffled rage at pane and door,
While the red logs before us heat
The frost-tide back with tropic heat:

And ever, when a louder blast
Shook beam and rafter as it passed,
The merrier up its roaring draught
The great throat of the chimney laughed,
The house-dog on his paws outspread
Laid to the fire his drowsy head.
The cat's dark silhouette on the wall
A couchant tiger seemed to fall.

What matter how the night behaved?
What matter how the north wind raved?
Blow high, blow low, not all its snow
Could quench our hearth-fire's ruddy glow."

"FROM WHITTIER'S SNOWBOUND."



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

Vol. XXV

Takoma Park Station, Washington, D. C., January, 1910

No. 1

As We See It

A Bureau of Health and Sanitation

THE coming session of Congress bids fair to make a record for itself on one point, the creation of a bureau of health and hygiene, into which all the present governmental activities for the preservation of health and the prevention of disease shall be gathered.

President Taft has spoken in no uncertain terms regarding the necessity for such a bureau, and his first message to Congress contained an urgent recommendation to that effect.

At present these activities are scattered among several departments. The Department of the Treasury has the United States Public Health and Marine Hospital Service, a service that has been most useful in the curtailment of communicable diseases, such as yellow fever, plague, malaria, typhoid fever, and others. In the Department of Agriculture there is the Bureau of Animal Industry, which has conducted a large number of investigations regarding the relation of animal and human disease. The experiment stations have done an immense amount of work in the matter of food and nutrition, and the Bureau of Chemistry has rendered valuable service, especially in the matter of adulteration of drugs and foods. Then the army and the navy each have their medical bureaus. It is proposed that this work,

with the exception of the army and navy, be collected into one bureau of hygiene and sanitation or bureau of health.

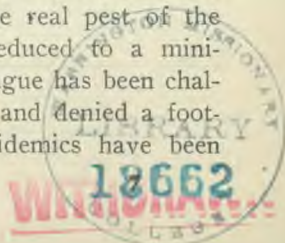
Perhaps the health of the people of the United States is not a matter of sufficient importance to require a separate department, with its cabinet officer; but there are many who think that Cuba made one step in advance of us in establishing among its cabinet officers an official responsible for the health of the nation.

Possibly the bureau of health may lead later to a department of health.

✽

An Ill-Considered Move

WHAT the French could not do on the Isthmus of Panama, the United States government is accomplishing successfully, for one reason, and only one—better sanitation. By means of the Sanitary Department under the leadership of Colonel Gorgas, the Canal Zone has been made habitable for the white man. Not only so, but it has been proved that under proper sanitary control the tropics are fully as healthful for Americans as their own lands. "Yellow fever, the perennial dread of the tropics, has been banished; malaria, the real pest of the Isthmus, has been reduced to a minimum; the bubonic plague has been challenged at the portals and denied a foothold; devastating epidemics have been



made a thing of the past." This is part of the record of the work of the Sanitary Department, a work which was impossible when the sanitary work was a subdepartment harassed by endless delays and official red tape.

A bill is now before two Congressional committees making the sanitary work of the Isthmus again subordinate to some other department. This measure (H. R. 5155; S. 601), entitled "A Bill to Provide for the Government of the Canal Zone, the Construction of the Panama Canal and Other Purposes," will probably rouse such a storm of protest that it will fail to pass. Whatever may have been the motive of the men who drafted this attempt to cripple the sanitary work of the Canal Zone, it is not apparent; but one thing is apparent, health conditions on the Isthmus will depend very largely on the fate of the bill.

✽

Attitude of Southern Papers to the Rockefeller Gift FOLLOWING Bishop Chandler of Georgia, who branded as an insult to the South Mr. Rockefeller's million-dollar gift for the eradication of hookworm disease in the South, a number of Southern papers have expressed resentment at the gift, and some even attempt to make it appear that the hookworm infection in the South is a matter of small significance. Some object to the gift on the ground that the money is "tainted." Others believe that the acceptance of such a gift would mean the debauching of the recipients.

There are, however, many Southern papers which see no harm in accepting Mr. Rockefeller's offer, and probably this counsel will prevail. It is to be hoped that there are not many in the South who would let sectional pride stand between them and an effort to eradicate a cancer that is sapping the life-blood of the South, and is gradually spreading its

tentacles into other regions. The hookworm disease is such a menace that any proffered aid for its eradication should be accepted gladly.

In some ways it is a parallel to the conditions existing when short-sighted business men in San Francisco attempted to deny that bubonic plague existed in the city, and did all they could to vilify the men who were engaged in stamping out the national menace. We can not eradicate a plague by denying its existence.

✽

The Public Drinking Cup You would not think of using your neighbor's tooth-brush — not your own brother's brush, would you? Yet how many will hesitate, when thirsty, to take water from a cup containing, as has been revealed by the microscope, thousands of bits of dead skin and germs from the mouths of others. Formerly the method of transmission of disease was somewhat mysterious. We knew the children "caught" scarlet fever or measles from some other child, but attributed it to the clothing, the scaling of the skin, and the like. Experience is proving that these have very little to do with the transmission of disease. It was a matter for surprise when we learned that one could with impunity sleep in the soiled bedding of one who had recently died of yellow fever. It is now being learned that scarlet fever, measles, and other diseases are probably in nearly all cases contracted through the nose or mouth — perhaps through using a drinking cup which has been used by some one just coming down with the disease; for it is in the early stages of the disease, when it is not yet recognized as anything likely to be dangerous to others, that the mischief is apt to occur. This would suggest two precautions, which, if observed, would go a long way toward stamping out children's diseases:—

1. Never use a common drinking cup. In fact, every such cup should be unchained and thrown into the ash barrel.

2. Consider every "cold," sore throat, or fever to be a dangerous disease, capable of infecting other children, until the doctor has made examination and pronounced it harmless. Until such an examination, the child should be kept away from other children. This is the golden rule.

✽

Another Application of the Golden Rule

EVERY tuberculosis patient has the disease because of some other patient's ignorance or carelessness. Resentment might suggest to him, as it has to some syphilitics: "Some one has given it to me. I'll give it to as many as possible to get even." A more humane attitude, one more in keeping with the golden rule, would be: "My illness is due to some one's ignorance or carelessness. I shall try to avoid passing the cruelty down the line. So far as lies in my power, this strain of tuberculosis will end with my case."

Only recently a letter arrived containing something wrapped up in a piece of paper. The letter stated that it was a discharge from the lungs. It was evidently dry, and to have opened it would scatter, perhaps, tuberculosis germs through the apartment, so, lifting the stove lid, we cremated it without opening it. Perhaps the letter should have met the same fate. Sputum should be sent through the mails in tight, well-corked bottles, protected by a wooden box, so that there is absolutely no danger of breakage or leakage. In fact, one ruling might be construed to forbid altogether the use of the mails for sputum specimens.

A few days later a letter was received from a tuberculous patient, containing a stamp for reply, the stamp being stuck by one corner to the letter. That meant

that the stamp probably had adhering to it great numbers of tubercle bacilli; for experiments have shown that the stamps and letters sent out by consumptives who are accustomed to attach stamps and seal envelopes with the tongue are alive with tubercle bacilli. Think of the consequences that might have ensued, had some one licked that particular stamp in order to attach it to a letter! This consumptive is certain that he owes his disease to *one* kiss. Would not licking one tubercular stamp involve a similar danger? After all, why should we *ever* lick stamps to attach them to letters? Why not employ some safer device for moistening them and the gummed flaps of the envelopes?

Whether we older folks can always learn the lesson is doubtful. I have in mind a certain stenographer, still a long way under the forty mark, who has been cautioned repeatedly about licking stamps and moistening a pencil with the tongue — and yet the caution has to be repeated. As often as we see one another doing an unhygienic, and really dangerous, act, we should speak of it; and we should especially keep up a campaign of education with the children, in order that during their more pliable years, they may form right habits.

✽

The Meat-Juice Delusion

A REPORT *recently* submitted to the Council on Pharmacy and Chemistry, of the American Medical Association, shows that some of the most widely advertised and popular meat juices, beef juices, carnines, bovinines, etc., are sold under misleading names, and that their composition and their food value are not correctly stated by the manufacturers. It was therefore recommended that these substances be refused recognition by the council. Says the report: —

"A physician depending on any of the foregoing products to supply material nour-

ishment in case of serious illness, is deceiving himself, starving his patients, and maybe lessening their chances for recovery."

Commenting on this report, of which we give but a few words, the *Journal of the American Medical Association* says:—

"We can not escape the conviction that many persons must have been simply starved, while, with firm faith in the reputed value of the extracts, the prostration and emaciation have been attributed to the disease instead of to the lack of nourishment in the 'food.'"

And we can not escape the conviction that there are other delusions besides the beef-juice delusion which have sent to the undertaker numberless patients who might have been spared to their families. It will be a step in advance when physicians cease to permit manufacturing houses—no matter how long established and favorably known—to do their prescribing for them. If a physician desires to prescribe a food for a diabetic patient, or a food containing a certain amount of nourishment, he does not take the wisest course when he accepts at face value the statements of manufacturers as to the composition of their products.

Moreover, the layman who, in order to get strength, takes a little "beef, wine, and iron" out of a bottle is depending on the label and on the stimulation of the alcohol, for he gets no real strength out of it.

After all, the wide-spread habit of seeking in a drug store some antidote for the results of our ignorance, evil habits, and misdeeds is a pernicious one, for in postponing the day of reckoning, the patient often makes it the more disastrous when it arrives.

✽

The Tonsils and Rheumatism AT the International Medical Congress recently held in Budapest, Vosanyi and Lenart advised that in all cases of acute articular rheumatism the tonsils be care-

fully examined. Even though a superficial examination failed to reveal tonsillar trouble, the authors found accompanying the acute rheumatism a deep-seated inflammation of the tonsils; and, moreover, the removal of the glands was promptly followed by amelioration of the joint symptoms, and the rapid improvement of the patient.

It has been noted for years that follicular tonsillitis may be followed by rheumatism, but whether this was simply because the tonsillitis was one of the symptoms of the rheumatic attack, or whether it was by the tonsils that the infection entered the body, was undecided. The present findings would seem to point to the tonsils as the port of entry of the infectious material, the inflammation there set up being a focus for its distribution to other parts of the body, particularly the joints and the heart.

In view of this it would be well in all cases of acute rheumatism to look well to the tonsils.

✽

Cosmic Influences and Health THE *Lancet* suggests that the unsettled weather of 1909, which has been very uncongenial to every one's health and comfort, is due to sun-spots, the most recent of which is said to be hundreds of thousands of miles in area.

Only recently the earth was visited by a magnetic storm, which caused so much disturbance of registering instruments that its intensity could not be measured; and, as a result of the storm, the telegraph service was in many places put out of commission for the time. That this particular storm had any observable effect on health has not been suggested; but that the other meteoric changes of the year, due possibly to causes originating outside of our planet, have had an observable effect on the general health seems to have some foundation.

The Second International Food Congress (Paris, October 17-24)

was to establish a uniform standard of manufacture which shall be recognized by food producers the world over. The decisions of the congress, even though passed by unanimous consent, have, of course, no legal force. They merely indicate the consensus of opinion of the food experts. But doubtless these decisions will, to a considerable extent, influence food legislation in the various countries represented in the congress. Before laws can be effectively uniform, however, it will be necessary to bring the analytical methods of the food laboratories in different countries to one standard. This will probably be in large measure the work of next year's congress.

The Paris congress is said to have been a decided success. There were more than two thousand members, representing twenty-eight different countries.

The congress was divided into a number of sections, each representing a class of foods. The Bakery Products Section, for instance, considered such foods as flour, bread, and pastry. There were also sections for drinks, confectionery (sugar, honey, etc.), groceries and spices, dairy produce, meat industry, and drugs.

When a section had, after discussion, decided by vote as to the definition of a certain food (e. g., milk), defining what it should and should not contain, the definition was passed on to the Section on Health and Hygiene for approval. This section was, perhaps, the most popular, as it was the most important of the congress, and had a registration of more than five hundred names.

Among the findings of the congress

the following will strike some of us on this side of the water as reactionary:—

It was decided that "boron" preservatives (borax, boracic acid) are not only allowable but absolutely necessary in the manufacture of butter, and that it should not be necessary to state their presence any more than is the case with salt! In the preservation of (dried?) fruit, sulphurous acid was declared to be absolutely necessary. There were twenty anilin colors which the congress considered permissible for use in connection with confectionery.

In the matter of milk, it was decided that it is not worthy of the name unless from a healthy cow and free from colostrum and any added matter whatever. (Why didn't they make an exception of those "boron" preservatives?) Pasteurization, filtration, and refrigeration were declared to be regular operations; but sterilization or any change whatever in the composition of the milk constituted a "facultative" operation, of which the purchaser should be informed at the time of sale.

It became very evident as the congress proceeded that there is practically no substance connected with the food supply which is not subject to some form of adulteration or sophistication. Some large companies keep regularly in their employ skilled chemists, whose work is to reduce the manufacturing cost (and hence the quality) of foods without injuring the appearance and taste; and it is largely upon the poorer classes that these cheap goods are foisted.

Some one has said that half the chemists in the world are engaged in perpetrating frauds on the public, and the other half are engaged in detecting the frauds. As regards the food chemists, this statement appears to be no great exaggeration.



The Girl a Factor in the Social Fabric--No. 2

*Mrs. W. H. McKee, Matron Michigan Home for Girls,
Byron Center, Mich.*

[This is the second of Mrs. McKee's intensely practical articles on the girl. Another paper will follow.]

IT is not my purpose in these articles to arraign the poor girls of the world at a public tribunal for criticism or condemnation; but, rather, to arouse in them a loathing of the life of sin, and to alarm the younger element into an instant retreat from possible downfall, by bringing them to such a realizing sense of the repulsiveness of the situation that they can no longer be a party to it. The arraignment must be of the pastors and masters, the parents and educators, who remain silent in pulpit, home, and school, upon these vital questions. The ministers who teach the people have a responsibility to educate the young fathers and mothers upon life's pure principles; and the home, church, and school are not accomplishing their complementary purpose when these topics fail of discussion by those whose duty it is to educate, and are discussed, experimentally, in silence and in shadow, by those who should have been advised and educated.

The war-cry and watchword of our great Abraham Lincoln, on the Negro slavery question, "Agitate! Agitate! Agitate!" can now be adapted to the white slavery of modern times,—“Educate! Educate! Educate!” not alone by books; no! *personal interest*, actual concern in the individual welfare of our boys and girls, is what is most imperatively needed; first, in the home, by godly par-

ents who know the value of divine help in the work of overcoming the weaknesses of the flesh, and who are informed as to the social situation and their own responsibility; second, in the church, where co-operation with the home influence emphasizes the need of help from a Source higher than self; and third, in the school, where mental and moral forces co-operate to strengthen these influences. If such a system of education—a triune power—could exist in this world, this triple alliance for good would be able to unlock the door of our social chamber of horrors, and banish the hideous specters of iniquity that haunt the lives of so many, invading homes, despoiling the purity of our fair flock, and preventing the access of that knowledge which is the key to heaven.

Prisons, jails, reform schools, and houses of correction would have little to do if our homes, churches, and schools from the enlightened view-point of each in its respective sphere, did their individual duty by every child. But this happy "Arcadia" will not be realized, for the simple reason that so many, even of those who desire to be benefactors, fail to recognize any higher source of strength and wisdom than their own limited knowledge. No higher power has controlled their own lives! They have left God, Christ, and the Bible out of the "social question." Gladly would he.

if permitted or invited, use for our social regeneration these three great channels of human help,—the home, the church, and the school. Without divine guidance we are afloat, with no shipmaster or chart, on a great sea of sin, rudderless and without compass. In view of the appalling social situation, we are truly in a time when "apostolic religion" pure and undefiled is needed. Only a wise and merciful God, who sees the social picture far more clearly than any human pen can portray it, can deal with the situation. Those who co-operate with him will succeed in rescuing some precious souls from the great crash that will inevitably come. The pen of inspiration has not exaggerated the situation when it says, "The whole world lieth in wickedness."

God originally endowed woman with qualities enabling her to exert an influence so potent as to be second only to that of angels; and the divine One gave her the blessed privilege of being man's "guardian angel" in human flesh. Sin has perverted, for a time, this benign purpose, and as a consequence sinful woman has become the synonym of evil. Yet the Great Teacher has prepared a way of return from sin to his original plan, emphasizing it by comparing his true church to a pure woman.

Few homes present this beautiful truth to the girl as she approaches womanhood and social responsibility, a factor herself in the social fabric. On the contrary flirting, clandestine meetings, and imaginative illusions of love-sick sentimentalism occupy too much of her thought. Ignorant of the purpose and possibilities of her own life, she fails to comprehend her real relation toward the one who will some day be her companion in life. Many marriages would be more happily planned, many lives more truly mated, if sex matters had their proper place in our educational system in home, church, and

school. There would be fewer divorces to scandalize the community if the most sacred experience in life were not tried as an experiment.

Loose social and domestic life would be far less general were the youth given to understand the tremendous importance of self-knowledge on sex subjects. Too nearly universal is it the custom to shun the question, or to be indifferent to it, until irreparable damage has been done. Still, strange to say, even with such an object-lesson, parents who have in their own experience seen the failure of the let-it-alone policy, fail to recognize their duty to warn their children not to enter upon the same unhappy course.

As I have observed them in sixteen years of public work, there are three classes of girls, irrespective of birth or education, which come before public notice,—the modest, the curious, and the reckless. The modest girl prizes her honor and her good name, shrinking from any familiarity with men, knowing that her power, her influence for good, lies in her own self-respect, and in the valuation she places upon her own womanhood. This principle appreciated would protect the sex against the skepticism of men regarding the purity of woman. In her very manner of quiet dignity she says, "Thus far! and no farther." She wears no corseted garments to display her form, no lace yokes or sleeves in her dresses to excite unholy thoughts in observers. She does not come under the censure of the pastor who told his female flock, "Go home and get your clothes on!" She declines to be a temptress to her male friends, either in dress, language, or manner. No bold, forward speech is hers, no coquettish invitation to caresses or familiarity, which prepare the way to certain ruin, if such advances are not repulsed. Her taste does not run to the sensational and exciting amusements of the world. How

few girls there are to whom this tribute would apply, paid by a young man to his betrothed: "What first attracted me to — was that she was so different from other girls. She didn't care to have me spend money on her for candy, gum, ice-cream, and the theater. She talked to me of my soul, of God, and the things to make me a better man; told me how tobacco was my enemy, and how to live as I ought. I thought a girl who considered *such* things would make me a good wife."

While it is true that there are many innocent girls lured by wicked deceivers to a terrible fate, I am compelled in candor to say that many girls invite their own destruction. The curious girl, who would pry into sin, "to see what it is like," finds all she was looking for, and far more. When it is too late, she is horrified; chained by conscious guilt, she finds herself a slave to the life of sin, although she has not really chosen it. Perhaps the beginning of her career was a curiosity to see moving pictures, which stimulated the desire to go farther in sin and realize in experience what she saw in picture. Ignorant of consequences, she "didn't know" the result of her curiosity to "see the world." It may be she had a good home, but mistaken silence on the part of parents, either from ignorance or prudery, left the girl a prey to her own inclinations or evil associates.

The reckless girl is she who "don't care" what becomes of her. She is as indifferent about her future as if she had none to consider. This fearful recklessness is to-day ruining thousands of girls, who "don't care," until the bloom of youth is gone; vile disease makes her personally offensive, and she is tossed aside and trodden under foot of men. Her bold, jaunty style of indifference to trouble, disgrace, suffering, or even death, makes her a serious factor in the social fabric. Unreasonable, intolerant

of advice or restraint, having so grown up from childhood, she is a dangerous element in the social fabric, a menace to the better element.

Whether clothed in calico, working in shops or factories, or dressed in silks and velvets, living in luxury and elegance, no girl enjoys being insulted, *if she knows it*. It is when *ignorant* of the true charm of virtue that, despising her birthright, she becomes a moral pervert; and the task for parents, educators, and reformers — lovers of "the clean life for two" — is to educate the girl to be her own defender. When both boys and girls are taught that self-respect and honor are indispensable attributes of character, the destructive elements of sin will not so largely dominate their lives. They must know that what is destructive to society in general, is first destructive to the individual, morally and spiritually. As far as human beings can act, the need of the hour is that each young woman should uncompromisingly determine not to recognize on a social equality, for personal association, any young man who drinks, swears, dissipates, uses tobacco in any form, or who is immoral in any phase. Let woman take it upon herself to frown down the social lie that "men may sin with impunity, and be received, unquestioned, in society." Woman's influence in temperance and politics has been felt. Why not equally in aggressive work in social purity lines? Let women *demand* in men the same standard of purity that they, in turn, demand of the mothers of their children. When this agitation becomes general, the helpless, dependent working girl, now at the mercy of her employer, need no longer fall, because of her situation in life and its environment.

The mistaken idea with many women that the "way to a man's heart is through his stomach," is productive of great evil. Women feed men, causing

them to gormandize until they are unable to control themselves, and many a man goes straight from his own table to the saloon and the brothel. Shame on womankind to be so ignorant of the laws of physiology and healthful cookery that they really become allies to the saloon-keeper, and unconscious instruments of unrighteousness! Let "society" quit thinking so much of eating, drinking, and dressing, and consider a more intelligent standard of character, mentally, morally, and spiritually. Supreme over every other ambition should be the love for others that desires their best good. This can come only from above; and in inculcating this principle, every woman should seek for the knowledge that banishes ignorance, and will enable her to

reach this divine standard: A virtuous woman, her price is far above rubies! The heart of her husband doth safely trust in her: she will do him good and not evil all the days of her life. She stretcheth out her hand to the poor and needy. Strength and honor are her clothing; and she shall rejoice in time to come. She openeth her mouth with wisdom; and in her tongue is the law of kindness. She looketh well to the ways of her household; her children rise up and call her blessed; her husband also, and he praiseth her. Favor is deceitful, and beauty is vain: but a woman that feareth the Lord, she shall be praised. Give her of the fruit of her hands; and let her own works praise her in the gates.





Take Care of Your Teeth

J. S. Frost, D. D., S.

DECA Y of the teeth is not a disease which has its origin in modern methods of living, for toothache, with its pangs, dates back as far as history can be traced, and never has the human race suffered so universally from any other malady as it has from dental disorders.

Until recently the real cause of tooth decay was not known. Many theories were advanced, but none permanently accepted until Dr. Miller of Berlin, after many thorough and exhaustive researches, made the announcement that he had discovered that decay of the teeth is directly traceable to the formation of lactic acid between and about the teeth, as a result of fermentation and decomposition of food left on their surfaces.

Now, to come to the practical point and tell our readers how to preserve their teeth, add greatly to their personal appearance, and improve their general health. Have your teeth cleaned and their surfaces thoroughly polished, taking care that all deposits of tartar are removed from the necks of the teeth and from under the free margin of the gums.

Every cavity should be filled, and any roots or teeth that are too far gone to be saved should be removed at once; otherwise, they will contaminate the breath, act as breeding-places for bacteria, and cause other teeth to decay.

The dentist having done his share of the work, it is necessary that you do yours in order that his work may be a success. If you have no tooth-brush, lose

no time in obtaining a good one, with moderately soft bristles, and some reliable dentifrice. A liquid mouth wash is very good to use evenings before retiring, as it percolates between the teeth more thoroughly than does the powder or paste, and neutralizes any acid that remains. Do not depend on a liquid dentifrice to keep the surfaces of your teeth clean. It is necessary to use a paste or powder at least once a day to do this.¹

Above all, remember that decay is caused by fermentation and lactic-acid production, the result of food left on the teeth.

Teeth decay very little during the day, as there is a large amount of saliva always present, which dilutes any acid almost as soon as formed. At night when we are asleep, the salivary glands are at rest, and there is very little saliva present in the mouth. If the surfaces of the teeth are covered with food, it will ferment during the night, and the resulting acid not being diluted by the saliva, will cause decay. Hence, it is important to remove the food from your teeth before retiring, by brushing them, using tooth-paste, powder, or liquid. These dentifrices are alkaline in reaction, and will neutralize any acid that may be present in the mouth.

Try this method of preserving your teeth, and you will find it lessens your expenses, preserves your beauty, and improves your health.

¹ See article on dentifrices in September number

Pellagra

O. C. Godsmark, D. D. S., M. D., Chattanooga, Tenn.

PELLAGRA, or corn-meal disease, seems to be attracting considerable attention, more particularly of late, as new cases of this fatal malady are being recognized and brought to public notice.

It is more than probable that this disease has existed in the United States for some years, but not until recently has it been identified with the scourge that for years has baffled the skill of Europe's best physicians.

As far back as 1730 it was known in southern Europe, and received the name of *lepra asturiensis*, as it was supposedly a form of leprosy, and was associated with the eating of the Indian corn-meal, which had lately been introduced from this country, and had become a food factor among the poorer classes.

The disease has gradually spread throughout the countries of southern Europe until its frightful ravages are met almost everywhere at the present time.

Hopeless, loathsome, forsaken, demented sufferers, with bleeding arms and limbs, fill the hospitals and public institutions on every hand. Italy has taken hold of the situation in earnest, and prohibits the use of corn-meal that has not been governmentally inspected, and cures, free of charge, the home-grown product, and is thus lessening the frequency of its occurrence quite materially.

Pellagra is obtaining a foothold in the United States with alarming rapidity. It seems to be spreading, and so far but little has been done toward effecting a permanent cure.

The symptoms are hard to describe, as they differ so materially in different cases. In some the symptoms are severe, and death ensues in a very short time,

the average being thirty-seven days, as reported in the Cook County Hospital. In others it extends over a period of about three years. These symptoms manifest themselves in the spring of the year, and when apparent recovery is made, it is only that they may reappear the following spring in a more aggravated form.

Generally the first that is noticed is a slight gastric disturbance, with diarrhea and pains in the abdomen. The gums may swell, and an excessive flow of saliva manifest itself. A general feeling of indisposition and a loss of interest in work or study may accompany these manifestations for a few days or weeks the first year. The patient recovers, and nothing is thought of it.

Another symptom that may or may not be present the first year is that which gives it its name, pellagra, which means "rough skin." This usually appears the first season, in mild cases, in what seems to be merely a severe case of sunburn on the back of the neck or the hands, or on the upper surfaces of the feet in persons who go barefooted, or these brown rough patches may appear as "liver-spots" at the outer corners of each eye. They are rough, brown surfaces at first, but later on scale off in a bran-like scale, having a highly inflamed and, in some cases, bleeding surface.

If the case is mild, and the patient recovers, the disease will break out again in a more aggravated form the following spring. If the patient is allowed to eat corn bread, or corn in any way, to any extent, at any time during the year, the symptoms will reappear, as the disease seems, when once implanted within the system, to be aggravated by corn products, be they ever so healthful.

When the case is acute, or has returned for the second or third time, the conditions are distressing. The patient suffers intense itching of the parts affected, and will so lacerate himself as to leave the parts torn and bleeding. His mental condition is hopeless. Such patients lose all sense of shame or personal neatness, and are loathsome in the extreme. The constant uncontrollable diarrhea, with incessant drooling from the mouth, only adds to the repulsiveness of the condition. Death is the only relief so far found. Each case does not necessarily manifest all the symptoms herein given, but these are the rule.

The one early distinguishing symptom by which it may be definitely recognized is the shape of the patch of "sun-burn," or "liver-spot." Just as you find it on the back of one hand or wrist, so exactly will it be on the other hand. Just as you find it outlined on one foot, or behind one ear, or at one side of the face, so will you find it outlined on the other foot or part of the face or neck, to the minutest detail.

As the surface spreads, the encroaching border is raised and much inflamed, while the central portions dry down and scale off, leaving a cracked, bleeding, open sore.

So far we have been unable to find a cure, and all that can at present be done, is to raise a voice of warning to those who are not yet within its grasp. This brings up the question of etiology, or what causes pellagra. We do not know; but the indications point strongly toward the use of corn-meal that has at sometime been heated, in the crib while yet in the hands of the farmer, or, as is most likely, while the sacks of meal are confined in closed cars for shipment, or in large storehouses.

Corn-meal that has been so treated is found to contain a germ known as *bacillus maidis*. This bacillus produces a

non-toxic glucosid, which, as is thought, is decomposed within the intestines, forming a toxic, or poisonous, substance that produces the disease. Lombroso prepared from corn an oil, a fluid extract, and a tincture. He gave the tincture daily to a number of persons, and produced in nearly every case symptoms similar to pellagra. Antonio reported seven cases fed on diseased corn, in addition to meat and cheese. Of this number several became pellagrous. Many cases are reported of feeding human beings, as well as rabbits, guinea-pigs, etc., corn-meal that had been heated in shipping, and the disease was developed. It is claimed that pellagra has been found in individuals who had not used corn in any form, but these cases are rare.

In the North and West, where the farmer raises his own corn, cures it in his own open cribs, and has it ground at the neighboring mill, there is little chance of the meal heating, and pellagra is hardly known. But here in the South, where the most of our meal is shipped to us in closed cars from the North and West, we have just the proper conditions to produce this disease. In one place in North Carolina where pellagra was becoming epidemic, it was found that the supply of corn-meal was shipped to that place from Ohio and Virginia.

The man who can raise his own corn, grind and care for his own meal, is safe. We can never tell, when we buy a sack of meal, how far it has come, under what conditions it was shipped and stored, and whether we are getting a food that is healthful, or buying a most horrible passage to an imbecile's grave.

It seems as if Satan himself is poisoning the very air we breathe, and the nearer we can come to God's appointed way of living,—that of getting our own food from the ground,—in place of huddling together in the crowded cities, the better it will be.



A Plea to Mothers

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(WRITTEN FOR LIFE AND HEALTH)

THE most valuable resource of a nation is its children. The most important duty of any community is the conservation of its most valuable asset—infant life. It is because men and women, physicians and lay persons, are awaking to the knowledge of this elementary truth that we see such movements come into being as that of the German Congress on the Care of Infants, at Dresden, the Conference on Infant Mortality of the American Academy of Medicine at New Haven, the new National Association for the Prevention of Infant Mortality, and the various agencies operating to prevent infant deaths in the great cities of our own and other lands.

It is a curious fact of human experience that a railroad accident in which a few lives are lost will be treated at length in the pages of our newspapers, but the more deplorable massacre of innocent children which occurs in every large city—the deaths due to a bad milk supply or improper diet—passes unnoticed. It is hard for the general public to appreciate the horror of the slaughter of little children in midsummer, because it has not yet come to be a matter of common popular knowledge why they die, or how the greed or the culpable ignorance or the indifference of a few men can be responsible for such a wholesale tragedy.

Long ago, Harrington showed that the chief cause of infant mortality is dirty milk, and he placed the responsibility for the alarming number of infant

deaths where it belongs, on the shoulders of the milk producer, the milk handler, and the mother in the home. It can not be thought that any mother would willingly cause the sickness of her child, but many a mother's ignorance has resulted in the death of her little one.

The prevention of infant mortality rests, even more than most other social and sanitary reforms, upon education,—the education not only of the community and of the milk farmer, but even more of the individual mother.

Medical opinion, both here and abroad, is unanimous as to the great importance of infant feeding. During the first year the growth of the infant proceeds with a rapidity which is never even approached in after-life. By the end of five months the infant has doubled, or should have doubled, his birth weight, and at the end of the first year should weigh three times his weight at birth; and as all the material for this immense increase must be derived from his food, it is evident that to the infant a proper food supply takes precedence over every other consideration.

Now the great central fact in infant feeding is that human milk is by far the best food for human infants. This truth, suggested by common sense, is amply confirmed by the united testimony of physiology, statistical evidence, and clinical experience. The more we learn about infant feeding, and the more closely we analyze the causes of infant mortality, the more evident it becomes that in human milk we have a food ab-

solutely unique and wonderful, for which the ingenuity of man has so far toiled in vain to find an entirely satisfactory substitute.

Hence it is that the premature separation of a child from the mother's breast, and the substitution of an artificial food, is almost as deplorable as the premature birth of an infant, and, in fact, from the standpoint of physiology, as Chapin has well remarked, the artificially fed baby is in reality a premature child.

Is it any wonder, then, that the weaning of a young infant from the maternal breast is so often followed by disaster? Disaster is precisely what we should expect to find, and what we do actually find in practise. It is now well established that the milk of any species is designed not only to support the life of the young and to furnish the materials necessary for growth and development, but that it is indeed a highly specialized product, fitted mechanically, chemically, and physiologically to suit the digestive system, nutrition, rate of growth, and mode of life of the animals of that species, and that it can not with impunity be supplanted by a foreign food. The milk of the mother behaves in the stomach of the young animal much as the food of the mother behaves in her own stomach, and the young animal is thus being educated from the start to digest in the same manner as it will when it is grown.

In the cow, goat, and sheep there are four stomachs, while in the horse and ass there is but one; and although these animals eat the same food, we should expect, and we do find, that the milk of each species is suited to the structural character of the digestive apparatus. The milk of the cow clots with a firm, hard curd, which takes much digestion before it can pass from the stomach into the intestine; and with this curd the calf, by means of his four stomachs, is well

equipped to deal. The milk of the horse, on the contrary, forms a jelly-like clot, which passes readily into the intestine, where it is digested.

Human milk, in clotting, forms not a solid lump, nor a fluid jelly, but a soft, flocculent, finely divided mass. Is it then surprising that the human baby, with its one small stomach, constituting about twenty per cent of the digestive tract, finds difficulty in digesting the curd which the bovine baby, with its four stomachs, constituting together about seventy per cent of the digestive tract, finds accurately adapted to its special needs? What human mother, understanding these elementary facts of digestive physiology, will, except under compulsion of the gravest necessity, refuse to nurse her baby, and choose rather to expose him to all the dangers inevitably associated with the introduction into his stomach of this alien food?

The chemical differences in the different species of milk are even more striking, but I shall mention only one. Human milk is very rich in lecithin, a substance which forms a large part of the brain and nervous system; while the amount of lecithin in the milk of the cow, mare, ewe, etc., is very small. The calf, the colt, the lamb, and most other animals are born with a well-developed nervous system, and a few days after birth are able to stand alone and to follow the mother about. They do not require so much lecithin as does the human infant, with a nervous system to a large extent undeveloped at birth and needing to be built up from the material furnished it as food. The effect of a deprivation of this important constituent on the development and vital capacity of the child is therefore clear, and the great value of even a little human milk in the dietary of the infant, when unhappily cow's milk must be given, and the importance of conserving what breast milk

there is, and employing mixed feeding instead of abandoning the breast and employing exclusively an artificial food, is also self-evident.

Another interesting point of difference in the milk of various species is the percentage of fat. In the milk of animals living in hot climates the percentage of fat is low, but inasmuch as milk fat has a great heat-producing power, animals inhabiting cold climates have a milk relatively rich in fat. Thus reindeer milk contains ten per cent fat, and that of the dolphin, which dwells in the waters of the colder regions, shows as high a percentage as forty-four. The fact that human milk contains only about four per cent has by some been regarded as evidence of the tropical origin of the human race.

But there are still more subtle differences. When an animal is exposed to the toxins of disease, its organism responds by forming in the blood certain antidotes which tend to neutralize the poisons, as, for example, the "antitoxin" of diphtheria. Now it has been found that when the milk of one species of animal is injected into an individual of another species, this individual reacts to what is, in a sense, to him a poison, by forming an anti-body which has the power of coagulating the milk of the first species. Furthermore, this reaction is confined to coagulating the milk of the particular species in question, and will occur with no other; as, for instance, if cow's milk be injected into a horse, the horse's blood serum will acquire the power of clotting cow's milk only, but not the milk of a goat, ewe, or other species. A bottle-fed baby, accordingly, has first to produce an anti-body before it can begin to digest and absorb cow's milk, and as a consequence we find that digestive leucocytosis is marked in bottle-fed infants, while it is almost absent in the breast-fed baby.

But this is not all. The milk of the mother contains anti-bodies derived from her own blood serum, formed in her frequent victorious battles with disease; and the legacy of these protective anti-bodies, carried in the mother's milk into the infant's system, brings it safely through perils to which the artificially fed baby is much more likely to fall a prey.

All these facts are in firm accord with clinical experience. The comparative immunity from infectious disease enjoyed by nurslings is confirmed by a large and rapidly increasing mass of statistical evidence. It is the unanimous opinion of medical authorities that the breast-fed baby will have a much better chance of survival than his artificially fed brother. Not only in the cases of diarrhea, from which ten artificially fed infants die for every one that is breast-fed, but in all other diseases, the resistance of the breast-fed baby is naturally and inevitably much greater than that of the partially starved infant deprived of his own, and reared upon an unnatural food.

It is the plain duty of physicians, of the clergy, and of all the more intelligent members of the community, to keep these important truths continually before the minds of the mothers and the future mothers of the nation, so that they may understand that breast feeding is a sacred duty, and that the mother who, for the sake of "social duties," indifference, or for any reason short of the most absolute physical necessity, fails to nurse her baby, takes a very grave responsibility and incurs the risk of being the direct cause of her infant's malnutrition, poor development, sickness, and even death.

But after all is said and done, it is unquestionable that there is a large number of mothers, who, try as they will, are absolutely unable to nurse their babies at all, or can nurse them for only a short space of time. And this is no new condition: it has to a greater or less extent

existed in all ages, and even as far back as the time of Homer the problem of substitute feeding was keenly felt.

The question of collecting and preserving human milk that would otherwise be wasted, has been considered many times, and most recently by Professor Escherich, of Vienna, who, last September, in a paper before the International Medical Congress at Budapest, described a method of adding bicarbonate of soda and peroxid of hydrogen and then heating, by which means milk collected from various mothers and wet-nurses may be preserved fresh and sweet for several weeks.

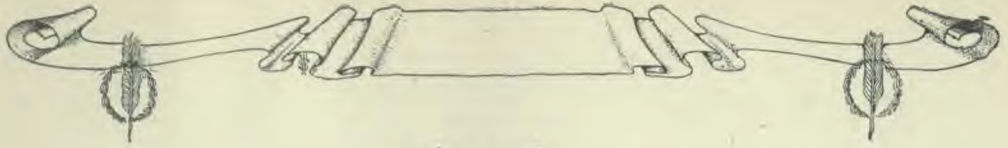
But this device is evidently of very limited application, and we are constrained to consider what is, by common consent of the authorities on the feeding of infants, the most practicable source of artificial food — *cow's milk*.

Now, unfortunately, cow's milk, in addition to the important points of difference which we have already emphasized, labors under the disadvantage of another most important point of difference from breast milk in that it is subject to bacterial contamination. Human milk passes from the breast direct to the baby's mouth, and is practically germ-free,

while cow's milk, in its journey to the child's lips, is almost continuously exposed to sources of bacterial infection. Any person who has ever seen a cow milked realizes that during the process there goes on, almost of necessity, a continuous inoculation of an excellent culture medium with quantities of all sorts of germ life. This is so true that it has been agreed that milk which contains not more than twenty-five thousand bacteria in each teaspoonful is good milk, and can even be "certified." Consider, then, if you can, the population of triumphant lives in a glass of milk, good, indeed, but not of high enough grade to be "certified." Consider, if you can, the effect on the tender baby, whose powers of resistance to toxins are still undeveloped, of the entrance into his body of this fluid, contaminated by the inevitable dirt of the domestic cow, re-enforced by the various dirt of the civilized human, continually exposed to serious pollution — the gross bacterial fouling of which is so common as to be almost universal.

We do not know fully the influence on health of bacteria-polluted milk, but *it may safely be assumed that for babies, at least, clean milk is preferable to dirty milk.*





Anemia

D. H. Kress, M. D.

ANEMIA, usually known as poverty of blood, is a common condition. The number of pale-faced and nervous old, middle-aged, and young women in cities, towns, and villages is daily increasing. Even in the country, where nature has an opportunity to paint roses on the cheeks of all, anemia prevails.

This disease is more common among women than among men. Among the common causes of anemia are probably tight lacing, tea drinking, impure air, and lack of outdoor life.

It is well known that poisonous products are constantly being formed in the human body by the breaking down of tissue from muscular and mental activity. These wastes are mostly eliminated from the body through the lungs. Every ten minutes sufficient poison is thrown off through this channel alone to cause death. This emphasizes the importance of lung freedom.

It is through the rapid interchange of gases that takes place in the lungs by pure air being brought into almost immediate contact with venous blood, that the blood is freed from impurities.

Nature recognizes but one blood purifier; that is *pure* air. The Creator has given none too much lung capacity, and shallow breathing, even of pure air, will result in poison accumulation.

Up to the age of twelve, the girl is permitted to dress loosely, and to play with her brother in the open air. During this period her health is usually as good as his. At this age a change occurs. The boy is still permitted his freedom, but the girl is placed in corsets. The lungs are thus constricted; this

makes exercise and lung expansion difficult. Sufficient air can not now be taken into the lungs to keep the blood pure. Improper oxidation of the blood results in accumulated waste products. These are destructive to the red blood-cells, and cause anemia.

Tea Drinking

The evil resulting to the human family from the use of tea is great. A strong man accustomed to the use of alcohol might take an ounce of pure alcohol without causing death; even one tenth of that amount of theine would result fatally. Theine is many times more powerful as a poison than alcohol.

There are two and one-half grains of theine in every cup of tea as ordinarily made. It is estimated that one eighth of a grain will kill a frog, and that two cups of tea contain five grains, or a sufficient quantity to kill a rabbit.

Every pound (or sixteen ounces) of tea contains four ounces of tannin. Tannin interferes with the digestion of the food, especially the albumens, and favors putrefaction and the formation of poisons which are especially destructive to the red blood-cells, thus impoverishing the blood. Tannin still further impoverishes the blood by destroying the organic iron contained in the food.

It is recognized that in ordinary anemia there is always a diminution of iron in the blood. This has led to an effort to supply it in some way, frequently to the extensive use of iron in various preparations as a medicine.

Is there any good derived from the administration of mineral iron? Professor Bunge, the eminent physician and

chemist of Basel, Switzerland, in his work on "Physiological Chemistry," in summing up the present knowledge of the subject, says:—

"So far it has not been proved that any part of the inorganic preparations of iron given in the small quantity which is necessary in order to avoid digestive disturbances (1.5 to 3 grains) is absorbed either in man or in smaller animals, to which correspondingly less iron can be administered. If large quantities of iron be given, or if the administration of small doses be continued over a long period, part of the iron passes the intestinal wall. But it can not be ascertained whether this iron is assimilated.

"Even if the assimilation of inorganic preparations of iron be granted, it is indisputable that the iron which exists in normal food in the form of organic compounds is far more readily and more completely absorbed.

"Hence there is in no case any reason to prescribe preparations of iron for the production of hemoglobin in people who take their natural food with a good appetite."

In the light of these important facts, it is interesting to study the composition of various foodstuffs in relation to the amount of organic, vitalized iron which they contain.

The adult body loses less than one sixth of a grain of iron daily; hence this is all that need be supplied by the daily food. The following table shows the quantities of the various wholesome foods

required to furnish this amount of iron daily:—

Beans	5.2	ounces
Rye	5.4	"
Wheat	7.8	"
Barley	11.5	"
Yolk of egg	4.0	"
Hazelnuts	9.0	"
Almonds	7.5	"
Spinach	11.0	"
Figs	2.2	lbs.
Potatoes	1.5	"
Apples	1.2	"
Strawberries	2.2	"
Cherries	1.1	"
Raspberries	3.4	"
Cow's milk	1	gallon

From the above table it will be seen that the mineral iron preparations are unnecessary, because an ordinary meal composed of wholesome food is seldom deficient in organic iron.

What anemic patients need is to discontinue the use of tea; they need to dress healthfully, take daily exercise out of doors if possible, being careful not to overdo, and sleep in well-ventilated rooms.

Care must also be taken in regard to the diet. Foods should be abstained from which readily undergo decay, for auto-intoxication is without doubt an important factor in the causation of anemia.

A great variety of foods at meals should be avoided, and attention should be given to the combination of foods. When these directions are faithfully carried out, the anemia will give place to a condition in which the blood is rich and pure and able to carry the oxygen to various structures of the body.





The Maintenance of Health by Physical Culture

Herbert M. Lome

THE maintenance of health through the medium of physical culture depends upon the faithful and consistent performances of the practises of the science. Whether failure either to acquire or continue an ideal bodily condition exists, it is invariably due to want of perseverance in well-doing, or to the environments or circumstances of daily life presenting too many obstacles to the would-be physical culturist.

Let us consider these two classes of obstacles in the order named, and by so doing, we shall learn how to conserve the health which is brought about by a course of right living. In this connection, it will be in order to repeat that the secret of physical-culture success is persistence in the methods recommended. To form physical-culture habits is not an altogether easy matter for him who has heretofore lived an unhygienic life, and the situation is complicated by the fact that a weakened condition of the physical being is almost always accompanied by a lack of will power. Still, provided one has awakened to a sense of the necessity of right living, the needed determination will assuredly follow, and will gradually strengthen in the same degree as the bodily condition is bettered. A wholesome mental attitude is as much a requisite of health as is physical soundness and virility. The one is a component part of the other, and the two, working together, bring about that last-

ing continuance of health which is the end and aim of true physical culture.

The fact that wrong habits are somewhat hard to overcome should not discourage the seeker after rugged health.



Stand upright, with arms raised over the head, fingers touching. Now raise the right leg backward, and at the same time incline the body and arms forward, raising the leg behind as far as you possibly can. This movement should be executed deliberately and gracefully. Come back to the first position, and repeat, using the other leg. This exercise teaches balance, which is equivalent to nerve and muscle control. It also strengthens the back and creates poise.

On the contrary, the fact should encourage him, because it follows that if bad habits can be formed, good habits can

be cultivated with equal facility. Likewise, good habits can become as much a part and parcel of daily existence under the new régime, as were harmful habits under the old system.

One of the encouraging features of physical culture is that the benefits of



Stand upright, the heels touching, hands at the sides. Now raising the arms until they are on a level with the shoulders, lift the right leg simultaneously, but *slowly*. Incline the body over to the left as far as possible, and hold the position until you begin to feel fatigued. Then drop the leg and arms and repeat by raising the left leg. This exercise has a good effect on the nervous system as a whole, and is also excellent for the muscles of the abdomen, groin, thighs, and hips.

its practises make themselves manifest in short order, thereby encouraging the student to continue in their observance. The practical evidences of the power of the science in the shape of one's good spirits, increasing muscles, improved digestion, and regular excretory action will prompt to increased perseverance. In some instances, the improvement will be more rapid than in others, but in all cases, as the writer can testify, the conditions for the better will be apparent almost from the start. Yet it must never be forgotten that physical defects or organic troubles due to a lifetime of improper diet, want of exercise, or general

neglect of hygienic law, can not be permanently remedied by spasmodic spells of hygienic virtue. The person who seeks to regain or maintain health by a return to the primal principles of wholesome living, must make up his mind that the benefits that he seeks can be reached only by a continuance in the straight path of hygienic rectitude.

In this connection, it might be stated that it will not do to practise one or two of the tenets of physical-culture law to the neglect of all the others. While it is true that certain shortcomings of the bodily system demand special exercises or treatment, there must be no neglect of the other things which form the physical-culture routine. If your digestion is defective, a proper diet is the first essential. At the same time, you must not overlook the exercises which stimulate the action of the organs of digestion, nor must you fail to see to it that your lungs obtain their needed supply of pure air; for if your blood be poisoned by an impure atmosphere, the stomach will assuredly refuse to do its duty, no matter what other attention you pay it. And what stands good in this illustrative instance, is equally true of all sorts of bodily conditions.

Let this fact sink into your mind: health can be maintained only by an all-round observance of everything that makes for health. If you neglect one or more of these things, your health will be comparative, and not superlative, as it should be. The old axiom that "a chain is only as strong as its weakest link," applies equally to the human body. Given a weakened organ or a physical defect, and you have that which endangers the total fabric. To maintain, you must not neglect, even to a trivial degree; and such maintenance is by no means difficult, provided you have the will power which is one of the basic elements of perfect health.

Let it be once more said that improper living is equivalent to lack of self-restraint. This quality seems to be less-



Stand upright, with the arms raised above the head, but kept apart. Now swing forward until the finger-tips touch the floor, but let the fingers be as far from the toes as possible. If you do this, the effect upon the muscles of the spine will be felt forthwith, and it is to exercise these muscles that this movement is primarily intended. This exercise is also good for the nervous system as a whole.

ened by poor health. Inferentially, it is strengthened by good health, and so it is that as one becomes stronger in body, one gathers power to refrain from those things which make for his physical undoing. Self-restraint in matters unhygienic means maintenance of health.

The second condition that militates against the maintenance of health is, as stated, that of environment, but, happily, this difficulty is diminishing with the passing years. Not so long ago the person who determined to live a physical-culture life, to nourish himself by means of a physical-culture diet, and to practise physical-culture exercises, had some difficulty in carrying out his intentions. At the best, he was looked upon as a crank, and at the worst, was considered a nuisance. Occasionally, he was regarded as a more or less harmless maniac, and in any event, he was treated as "eccentric." Fortunately, those days are past. The benefits which arise from the science are now not only widely recognized, but in addition, have created demands for spe-

cial foods, etc., which have appealed to the commercial instincts of many of our citizens. The results are that to-day one can find physical-culture restaurants in almost every large city; the popularity of athletics was never more in evidence than now; public gymnasiums and playgrounds form an important portion of the scheme of every municipality; while the trade in physical-culture garments, apparatus, and hygienic appliances in general, is assuming very large proportions indeed. So that, nowadays, there are many more aids to the maintenance of health in the way suggested than there were ten or fifteen years ago.

But for all that, the average individual who is determined that his body shall enjoy the degree of health which, normally, is the inalienable right of the race, finds himself confronted with many diffi-



Stand erect, feet well apart, toes pointing somewhat outward. Raise the hands above the head, the fingers touching. Bend the arms and head back, and then with a vigorous swing, bring the arms downward and between the legs as far as possible. Recover to the first position quickly, and repeat. This exercise is excellent for the muscles of the waist and the abdominal organs, and is also good for the muscles of the neck and shoulders. It is "stimulative" exercise, by which is meant that it increases the circulation, and incidentally, the excretive action of the skin. Perform about ten times in succession, then rest, and repeat. About fifty times is the maximum number of movements that should be made.

culties. Take the case of, say, a clerk or bookkeeper who is living away from

home. If he is an inmate of a boarding-house, he can not obtain the diet that he desires. If he shares his sleeping-room with a companion, the chances are that the latter will object to open windows at night. The ventilation of his place of business is also open to question. In all probability, he will be compelled to take a train or car from his office to his dwelling-place, owing to the distance between the two, and hence he can not enjoy the advantages of walking. Thus athletic exercises outside of those done in his bedroom, will have to take place in an indoor gymnasium. The temptation of the cheap "quick" lunch will meet him daily. The demands of fashion will prevent him from wearing easy and hygienic clothing. In short, there seems to be a conspiracy of

civilization (so-called) against his physical well-being, and, of course, his maintenance of health. Yet these, and other obstacles, may be overcome, wholly or in part, if he has the needed will power. Let him map out for himself a daily routine which shall be in accord with the principles of the science. Let this routine be of a practical nature. A little ingenuity and experiment will make this possible. Let him, furthermore, determine that he will religiously observe it,

and in this connection, he must be prepared to meet many difficulties and allurements. But the results will more than justify the effort.

The end and aim of humanity should be health, and given that, contentment

and happiness are sure to follow, while material benefits are equally certain to accrue.

All the great and successful men of our age and the ages past, have been blessed with virility and vitality. Their success has, in the great majority of cases, been based on their physical condition. Genius is a capacity for work, and work, especially of a strenuous nature, follows on health. The maintenance of health, therefore, is the measure of one's capacity for effort. Nowadays, the struggle for existence is so keen



Stand upright, with the heels touching, the toes pointing outward, the hands on hips. Now, without changing the position of the feet, wheel on the heels obliquely to the left. Next, place the heel of the right foot against the arch of the left foot, and then extend the right foot and leg forward as far as possible, letting the body follow the inclination of the limb. Come back sharply to the first position and "charge" forward to the left in the manner described. This is another "stimulative exercise," and is furthermore good for the muscles of the legs, the lower part of the back and the abdomen.

and unending that only those who are prepared to face it with strong minds and bodies can hope to be classed among the victors. This stands true of toil of all kinds, whether it be of muscles, brain, or spirit; and in each and every case, the ambitious one — the one who sees his ideals and is determined to achieve them — must take those steps for the maintenance of his health which are hewed in the steep ascent of success by physical culture.



HEALTHFUL COOKERY

Yeast Bread

Geo. E. Cornforth

IN our last lesson we discussed the cooking of grains in the form of mush. Cereals are more extensively used in the form of bread, and yeast bread is the most common kind of bread. The ideal to be kept before us in bread making is to make the bread so good that it will be, indeed, what bread has been proverbially called—"the staff of life." We hope to give in this and the following lesson such careful directions for the making of bread that any one can make the best of bread by following the directions. It seems to the person who has the habit, so to speak, that it is a very simple process. But as in everything else, experience is the best teacher, and after one has once formed the habit of going through the process in the right manner, there is no trouble in always having good bread.

Various grains have, in the past, been used for the making of bread; but, perhaps by the law of "the survival of the fittest," wheat has come to be most used for that purpose, for wheat flour seems to be best adapted to the making of bread. By reason of its large content of gluten, wheat flour can be made into a dough which will retain gas within itself and expand readily. Other grains contain less gluten, and some, such as oats, barley, and rice, do not contain any, their proteid being in other forms; therefore in the making of bread from other grains some white flour must be used with the flour from the other grains.

Difference in Food Value of Different Kinds of Wheat Flour

Many people have had the idea that there is very little nourishment in white bread. The tables issued by the United States government giving the chemical composition of food materials show that this is not true, but that white bread stands higher in total nutritive value than whole-wheat or Graham bread, and that it has nearly as large a proportion of the nitrogenous food element. Some of our readers may have seen an advertisement of a widely advertised soda cracker, in which the statement was made that, "according to the United States government analysis, these crackers are the most nutritious of cereal foods," and may have thought it was a deception. It is the truth, and yet it does not mean that soda crackers are the best of cereal foods. White flour products, while they have a greater total nutritive value, are really an "impoverished" food, because they have been deprived of some of the most important food elements which the wheat contains; namely, the mineral substances, and these are necessary for the building of bone, brain, and nerves, and, in fact, every tissue of the body; and this may account for the early decaying teeth and various bone diseases in some children fed largely upon white bread. While most people have a prejudice against dark bread, to those who are used to the sweet taste, and rich, nutty, satisfying flavor of bread made from flour which

represents the whole grain, white bread tastes flat and insipid.¹ It is no wonder that people who eat no bread but white bread are not satisfied by it, but have a craving which they attempt to satisfy with cake, pastry, meat, and the use of spices and condiments.

Bread, to be good, should be palatable, light, porous, friable, and must contain nothing injurious. In order to make good bread it is necessary to have good flour; and while the best flour costs more than inferior grades, it is cheaper because a given quantity of such flour makes more and better bread than the same quantity of poor flour. Good bread flour is made from wheat which has a large percentage of gluten, and is dry and mealy, or sandy; when a handful is squeezed, it does not retain the imprint of the fingers, but falls apart like dry sand. The best white bread flour is not chalky white, but cream white.

Flour should be kept in a warm, dry, well-ventilated place, not near any substance which has a strong odor, because flour readily absorbs odors.

Explanation of the Process of Making Bread

The first step in the process of making flour into bread is the mixing of fluid with the flour. The fluid surrounds each starch granule so that it is ready to be absorbed when heat is applied. The fluid also develops the glue-like property of the gluten, thus sticking the flour together into what is called dough. If this dough, made simply from flour and liquid, were baked, it would be hard and tough and almost incapable of mastication. In the process of bread making which we are describing in this lesson, it is the action of yeast which obviates this difficulty.

¹ A dog or a cat which will eat ravenously of Graham bread will refuse white bread. Does the animal instinctively appreciate the difference in nutritive value?

The yeast-cell is a minute, membranous, egg-shaped sack containing protoplasm. It is one of the very lowest forms of vegetable life, very closely related to common mould. It is found in the air. Having no mouth, it must take its food, which is sugar, by absorbing it in liquid form through its skin. Furnished with the four essential conditions to growth—air, food, moisture, and a temperature from 50° to 100° F.—the cell grows and multiplies, producing perhaps four buds, which grow until fully developed, and then separate from the parent cell, each putting out four buds; and so on. The higher the temperature, within the limits mentioned, the more rapid the growth. In its growth the yeast-cell feeds on sugar and breaks it up into carbonic acid gas and alcohol. Now, if we have some yeast dissolved in the fluid which we mix with the flour, the flour supplies the food for the yeast-cell, and if we at the same time supply the other condition of growth,—namely, warmth,—the yeast-cells will multiply rapidly, and the carbonic acid gas which is one of the products of their growth, will puff up the dough and make it light. The alcohol which is produced evaporates at a much lower temperature than water, and is driven off in the process of baking the bread, or evaporates soon afterward. There are three stages of fermentation; namely, alcoholic, acetous, and putrefactive. The bread should be baked during the alcoholic stage. If the fermentation is allowed to go on till the acetous fermentation begins, acetic acid, the essential element of vinegar, will be produced, and the bread will be sour. If the process of fermentation is very much prolonged, putrefaction will take place, and the gluten will be more or less decomposed.

In "yeast-cakes" the yeast-cells are lying dormant, but when they are supplied with the conditions of growth, they

become active again. Compressed yeast seems to us to be the most reliable, though many people like the dry yeast-cakes, and are able to make good bread with them. Compressed yeast is good when it appears brittle, dry, and white when broken. If it is dark colored, soft, and stringy it is poor.

Methods of Starting Bread

There are several different processes of making bread, and good bread is produced by all of them. We may choose the process which best suits our convenience, or by which we are able to get the best results. One method is to use part of the liquid and part of the flour in "setting the sponge" (which is preparing a batter of liquid, yeast, and flour); and when this is light, the rest of the liquid and flour are added to make the dough. Another method is to use all of the liquid and part of the flour in "setting the sponge;" and a third method is to dispense with the "sponge," and mix all of the liquid and all of the flour into a dough at the first mixing. The first two processes require less yeast but more time, and are convenient when it is desired to start the bread at night and finish the process the next morning.

As a general rule, with the best quality of flour, three measures of flour to one of liquid are required to make a dough of the proper consistency. The temperature of the room where the bread is set to rise should be from 70° F. to 90° F.; 75° F. being considered about the best temperature.

Tests for Lightness

A thin batter is sufficiently light when it appears frothy and full of bubbles. It will not rise much. A thicker batter, or sponge, is light enough when it has nearly doubled its original bulk. It should not be allowed to rise until it begins to fall, as it will after the gluten has expanded to its limit. The rest of the ingredients should be added before

it has risen far enough to begin to fall. If for any reason it is not possible to add the other ingredients as soon as the sponge is ready, do not allow it to stand, but stir it down. To test the lightness of a dough, hit it a sharp tap with the backs of the fingers. If a hole sinks into the dough where it has been struck, it is sufficiently light, and should be worked over. If it remains firm after it has been tapped with the fingers, it may be allowed to rise more. All that is necessary to do to the dough when it is light enough, if it is to be allowed to rise again, is to press it down in the middle, then fold it in from the sides into a hard ball, then turn it over. The dish in which it was put to rise should have been oiled to prevent the dough from sticking to it. The dough may be molded into loaves after it has risen once, or it may be allowed to rise twice, or even three times, before it is molded into loaves, if it is not allowed to rise too much at any time. The more times it is allowed to rise, the lighter and finer grained the bread will be, but some of the flavor of the wheat will be destroyed. To retain the sweet, nutty, wheat flavor, the dough must be allowed to rise less times, and then it will be less light and spongy. This makes the difference between baker's and home-made bread. It is sometimes said that there is nothing to baker's bread, but that home-made bread seems so satisfying.

It is important to know when the bread is sufficiently light after it has been molded and placed in the pans. If it is allowed to rise too much in the pans, it will fall when put into the oven; while, if it is not allowed to rise enough, it will not be sufficiently light when baked. The more times it has been allowed to rise before it is put into the pans, the more it may be allowed to rise in the pans. It must not be allowed to rise to its limit before it is put into the oven, but must rise some in the oven.

As a general rule, it may be allowed to rise till it has a little more than doubled its bulk. If the dough has risen only once before it was put into the pans, it should, perhaps, not be allowed to quite double its bulk. It is better to bake it a little too soon than to allow it to rise too much. If it rises too much, even if it does not fall, it will be coarse grained. If the dough should get too light in the pans, it may be molded over, and allowed to rise again.

Process of Kneading

A thin batter, or sponge, may be mixed with a spoon, but a dough is too stiff to be thoroughly mixed in that manner, and must be mixed by kneading. The purpose of kneading, it must be remembered, is to blend thoroughly the ingredients which have been already mixed, and *not* to make the dough stiffer. The process is a rolling motion which does not require much pressure; the dough is simply kept in motion, drawing it toward one with the finger-tips, then rolling it away from one with the palms of the hands, as illustrated in Fig. 1. This rolling motion is continued until the dough becomes very much elongated, when it is turned at right angles, and the process is repeated. Not much flour should be used on the bread board, but the dough should be kept from sticking by keeping it in motion, and when it is thoroughly kneaded, the dough will not stick to the board, though it be soft.

It is not possible to make as good bread, especially whole-wheat bread, by hand as by mixing it with a machine. There are bread mixers for home use on the market which save time and labor in kneading, and make better bread. To make good whole-wheat bread it is necessary to mix a dough softer than can be thoroughly mixed by hand, and this can be done with a bread machine. The lightness of bread depends considerably upon the manner in which it is molded into loaves. If the dough has been mixed by hand, when it is ready to mold into loaves, divide it into the required number of pieces. Then mold each piece into a hard round ball, as shown in Fig. 2. The process is a little different from the kneading of the whole mass. The left hand is kept behind the piece of dough, while the right hand works in front of it. The right hand draws the dough toward the left hand, then presses it with the palm, the dough being turned a little after each forward and backward movement, thus going around the piece till it is formed into a firm ball. After all the pieces have been formed into balls, you may begin with the first one to mold into loaves. If the dough was mixed by a machine, this forming into balls is not necessary. The molding into loaves is shown in Fig. 3. First hit the piece of dough two or three sharp blows with the fist, fingers downward, so as to flatten it out, then fold each side in toward the



FIG. 1. KNEADING THE DOUGH



FIG. 2. MOLDING EACH LOAF INTO A BALL

middle enough to make the sides overlap a little as they are folded together; then fold toward you a little of the end that is farthest from you, and then roll the dough up into a hard roll as shown in Fig. 3, rolling the dough toward you with the fingers, then pressing the thumbs into it to roll it tight, then rolling it toward you again and pressing it together tightly with the thumbs, till it is all rolled up. Then if it is not long enough to fit the pan, roll it out with the flat palms of the hands. This is a process which is difficult to describe. It almost needs to be seen to be learned; but when molded in this manner, the bread will rise more in the pans without falling when put into the oven, and will rise more in the oven. In molding do not be afraid to pound the dough and to press it hard. Do not feel that you must handle it care-

fully, so as not to get any gas out. If the loaf is soft when you put it into the pan (I mean soft because it has not been molded tightly, not because it is not a stiff dough, because the dough should not be stiff), it will be apt to rise flat on top instead of as a roll, and will be apt to fall instead of rise in the oven. In all stages, when set to rise, the bread should be covered, to prevent the surface from becoming dry. It is well to have the sponge or dough in a dish with a tight-fitting cover. After being placed in the pans, a cloth may be placed over it.

Temperature for Baking

The proper baking of the bread is as important as any other part of the process. When the bread has sufficiently risen, it must be placed in a temperature sufficient to stop the fermentation,



FIG. 3. MOLDING INTO LOAVES

to destroy the yeast plant, to render permanent the cells formed by the carbonic acid gas, and to cook the flour. The heat must not be so great as to burn the outside of the loaf before the inside of it is sufficiently cooked. A loaf of ordinary size should bake about one hour. With an oven thermometer, it is possible to know exactly when the oven is at the proper temperature. There should be sufficient heat to keep the temperature of the oven at from 400° to 450° F. after the bread is in the oven. The temperature must be above that before the bread is put in the oven, and how much above that it should be will depend upon the amount of bread to be baked. In the absence of a thermometer, experience must teach one the proper temperature. It is said that "a good way to test the heat of an oven is to put in a piece of white paper. If it turns a dark brown in five minutes, the oven is of the right temperature, but if it burns, the oven is too hot; if the paper is only light brown

at the end of the five minutes, the oven must be made hotter."

Bread is sufficiently baked when it sounds hollow when tapped on the top with the fingers, and a well-baked loaf may be lifted from the pan upon the bare hand without burning it.

For the benefit of any who may wish to know the food value of bread for the purpose of comparing it with other foods, we give the following figures:—

Food Value of Breads in Calories

	Proteid	Fat	Carbohydrate	Total
Graham bread	10.3	4.8	60.4	75.5
Whole-wheat bread	11.2	2.4	59.6	71.2
Rye bread	10.4	1.6	61.7	73.7
White bread	10.6	4.2	61.8	76.6

From this table it will be seen that bread contains more than ten per cent proteid, and therefore more than the proportion of proteid which the body requires.

The next article will give recipes and careful directions for making various kinds of bread.





The Effects of Tobacco

IN the minor, the use of tobacco in any form is highly injurious, interfering with the normal development of the mental powers, producing various nervous disturbances, especially nervous disturbances of the heart, as manifested by palpitation, weakness, irregular action, irritability, and anginal pains.

That the habitual use of tobacco by the young causes stunting of the physical and mental growth, is set forth in the observations of Seavers, of Yale University, who has for years studied the growth of students during their four-years' time at the university. He observed that those who do not use tobacco increase in weight, height, chest girth, and lung capacity more than those who do use it. He states that Hitchcock, of Amherst, has made like observations.

On those who are more advanced in life, from forty upward, tobacco seems to spend its force more particularly on the eyes, producing a gradual but progressive reduction of the visual power, together with a confounding of colors for central vision. Out of something like three thousand cases examined by me, during a period of ten years, in the tobacco factories of Cincinnati, more or less disturbance was noticed in about five per cent of the cases among the male employees who used tobacco to excess. The females were exempt.

The deleterious effects of tobacco on the system in general, or on the eyes, are due, as we all know, to the presence of a poisonous ingredient called nicotin. This oily, colorless fluid diffuses itself

into the blood with as much rapidity as prussic acid, and a poisonous dose has been known to kill an adult in three minutes. Nicotin, when heated to two hundred fifty degrees, becomes volatilized and decomposed; but if watery vapor is present, volatilization takes place without decomposition. When dry tobacco is smoked, the greater part of the nicotin is decomposed by the heat, and passes off with the smoke. The more moist the tobacco,—and the cheaper grades are usually damp,—the more this is retarded. The cheaper grades of tobacco contain more nicotin than the more expensive ones, and consequently are more injurious to the consumers. The tobacco used for chewing purposes is usually very rich in nicotin. The action of nicotin on the blood is an interesting one; it first produces a temporary increase in the blood pressure; this is followed by a more prolonged reduction of the pressure, and this again is followed by an increase in the blood pressure (Tschirwinsky).

On the blood-corpuscles themselves, nicotin exerts a marked influence. The red corpuscles become serrated in appearance, and when the drug is administered in large doses, partial disintegration of the corpuscles takes place. In the experiment of Hare, they are shown to arrange themselves in columns, instead of in rouleaux, in such a way that the edge of one corpuscle touches the edge of its neighbor. If the poison is added to the specimen under the microscope, the red corpuscles appear to disintegrate, and their diameter becomes

smaller, whereby for the most part their concavity is diminished, and they become colorless and transparent. Vas has shown that in chronic tobacco-poisoning the number of red corpuscles is reduced, whereas the number of white corpuscles is increased. The action of the poison is particularly marked on the white corpuscles. Their motion, which on the artificially warmed slide continues, is, as the Hare experiments show, immediately retarded by the addition of nicotin; the blood-corpuscle, on its part, breaks up into eight or more divisions, which from time to time separate and swim in the fluid independently of each other. These divisions are round in appearance, and bear a strong resemblance to the red corpuscles. The globular shape which the white corpuscles often assume does not appear after the addition of nicotin; but the protoplasm remains without change in the condition in which it appeared when motion was suspended.

Nicotin exerts a direct action on the oxyhemoglobin, and it is probable that it is in the reduction of the latter that nicotin acts as a causative agent in the production of asphyxia [air starvation]. The disintegration of the red corpuscles described above points to the correctness of this conclusion; therefore, death following nicotin-poisoning is not simply in consequence of the usual asphyxia from depression of the respiratory center, *per se*, but is due to the fact that the hemoglobin fails to carry oxygen to the various parts of the body.—*Francis Dowling, M. D., in Journal of the American Medical Association.*



The Cause of Leprosy

IT can be asserted without fear of contradiction that Hansen's bacillus is the specific microbe of leprosy. It has, however, been impossible as yet to find a medium in which it can invariably be cultivated outside the human body. The

disease is contagious from person to person, but the precise way in which contagion takes place has not been demonstrated. It is a matter of experience that leprosy is prevalent under conditions of personal and domestic uncleanness as well as overcrowding, especially where there is close and protracted contact between the sick and the healthy. The possibility of indirect contagion effected by fleas, lice, bugs, and the itch parasite can not be ignored. . . .

The view that leprosy is a hereditary disease receives little support at the present time. The food theory, and especially the alleged causation of leprosy by fish, did not find much favor with the delegates at Bergen [the second International Conference on Leprosy, held at Bergen this autumn under the presidency of Dr. Hansen, the discoverer of the leprosy bacillus]. . . .

It is essential that in countries afflicted with the malady, no leper should be permitted to take part in certain trades, and no leprous vagrants should be allowed to roam throughout the country. Compulsory notification and segregation of lepers in settlements or institutions where some sort of home life is possible should be strictly enforced. The healthy children of lepers should be separated at once from their parents, and medically examined from time to time, as should also any persons who may have been found living in lepers' houses. . . . There can be no doubt that leprosy is disappearing from highly civilized countries, and that, on the other hand, it lingers in lands which are semicivilized, or where cleanliness of person and environment is not cultivated. So that it seems necessary that precautions against the spread of leprosy from person to person should be further supplemented by general measures having for their object the sanitary improvement of the conditions under which the common people live, and their

education in habits of scrupulous cleanliness in the widest sense.—*London Lancet, Editorial, Sept. 25, 1909.*



Rabies Due to Indifference

LET us compare the question of the elimination of rabies in this country with that question in Great Britain. Only a short time ago there was a great furor in this city, and each year we have to deal with this same dread affliction upon our people. In Great Britain there exists no rabies. It is absolutely free from even a single case; so much so that when Professor Woodhead desired to obtain an animal dying from this disease, he was unable, after searching all through the kingdom, to find one, and had to send outside of his own country to get one. I think we could have supplied him.

This is how they did it. No dog—big or little, great or small, with or without a pedigree—can enter Great Britain until it has been under surveillance for at least six weeks. No politics, no influence, no appeal to the man higher up, can admit the lady's pet poodle or the master's big Dane until after this period of probation. At the time the law was enacted, every dog was compelled to be muzzled for at least six months, and then carefully watched afterward.

This of course becomes almost impossible in our country, because we have what is known as State rights, and no general enactment promulgated by Congress can regulate the internal working of the States only so far as it affects contiguous States. The regulation of keeping pigs in the yard and cows in the coal-shed was vigorously opposed by ignorant and selfish people. Only recently the ordinance for the muzzling of dogs was equally strongly opposed, and following up its passage, it has been allowed to supinely rest. The public conscience was only stirred a little because a poor child was bitten by a rabid dog. But

this sentiment has again fallen into a state of lethargy, and the stray animal roams around with almost as much freedom as of yore.—*M. G. Linthicum, A. M., M. D., in Maryland Medical Journal.*



Make a Business of Getting Well

THERE is no more important point for a tuberculous patient to grasp, whether he be affected in the lungs, the joints, the glands, or elsewhere, than the fact that tuberculosis is not cured in six months, the time that most patients plan to take treatment. In reality the reason why permanent results are not more frequently obtained in the treatment of this disease, is due largely to the fact that both patients and physicians have failed to grasp this important point; namely, that tuberculosis requires four or five years of careful, well-regulated living to effect a successful cure. By this we do not mean that these years must be spent living away from home, or if at home, upon a veranda doing nothing, but we mean that the manner of living which caused the breakdown must be avoided; that the patient must ever keep before him the fact that for this period of years he must subject himself to no strain that is not absolutely necessary. It is a curious fact that the majority of patients who, having regained their health, break down again, do so not on account of the work they do, but largely for the reason that they find it impossible to give up their play.

One writer has spoken of the deleterious effects of late hours, poor ventilation, and injurious practises which are often associated with amusements. It seems to us that certainly for the period of probation, which we may say extends over a period of at least two years, the convalescent should make up his mind that he can not work, play, and get well; he can play and get well, or he can work

and get well, but he can not, to reiterate, play and work and get well. This is such an important point in the lives of many patients that we feel that we can not emphasize it too strongly.—*Journal of Outdoor Life, May, 1909.*



Home Treatment of Scarlet Fever

DR. MILNE tells nurses and parents to "rub the patient most carefully from the crown of the head to the soles of the feet," including the armpits and the roots of the hair, with a ten-percent carbolized oil, or preferably with oil of eucalyptus. Rub morning and evening, the first four days, then once daily for six days. Swab the throat every two hours for the next twenty-four hours, with carbolized oil. The author, using this treatment, has never seen a case of nose, ear, or kidney disease, and the severity of the attack is greatly modified. He claims that with this method, there is no need to disinfect afterward; but this may be questioned. As a diet, he gives soda-water and milk and water, then in a few days a light diet, and at the end of ten days, the ordinary diet.—*Archives of Pediatrics.*



Roller Skating

THE evils of roller skates are not limited to the collisions so frequently observed between humble pedestrians and the young flying barbarians who are addicted to the roller-skate method of locomotion. A physician who has given some thought and attention to the matter asserts that the excessive use of roller skates tends to develop flat foot, faulty development of the foot and leg muscles, and more or less irreparably injures the gait and bodily carriage. When it is considered

that any evil that may arise from roller skating is exerted in the growing period, when muscles, bones, and joints are most subject to modifying tendencies, there can be no doubt that the excessive use of roller skates is harmful. Muscles ordinarily brought into play in walking, those of the feet particularly, fall into disuse in roller skating, while other muscles are abnormally developed. The result is more or less malformation of the body, especially of young girls, with loss of the normal curves and lines that make the human form lithe and beautiful. Walking promotes such physical beauty, and by developing special powers of equilibrium and movement overcomes natural awkwardness. It would seem wise, therefore, that physicians and parents should carefully consider the roller-skating craze, and see that the young and undeveloped are not allowed to carry it to excess.—*American Medicine, July, 1909.*



Bovine Tuberculosis

IT is now more or less a matter of agreement among the majority of medical men that tuberculosis can be transmitted and spread by infected milk. As for the danger to be feared from the consumption of meat from a tuberculous animal, opinions are far less decided, and perhaps the view generally held is that infected meat is not often, if ever, a means of transmitting tuberculosis. In other words, it may be stated that milk from tuberculous cows may be looked upon as a grave menace to the health of the country, but that sufficient is not known concerning the danger to be apprehended from tuberculous meat to warrant a definite statement being made.—*Editorial, Medical Record.*

Abstracts



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.

The Alcohol Question From Various Standpoints

Scientific

PROFESSOR LAITINEN, director of the Hygienic Institute in the University of Helsingfors, Finland, who two years ago at the Stockholm Congress presented a report of his investigations of the effects of small quantities of alcohol upon immunity in animals, and upon the growth and development of their offspring, reported at the London Congress, in two papers, the results of parallel investigations upon men. The work upon immunity included experiments on two hundred twenty-three persons, of different classes and ages. Five different series of investigations of the blood-corpuses and the blood serum showed decreased power of resistance in drinkers. The conclusion was that alcohol, even in comparatively small doses, exercises a prejudicial effect on the protective mechanism of the human body. Professor Laitinen gave full consideration to the fact that the power of resistance varies greatly in different

human beings, and for that reason used so large a number of subjects that he was able to work from averages, obtaining as a constant result the weaker resistance of the drinker.

The report on the influence of alcohol on the degeneration of human offspring contained tabulated data showing striking differences between the offspring of drinkers and of abstainers. To get this data, fifteen thousand circulars, asking the necessary questions, were issued, and the answers compared with a study of all the inhabitants of a little country town, where the drinking habits of all the people were well known to each other. The collection of the material extended over six years. Information was obtained from more than five thousand families, and included more than twenty thousand children. The comparative ability to live, and the rate of growth and development of the children of abstainers, moderate and heavy drinkers, obtained by this investigation, is shown in the following table:—

	ABSTAINERS	MODERATES	DRINKERS
Number of families.....	1551	1833	2461
Number of children.....	3695	6673	9640
Living children.....	86.55%	76.83%	67.98%
Children that died.....	13.45%	23.17%	32.02%
Weight of girls at birth.....	3600 gms.	3570 gms.	3470 gms.
Weight of boys at birth.....	3870 gms.	3780 gms.	3700 gms.
Weight of girls at 8 mos.....	9090 gms.	8910 gms.	8880 gms.
Weight of boys at 8 mos.....	9880 gms.	9810 gms.	9150 gms.
Toothless at 8 months.....	27.5%	33.9%	42.3%
Av. No. teeth at 8 mos.....	2.5%	2.1%	1.5%

Medical

Dr. Holitscher reported the results of an inquiry made of a great many hospitals as to the comparative death-rate of the alcoholic and non-alcoholic treatment of pneumonia and typhoid fever. Statistics collected from forty-seven hospitals showed that among two hundred thirty-eight cases of pneumonia treated with alcohol the death-rate had been 24.3 per cent. Among two hundred forty-eight cases treated without alcohol it has been 21.3 per cent.

Of forty-seven cases complicated with delirium tremens, alcohol was prescribed in twenty-one cases, of which fifteen ended fatally, while of twenty-six parallel cases treated without alcohol, only nine died. This showed that there is absolutely no foundation for the prevalent idea that alcohol is needed at least in inebriate cases.

Of one hundred sixty-one typhoid patients reported on by eight institutions, eighty were treated with alcohol, of whom fifteen died; and eighty-one were treated without alcohol, of whom twelve died.

Legal

Among the legal measures recommended for dealing with the criminal inebriate were the following: If a drinker has committed some breach of the law, and if it has been ascertained by medical opinion that the accused is a habitual drinker, the law must sentence the man to be interned in an inebriate home.

If the drinker shows himself to be incurable, he should be sentenced to perpetual custody in an asylum.

Legislation for inebriates was also discussed by Dr. R. Welsh Branthwaite, inspector under the Inebriate Acts, England, who said that every inebriate is a potential criminal, a burden upon public funds, a danger to himself and others, or a cause of distress, terror, scandal.

or nuisance to his family, and those with whom he associates. Every inebriate, moreover, by precept, example, neglect of children, and possibly by direct pre-creation of his species, is contributing to the supply, reproducing his like to the detriment of national welfare in years to come. Interference with the liberty of the inebriate, so that the persons and liberty of others may be safeguarded, is therefore justified, and to carry this out, legislation amply protected against misapplication is needed.

Efficiency

Mr. Karl Kogler, of Vienna, discussed the relation between alcoholism and the working men's insurance. He said that alcohol increases the number of diseases, lengthens the time of sickness, shortens life, aggravates the effects of wounds, and causes premature incapacity. It leads to a degeneration of the whole race, and thereby to a general increase of the risks for every class of workman's insurances. As a result of a circular issued by the insurance department of the German government to the business associations and institutions for disabled members, all the business committees of the insurance associations recommend their members to combat alcoholism.

The returns from a regiment in North China showed the sick-rates among the non-abstainers in 1908 to be two and one-half per cent, while among the abstainers it was only one-half of one per cent. In an artillery company in Mauritius the abstainers were all reported in good health; the non-abstainers, 76 per cent in good health, 19.5 per cent fair, 4.5 per cent bad. Reports of conduct from North China showed the abstainers 95.5 per cent very good, 4.5 per cent fair, none bad; the moderate drinkers, 79 per cent good, 18 per cent fair, 3 per cent bad.

Field Marshal Sir George White told of his early days, and of the time when he was commander-in-chief in India. An enormous and astounding change has come over both officers and men in the army. The army recognizes that soldiers must be gentlemen and sober men to be of any use. Of the seventy thousand soldiers in India, forty-two and five tenths per cent are enrolled abstainers.

Vice-Admiral G. King-Hall, reporting for the navy, said that his experience after forty-four years of service is that

about eighty per cent of the offenses against discipline are due to alcoholism. There are now about twenty-five thousand total abstainers belonging to the Royal Navy Temperance Society, with branches on nearly all ships. Lord Charles Beresford wrote the speaker that marked decrease of crime in the service is due to decreased drinking habits, to marked improvement in temperance sentiment in the fleet, and to the support given it by officers and men.—*Abstract of Addresses at the London Congress, in the Scientific Temperance Journal.*

Starch Digestion in Babies

IT is frequently argued that because there is no starch in human milk, infants should be given no starch-containing foods during the first few months of life. On the other hand, we have the testimony that barley-water can be used to dilute cow's milk during the first few days of life as well as subsequently, with no damage to the child, and often with decided benefit. Perhaps the truth lies between these extremes.

Not much stress can be laid on the absence of starch in human milk; for when a baby is artificially fed, it is of necessity placed upon a food differing from mother's milk. The proteid is not identical in human and cow's milk, and no scheme of laboratory modification will render it identical. It is not essential that the carbohydrate in infant feeding be milk-sugar. Cane-sugar is often used, and there is much in favor of starch in preference to cane-sugar for this purpose.

I hope to show that our ideas on the subject of starch in infant feeding require modification, and that with proper limitation in the quantities given and in the form in which it is prescribed, it is

a more rational diluent of cow's milk than water, gelatin solution, etc.

Chemical tests show that the starch-converting ferment is formed in the infant mouth during the early months of life, even in the new-born, though it is more active as the infant grows older. About one cubic centimeter of saliva is secreted in twenty minutes at the end of the first month of life, but at the end of the third month this quantity is secreted in two minutes.

Experimental work with the discharges of infants fed partly on starchy foods shows that a considerable proportion of the starch is utilized, the amount varying with different infants. By means of a modification of the bead test it has been demonstrated that newly born infants can digest cooked flour perfectly.

Jacobi has always advocated barley- or oatmeal-water as a diluent of milk, even in the first few weeks of life. Milk and barley-water is a practically universal diet in this country for artificially fed infants. For many years I made use of it in the second month of life, though in some cases water seemed preferable.

Starch serves two purposes in infant

feeding,— for nutrition, and to aid in the formation of a finer curd. The nature of the starch affects its value as a food, some varieties being acted upon much more rapidly than others. Potato starch seems to yield most readily, and after it, wheat, maize, and rice starch in the order named. Starch is acted upon with difficulty unless it has been previously converted by heat into "soluble starch."

The evil effects of starch in the food in early life are due to the quantity and mode of administration, and not to the starch itself. Artificially fed infants are prone to digestive trouble, whether fed on modified milk alone or with some starchy diluent; and this disturbance is more marked if the starch is increased at the expense of the milk.

It is easy to understand that if a child is fed on arrowroot gruel, corn flour, etc., the milk being more or less omitted, it is certain to be ill as much from the proteid starvation as from the excess of starch; but I have known a baby to remain apparently well for six months, although it had been fed entirely on thin oatmeal

gruel, proving that in this case at least there was no such thing as starch poisoning.

As an evidence of the beneficial effect of starch in the early months, we have the common practise, during intestinal disorders, of withholding all milk and putting the child on a diet of barley-water or rice-water. These form unsuitable media for the germs which flourish in the milk, and so act as an intestinal antiseptic.

Practical experience has shown that the usual barley-water contains about two per cent starch. If this is mixed half-and-half with milk, there will be only one per cent of starch in the mixture. Such an amount is not injurious, and is most certainly beneficial in preventing the growth of putrefactive bacteria.

In beginning the use of starch solutions in milk, they should be first given very dilute, not over one-half per cent starch, and then gradually increased.—*Edmund Cautley, M. D., Cantab. F. R. C. P., London, in the Lancet.*



THE MEDICAL FORUM



The Increasing Use of Remedial Agents Other Than Drugs

THE *Therapeutic Gazette* is a medical journal that stands pre-eminently on the side of drug medication; in fact, it is given over very largely to the discussion of treatment by drugs. This fact renders even more significant the following statement, which appears in the editorial columns of the November *Gazette*, under the above caption:—

“Without any intention of diminishing the importance of drugs in the treatment of disease when they are properly employed, it has always been our effort to encourage to the utmost the use of remedial measures other than drugs, since such measures, if employed with average intelligence, rarely possess the power of doing harm, and often accomplish an immense amount of good. It is one of the encouraging signs of the times that physicians everywhere are employing remedial measures other than drugs on every possible occasion.”

That the advance of knowledge regarding what we call “rational” or “physiological” therapeutics is having an excellent effect in displacing some of the more harmful old-time measures is frankly admitted.

“In this connection it is interesting to note that with the employment of hydrotherapy in the treatment of various fevers the use of alcohol as a remedy has materially decreased.”

But with this admission is the proviso that—

“this diminution in the amount of alcohol employed does not indicate that the drug is useless under all circumstances, but that hydrotherapeutic measures are generally more advantageous.”

Perhaps that is as much of an admission as might be expected at present, but sentiment is rapidly growing in that direction.

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Play Versus Suicide

WE may not agree with all the editor of *American Medicine* says, but there is a truth behind his utterance regarding this topic (August, 1909), which we do well to ponder:—

“The medical profession can do more than they have in preventing suicide, by advocating more play and relaxation. Fun is as necessary to health as work, and we may find that the proverbially good-natured fat men never kill themselves. They have too good a time. The typical suicide is the lean, underfed, overworked, overworried, playless fellow, who enormously overestimates the importance of his own work, and whose brain is so starved that it can not do good thinking.”

This will do very well as a generalization, though the observant person will doubtless recall many exceptions. The fact is, many among us get a wrong perspective. Some insignificant incident looms up so large as to shut out the view of everything else, and cut off all desire to live any longer. That this faulty perspective is due to lack of *avoirduois* or to insufficient play has not been proved; yet the fact remains that the majority of suicides have the characteristics outlined by the doctor.

Possibly we may yet have a “tennis cure” or a “golf cure” for the suicidal

mania, though I would suggest the automobile cure or the aeroplane cure, as doubly advantageous in that, if they failed to overcome the desire, they would furnish the ready means.

It has often seemed rather paradoxical that most of the people who commit suicide *via* the automobile are men who take an intense interest in life. Would it not be more fitting to turn the autos over to the men who are determined to get out of the world? Perhaps a "joy-ride" or two, if not ended in a smash-up, would make them want to live.

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Is There a Dog in the Manger?

THAT physicians recognize in psychotherapy, as practised by non-medical or "irregular" practitioners, a formidable rival, is evident from expressions from representative physicians.

Witness this from a lecture before the American Therapeutic Society, delivered by a prominent neurologist of Canada, a London graduate:—

"The sooner we honestly face the shameful but undeniable fact that unqualified empirics can relieve distressing affections in cases that have defied medical skill, can produce results where we fail, the sooner will this flagrant lack in our system of education be remedied, and the better it will be for the dignity and honor of the medical profession.

"While the present state of affairs lasts, in which most physicians are not given five-minutes training in psychology in the five years of their student life, and in which there is no teacher of clinical psychology in any university or medical school in the country, our profession must submit to being the prey of the charlatan and the mock of the scoffer."

If honest confession is good for the soul, there must have been a real soul-

feast in that therapeutic body—composed of some of America's ablest physicians—about the time of that utterance. And yet men are trying to limit all mental therapeutic measures to the medical profession.

This is by no means an isolated statement. Here is another by a neurologist in the September issue of the *California State Journal of Medicine*:—

"The public require and demand psychic treatment. They receive from the medical man, burdened with the complexities of his art, only indifference or an affectation of knowledge which they are quick to penetrate."

He urges the establishment of courses in our medical school to fit men for this kind of work.

"In the meanwhile, the doctor who endeavors to bungle through the treatment of a psychoneurotic case, without understanding psycho-physiology and pathology, and with only a rough empirical experience, is guilty of a crime to his profession."

A California physician in an article on psychotherapy in the *California State Journal of Medicine* acknowledges the same condition.

"When scores of people are being cured by lay unscientific people (I care not if these be proved functional neuroses, moral obsessions, or neurasthenia, they are diseases that doctors have not helped to cure), there is something omitted from our treatment which we, if true to our vocation and training, should use."

Granted that psychotherapy is a two-edged sword, often doing more harm than good, where is the advantage of giving the regular profession the monopoly of it, when confessedly they have had no training in that line, and when the "irregulars" cure many cases on which the "regulars" fail?



The Medical Missionary At Work



Missionary Nursing in Argentina, South America

Miss Meda Kerr

LIFE as a foreign missionary in South America is very different from what we expected when we left home. I supposed that I should be out among the natives working where there was very little civilization; but instead of that, we find ourselves in a modern city, different, though, in many ways from our home cities,—narrow streets, low buildings, etc. But we are glad we are here; for the dear souls behind these stone walls must have the gospel, and we are thankful to be instruments in the Lord's hands to carry the truth to them. It will take a great deal of patience and careful watching, to grasp every opportunity to sow seed. Catholicism holds full sway here, and God alone can open the doors to let in the gospel light. We gather the children on the Sabbath, and hold Sabbath-school with them, hoping in this way to reach the parents.

I have been out on a case in an English family. The physician, who was Spanish, was glad to have me use our treatments. A child had whooping-cough, complicated with pneumonia. We used tub baths, chest packs, and regular pneumonia treatment. It was a close call for the child, but the Lord added his blessing to our work, and the little one has been restored to health. This family is influential, and we have met some of their friends, and through

them have become acquainted with two of the best Spanish doctors. We have visited about forty physicians, but have not seen all in this place; the cities here are overcrowded with physicians. We have walked the streets over the cobblestones until our feet are very sore. The physicians seem to be glad to get hold of a trained nurse, and I hope we are going to be able to do a good work for them, and thus gain the confidence of both the physicians and the people.

I have been out caring for three small-pox cases in one family. I was with them four weeks, on a cattle ranch, one hundred miles out from Montevideo. We are not afraid to go among these cases, because we know that the Lord is directing us, and he will send us where we can do the most good. These people were excellent English people, and I had several opportunities to present some phases of our work before them; I hope I have sown some seeds of truth which will bear fruit for the Lord. They improved rapidly, and are all doing well.

On my way home I met Brother Maas and Dr. Habenicht and family, who were just arriving from the States. I went out in a rowboat to the steamer to see them. We had a chance to talk with them for a little while. It did seem good to see some fellow workers. Mr. and Mrs. Charles Foster were also on board.

This climate is very much like California [Miss Kerr's former home], but the houses are of stone and cement, and when they once get cooled off, it is impossible for the winter sun to heat them. Our spring is supposed to open the first of September. We have felt the cold in the winter very much, and shall be glad to see spring coming.

Everything here is expensive. It costs a great deal to live. Potatoes are four cents a pound. We can afford to have them only once a week. Cheap beans are ten cents a pound, and the better ones fifteen cents. Room rent is very high, twenty-five dollars gold for three rooms.

Work goes slowly in this dark land,

but I am glad I came. I wish I could say something to influence others to come and help us in this needy field, where souls are perishing daily without God and without hope. We each need to be baptized with power from on high, that we may stand where God wants us, and where he can use us in his work.

We have more work than we can do now. Miss Bockman has been out on a case for seven weeks. We see some fruits of our labor. We are of good courage and in good health.

How much I would enjoy an evening in one of our Loma Linda [sanitarium in California] Friday evening young people's meetings again. We look back now upon our many privileges, and wonder that we prized them so little.

The Mussoorie (India) Dispensary

Louise Scholz

THE first eight days of the month of June, we treated twenty-three native men and women in the Mussoorie dispensary, but the work has increased very much since that time. The second week we had 62, the third 115, and altogether in the month we treated 493 patients. Of these, 50 were women, 55 children, and 388 men. Our report for July is 1,310 patients. A girl only fourteen years of age, who had been suffering from fever for over a year, was brought in on her husband's back. After receiving treatments for about a week every day, a remarkable change has taken place in her condition, and the fever has almost left her.

Although the people bring large bottles along for medicine, we do not give many drugs, but treat by hydrotherapy instead. Not long ago I was invited by a Mohammedan to visit his wife. He was waiting for me in the bazar, when I came

from my work, and took me into a house with a very narrow entrance. In order to reach the room where his wife was, I had to climb a high, narrow ladder. I did not notice how steep the ladder was until I was ready to go down, and, for fear of falling, had to go down backward. When I got down, four or five women gathered around me, and offered me a chair, to sit down and teach them. O how I longed to be able to speak to them, and tell them about Jesus!

Another man called me to see his sick wife. I found her lying in a dark, damp room without any window, and covered with dirty blankets. The poor woman, unaccustomed to being visited by a white person, was very much frightened. While I examined her, the husband was standing in the other room, where he could watch me.

At the dispensary sometimes we have multitudes standing up to the middle of

the road, waiting for an opportunity to be treated. The blind as well as the deaf come for help. It reminds me of the time when Christ was ministering to the sick and needy on this earth, and how he healed them. I long to see the same power manifested in this work. Why is it that we do not have this power? We have the promise to do even greater things than Christ did. As recorded in Matt. 17:20, when the disciples asked Jesus why they could not cast out the devil, he answered: "Because of your unbelief: for verily I say unto you, If ye have faith as a grain of mustard seed, ye shall say unto this mountain, Remove hence to yonder place; and it shall remove; and nothing shall be impossible unto you." May this work glorify Christ, and bring the rich as well as the poor to a knowledge of the Great Physician.

These poor people in India need to be taught with great patience and meek-

ness in the right health principles. God has said he places among us the poor and helpless to be dependent upon our care, to test the professed followers of Christ. We must do our best. By our love and service for his needy children, we prove the genuineness of our love for him. "As ye have done it unto one of the least of these my brethren, ye have done it unto me." May God keep us humble, and fill us with the fruits of the Holy Spirit.

As the result of our dispensary work for the poor, one patient from among the better class of Hindus has been brought up from Dehra Dun to the sanitarium.

We see patients recover, and know it must be by the Lord. It is wonderful how God blesses us in this work. I am studying hard to get the language, so that I may be able to speak to these poor people. We have a great responsibility in this field. My courage is good. I trust in the Lord.

Our Medical Mission in Germany

Dr. E. Meyer

WE would like to tell the readers of this magazine something of the work in connection with the Friedensau Sanitarium. We have more cause than ever to exclaim with the psalmist, "Praise the Lord, O my soul, and forget not all his benefits."

Since the opening of our sanitarium in 1901, its circle of influence has been continually increasing. Although our arrangements may have been quite primitive at the beginning, yet from year to year our equipment has been more fully perfected, until to-day we compare favorably with the best-fitted-out sanitariums. I would not be understood to intimate that the appliances are the chief thing for an institution of this kind, but

as there are so many sanitariums and other places for the treatment of the sick, it is but natural that we take into consideration the outward appearances, by which the public so largely judge of the efficiency and equipment of an institution of this nature, and somewhat keep pace with them in these respects.

We are able to take care of about seventy patients at the sanitarium, but as we can use tents and open-air cottages at the height of the season in summer, we accommodate one hundred regular guests during this time. Aside from these, hundreds from near and far come to us for medical consultation. Many of the patients state that their attention has been called to our work through the

columns of the German health journal, *Gute Gesundheit*. Of course this encourages us to attempt still more for that paper. At the time our sanitarium was begun, the German *Good Health* had an edition of about 6,000; two years ago, the circulation had increased to 12,400, and now it is 16,500.

We also regard it as a good sign that many of our patients come back to us for treatment, if they are in need of rest and recuperation, instead of going elsewhere. Unsolicited testimonials of our guests show us now and again what the great need of the world is. Earnest sympathy in their welfare, and a friendly manner, is good for all those who are ill. Only a short time ago a young lady patient, who was making her first visit at Friedensau, said that she felt quite at home here, and she certainly would get well at this place, as all were so friendly to her. Now, although friendliness and kindness are self-evident virtues of the Christian's character, still such expressions as these encourage us to greater earnestness in that direction. We are happy to say that many a soul has first found true peace with God before leaving our sanitarium.

Our nurses who have received their training in the sanitarium and school here at Friedensau, go into the field as missionaries when they are ready for work and are needed. We have workers in Germany, also in Austria, Hungary, Russia, Palestine, and Africa. At present there are sixty-seven gentlemen and lady nurses in the field who received their preparation as medical missionaries at Friedensau. Each of these could give a long and interesting report of many good experiences, in spite of hard work and difficulties; but perhaps we will speak of some of these at a later time. Wherever possible, we follow the principle of sending our nurses out to pioneer the way in a city, two and two. When

they have no nursing to do, they engage in the distribution of health literature. In this way many of the books containing the precious truth for this time are scattered by our medical missionaries at home and abroad, falling into the hands of needy souls.

The following instance may show how the Lord often uses human beings as instruments for good: For years one of our lady nurses was in the employ of a certain court physician, helping him in his private clinic. She had specially to help at operations. In spite of this, she took time to work for the patients and for God. She was able to sell many books, such as "Christ's Object Lessons." Because of her good name among patients and in the eyes of the physician himself, she became a thorn in the flesh of one of the clinic nurses, who was of another faith. Using all manner of intrigue, this nurse found it possible to crowd our sanitarium nurse out of the house. When lo, as our sister left the clinic, success also departed, and before long the court physician insisted that our nurse return; and, indeed, the very person who had been instrumental in securing her discharge came again and again, with the request that she come back—herself desiring that these books again be circulated among the patients. In fact, she had sold a few of them herself.

Our school here at Friedensau has been so enlarged that it can now accommodate about two hundred students. Most of the young men are preparing for the Bible work, while the young ladies are largely preparing for medical missionary work. There are now twenty nationalities represented at the school, so that we hope to send out qualified laborers into many fields in the "regions beyond." May the same God who has thus far blessed our efforts, continue to be with us.

Friedensau, Germany.



Unsigned articles are by the editor

The Coal-Tar Remedies

THE introduction of the coal-tar antipyretics — acetanilid, phenacetin, and antipyrin — into medicine gave promise of a great advance, as they seemed to be comparatively harmless substitutes for opium and its preparations, and powerful aids in the reduction of temperature in fever.

Phenacetin, it may be said, was introduced in the attempt to obtain the desired antipyretic (reducing temperature) effect of acetanilid without its depressant effects.

All these preparations have been used in various combinations, both for reducing fever and for the relief of headache and other pains; though on account of its cheapness acetanilid figures more largely in the anti-pains widely advertised under various names. Usually these preparations are combined with alkalies and caffeine, in the belief that these will overcome the depressing effects of the antipyretic on the heart.

The Hygienic Laboratory (United States Public Health and Marine Hospital Service) has recently conducted a series of experiments which showed conclusively (Bulletin No. 53) that caffeine greatly adds to the depressing effect of acetanilid. In other words, a mixture containing acetanilid and caffeine is actually more dangerous than acetanilid itself. It should be remembered that

practically all the headache-powders on the market are of this composition. This will explain in a measure the great frequency of fatalities from the use of headache-powders.

The Divisions of Drugs, Bureau of Chemistry, United States Department of Agriculture, has recently conducted an investigation (see Farmers' Bulletin No. 377) to determine the harmfulness of headache mixtures.

This investigation was prompted partly by the fact that these mixtures are advertised as harmless, as containing no poisonous or harmful ingredients, etc., and some manufacturers go so far as to assert that their product is a "nerve food," a "brain food," and the like.

The investigation shows that in the fourteen years ending in 1907, there were reported by physicians eight hundred fifty-five cases of poisoning from these products.

SUBSTANCE	POISONING DEATHS	
Acetanilid	297	13
Antipyrin	488	10
Phenacetin	70	3
Total.....	855	26

In *one* year, 1908, there were reported nearly as many accidents as in the previous fourteen years, probably because the cheaper acetanilid is being more vigorously pushed by the manufacturers of headache-powders. The accidents run

largely to acetanilid, though the percentage of fatalities is higher for antipyrin, and higher still for phenacetin.

Reported in 1908:—

SUBSTANCE	POISONING DEATHS	
Acetanilid	614	17
Antipyrin	105	5
Phenacetin	95	7
Total.....	814	29

This makes a grand total of sixteen hundred sixty-nine accidents, with fifty-five deaths, reported from the use of these drugs, very largely in the relief of some minor trouble, such as a headache.

Undoubtedly there are many such cases not reported.

It must be admitted that in many cases these substances have been used by physicians themselves, but as a rule the profession is coming to look upon the coal-tar antipyretics as of very doubtful use, and as dangerous drugs, to be used only when absolutely necessary, and then with extreme care.

Certainly unmedical persons who make use of such headache remedies — no matter what statements are printed on the package — are unwise.

It Takes a Crank to Turn the World

BURTON HOLMES, in his lecture on Egypt, speaking of the remarkable energy of De Lesseps in bringing to a successful completion the Suez Canal, said that a man must be a little insane in order to accomplish a great work. And perhaps he is right. Some one has said that it is the paranoiacs, after all, who accomplish things. Perhaps every man who has carried the crowds with him has had "a screw loose somewhere." It is not the man who carefully weighs, considers probabilities, and balances the chances of success and failure who makes the moves that bring him suddenly into the light and carry him on a wave of enthusiasm to success. It is the dreamer, the man who sees only one side, who never thinks of a possible failure, who never has the remotest thought that possibly, after all, he is not on the right track,—it is this man who is destined to have a brilliant success, provided he does not meet with a crushing failure. And often his success comes only after repeated failures that would have broken the spirit of an ordinary man. His dream of success keeps him look-

ing straight ahead, oblivious of defeat, of failures, of difficulties, till sometime perhaps fortune smiles upon him.

What would Joan of Arc have accomplished, but for her hallucinations or dreams? What would such people as Mary Baker Eddy, Madame Blavatsky, Elbert Hubbard, and Dowie have accomplished, had they been endowed with some of the inhibition which the ordinary mortal possesses?

A careful examination of that which serves as a molasses barrel for human flies will suffice to detect (to change the figure) the screw which, if tightened, would make the person more sane, and certainly more safe, because he would be shorn of his power with the crowd.

It might not be out of place to consider in this connection some of the blatant health culturists and diet faddists who are sure that everybody who differs from them is wrong, notwithstanding mortality statistics in no wise bear them out.

The principal stock in trade of this class is positiveness, bald assurance, unqualified assertion; and it is well, so far as they are concerned, for this quality

draws heavily on the unthinking crowd, and turns a handsome revenue into the pockets of the promoters. There is a method in their madness.

If one had seen but one of the type of book produced by these people, he might, in his first enthusiasm, imagine that he had discovered the fountain of immortal youth; but after he had read three or four of these various versions of the only true way to attain perfect health, he would be pardonable if he began to doubt whether any of these positivists know what they are talking about; and the further he pursued his investigation, the greater would grow his conviction that the positivism of these writers is temperamental — innate, and not necessarily the result of actual knowledge.

We all sift evidence, retaining what suits us, and disregarding that which does not meet our fancy. I suppose no person on this planet is entirely free from this fault; but there are degrees.

In some it is pre-eminent; they can shut their eyes absolutely to the most patent, the most palpable facts, and spin webs of theory as fine as gossamer. Most of these writers have some pet antipathies; it may be the medical profession, or vaccination, or animal experiment, or it may be cooked food! Whatever it be, they hate it as heartily and as ferociously as the Mohammedan hates the "infidel Christian" and the dog of a Jew.

Sometimes one can read these writings with amusement, but often it is with a feeling of impatience that the writers will so disregard important facts which do not bear out their theories.

But, then, perhaps, they get as impatient at us. After all, "All the world is queer but me and thee, and thee's a *little* queer."

What a satisfaction it is to say to self, "My gray matter is functioning all right, but what consummate fools these other fellows are!"

The Tropics and Health

AT the recent meeting of the American Climatological Association (Fortress Monroe, Va., June 4, 5, 1909), Colonel Gorgas stated his conviction that tropical climates are not necessarily unhealthful for white men. The cause of malaria, yellow fever, and other tropical diseases having been ascertained, and sanitary arrangements having been perfected for the elimination of these drawbacks, he has found the Canal Zone to possess a remarkably healthful climate.

There are some eight thousand whites connected with the canal work, principally machinists and workmen of more than common intelligence. Among these men and their families the death-rate is exceedingly small.

He does not attribute this to better

climatic conditions than are found in the United States, but to the fact that the sanitary control is better, and the people live under more ideal conditions. "They are like a country population rather than a city population. The quarters are large, airy, and well screened."

The death-rate from disease among the men is three or four to the thousand each year, and that of the women and children slightly less.

Dr. Gorgas is inclined to believe "that the effects we have been accustomed to look upon as climatic are due, in a location like Panama, to chronic malaria. If the laborers are protected from malaria, they seem to retain their vigor."

If the sanitation in our home cities and on our home farms could be as effi-

ciently controlled as it is in the Canal Zone, the result would be a great saving of life, an immense reduction in sickness, and a genuine conservation of resources, which would amply repay all the outlay. But the first step is the education of the people to the point where they will submit to adequate sanitary supervision.

It is the same problem on a smaller scale as in India, where the first step in the eradication of plague must be the education of the natives to understand that the rat is a menace.

As an illustration of the statement that

sanitary conditions are by no means ideal even among most advanced nations, we have the recently published statement of the Committee on Congestion of Population in New York to the effect that the economic waste in that city alone from preventable diseases is between thirty-seven million dollars and forty-one million dollars annually. By preventable diseases is meant diseases which, with adequate and efficient sanitary control, might be wiped out as completely as yellow fever and malaria are wiped out from the Canal Zone.

Scarlet Fever Infection

THAT this disease is very infectious in its early stages is shown by the number of cases developing in families after one case has been removed to a hospital. Contrary to the usual opinion, infectiousness rapidly declines with the diminution of throat symptoms and the disappearance of the rash. A small number of cases remain infective for a long period, as shown by families being reinfected by cases returning from the hospital. This appears to be due to chronic discharge from the nose or ear. The old belief that the scales of the skin can convey infection has been disproved by careful observers. Some physicians have discharged large numbers of scaling patients without in any case causing a transmission of the disease.

Scarlet fever, in the matter of contagion, is more like diphtheria than smallpox, for the infection seems to be confined to the mucous membrane rather than the skin. Cases where the disease is transmitted after the throat symptoms are past are explainable on the theory that the patient is a "carrier," that is, lodges the "germ" of scarlet fever in

his mouth or nose — possibly in a chronic discharge.

The belief that the disease is carried by clothing seems now to be quite exploded, for even in crowded tenements it does not travel from one family to another in the manner it would if this were the means of infection. And there is now no reason whatever to believe that the disease is air-borne. It is, in fact, a disease of direct contact (kissing, etc.), or is caused by the use of a common drinking cup, or by lead-pencils, toys, candy, etc., placed in the mouth after having been in the mouth of the sick child.

Dr. Chupin, who has recently given much study to this disease, lays great stress on the early recognition of scarlet fever, as it is these early cases that spread the disease most rapidly. Every sore throat affecting a child should be sufficient reason for isolation until it is known that the trouble is not scarlet fever, diphtheria, or some other dangerous disease.

More care in the early isolation of all suspicious cases would do much to stamp out epidemics of children's diseases.



Tuberculosis Notes

It is estimated that Chicago, by the establishment of outdoor schools, could save a child life every day.

ILLINOIS is said to pay more than a million dollars a year for the instruction of children who, before they are "out of their teens," die of tuberculosis.

CHICAGO is said to be the first United States city to maintain an open-air school for tuberculous children as a part of its regular school system. The Chicago board of education supplies the tent city, equipment, and teachers; the Chicago Tuberculosis Institute furnishes transportation and medical services.

THERE are at least 44,000 cases of tuberculosis in New York City, of which only 16,000 have the care of physicians. This means that in the tenements there are 28,000 cases of neglected tuberculosis. Each year there are 24,000 new cases. An effort is being made to increase the appropriations for antituberculosis work, so that this vast army of tuberculosis spreaders may be better cared for.

AN open-air school has been started on the grounds of a Chicago school. Objection was immediately made that there would be danger of infecting the pupils of the regular school. The critics thought nothing of it when these same tuberculous children were housed in the same room with other pupils; but now that they are *segregated and kept in the open air*, the proximity is supposed to be a menace. Well, gray matter forms a very thin layer after all.

IN cities like Providence, Boston, and New York, where outdoor schools have been conducted for two years, the results obtained from the treatment of children in special tuberculosis open-air schools seem to show the great advantage of this class of institutions. This, coupled with the experience of open-air schools in Germany and England, proves that children can be cured of tuberculosis and keep up with their school work, without any danger to fellow pupils.

A LIFE insurance company has mailed to each of its policy-holders an illustrated pamphlet regarding tuberculosis. The managers of the company realize that a little timely warning, if heeded, will materially lengthen the lives of policy-holders. Another insurance company has established a health bureau, intended to help policy-holders by giving them advice regarding the care of the body, and by discovering disease in its early stage, when a little attention will cure it and lengthen life.

IN a large number of cities, children with tuberculosis are excluded from the public schools, but in most instances no special provision is made for them. The National Association declares that children who are afflicted with tuberculosis are a menace to the health of their schoolmates. Both on this account and because they are physically unable to keep up in their work, special schools are needed for this class of children. Every city should provide at least one well-equipped school or special class-room of this sort for each twenty-five thousand population.

THROUGHOUT the first winter of the Providence Fresh-Air School no pupil had even a cold in the head. The winter was severe, and during the stormy weather the attendance was better at this school than at the regular schools. Boston's "outdoor school" furnishes each pupil with a drinking cup and a toothbrush, a reclining chair and blankets, a warm overcoat, overshoes, woolen cap or hood, mittens, and a bag made of paraffined canvas, with a detachable blanket lining, for protection during storms. The attendance in this school is limited to twenty. Several Bostonian teachers noticed sudden agreeable changes in the mental activities of a number of their pupils whom the principal of the school had seated in the school yard during pleasant weather.

NINE fraternal and benefit organizations with a membership of nearly three million, and three international labor unions with a membership of over one hundred thousand, have joined the ranks of the fighters against consumption within the last year. A year ago only one fraternal organization and one labor union maintained institutions for the treatment of their tuberculous members. These fraternal organizations and labor unions are also carrying on campaigns of education among their members. In this way over three million men and women are receiving instruction through lectures, through official papers, and by literature expressly prepared, showing the dangers and methods of prevention of tuberculosis. The recent National Fraternal Congress estimated that fifty per cent of the death losses from tuberculosis could be saved by the various fraternal organizations of the country. The National Association for the Study and Prevention of Tuberculosis has rendered all assistance possible to these various movements among the labor men and fraternal organizations, and stands ready to co-operate as far as possible with any society of this character.



American Public Health Association.—The thirty-seventh annual meeting, held in Richmond, Va., October 19-22, was one of the most successful meetings the association has ever held.

Six-Years' Course in Medicine.—The University of Michigan Medical School at Ann Arbor has extended its course from four to six years. The department has for some time had an optional six-years' course.

Evils of Poor Ventilation.—Health officer Evans of Chicago recently said, in an address, that while bad meat kills hundreds, and bad water thousands, bad air kills hundreds of thousands. He urges more thorough ventilation of assembly-rooms.

Insurance Companies and Health.—One industrial insurance company is trying the experiment of employing a trained nurse to visit policy-holders who are ill, in order to learn, if possible, the cause of the illness and to give such suggestions or render such aid as will hasten recovery.

Sanitation in Mexico.—Health officers in Mexico who have been making a strong effort to eradicate yellow fever, say that the effort to stamp out this disease is not only proving successful, but incidentally the warfare against mosquitoes is causing a marked reduction in the prevalence of malaria.

Pure Food Law Enforcement.—Since the passage of this law, nearly six hundred prosecutions have been made for its violation, with conviction in nearly every case. For first offenses the policy is to let the offenders off with a light sentence, it being understood that they will take warning and adhere more strictly to the letter and spirit of the law in the future.

Adulteration of Olive Oil.—Recently one hundred twenty cans of olive oil adulterated with cottonseed oil were seized in Atlanta, Ga. Such adulteration should be punished severely, until fraudulent dealers either learn to respect the law, or are driven out of business. Cottonseed oil is an excellent oil, and can sell well on its own merits, but it should not masquerade as olive oil; and it is believed that most cottonseed oil producers would discountenance such a sophistication.

Ill Health and Poverty.—At the recent meeting of the American Public Health Association, it was shown that ill health is a potent factor in causing poverty, and that poverty is one of the most important causes of ill health; these two blighting influences working together with ignorance to keep a large proportion of the population in a condition of hopeless wretchedness. To relieve this situation is the problem which charity workers are trying to solve.

Instruction in Care of Babies.—The Philadelphia Alliance for the Care of Babies will hold free lectures and clinics this winter in the Philadelphia school buildings. The records of births will be made the means by which every young mother will be visited by a member of the Alliance, who will give her personal instruction regarding the care and feeding of the child. Effort will be made to discourage bottle feeding wherever it can be avoided.

Physician for Every School.—A bill has been prepared for the next Ohio Legislature providing that there shall be stationed in every school a physician who will be as much a part of the school system as the teaching force. Among the provisions of the bill are: Examination of each child by the teacher, for sight, hearing, and breathing; examination by physician of all pupils returning to school after illness, or who have symptoms suggestive of communicable disease; lectures to teachers on hygiene and recognition of communicable diseases.

Infantile Indigestion.—Smith, in a recent number of the *Practitioner*, states his conviction after long observation, that indigestion in infants is caused, much more frequently than is suspected, by the use of boiled or sterilized milk. There is undoubtedly much truth in the assertion that boiling milk renders it more difficult of digestion, especially for infants. Perhaps, as some think, it may be better to run the risk of indigestion than to give opportunity for the chance transmission of tuberculosis or typhoid; but far better is it, where possible, to secure milk from a herd of tested cows, where by inspection there is an assurance that strict cleanliness is maintained.

Poisoned With Quinin.—A three-year-old child, finding in a closet a box of two-grain quinin pills (probably sugar-coated) and supposing them to be candies, swallowed seven of them, and in a short time was in an alarming condition, and died within an hour at the hospital at Paterson, N. J.

Opium for Medicinal Purposes Only.—The second conference of the International Opium Commission will be held at The Hague in the near future. The purpose of this important meeting will be to discuss thoroughly the subject of opium, with a view to the complete suppression of its use except for medicinal purposes.

Communicable Diseases in Rural Schools.—In order to bring to rural districts some of the benefits of medical school inspection, the New York State Health Department has sent to school-teachers a circular entitled "The Teacher and Communicable Disease." It is hoped that the information contained in the circular will enable teachers in many cases to prevent the spread of contagious disease.

A Pellagra Association Organized.—At the first national conference on pellagra, held at Columbia, S. C., in November, 1909, there was organized the National Association for the Study and Prevention of Pellagra. It would seem that this association has on its hands a program second only to that of the tuberculosis association in magnitude. The second annual conference on pellagra will be held at Peoria, Ill., June, 1910.

Expensive and Disastrous "Patriotism."—This year we paid a toll of two hundred fifteen lives (lockjaw) and five thousand ninety-one injuries or serious crippling, in addition to the losses by fire, amounting to thousands of dollars, all for our devotion to the senseless method of celebrating the "Fourth," which we borrowed from the heathen Chinese. A few cities have issued their declaration of independence of this worse than foolish custom, and another decade will undoubtedly witness the passing of the firecracker and toy pistol in all civilized parts of the Union.

A Movement to Abate Tenement Evils.—In Philadelphia recently a definite movement to provide sanitary conditions for inhabitants in the tenement districts was inaugurated by the Director of Health and Charities of that city. It is desired to secure the enactment of the following laws: "An act requiring all premises to be underdrained, and making all privy vaults a nuisance; an act extending the provisions of tenement-house laws to lodging-houses and rear dwellings; an act requiring the removal of insanitary dwellings and the abandonment for dwelling purposes of insuf-

ficiently lighted and ventilated buildings; an ordinance requiring all garbage to be placed in metal-covered receptacles."

Nutrition Investigation in Philadelphia Schools.—Eight schools have been selected, containing about twenty-four hundred pupils. In four the children will be given a midday lunch consisting of soup, milk, and rolls. In the other four the children will be allowed to fare as they usually do. Physical and mental examinations will be made of both groups, at the beginning and end of the test, which will continue for several months, in order to determine whether the improved nutrition is worth adopting as a regular measure in all the schools at public expense.

Prosecutions for Misbranding.—The Department of Agriculture is investigating cases of attempt to evade the "pure food" law, and as a result, producers who have not been careful to comply with the law occasionally come to grief. Frequently the offense is misbranding, e. g., underweight in canned goods, cane sirup labeled maple, wrong place of manufacture given, etc. One company was fined for selling as "lithia water" an artificial product made by introducing the desired chemicals into the distilled water. Possibly not harmful, but a fraudulent means of obtaining money under false pretenses.

Second International Conference on Leprosy.—This body, which met in Norway on August 18, reaffirmed the statement made by the first conference held in Berlin, in 1907, to the effect that leprosy "is contagious from person to person whatever may be the method by which the contagion is effected. Every country, in whatever latitude it is situated, is within the range of possible infection from leprosy." "In view of the success obtained in Germany, Iceland, Norway, and Sweden, it is desirable that other countries should isolate lepers." It is advised that the children of lepers should be separated from their parents, and kept under observation.

Recent Actions of the Michigan State Board of Health.—The following were named as dangerous communicable diseases which must be reported by attending physicians: pneumonia, tuberculosis, typhoid fever, meningitis, diphtheria, whooping-cough, scarlet fever, measles, and smallpox. Directions were given for preventing each of these diseases, and for abatement of various measures. Tetanus, rabies, erysipelas, leprosy, and cancer were placed on the list requiring report from attending physicians. The board ruled that no person with open tuberculosis be employed to teach in any State school; and that public schools and trains be forbidden to furnish public drinking cups.

Tuberculosis Is Diminishing.—At least the vital statistics of the United States Census Bureau so indicate, for in the "registration district," comprising about half the population of the United States, the tuberculosis death-rate per 100,000 of population was, in 1897, 183.6; in 1898 it was 173.9.

Kansas Takes the Lead.—A State law taking effect September 1, forbids the presence of public drinking cups in railway trains, railway stations, and schools in the State of Kansas. It is supposed that the fact that large numbers of consumptives pass through the State on the trains, led to the early passage of the law.

We Still Grope.—A bill introduced into a Western legislature to provide for public school instruction in hygiene and prevention of contagion was met by so many protests from the clique who believe there is no such thing as disease, that the bill was killed at the first hearing. Our forward progress is sometimes zigzag.

Disease Not Transmitted by Clothing.—Dr. Doty, of the health department of New York City, declares as the result of extensive investigation that there is no ground for the idea that infectious diseases, such as scarlet fever, smallpox, and measles, are transmitted by means of clothing. The danger is the patient himself, and particularly his discharge.

Benzoate Controversy Not Ended.—There has been so much dissatisfaction with the disposition of the benzoate question by those who believe sodium benzoate is used to cover up the use of inferior goods, that it is probable, as now reported, that President Taft will be requested this winter to appoint a committee of experts, to inspect the factories using benzoate as a preservative.

Amebic Dysentery Gaining a Foothold.—This disease, hitherto generally confined to the tropics, has, because of our close relationship with the Pacific islands and the Orient, gained such a foothold on the Pacific Coast that there is a likelihood of its spread throughout the country. There is some reason to believe that its spread is due to the use of uncooked vegetables from the Chinese gardens, fertilized with human sewage.

Druggist Association and Liquor.—Two druggist associations have taken their stand against the sale of liquors over the counters of drug stores. This, because some retail druggists have been tempted to disgrace their calling by making it a sort of a "respectable" drinking place, and because liquor men have been employing registered druggists to conduct saloons in places having the appearance of pharmacies. The intention of these bodies is to ostracize every so-called pharmacist who prostitutes his profession to that of a liquor dealer.

Typhoid Caused by Milk.—In Salt Lake City an epidemic of typhoid fever has been traced to a dairy whose owner has been arrested for selling dirty milk.

Hospitals Using Less Drugs.—In four years the drug bill of the Massachusetts General Hospital has diminished from two dollars a year per patient to ninety-one cents. The Buffalo General Hospital shows a similar decrease. There has been, meantime, a corresponding increase in the use of rational measures, such as hydrotherapy, massage, fresh air, and exercise.

Typhoid Epidemic Traced to Milk.—A recent epidemic in Boston was traced to a certain dairy farm. One of the employees on this farm had just recovered from typhoid fever, which the attending physician had failed to report. It was a mild case, and the man was allowed to sleep in the same building with the other milkmen, and nothing was done in the way of disinfection. Criminal stupidity is the diagnosis.

Congress on Pellagra.—The Fourth Italian Congress on Pellagra, recently concluded, pronounces in favor of the theory that the disease is caused by damaged corn, especially corn that has not been permitted to ripen completely. *Polenta*, or corn-meal mush, is a dish in general use by the Italian peasantry, and it is difficult to control the production of corn-meal so as to prevent the use of damaged corn; but the government is making a special effort in this direction.

Early Treatment of Insanity.—The president of the New York State Commission on Lunacy appeals to physicians and others to induce persons with incipient or border-land insanity to enter an institution at once; for the probability of cure of insanity decreases as the disease progresses. The State of New York has thrown open its State hospitals for any incipient patients who desire to avail themselves of the treatment.

Camphor in Pneumonia.—A German medical weekly gives a report of twenty-one cases of pneumonia treated with hypodermic injections of camphor, with recovery in every case. The camphor was at first used experimentally as a stimulant, but afterward as a germicide. In every case where camphor was administered, there was no crisis, but a gradual improvement beginning with the first dose of camphor. The administration was in the form of twenty-per-cent camphor oil, and doses as high as twelve cubic centimeters were given, repeating every twelve hours. The author claims he had no bad results from these seeming heroic doses. Though one hundred per cent of recoveries is a splendid record for pneumonia, twenty-one cases is altogether too few to base a generalization on. Future reports may not be so optimistic.

Cause of Pellagra.—The investigation of the pellagra outbreak at the Peoria (Ill.) State Hospital developed facts suggestive of the theory that pellagra is a water-borne disease, requiring precautions similar to those used in the prevention of the spread of typhoid.

Emmanuel Movement College.—There is a movement on foot, according to Dr. Elwood Worcester, to found a college for the training of students of medicine, theology, and sociology in the principles and practises of Emmanuel healing. It is also proposed to establish a periodical, the *Emmanuel Movement Bulletin*.

Creosote in Consumption.—Dr. Beverly Robinson, who about twenty years ago introduced the treatment, still maintains that beechwood creosote given internally and by inhalation, is the best medical treatment of tuberculosis we have, especially in the early stages; and as a preventive treatment, but that it affords much relief in all stages of the disease. "In nearly all cases, no matter what the stage of the disease, much relief to symptoms may be obtained. This treatment is very inexpensive, and interferes with no other rational doing." "To judicious rest when required, fresh air, and proper food, add creosote treatment, with or without lime salts, and there is at present little or nothing in the way of further treatment to insist upon."

Plague in California.—Some recent cases of human plague are quite definitely traced to infection from ground-squirrels, which are known to harbor the disease in certain sections of the State.

New Spinal Anesthetic.—Professor Jonnesco has for more than a year successfully induced anesthesia by the use of stovain injected high in the spinal column, with a little strychnin to counteract the depressant effect of the stovain on the heart. It is said that this new procedure renders operations on the arms, chest, and neck safe, and obviates the discomfort following inhalation anesthesia.

Oleo in New York.—New York State has a law providing that every restaurant using oleomargarine shall display prominently a sign stating the fact. The penalty for non-compliance is a fine of fifty dollars for the first offense, an increased fine the second time, and fine and imprisonment for the third offense. The law is not intended to brand oleomargarine as an unhealthful substitute, but to appraise customers that they are using a cheap substitute for butter. As a matter of fact, there is probably more opportunity to get tuberculosis from dairy butter than from oleomargarine, because of the high temperature to which the latter is subjected in the process of manufacture.

An hygienic condition of the mouth can best be attained by
the systematic use of

LISTERINE

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M. G. STONEMAN, a photographer of Nebraska, whose sworn-to sales in less than 3 years on part time total \$15,000. His biggest month was \$1,251.65; biggest day was \$181.75 among 300 people. Again sold \$800 worth in eight days. Says: "Best thing ever sold. Not one complaint from 2,000 customers."



J. B. HART, a farmer of North Carolina, whose sales for one year total over \$5,000, never sold goods before joining us. Took 16 orders in three hours. He writes: "You can't keep from selling it if properly demonstrated. Appeals to everyone. Never had it condemned by anyone yet."



M. JUELL, a railroad man of Canada, who started on spare time and later excluded everything for the bath business. Not a regular salesman, yet sold about \$6,800 worth in about 18 months.



DR. D. E. HOARD, a doctor and farmer of North Dakota, demonstrates how this business grows by selling \$2,275 worth in territory previously worked. Actual time required to get this business, about 6 months.



C. A. MILLER, a minister of Nebraska, who sold and purchased over \$700.00 worth after working but a few days. Never sold goods before, so far as we know.

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