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Tuberculosis; its sources in childhood. A timely article by Dr. H. J. Achard.

Neurasthenia; cause, prevention, and cure of "the American disease," by Dr. Jean Vernier.

Pneumonia; its prevention and treatment, by Dr. H. F. Rand, superintendent of the St. Helena Sanitarium.

Some dangers of school life, a reminder to parents at the beginning of the school year, by E. C. Jaeger.

During the past summer many have adopted the custom of outdoor sleeping, and are wondering how they may con-

tinue to obtain the beneficial effect of outdoor air during the winter months. The illustrated article, "How to Sleep Out of Doors in the House," describes an inexpensive but very efficient method devised by Mrs. Martha Cony Howe.

Mr. Geo. E. Cornforth, in charge of the culinary department of the New England Sanitarium, Melrose, Mass., who needs no introduction to LIFE AND HEALTH readers, has prepared an article, "Methods of Cooking," containing many excellent pointers which might profit even experienced cooks.

Perhaps no one would be better qualified to give timely caution to parents than Mrs. W. H. McKee, matron of the Michigan Home for Unfortunate Girls, who has furnished an article on "Importance of Home Influence."

An article by a dentist, Dr. J. S. Frost, on "The Care of the Teeth," contains instruction which, perhaps, we have heard, but which too many of us have not heeded. We need an occasional reminder of the important bearing of mouth hygiene on the general health.

Have you heard of durum wheat—the wheat of the dry plains, hard, vital with gluten, quite different in composition from the starchy, soft, white wheat, and flour common on the American market? Read the article by Charles Cristadora.

Herbert M. Lome begins a series of practical illustrated articles on physical culture. The first article, "Physical Culture, What It Is and What It Is Not," is marked by good common sense and an absence of the bizarre instruction so frequently dealt out as physical culture.

Those who have read the articles on healthful dress by Mrs. Eva K. Cogshall will regret the omission of an article in the present number, and will be glad to know that an article from her pen is in hand for the next issue.

Sometimes the efforts of diet reformers are disappointing. Dr. D. H. Kress tells why.

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Vol. XXIV Takoma Park Station, Washington, D. C., September, 1909 No. 9

Baby Foods

The Editor

THERE is a general belief that milk is milk, and that while cow's milk may not be exactly the same as mother's milk, it is so for all practical purposes. In fact, a large proportion of babies are nourished almost entirely on cow's milk.

It is true the infant has strong powers of adaptation, and can survive after a fashion on various foods, including milk mixtures and the widely advertised proprietary foods; but physiological chemists believe that there is a very nice adaptation of the constitution of mother's milk to the changing needs of the infant, and that the infant can not survive to the best advantage unless supplied with the food intended for it by nature.

At first, the child needs more albumen for the rapid production of tissues, and then there is a large proportion of albumen present in the milk. Gradually the albumen content of the milk diminishes, while fuel substances, such as sugar and fat, increase in amount. This is perhaps an adaptation to the varying needs of the child.

It is noticed that in each species of animal the milk varies in composition according to the rapidity of the growth of the nursling. In animals which grow very quickly, the milk is much richer in tissue-building material. A baby takes one hundred eighty days to double in

weight. Human milk is poor in cell- and bone-making material. The young rabbit doubles in weight in six days, and we find rabbit's milk contains a very high proportion of cell- and bone-making material. Herewith is given a table from Abderhalden, showing the comparison of various species in this respect. The cow stands much nearer to man than many of the other animals; still there is a great difference in the composition of cow's milk and mother's milk, and children being nourished with cow's milk must have an excess of building material to deal with.

100 PARTS BY WEIGHT OF MILK CONTAINED

SPECIES	DAYS REQUIRED TO DOUBLE WEIGHT	ALBUMEN	ASH	LIME	PHOSPHORIC ACID
Man	180	1.6	0.2	0.03	0.05
Horse	60	2.0	0.4	0.12	0.13
Cow	47	3.5	0.7	0.16	0.20
Goat	22	3.7	0.78	0.20	0.28
Sheep	15	4.9	0.84	0.25	0.29
Pig	14	5.2	0.80	0.25	0.31
Cat	9½	7.0	1.02
Dog	9	7.4	1.33	0.45	0.51
Rabbit	6	14.4	2.50	0.89	0.90

Abderhalden comments: "The above results between the rate of growth and the composition of the milk make it perfectly apparent how difficult it must be to replace one kind of milk with that of

another species." Even though the milk be rich in everything but one constituent, the lack of that one constituent may be fatal, or at least very injurious to the growth of the child. As Abderhalden says:—

"There is no question that the unsuccessful results in the artificial feeding of infants have been due chiefly to the non-observance of this principle. It is obvious that the mother's milk can never be replaced by some other milk or milk substitute. This accounts for the greater mortality among 'bottle-fed babies' than among those breast-fed. [Not altogether; germ growth in milk explains much of the increased mortality from the use of cow's milk.] It is our duty to make it known that on the one hand there is no perfect sub-

stitute for mother's milk, and on the other hand to show that when a replacement is unavoidable, the food should be adjusted in accordance with the requirements of biological investigation."

It is unfortunate that it is the custom of mothers for this or that trifling pretext to shirk their proper office, and turn their helpless infants over to the tender mercies of the bottle. However, the fact that many infants are successfully brought up on the bottle would indicate that this difference in composition of milk might not be as serious as the laboratory men seem to think. The human organism has great power of adaptation.





ONE CORNER OF THE GARDEN

Garden Reveries

R. O. Eastman

THIS afternoon I am going to take you with me on a walk through the garden. It is a great day for a stroll. Yesterday it rained, and the dry, thirsty earth drank in the nectar of heaven thankfully, and lifted up its head in rejoicing. To-day the clouds have cleared away. You can see them off to the south like a flock of snow-white sheep seeking another pasturage. The sun shines brightly, and the earth is warm and moist, but the air is cool, for a gentle northwest wind is playing in the branches of the peach trees and rustling among the leaves of the corn field.

One yearns on a day like this, for the ample fields and meadows of an old farm, where he can walk through the wheat, plucking the ripening heads here and there; or through the corn, where the elusive shadows work a kaleidoscopic tracery which no artist's pencil can define; or over on the hillside, where some huge rock of granite offers an inviting shade, to sit for an hour with an old book in his hand and let the eye wander from its pages anon over

the peaceful valley and pleasant farms spread out before him.

For it is now that the earth is fruitful, and the land seems "good to possess." The labor of him who works the soil, be he the lord over many acres or the gardener of a home plot of as many square feet, is in this season rewarded with ripening harvests.

But here we are at the edge of the garden; so let us leave the realms of fancy, however much they invite our further wanderings, and stop long enough to view the little patch before us. Remember, first of all, that this patch is only part of an old worn-out Michigan farm. In other words, it was originally nothing more nor less than a sand heap of the most unproductive variety. The farm of which it was once a part had done service so long that it was fit for little else than to cut up for building lots—which was done. At least that is what I have been told.

But there is the same good thing about unpretentious land that there is about unpretentious people—we are not led to expect too much of them.

So, instead of relying on the soil to produce things entirely of its own accord, we resort to a little intelligent fertilization, and then, with reasonably careful planting and tending any one may have just such a garden as I am showing you to-day.

That's where the small gardener has a big advantage over the large farmer. The latter has to take things largely as they come. The former can practically make his land to suit himself. Over in Normandy, says one of my agricultural papers, they actually do that thing: the farmer makes his land to suit his requirements; and when he rents his farm, only an acre or two, he specifies in his contract that when he moves away, he shall have the right to take away eighteen inches of the top soil with him.

Michigan is a bean country, and I must admit that it does grow beans to perfection. Here are eight rows in front of us, two of Limas, and the rest wax beans. I have planted them in long rows quite thickly. Somebody asked me this spring how many beans I thought ought to be planted to a row. "As many as you can afford," was my reply. This season, at least, the results have been unusually good, and with

beans worth twelve cents a pound, we have had an abundance of them. Here are two rows of seed onions, and then, just beyond (see them in the picture), my cucumber and squash vines. Some of my vines suffered slightly from too

severe an application of poison in bug time. In one or two cases, I well remember, I managed to kill the vines; and when I went out the next morning, the bugs were crawling around over the ground, trying to find out where the vines had gone.

Then a step farther on and we come to a place where I have just raked out the peas, which had finished bearing, and have set out several hundred cabbage and cauliflower plants, all thriving, in spite of a little spell of dry weather soon after setting them out. C a b b a g e,



A PATH THROUGH THE RASPBERRY BUSHES

The hand cultivator, or spring-tooth hoe, is the handiest all-round small garden tool that one can buy

some of the doctors say, is most easily digested raw. Then we will have some cabbage salads about next January, from the yield of this patch.

As for beets and carrots, I have never had better success with them than I have had this year. They have grown luxuriantly, as has also my Swiss chard and lettuce. I find many do not know what Swiss chard is. It would pay them to cultivate its acquaintance. Swiss

chard, or sea-kale, as some call it, is delicious. It grows more abundantly, with perhaps more certainty, than either beets or spinach, and so is a good thing for the small garden. It should be sown thickly in one or two rows, and thinned, when well up, so that the plants will not crowd one another. Swiss chard grows heavy leaves, the central part of which is sometimes as thick as a man's finger, but perfectly tender and edible. Only the leaves are picked or cut off for

method of culture. Never have I seen vines loaded with more perfect fruit, or promising a finer yield than these do this year. It cost an effort to sacrifice all the stalks branching out from the sides of the one which this system permits to grow, especially when the branches were loaded with blossoms, but as you see, it evidently pays. It is a luxury to have all the tomatoes you want fresh from your own vines, and there will be an abundance of this



CORN FIELD AND PEACH ORCHARD

greens, so the plant bears all the season through. Swiss chard will make a good border for your garden next year. In some sections it grows to immense proportions.

We take a pardonable pride in our tomatoes this year, for we have succeeded in raising them better than we ever did before. I am giving you a glimpse into the tomato patch, for I want you to see the growth these vines have attained as a result of the stake

healthful fruit for us to prepare for winter use. Here on the other side are my summer cabbages, with my ever-ready wheel hoe doing good service keeping out the weeds and stirring up the soil.

And now for a look at the corn. I am especially proud of my corn, not because of the amount of corn I am going to get off from it, for I do not know anything about that as yet, but because it looks so well. It is the best-looking

corn I have seen in the country. One neighbor tells me it is too thick. Another tells me I have it planted in the wrong place. Another says it was not planted in the right time of the moon. But for all that, it suits me first rate thus far, and I want you to look at it and see if it doesn't look pretty good to you. Here, too, are the peach trees, which promise, not an abundant, but a choice picking of fruit this season; the apple trees, which have made a tremendous growth; the raspberry vines, which, just at the time I am writing, are furnishing us with goodly servings of delightful berries every day. There is more — very much more — to look at

and to talk about, but it is time now to go in.

Just a word more. I have enjoyed telling you my little garden experiences and ideas. The time has come now to end the series, and as I do so, I want to ask you one question: *Will you garden with me next year?*

If there is a vacant lot behind the barn, which grew up to weeds last year and the year before, redeem it next spring. Whether you have an acre or a square rod of earth, make use of it, and let it produce for you, besides a liberal return of fresh garden produce, acres of fun each year, and miles of solid comfort.



The Dangers of Tooth-Powders and Pastes

A Possible Predisposing Cause of Pyorrhea Alveolaris (Loosening of the Teeth)

R. Macdonald, D. D. S. (Leicester, England)

University of Pennsylvania, Late Honorary Consulting Dentist to the Australian College of Dentistry, Melbourne

THE researches of the distinguished dental pathologist, the late Professor Miller, in regard to the destructive action of tooth-powders and pastes on the teeth, has suggested to me the possibility that the disease known as pyorrhea alveolaris (loosening of the teeth), may be caused in many cases by the use of pernicious dentifrices, and I would like to give the readers of LIFE AND HEALTH a professional insight into a matter which concerns so closely their own and their children's welfare. The danger element in

dentifrices (powders and pastes) is the numberless sharp crystals which most of them contain. These crystals are so sharp and hard as to be capable of cutting glass when drawn over it (shown in photomicrograph 6). Chalk, the basis of nearly all dentifrices, abounds in crystals (photomicrograph 4 shows this fact). The photomicrographs 1, 2, 3, 4, 5, are taken from popular dentifrices, and give a somewhat discomfoting insight into their composition and character. Pumice is used I fear to a considerable degree in the composition of many dentifrices. It abounds in sharp crystals, and is well shown in photomicrograph 2. Powdered oyster shell (photomicrograph

3) is also used by some manufacturers as a base. So destructive are these crystals that Professor Miller found that by brushing the teeth of skeletons with some of these dentifrices, he could cut half through the tooth in about three hours.

The cause of pyorrhea (loosening of the teeth) has always been a matter of controversy with dental authorities; but it is agreed that it is a suppurative condition of the delicate membrane (the pericementum) which surrounds the roots of all teeth, connecting the root with the bone. The disease is

divided into two classes, ptyalogenic and hematogenic, the first implying that the exciting cause is salivary deposits (tartar) forming on the neck of the teeth, and the second (hematogenic) implying that the exciting cause is a gouty deposit from the blood, forming on the apex or top of the root. These deposits cause irritation and pus formation; then the teeth loosen and fall out.

The losses in teeth caused by this disease are said to exceed the losses caused by all other dental troubles. I mention these facts to give an appreciation of the importance of this subject, for the disease may develop in any mouth, and cause the loss of many sound teeth. The

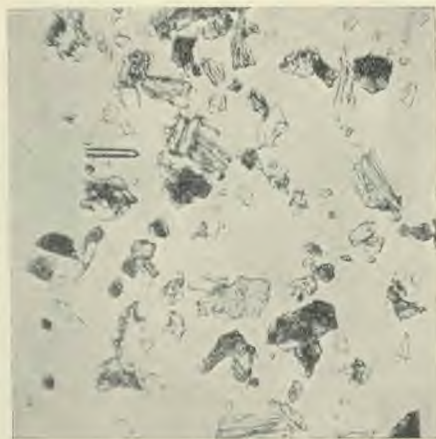


FIG. 1

Photomicrograph of sediment obtained by washing tooth-paste

disease frequently asserts itself in mouths which have been subject to the greatest care and attention, proving that it does not always originate in neglect. This fact, of which I have had many illustrations in private practise, suggested to me the theory that the disease may be in many cases caused by the crystals found in nearly all dentifrices. I have examined microscopically about twenty popular dentifrices (English and American), and have found only two free from sharp crystals.

If the reader will feel with his fingernail, he will detect the free margin of the gum. The normal gum is not closely attached to the tooth at its neck. Now the use of dentifrices, in conjunction with the inserting properties of the toothbrush, must occasionally cause a lodgment of some of these crystals under the "free margin" of the gum, and aided by

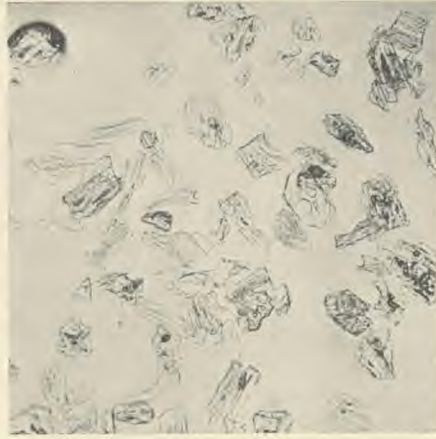


FIG. 2
Photomicrograph of powdered pumice

the constant strain and slight lateral normal movement of the tooth in its socket, irritation of the pericementum must in many cases ensue. The microscopic character of these crystals means that hundreds of them may be working simultaneously to produce this irritation.

It is reasonable to assume that the pericementum is irritated, cut, and detached in a lesser or greater degree from the body of the tooth. This would necessarily produce inflammation. Tartar is then extremely prone to form on the exposed part of the root, and this would cause further irritation, and consequent tendency to disease.

The reader will appreciate how progressive such inflammation is likely to be with the continued use of a dentifrice abounding in sharp crystals, and how pus is likely to form in the socket. Pressure by means of the finger on the



FIG. 3
Photomicrograph of a tooth-powder consisting almost wholly of powdered oyster-shell

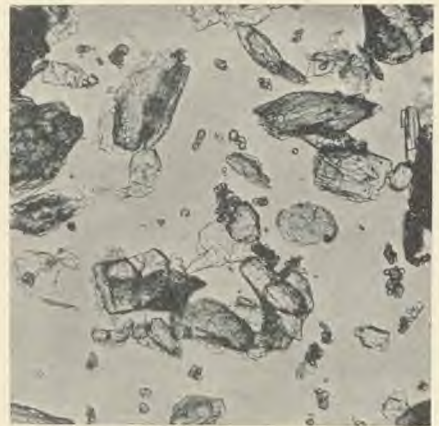


FIG. 4
Washing from a widely advertised American tooth-powder: Calcium carbonate (small crystals); larger particles not determined

gum will usually bring pus to the surface.

In the inception of the disease there would thus be a detachment of the pericementum, and a mass of crystals lying between the root and the bone, laceration would be likely to take place on the slightest strain or movement of the tooth in its socket; and where nature had designed a highly elastic cushioning body, we find its place contested by numberless sharp crystals, closely resembling broken glass. Under such circumstances is it

by the formation of a deposit on the top of the root, particularly prevalent in those with gouty tendencies. If there is an excess of uric acid in the blood, there is a tendency to deposit urates at points subject to strain and irritation. The top part of the pericementum is highly charged with blood-vessels and nerves, and irritation by the sharp crystals would be well calculated to cause undue activity and disturbance at this point; and if the patient has a tendency to gout, there

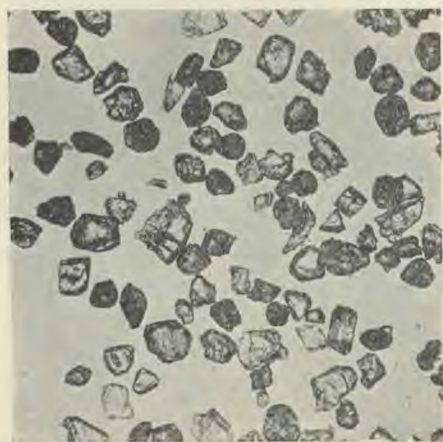


FIG. 5

Undetermined crystalline substance in a tooth-powder which had caused severe destruction of the teeth



FIG. 6

Action of sediment from a tooth-paste containing talc, on glass

surprising that loosening of the tooth should take place?

Although tartar is not always present in pyorrhea, it is sufficient in itself to account for its development, but I believe that in many cases the initial irritation and detachment of the pericementum is not caused by the tartar, as is generally supposed, but by the sharp crystals lodging under the free margin of the gum, causing slight detachment of the pericementum, the tartar representing as it were the second stage.

In the other form of this disease, called hematogenic pyorrhea, the suppurative condition of the socket, and the subsequent loosening of the tooth, are caused

would be a deposit from the vessels. This gradually increases, causing irritation and suppuration in the socket, and the tooth subsequently loosens and falls out. Part of the pain associated with the early stages of this disease is, I believe, often caused by the sharp crystals lodging under the free margin of the gum.

It may be asked, Why do not all who use dentifrices develop pyorrhea? The answer is that some are not so susceptible to irritation as others are, and some dentifrices are less injurious than others.

Consult your dentist and submit to his treatment, and discontinue the use of tooth-powders or pastes not known to be free from these pernicious crystals.



The Truth About Buttermilk

R. S. Cummings, M. D.,

Superintendent Paradise Valley Sanitarium, National City, Cal.

DURING the last year or two we have been hearing a great deal about the value of buttermilk to promote long life. Professor Metchnikoff, of Paris, who has made exhaustive studies and compilations upon this subject, has not only been observing the use of buttermilk upon others, but has been using it himself for upward of ten years. He says: "I am very well pleased with the result. And I think that my experience has gone on long enough to justify my view."

In studying the subject of health and long life, animals and man were compared. Professor Metchnikoff found that with few exceptions the long-lived animals are those whose intestines contained few bacteria,—for example, certain birds, fish, turtles, crocodiles, etc.,—and that certain classes of people and nations who eat foods which are antiseptic or have power to kill microbes,—such as the yoghurt-using Bulgarians,—have many more old people than do other classes or nations.

These facts led to the investigation of the intestinal bacteria, and of substances which would destroy the bacteria. It was found that two classes of bacteria existed in the intestines, especially in the large intestine, which are antagonistic to

each other. They have been called "friendly germs" and "unfriendly germs."

The "unfriendly germs" cause a decay of the refuse food in the large intestine, producing poisons which harden the arteries, irritate the nerves, cause rheumatic pains, and produce an early breaking down of the bodily structures. Therefore when we have headaches, "nerves," the "tired feeling," insomnia, and the like, we may be sure these "unfriendly germs" predominate.

When the "friendly germs" predominate, they kill off the poison-producing germs, and as a result the headaches, rheumatic pains, insomnia, and "nerves" disappear, and the individual feels well.

The "friendly germs" belong to the family of lactic-acid bacilli, which are found in sour milk. When these are taken into the intestines, they grow, producing lactic acid. The lactic acid also stops the growth of the "unfriendly germs," and consequently stops the poisoning of the body.

A glass of buttermilk two or three times a day, then, will not only help one to live longer, but will prevent the headaches, rheumatisms, neuralgias, the sluggishness and depression which are such common results of auto-intoxication.





Summer Outings for the Children

By a Visitor

A TWO-WEEKS' sojourn at Camp Good Will! One hundred dollars would not represent the value in health and efficiency that such a treat is to some of the children who are fortunate enough to have such an outing.

To the child who has the privileges of country life, the summer vacation is an unmixed blessing; to the child who must spend his vacation in a back alley, the occasion is a very questionable benefit. Often the little fellow would better be in school.

In many cities something is being done to give the unfortunates a breath of fresh air during the summer vacation. Floating hospitals, public parks, playgrounds, public baths, do much to mitigate the evils of the congested city.

The Associated Charities of the city of Washington have, as one of their many lines of benevolence, a summer outing committee, whose work it is to provide a few days of sunshine, fresh

air, country life, and nourishing food to needy and unfortunate children and mothers.

In Rock Creek Park, on a picturesque wooded knoll, an old-time country residence has been converted into an administration building. Adjoining are neat rows of army tents, comfortably furnished, the temporary homes of the little boys and girls who are given this breath of country life. Camp Good Will, they call it, very appropriately.

During July and August, the camp is all activity, if a hundred children



SAND-BOX, SWINGS, SEESAWS

of all ages up to twelve can make a place active. There are swings, seesaws, croquet grounds, sand-box and other means of amusement; and there is Maud! Maud is a long-eared quadruped, obedient and patient, though somewhat conservative as a follower, and, withal, quite liberal as an elevator. But this affords fun for the youngsters, and it is a question whether they or Maud have the most sport.

Convenient to the grounds is a bathing pool in Rock Creek, where, in the forenoon, first the boys and then the girls enjoy an hour swimming and splashing; that is, the boys swim, and the girls splash.

The children are selected by the visiting workers of the association, who send out to the camp, during the school vacation, such children and mothers as are in the greatest need of the invigoration of country life. From the helpless and sickly infant, accompanied by its mother, to the lad and lassie of twelve, all are welcomed and given "the time of their lives." Once a week, beginning the first of July, a company of fifty is made up and sent to the camp, to remain for two weeks; and it is needless to say that the joys of the fortnight

make a picture to be long remembered.

An important feature of the camp is a liberal menu of nourishing food, including milk, eggs, fresh fruit, and vegetables, and other foods tempting to the growing child. Many of these children, partly because their parents, not understanding nutritive needs, can not wisely select food, partly because of poverty, have never had an adequate dietary, hence are poorly nourished.

The association's outing committee does not limit its activities to the two-weeks' outing, but provides a physician, who examines the children and renders the medical or surgical aid that in many cases is necessary in order that the children may not be handicapped in their school work in later life.



BATHING POOL, ROCK CREEK



ALL VIEWS WITH THIS ARTICLE ARE OF CAMP GOOD WILL



Hygiene and Sanitation at the Alaska-Yukon-Pacific Exposition

PROBABLY at no other world's fair has the matter of public health received so much attention as at the Alaska-Yukon-Pacific Exposition, at Seattle, Wash.

In the arrangement of the buildings and grounds, and in the various exhibits, health and sanitation have been important considerations. Sewers and water-supply have been provided under the supervision of competent medical authorities, and cleanliness is everywhere apparent.

Public drinking fountains have received special attention, and the use of public drinking cups has been practically done away with, the fountains being largely in charge of porters.

The comfort stations, provided in practically all the exposition buildings, each station in charge of a specially employed servant, are kept scrupulously clean, and the most modern plans of disinfecting are used.

The buildings are exceptionally well lighted and ventilated. At a considerable increase in the cost of their construction, they have been protected from the effects of dampness and cold.

In the government building has been installed the most complete health display ever prepared. It represents the work of the different branches of the government, and includes displays of the latest medical discoveries.

The chief exhibit of the marine hospital service is a model operating-room

with life-size wax figures and a complete operating equipment, which is an exact reproduction of an operating scene in the service. Another display of this branch of the service is a model office of a United States marine hospital, showing how the business of managing a great hospital is carried on.

Demonstrations are given daily in the X-ray room of the marine hospital exhibit, which contains all the latest apparatus. Machines for both static and induction currents are used in the public demonstration, the latter being used for the production of high-frequency currents, giving an alteration of one million times a second.

The laboratory branch of the service is represented by a complete display of instruments and apparatus used in making experimental tests. Culture tubes and plates and illuminated micro-photographs of the various bacteria, are also on exhibit.

In the quarantine exhibit are models of the Delaware Breakwater and Reedy Island detention stations, showing in detail the features of the quarantine work in these stations. A model of the machinery used in the United States quarantine stations for disinfecting is also on display.

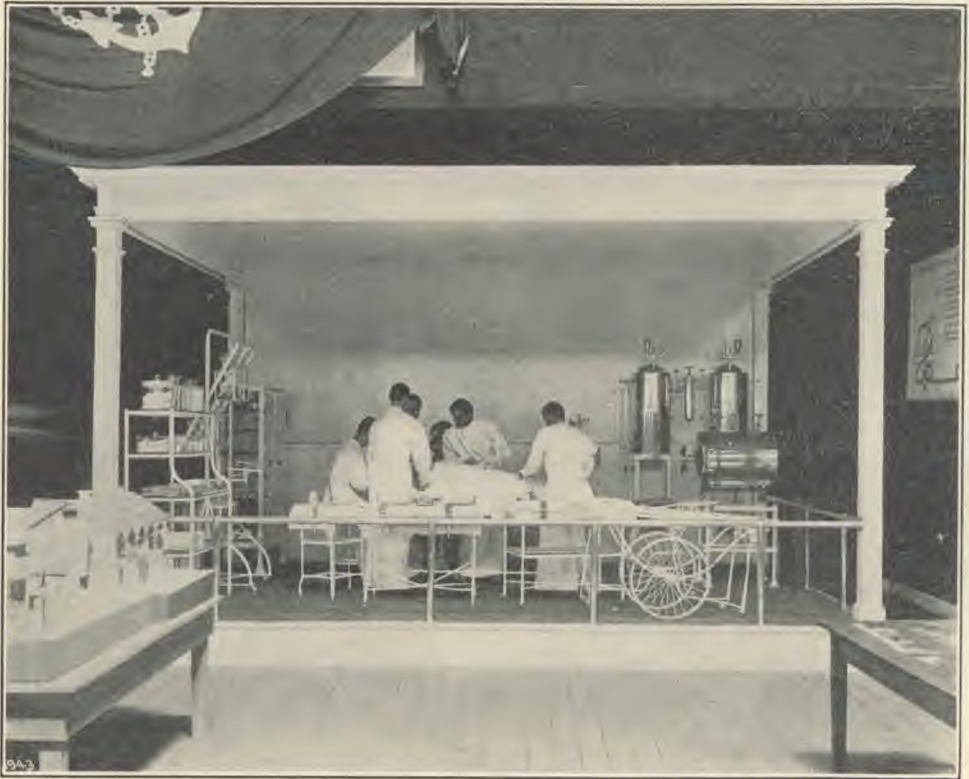
One of the most interesting exhibits, which shows perhaps the most rapid advance, is that of the public health function. Here is displayed a model house and stable, showing measures to be taken

to keep rats out of buildings. The suggestions include the use of screens between partitions and of concrete foundations, and the keeping of garbage cans and wood-piles away from the ground. The stable floor is concrete, and the feed and the manure are kept in metal boxes. The chicken house is raised above the ground.

A section of a typical Western build-

A taxidermic group shows the California ground-squirrel, a rodent which also carries plague. Another display exhibits dissected specimens of rats, showing the vital organs of the plague-infected animals and those of the healthy rodents.

A model of a detention camp at Camp Perry, in Florida, illustrates the methods used in guarding against yellow fever. A model of the tuberculosis sanatorium



Model of an operating-room in a marine service hospital health department exhibit, government building, Alaska-Yukon-Pacific Exposition

ing exhibits conditions under which rats thrive. In the rear is represented a barrel in which garbage has been thrown with little care as to whether it reached the barrel or not. The house, resting on the ground, allows the rodents to burrow into the cellar, and there has been no effort by means of tight joints to exclude them. Groups of rats are represented as running about the model.

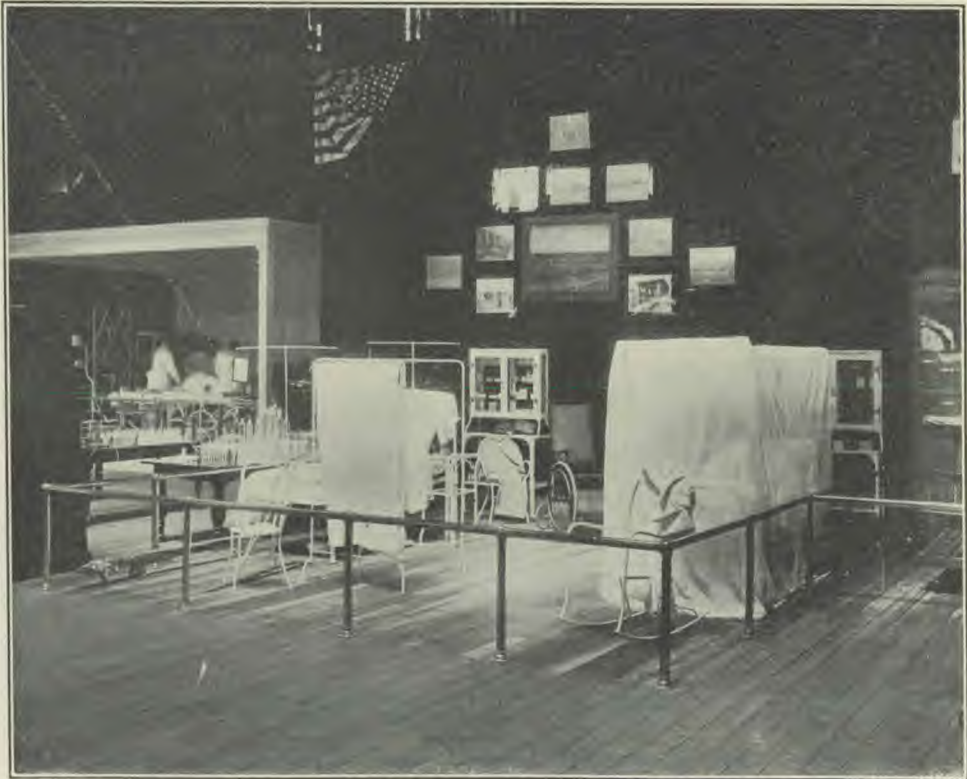
at Ft. Stanton, N. M., is accompanied by a display of model tents adapted to the use of patients.

The tuberculosis exhibit includes an interesting summary of the views of ancient writers on this disease. From the period before Christ, Hippocrates is quoted as having said that phthisis, taken early, can be cured; Aristotle said that the Greeks believed it to be con-

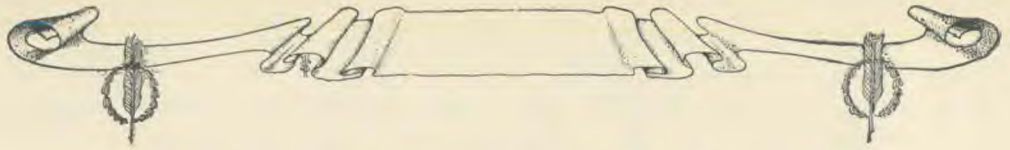
tagious; and Celsus recommended a change of climate, and especially a life at sea. From the writers after Christ, Pliny preferred pine forests, Aretæus lauded sea voyages, and Galen warned against contagion, and recommended a dry hill climate. A chart shows that one hundred sixty thousand persons died of tuberculosis last year, while but one hundred thousand have died of yellow fever during the past one hundred ten years.

The exhibit of the meat inspection department, which has been conducting a strenuous campaign, contains models of diseased meats, and shows the way in which they are detected.

Health exhibits occupy a prominent place in other buildings. A comprehensive exhibit in the Forestry Building illustrates the work of the Washington State Health Board, which directs its energies quite largely to the prevention and cure of tuberculosis.



A room in a marine service hospital reproduced in health department exhibit, government building, Alaska-Yukon-Pacific Exposition



Prevention and Treatment of Appendicitis

D. H. Kress, M. D.

A FEW years ago appendicitis was unknown in medical literature, while at the present time the disease is so common that the name has become a household word. Some medical authorities regard it as a disease of modern times. Perhaps the only thing modern is the name. The disease itself has no doubt existed for ages. Its rapid increase in modern times may be best explained by the old adage, "Many dishes induce many diseases;" for the disease is without doubt due to digestive disturbances.

The removal of the appendix has of late years become common. The organ is regarded as practically useless, and even dangerous. Some surgeons advise its removal whether diseased or not, whenever it becomes necessary to open the abdomen for other causes.

Appendicitis, as its name implies, is an inflammatory process of the appendix. The inflammation involves the first portion of the colon, or what is known as the cæcum — that portion of the colon into which the appendix opens and discharges. The disease is usually accompanied by pain on the right side near the groin, which is increased by flexing and extending the thigh, and is frequently associated with a rise of temperature, or fever; and as the disease advances, vomiting may occur.

Many of the diseases afflicting mankind are the result of self-poisoning, and have their origin in the alimentary canal, and especially in the colon. Dr. Strassburger has shown that in men who subsist upon ordinary foods, microbes increase in the colon at the rate

of one hundred twenty-eight trillions every twenty-four hours. The poisons and irritants thus formed bring about a catarrhal condition of the mucous membrane of the colon, and especially of that portion into which the appendix opens. To prevent the formation of these products which produce local catarrh and autointoxication, Professor Metchnikoff predicts that in the distant future it may be found necessary to remove the colon as well as the appendix. Dr. Arbuthnot Lane, an eminent English surgeon, claims to have successfully removed it in several cases, with apparent advantage to the individuals. Professor Metchnikoff says: "Man is very, very far from being perfectly constructed."¹

The fact that men and women live after the removal of the appendix does not prove it to be superfluous or useless; it is possible to live with one lung or one kidney, but two lungs and two kidneys are preferable.

The cæcum, into which the appendix discharges its secretion, is a second stomach, and completes the digestion of some of the foodstuffs brought to it from the small intestine. The appendix pours out its fluid as soon as the food reaches the cæcum.

In common with other observers, Professor MacEwen has noticed in nearly every case of appendicitis a history of indigestion.

¹ The more closely we study the human body, the more fully we are convinced that man possesses no organ that he can dispense with without injury to himself. Each organ has its distinctive function to perform, and upon the faithful performance of these the health of the entire body depends.

It appears, then, that in a state of health the appendix is a highly useful organ, and that it comes to be diseased only as a result of pre-existing intestinal diseases which, if neglected, gradually extend into the appendix.

That appendicitis seldom occurs among vegetarians has been observed by many. Dr. Snyder, who for ten years was connected with the court of the shah of Persia, during this entire time had under treatment only five cases of this disease at Teheran, and three of these were Europeans who happened to be in the country. He also attributes the infrequency of appendicitis to the mode of alimentation among the Persians. "At Teheran," he says, "abstinence from pork is obligatory, and the meat of cattle is almost unknown." One of these two Persians attacked by appendicitis was a student who had returned from Paris, and had continued to feed himself in the European style.

In my own practise of over fifteen years, I have not met with a single case of appendicitis in one who has for any length of time eschewed a flesh diet. However, I would not take the position that meat eating is the sole cause of this disease; for meat eating is usually associated with the use of pepper, mustard, and other irritants, which may act as causes of the disease.

The free use of cane-sugar, butter, fried foods, pastry, puddings, and jams causes catarrh of the alimentary canal, and favors the growth of bacteria, and may act as a cause of the disease. On a diet of fruits and nuts, or of fruits, grains, and nuts, fewer germs are found in the colon; while on a diet of cheese or meats, and especially when fish and shell-fish are freely used, germs are present in enormous quantities, their growth being especially encouraged by the presence in the colon of portions of undigested flesh.

Treatment of Appendicitis

If a person has the early symptoms of appendicitis, any tendency to constipation should be corrected. The free use of pure water early in the morning, one glassful about half an hour before breakfast, and again at night before retiring, is an effective laxative, obviating all drastic methods. A tablespoonful of pure olive oil, beaten up in the juice of one orange, and taken about three quarters of an hour before breakfast, makes a mild laxative, and is at the same time healing in its effect. This may be taken every morning for two weeks. If the colon is impacted, its contents should be washed out with a hot salt-water or soap enema. To do this, lie on the right side and use a fountain syringe. A quart of water may be safely used. With a little patience, the water will cleanse the canal up to the cæcum. To free the colon of its putrid contents is an important beginning of successful treatment. If the first results are not satisfactory, repeat the treatment. Apply hot fomentations for ten minutes, and then apply cold compresses every three minutes to the affected abdominal area, to allay heat. Repeat the fomentation at intervals of one or two hours. Never give opium or morphin, and never employ cathartics. If the disease progresses, a surgical operation will be necessary.

It is well to keep at rest for three or four days after the colon has been well cleansed. Not only should the body be kept at rest, but the digestive organs as well. As a drink, water may be taken freely, hot water being preferable. No food should be taken, with, perhaps, the exception of a little fruit juice, free from sugar, during the first two days. Then a small quantity of simple food, thoroughly masticated, may be used, preferably some well-baked breads, and an egg (perfectly fresh), beaten thor-

oughly, then stirred into some grape, orange, lemon, or pineapple juice. This should be sipped slowly. Some simple food of this kind should form all the nutriment for a week after the two days of fasting. A daily salt enema should be taken during the first week.

Appendicitis frequently appears in those whose habits are sedentary. The abdominal muscles of the sedentary person become relaxed, the organs to which they form a natural support drop out of their natural position, causing congestion, and preventing the food residue from being passed along. Naturally, the colon and appendix are more apt to become diseased.

The development of the abdominal muscles by appropriate exercises and by deep breathing, is an essential part of the treatment to prevent congestion of the appendix, and to encourage a free circulation of blood through the organ, and the passage of food along the colon. Exercise acts both as a preventive and as a cure.

Stooping or bending exercises are especially indicated,—some light employment in the garden, as planting seeds, pulling weeds, etc.,—but the body should be bent at the hips, keeping the legs almost straight. In sitting at the desk, practise sitting erect, with the abdominal muscles and the muscles of the trunk energized. Walking is an excellent exercise; but energy must be thrown into the walk, the head must be kept erect, the shoulders back, the abdominal muscles drawn in to hold the abdominal organs in position. Five minutes spent in deep-breathing exercises at night before going to bed is also helpful. Lying upon the back and slowly raising one leg, then the other,

twenty or thirty times, and afterward both legs together, aids in the development of the abdominal muscles, and helps to relieve constipation and improve the intra-abdominal circulation.¹ The importance of this will be seen when we recall the fact that the large blood-vessels contained in the abdomen, and the smaller vessels of the viscera, are capable of holding the blood of the entire body.

The principal thing that prevents the blood from stagnating there is the intra-abdominal pressure exerted by the abdominal muscles. When these are allowed to become flabby and relaxed through sedentary habits, the intra-abdominal pressure is removed, and visceral congestion takes place; and congestion is always the forerunner of disease.

Some one has said: "No man dies a triumphant death who dies of a disease below the diaphragm." Certainly this applies to appendicitis; for in order to live above the possibility of the disease, it is only necessary to return to a simpler life. Simple, non-irritating foods and drinks, together with thorough mastication, will render the use of laxatives unnecessary, and will prevent the decay and putrefaction of food products in the colon, while exercise will relieve the internal congestion by encouraging the circulation of blood to the extremities and periphery. In this, as in other diseases, prevention is better than cure.

¹ See the July number for an elaborately illustrated description of such exercises. The treatment of appendicitis is one of the most serious problems that confront the physician. Some cases will die under any treatment; some may be saved by an operation; some, by means of absolute rest, restricted diet, and local measures, as here suggested. An appendicitis patient should by all means have competent advice.—Ep.]

Surgery Useless in Neurasthenia¹



W. B. Holden, M. D.,

Portland, Oregon

I AM more and more convinced of the uselessness and harm that surgery does neurasthenics. Practically all such cases have been eliminated in my operations the past year.

One of the greatest problems of the medical profession to-day is the solution of the neurasthenic question. Surgery does these cases no good. It is a positive harm to suggest surgical operations to these patients for such conditions as retroversion, lacerations, dilated stomachs, floating kidneys, or anything of this kind. They should be operated on only when the conditions actually demand it. If every doctor had to live in the same town with these neurasthenics, and have them come back to his office with a tale of woe as large in proportion as before the operation, or perhaps larger, he would soon get so wearied with their growlings and gruntings that he would forever avoid that class of cases.

The damage is done these patients the moment any surgical procedure of whatever nature is mentioned to them. Any rascal or ignoramus can suggest an operation to one of these persons, and she will grasp at it, and insist upon having it done. You can reason, argue, and talk with her by the hour, and still she demands a kidney anchored, or

something done that will have no influence whatever upon her condition. This last year I have seen such patients broken-hearted because they were refused operations on kidneys that were practically normal. Some disreputable, dishonest, ignorant physician had assured each of them that her troubles were due to a floating kidney.

If the suggestion of a surgical procedure or the shock of an operation would set up a permanent change of thought in these persons, there might be some justification for operating; but my experience has been that after they recover from the benefits of the rest in bed, they are just as bad off as they were before; and when you once start, you can keep it up until you have done a whole course of operative surgery upon them.

It is time for sanitarium physicians, who receive chronic invalids largely of the neurasthenic variety, to take a firm stand against ovariectomy in young women. This unnecessary mutilation unsexes and changes the nature of the patient for the worse. These neurasthenics will sacrifice every organ in the body. It is not difficult to persuade them that they need an operation, and it is not unusual to find a single individual who has had three or four excursions to the operating table. It is not only wrong to do this, but it is bad policy. Sorrow, disappointment, and a waning reputation is the surgeon's compensation for doing unnecessary operations on neurasthenics.

¹From a paper read before the medical council held at the Seventh-day Adventist General Conference, Takoma Park, D. C., June, 1909.



Prohibition From a Medical View-Point

*T. D. Crothers, M. D.,
Superintendent Walnut Lodge Hospital*

HAVE the manufacture and sale of alcohol as a beverage contributed to the longevity, health, and general welfare of the people in any neighborhood in this country? Have our wealth and prosperity been increased, and are the things which we pride ourselves for having done, such as the perfection and manufacture of world-wide products and the development of educational centers with a higher degree of intelligence and public morality, been increased by the sale of spirits?

If the facts show that these results have followed in any degree from the making and selling of spirits, it is wisdom to continue their sale and manufacture; but if the evidence fails to prove this, and shows that the effects have been directly opposite, it is good sense to refuse to license or legally recognize the manufacture and sale of spirits any longer.

Insanity, pauperism, criminality, idiocy, and other allied evils have increased to proportions that are appalling. These results are not accidental, but come from causes that are as clearly traceable to the use of alcohol as typhoid fever is to germs from infected water or milk.

One of the great facts which exact laboratory research and careful inquiry have revealed, is that alcohol is not a stimulant, tonic, or food. Old theories concerning its action are unsupported, and are found to be untrue when tested with instruments of precision. Alcohol is a

narcotic. The good feeling which follows its use is simply that of an anesthetic, diminishing the discomfort, and giving a feeling of relief, very much the same as opium. A glass of wine, beer, or whisky covers up the nervousness, exhaustion, and weariness, and gives the person who uses it a false sense of restoration, health, and good feeling. This continuous covering up of discomfort and nervousness is followed by a growing

desire for a stronger anesthetic effect, and this desire very soon results in disease, weakness, and degeneration. This anesthetic effect of alcohol destroys energy and vital force, as well as the powers of repair. Many interesting questions, not settled yet, center about these conclusions; but the central fact that alcohol is an anesthetic is fully established.

Studies of the causes of insanity in this country and Europe show that from

The liquor traffic has not in any manner contributed to the welfare of the country. It has contributed to the increase of insanity, pauperism, criminality, and idiocy. Alcohol is neither a food nor a stimulant, but a narcotic and a depressant. It increases the fatality of pneumonia, and is largely responsible for railroad accidents. Public action is justified and demanded in case of yellow fever and other public scourges, even though the administration of the law may inconvenience individuals. Public action against such a common enemy as the liquor traffic is amply justified. Business interests are fast closing against the drinker. The manufacture of denatured alcohol for fuel will soon furnish a lucrative and legitimate field of operation for distilling plants.

fifteen to sixty per cent of the inmates of insane asylums used alcohol to excess before insanity appeared. From forty to seventy per cent of all criminals have a pronounced history of alcoholic excess before and during the commission of the crime. The same cause is evident in over thirty per cent of all paupers who are dependent on the public. Over fifty per cent of idiots and epileptics are traceable directly to the personal and parental use of spirits.

Pneumonia, one of the common diseases, is, as a rule, fatal in persons who use spirits, and fully fifty per cent of all deaths from this disease occur in persons who use alcohol as a beverage. A startling percentage of casualties is due directly to the faults of men under the influence of spirits. Sixty per cent of all accidents on railroads are due to failures of irresponsible persons who are using spirits. This fact has become so notorious that all leading railroads demand total abstinence of men in their employ, as a matter of economy.

These studies bring out the fact that the use of alcohol as a beverage is one of the most prominent causes of crime, pauperism, insanity, and disasters.

Yellow fever, which formerly decimated Southern cities, is driven out by exterminating mosquitoes and destroying their breeding-places. Typhoid fever is effectually checked by destroying the sources of infection. Smallpox is quarantined. Consumption is shown to be dependent on bad surroundings and bad conditions of living; remove these, and the disease can be checked. On this principle of preventing disease, health boards enforce better sanitary surroundings and conditions, and pure food laws prohibit the adulteration of foods and drugs.

This is evidence that the community recognizes that physical causes are active in disease, and that it is legitimate

to prevent or prohibit anything which tends to develop serious and incurable conditions. The practical question appeals to each one, Why should the insane asylums be overcrowded? Why should pauperism, disease, and mortality, as well as casualties, exist in our midst, and steadily increase year after year? Why can we not recognize the causes, destroy them, stamp them out, the same as we prevent typhoid fever or other diseases?

Outside of all sentiment, there is a deep-seated and growing conviction, supported by observation and sustained by statistics, that the sale of spirits increases and intensifies these evils. And this fact is creating and developing into the great reform revolutions that are sweeping over the country. It is not emotional appeals nor dogmatic assertions that rouse the public, but the sense of danger that is spreading in every direction.

Thirty-four different States had legislatures in session last winter, and two hundred sixty-four bills were introduced against the traffic in alcohol. Sixteen of these bills were for absolute prohibition of the manufacture and sale of spirits as a beverage.

These are unmistakable indications that public sentiment is recognizing alcohol as a prolific source of evil, and is demanding that the causes shall be suppressed. There is another fact equally significant. Within five years over a million persons in this country have joined organizations for the special purpose of suppressing the use of alcohol as a beverage.

In every business circle there is a rapidly growing recognition of the disability of men who use spirits. In every center where the best intellect and intelligence is called for, total abstinence is a requisite, and drinking men are dropped as unfit, incapable, not on any theory, but simply as an economic expedient, because of a determination to take no chances and remove every possible peril. There is

no sentiment nor prejudice in this. There is no question of license, regulation, or moderate drinking in the business world. It is total abstinence and prohibition; anything else cultivates danger, and diminishes the possibilities of success.

The great mercantile agencies rate a man's business capacity largely on his total abstinence. The future of a moderate drinker is uncertain, and confidence in him brings an increasing risk. The various bonding companies are growing more and more positive in their refusals to be responsible for moderate drinkers in positions of trust. Thus everywhere, prohibition of alcohol as a beverage is the outcome of experience.

The alcohol problem is a public health one — as much so as typhoid fever. The sale of alcohol as a beverage is a cause of many evils which imperil our home life, our business interests, and everything that makes for longevity and health.

To the question, How shall we get rid of evils and perils which threaten home life and civilization? there is only one true reply, and that is the removal of the causes. Stamp out the evils at their source. Clean up the water-supplies, clean up the homes, drive out the breeding-places, force men and women to observe rules of living that will not be obstacles to others.

There is another phase of the question which seems not to have been recognized. The air is full of significant signs and unmistakable indications that the manufacture and traffic of spirits is on the verge of a tremendous revolution. It has been demonstrated that denatured alcohol can be made a profitable energy, and that its use as a fuel, light, and power producer will come into general use in the near future. Every brewery and distillery in the country will change its processes to the manufacture of these cheap

alcohols whenever a demand for them is created. The profits will be greater, and the capital can be turned with greater frequency, and the business will be unrestricted.

Alcohol can be made from waste products of every description, such as decayed fruits, vegetables, garbage, corn-stalk roots, potatoes, and everything which contains starch and sugar. Alcohol is manufactured from these products in Germany to-day, and is sold at twenty cents a gallon as a fuel and light producer. This will be done here whenever there are practical boilers and stoves to utilize it. Last year over fifty patents were taken out for apparatus to harness alcohol and put it into practical use as a fuel and for light and power purposes. A firm in Meriden, Conn., claims to have perfected lamps and burners which will accomplish this purpose, and an experimental station at Darien, Conn., is working on these problems, and asserts that alcohol, now furnished at fifty or sixty cents a gallon, is as cheap for fuel, light and power purposes as coal at two dollars a ton.

Several large distilleries in the West have turned their business into the making of denatured alcohol, and shrewd manufacturers are diminishing their products and selling out their stock, preparing for this revolution which is just before them. The breweries and distilleries will be practically forced to take up this new industry. They will do it the moment the prospect of gain is made clear. All manufacturers and sellers of spirits should realize the signs of the times and the meaning of these great tides of coming events. They should join in welcoming prohibition as a way of escape from the present wretched business of tearing down and destroying, to building up and making life better.

Hartford, Conn.

Problems for Parents

E. C. Jaeger

THE second important period of life comes at about the age of thirteen, when the child begins to develop noticeably into the man or woman. This is a period beset with dangers, when new hopes and aspirations, new emotions and instincts, bud into being, and result in new activities, which may, if unguarded, lead to disastrous results.

Happy the parent who has not, previous to this time, built up a barrier of reserve, preventing that loving confidence which the youth now longs for, and which would enable the parent the more effectually to guard against wrong influences.

If the early training has been judicious and adequate; if a knowledge of hygiene, including sexual hygiene, has been thoroughly instilled, this period will have comparatively few anxieties for the parents. If, as is too often the case, there is a lack in this respect, the father and mother must now watch with especial care, or they will soon find themselves burdened with perplexities.

This, above all others, is the time when care should be exercised regarding the associations and environments of the child. It is about this age that children tend to band themselves together, to rove about, especially at night, committing deprecations. This is the result of the new tendencies or instincts developing, which, not being under control of an experienced mind, find expression in activities, which, while comparatively innocent themselves, may lead to that which is more serious.

These tendencies should not be crushed out, but should be developed into that which is useful. For instance,

the youth may be enlisted in the formation of societies for self-betterment, these societies to be under the wise leadership, or at least counsel, of those who are older. The activity which, undirected, tends downward, may, with proper direction, be utilized as an uplifting force.

Boys sometimes acquire strange notions of becoming heroes, and perhaps go so far as to run away from home. This tendency, traced to its source, will usually be found to be the result of reading cheap fiction. Such literature pours a deadly venom into the youthful mind, requiring years of constant re-formation of habits to overcome.

If more attention is bestowed upon the industries, — gardening, wood-working, and the like, — it will furnish a legitimate field for the youthful activities, and will prevent many of the unfortunate results of undirected, and consequently misdirected, energy.

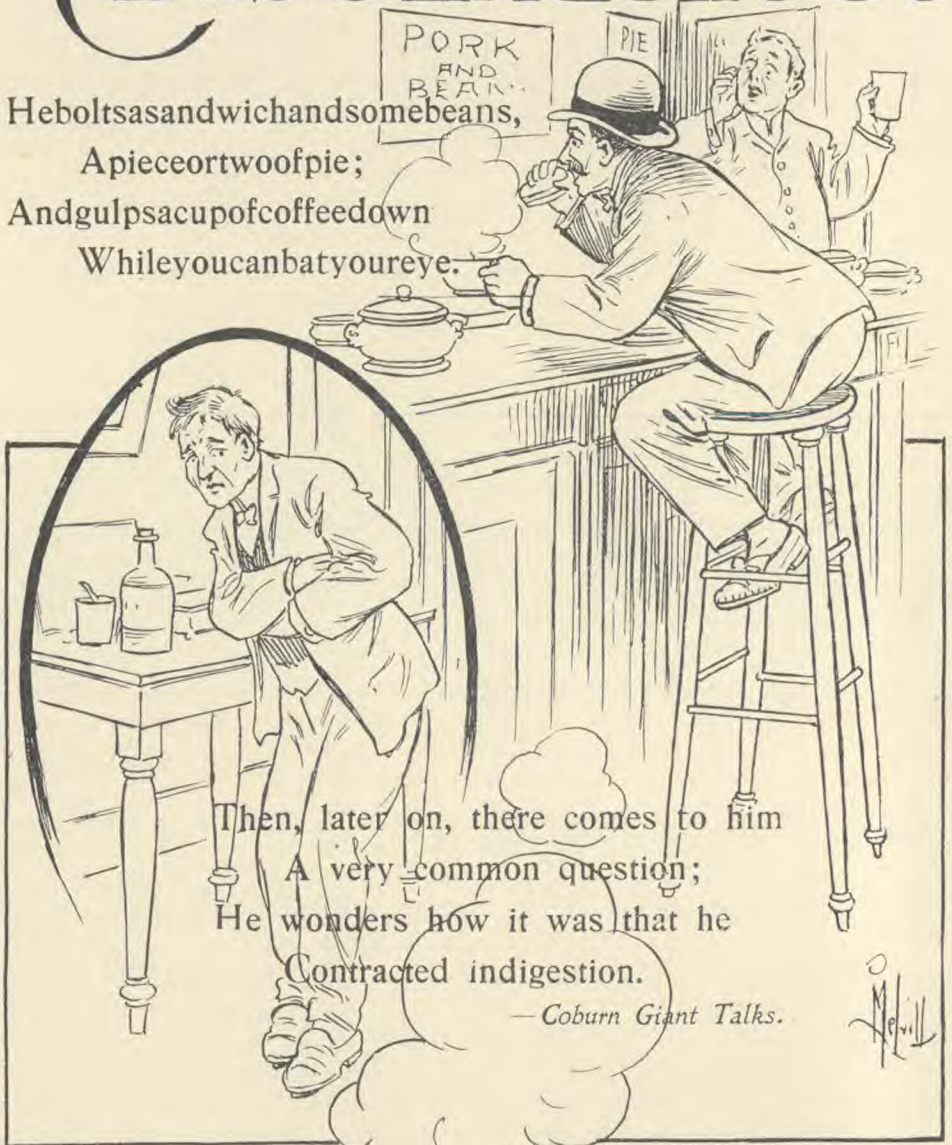
As a matter of fact, it would be far better if the boy and girl would spend their entire time in outdoor labor. We must give them some purposeful work, — work in which they are interested, — that their minds may be filled with noble thoughts. A year spent on the farm would not be lost, but would prove a wonderful blessing.

The diet should be given careful thought. The more unstimulating and abstemious it is, the better. Children who are permitted to partake of highly seasoned foods, tea, coffee, sweetmeats, and flesh foods will prove hard to deal with. Serve a simple dietary, consisting largely of fruits, grains, and vegetables, and the awakening of temptation to vice will be postponed.

Fernando, Cal.

Cause and effect

He bolts a sandwich and some beans,
A piece or two of pie;
And gulps a cup of coffee down
While you can bat your eye.



Then, later on, there comes to him
A very common question;
He wonders how it was that he
Contracted indigestion.

— Coburn Giant Talks.

Nevill





How to Be a Good Cook¹

George E. Cornforth

IN presenting these thoughts I have in mind professional cooks, though many of the suggestions might be put into practise by other cooks as well, and some of the truths are equally applicable to people who are engaged in other lines of work.

In order to be a successful cook more is necessary than a knowledge of the art and science of cookery. One may have that thoroughly in mind, yes, and be able to put that knowledge into practise in producing palatable and wholesome foods, and yet not be a success as a cook; for one's success in any line of work depends upon what one *is*, as well as upon what one *knows*.

It has been said that the way to learn to do is by doing. That may not be exactly true, for if the doing is in a slipshod, careless, or wrong way, one never will reach perfection in any art. But if every time we do a thing, we do *our best* at it, and strive to do it in the best way, then there is hope of our becoming proficient.

A cook must train himself to do things neatly, daintily, carefully, and at the same time he must be quick to think and to act. He must be observant, and ready to take suggestions. He must train himself to keep many things in

mind at once. And though it is said, "If you have too many irons in the fire, some of them are sure to burn," yet the really proficient cook must be able to tend many irons. Though he be hurried, he must be calm and self-possessed, and must never lose his temper. If he become nervous or excited and lose his temper, he will lose the respect of those who are working with him, and his influence with them also. He should never "show his authority," but should be a worker with others, not over them. He may sometimes have working with him persons with whom it is necessary to be firm, but it should be as a friend, not as a master. If he is an authority upon his subject, his authority will be manifest without the necessity of his showing it.

The idea seems to prevail that measuring ingredients is the work of a novice, and that it is unnecessary for a really proficient cook to measure. While it is true that many good cooks do put things together by guess, the best cooks do not; and lack of success in using recipes may be due to want of accuracy in following directions. Cooking, as well as every other line of work, is being reduced to a science, and no science succeeds by guesswork. This is not saying that there are not some simple things which an experienced cook can make without taking the trouble to measure exactly, but if one knows the exact measurements to be used, he will be

¹ These thoughts, intended primarily for professional cooks, may be read with advantage by the housewife. It should be the ambition of every housekeeper, whether she have hired help or not, to be a first-class cook. — Ed.]

better able to put the recipe together without measuring than if he has a very vague idea of the amounts to be used.

Cooks who make things by guess have to depend upon "luck." You will hear them say they had good luck with their bread to-day, or they did not have good luck with their cake. Now there is no such thing as luck. Nothing in God's universe happens. Every effect has its cause, and this is as true in cooking as in other kinds of work. God never makes a mistake, and if you do your

part right, he will do his, and definite results will come every time you put definite causes at work. If you have a good recipe and follow it exactly, there is no reason why you should not get the same result each time.

Another thing: as in every other business to-day, in order to keep up to date and not "get into a rut," the successful cook must, by constant reading, keep in touch with the latest developments in his line of work.

Melrose, Mass.

Decrease in Meat Consumption

A RECENT Bulletin of the United States Department of Agriculture comments upon the general decrease in the consumption of meat per capita. Steaks and chops, which were common at the breakfast table not long ago, have now vanished, and even the noonday lunch, while perhaps not avowedly a vegetarian institution, is probably far less heavy with proteids than of old.

But even with a steady and perceptible decrease, America, it seems to be agreed, is still eating too much flesh. To speak

scornfully of John Bull as the "beef eater" is rather inconsistent in view of the actual returns. Figures that were compiled some years ago showed that 185 pounds of flesh food was the average consumption for every man, woman, and child in America, and only 121 pounds in Great Britain. The others, needless to say, were nowhere. The per capita consumption in France was only 79; in Belgium, 70; in Denmark, 76; in Sweden, 62, and in Italy, 46.—*Chicago Post.*

The Importance of Dietetics Being Recognized

I N the progress of medicine the near future, in my opinion, will see the professorship of dietetics in the medical school advanced to the same rank as that

of medicine; and I am even going further than this, and say that the practise of medicine in the future will be largely the practise of dietetics.—*Dr. Wiley.*





The Playground and School Hygiene

THE playground is the only place where a schoolchild gets air in the proper amount and kind, the only place where he obtains full and complete aeration of the blood. A despicable fraction of schoolrooms have standard ventilating apparatus, and the rooms that have do not always adequately benefit thereby. . . .

But could ventilation be perfect in a schoolroom, there could not be the same aeration of the blood of a seated, studying child as of a child on the playground. There must be the exhilaration of joyous exercise, the strengthened pulse, the quickened, deepened breathing, the full chest of sustained effort that draws the blood to the very apex of the lungs, to meet the needs of the growing child. . . .

"Where the sun does not go, the doctor does," is an Italian proverb, quoted by Kotelman. Try as we may, we can not get the sun sufficiently into all our schoolrooms, and if we could, we would shut it out again as soon as we let the children in to study, because we say it hurts their eyes. Where, then, shall the children bathe in the sunshine as they should, but on the playground? . . .

Once upon a time the people of a certain city, when the question arose as to whether they should build a great public school or open a playground, decided to open a playground. Now it came to pass, in the course of years, that the citizens of that city advanced so far beyond the rest of the human race, that

in all the centuries since, the nations that have gone on building public schools and neglecting to open playgrounds have not been able to catch up with them even to this day.

This is fact, not fancy. At seven years of age the Athenian lad entered the palestra, which was essentially a playground. All the first and better half of the day was spent in gymnastics, games, and play. In the afternoon there was singing, some writing (the beginners wrote in the sand box or in sand strewn upon the ground), some reading,— all in the open air,— and then came a long period of play again. Such was the schooling of the Greek lad up to the age of ten or eleven, and it did not differ essentially up to the age of sixteen, except in the severity of the exercises. And yet, the world has not ceased to marvel at the results of the Greek education. . . .

In the State where I had the privilege of acquiring most of my experience in educational work, a child to obtain the best educational advantages must be blind, deaf, feeble-minded, incorrigible, or a truant. Then he is given exercise, playgrounds, gymnasia, baths, fresh air in abundance, gardens, and play shops. The great majority of normal children get along the best they can without them. And now in Pittsburg they have an open-air school for children with a tendency to tuberculosis. So consumption seems to be another of the list of ills, one of which a child must have in

order to enjoy the best educational advantages. I am not disapproving of this care for the weak. I believe in it with all my heart, but this we should have done, and not have left the other undone. There are thousands and thousands of children in the regular schools of Pitts-

burg who have no place to play, no recess, no really fresh air to breathe, little sunshine and less genuine life-giving exercise.—*G. E. Johnson, Supt. of the Pittsburg Playground Association, in Hygiene and Physical Education, May, 1909.*

Where Girls and Their Mothers Fail

IT is all very well for women to deplore certain low standards that prevail to-day among young men. But one important point that mothers of daughters who very often most loudly bewail the fact must not lose sight of: they can never hope to raise the moral standard of young men as long as they allow their girls to affect the all-too-transparent waists and blouses that are so generally worn, especially in the summer season. A man is a man: I care not of how fine a grain he may be. And it is not a whit helpful to a young man, in his growing years, in keeping his mind and thoughts clean and straightforward, to have thrust upon his notice on every hand such a

style of feminine dress. Decent young fellows complain bitterly of this tendency on the part of girls, and of the apparent indifference of mothers. And they are right. There is unquestionably something to be said on the side of the young man who wonders at the spirit or motive which prompts young women in persistently wearing a style of dress like the transparent waist, toward which there is such increasing tendency. One fact is absolute: no girl has a right to resent license or liberty from the other sex which her very dress implies or invites. A filmy lace waist, with low-cut corset-cover, makes a mighty poor moral uplift. —*Ladies' Home Journal, Editorial.*

The Rat Problem

THE rat has been for so long looked upon as an inevitable pest that the general public regard him as part of the scheme of things, and, like the poor, "always with us." His depredations do not apparently affect the bulk of the population, which, habitually indifferent to evils beyond its immediate notice, allows a serious danger to exist undisturbed.

The rat is, however, something more than an undesirable household pest, terrifying to the timid, and apt to become a nuisance by dying and decomposing under floors and behind wainscots.

Experiment has apparently proved that the rat in confinement can not live on a cent's worth of food a day, even if of the cheapest and bulkiest kind, and that several rats confined together in a cage and fed at this rate become mutually cannibalistic.

Accounts of destruction of bird life and ground game in islands where rats have swum ashore from wrecked ships are most convincing of their prolificness and destructiveness, and should prove the necessity of legislation and concerted action for their extermination.

Trichinosis and plague seem to owe their epidemic prevalence entirely to the rat, which in the former case acts as intermediate host of the trichina spiralis, ejecting the ova with its excreta after eating "measly" pork, the ova being in turn swallowed by the pig, whose muscles they infect, while, in the case of plague, the rat flea absorbs the plague virus from the infected rat, and in turn inoculates human beings. A report of a diphtheria epidemic at the Hospital for the Insane at Middletown, Conn., indicates that the rat can be a large factor in transmitting other communicable diseases.

The most effective method of getting rid of rats seems to be the use of one of

the bacteriological poisons, particularly Neumann's virus or Danysz's virus, which sets up a communicable disease among the rats, from which they die quickly in the open air and away from their haunts. In England whole islands and villages have been cleared of rats by distributing bread dipped in a bacteriological broth near their runs, and good reports from the use of the Danysz virus have come from a test made recently at a waterside stove warehouse in New York City. The advantage of these poisons is that they are harmless to humanity and domestic animals. For the destruction of rats in the holds of ships carbonic acid gas is used.—*Bulletin New York State Department of Health.*

Facts Concerning Milk

THE cow is the foster-mother of our civilization. Owing, on the one hand, to that sinister development of our industrial system which compels many women to engage in competitive factory labor, and the invasion by women of almost every field of human activity; and on the other hand, to the unwholesome influences surrounding those immersed in the fatuitous struggle for social supremacy, we find that each year rewards us with a larger percentage of women who are unable to nurse their children. . . .

The milk problem is virtually the children's problem, for cow's milk, modified in accordance with the requirements of each particular case, has been found to be the only practical method by which nature's plans for early nourishment of the human infant may be successfully imitated.

Inasmuch as one child in twenty in our large centers of population dies before five years of age of maladies traceable directly or indirectly to contaminated

cow's milk, it may be well to outline very briefly some of the properties of this indispensable food. . . .

A popular fallacy prevails which enshrines in the minds of the uninformed the belief that milk having a large percentage of fat is rich milk, and hence, the best milk. Milk rich in fat, and the best milk, both from a physical and a chemical view, are not synonymous terms, either as a matter of domestic economy or as applied to its use for infants. . . .

Protein is the most important nutritive content in all milks, and is the one toward which breeding efforts and the attention of the consumer must be directed.

We find in . . . the Holsteins and the Ayrshires the qualities particularly desirable in the family cow ["large quantities of cream containing a normal proportion of milk divided into small globules"], inasmuch as their milk is best for infants, and furnishes a balanced ration for older children and adults. . . .

The Jerseys, as bred and cared for in this country, have a highly irritable and nervous temperament. . . . The Holsteins, on the contrary, are a large, healthy breed, of placid temperament, great constitutional vigor, enormous digestive and producing capacity, comparatively resistant to disease, and flourish to a high degree in our trying climate.

The same qualities which commend the wet nurse in the performance of the function which the child's natural mother is unable to perform, are those which should commend to the community the cow which now, more than ever, sustains to the infant population the relationship above indicated.—*Dr. Rockwell, in Popular Science Monthly.*

Tuberculosis in Schoolchildren

WE could accomplish a really great work in the early diagnosis of tuberculosis if we would train our school-teachers to suspect tuberculosis when a child fails in its studies, looks anemic [pale], or complains of pain in the joints, and to refer such a child to the school physician for a careful examination.

It is only by systematic examination and re-examination of suspected cases that we shall find the children who are tuberculous.

After a child has been declared to be tuberculous, it should be sent to an open-air school or school sanatorium. We must teach the children to love fresh air.

When we begin by diagnosing tuberculosis in childhood, and follow up the case so that the child will not develop full tuberculosis,—you all know how curable tuberculosis is in childhood,—then we shall strike at the root of the problem.—*Dr. S. A. Knopf, in a discussion at the Chicago session of the American Medical Association.*

Effects of Coffee

ALTHOUGH the deleterious effects of the persistent use of coffee are most generally conceded, it must be owned that the profession at large has been slow to realize a fact long known to careful observers and those dealing largely with sensitive and neuropathic individuals. It is only within recent years, however, since laboratory research has seized upon every article of consumption and sought explanations for every

functional and structural alteration of health, that the effects of coffee have been subjected to the scrutiny of scientific investigation. The researches on the subject are now so exhaustive, its literature so exclusive, and the injurious action of coffee on the majority of those addicted to its use so fully attested, that further evidence is no longer called for.—*Walter Wesselhoeft, M. D., in Boston Medical and Surgical Journal.*



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 Inadequacy of the Sanatorium Treatment of Tuberculosis

[This abstract is given, not to criticize the work of sanatoria, but to call the attention of many persons in moderate circumstances who may not be in a position to take sanatorium treatment, to the fact that there is hope for them outside of a sanatorium, provided they enlist their energies and their intelligence in the business of getting well.—Ed.]

UP to about thirty years ago the diagnosis of tuberculosis was practically a death sentence. To-day we can in the majority of cases inspire the patient with hope. Formerly we gave hope of cure only when patients could maintain themselves in certain favorable climates. Breadwinners and those of moderate means, constituting the great majority of tuberculosis patients, were doomed.

But the fetish of climate has been dispelled. We know that tuberculosis can be cured irrespective of altitude, or temperature, or hours of sunshine. Now there is a belief that the sanatorium offers the most certain assurance of recovery, and nearly every institution has long lists of patients waiting to be admitted.

We have made great progress in learning that tuberculosis is curable in any climate, but we have not gone far enough in dispelling the notions about the place in which a consumptive may hope for a cure. A patient, informed he has tuberculosis, is directed to some institution. He may not find admittance for a month or more, according to circumstances. During that time his disease may have progressed to such a

degree that he is considered too far advanced for admission. As the patient has placed all his reliance on the sanatorium treatment, he has not meantime taken proper precautions, and his disease has steadily advanced.

But it is not true that a sanatorium is the only place where a consumptive may expect to be cured. Many more consumptives are actually cured at home than in sanatoriums. Autopsies show a very large proportion of cured tuberculosis among persons who have died of other diseases. Perhaps seventy per cent is a conservative estimate of the persons coming to autopsy who have at some time had tuberculosis. Of these, fifty per cent died of some non-tuberculous disease, and gave ample evidence that the tuberculosis had been cured.

Considering that the vast majority of these persons who come to autopsy tables are of the lower classes socially and economically, it is evident that tuberculosis is curable not only in sanatoriums, but in cities, and in the homes of the poor. While the sanatoriums cure only a comparatively small proportion, it is evident that the number who are cured at home without knowing they had the

disease is larger than is generally appreciated.

The number of existing sanatoriums is utterly and hopelessly inadequate. Even in Germany, the home of the sanatorium, where this institution has been developed to a greater extent than in any other country, there are not nearly enough institutions to accommodate the patients. They have, at the outside, twenty thousand beds, yet one hundred twenty thousand die there annually of tuberculosis.

In other countries the condition is even worse. In the United States, with its annual tuberculosis mortality of at least one hundred seventy-five thousand, meaning some one million two hundred twenty-five thousand tuberculosis patients, we have about fourteen thousand beds in tuberculosis sanatoriums [one bed for every eighty-eight patients].

Among the autopsy cases of cured tuberculosis are some in which the damage was quite extensive, and which, if discovered during life while the process was active, would have been pronounced moderately, or even very far advanced cases of consumption, and if referred to a sanatorium might have been rejected.

On the other hand, we see cases of incipient disease in sanatoriums treated for months, or even years, and discharged as only "improved" or "unimproved."

It is only incipient cases that are favorably received in sanatoriums, though they do receive moderately advanced cases. Not a few patients who have been diagnosed as tuberculous and advised to take sanatorium treatment have neglected to do so, and have made favorable recoveries at home. And even patients discharged as unfavorable from sanatoriums have improved in their home surroundings.

The moderately advanced cases, if they take good care of themselves, stand a good chance of improvement at home at a much lower cost than at the sanatorium.

Sanatoriums are inefficient in preventing the spread of the disease; for not only do they not segregate more than an insignificant minority of consumptives, but they do not accept patients in an advanced stage of the disease, who are the more likely to spread the disease.—*Maurice Fishberg, M. D., in Medical Record.*

A Warning to Brain Workers

RECENT scientific advances show that much of the weakness and failures [in medical journalism] depend on the mental condition and physical vigor of editors and authors. This is evident in the poor work and stupid blunders of highly trained men, due to impaired vigor of brain and nerves.

In one part of a book there are many strong, clear conceptions of facts. In another the facts are weak, confusing, and badly grouped. Many books exhibit the strained efforts of a tired, overworked brain, depending on chemical help

from spirits and drugs; or of a worn-out brain needing rest, or a nervous system buoyed up by tobacco, coffee, or spirits, working at midnight with increasing feebleness and confusion.

Text-books by college professors and teachers are good illustrations of the strained conditions and feeble mentality, and the caffeine, tobacco, and spirits relied upon to produce them. Such works are fashioned at midnight, with the "aid" of alcohol, tobacco, cocaine, or coffee. Though the authors may be forceful men, they lack the ring of clearness and vigor-

ous conception. * These facts are seen in journalism, both in the contributors and among editors. The irritability and pessimism of editors are significant signs. Editorials that are involved, negative, obscure, or intensely personal suggest a great variety of causes.

A study of orations and addresses before medical societies by good men brings out the same fact. Often these addresses were written at different times with intervals between the parts, and in some parts ill health and mental confusion are discerned, and there is evidence that the author was under the influence of spirits, cocain, or other drug; not that he was a victim of these addictions, but that he had used one of them for the emergency, with the idea that it gave him fluency and clearness.

It is a curious fact that though muscular fatigue is recognized as requiring rest for restoration, brain and nerve fatigue are often regarded as a condition which can be overcome by chemical agents. Often editors and authors under-rate their weakened condition and debility, believing it to be a matter of will power which can be overcome by stimulants. If sleep does not follow when required, it is forced by chemical means; and if the brain shows weakness and irritability, drugs are supposed to restore the lost energies.

Secular journalism presents startling examples of impaired vigor and mental failure, and some books show the effects of cocain, coffee, spirits, and opium so clearly that an expert is as positive of the habits of the writer as if he had seen him personally.

Recently some studies of the effect of diet in literary work have called attention to the fact that the peculiarities and eccentricities of authors are dependent on the toxemic conditions from excess of carbohydrates or proteid foods. This is indicated by the oft-repeated statement

that the writer is bilious, and is constipated, and his thoughts take form from these conditions.

In an instance under my care, a medical man, who was a brilliant writer, suddenly became stupid, confused, and irritable. In reality he was a gormand. When he changed his habits of life and lived hygienically, his former brilliancy returned. There can be no question that indiscriminate eating and reckless disregard of the ordinary hygienic rules of nutrition make a pronounced impression on the literary work and the scientific judgment of an author.

There is no justification in the theory that spirits, drugs, caffeine, tobacco, cocain, or any substance of like character, have only temporary and transient injurious effects on the brain and nervous system, and that they may be taken in emergencies to draw out new forces and energies without loss or impairment. All evidence indicates that these drugs impress and diminish the normal workings of the brain and nervous system.

Neither is there any justification in the belief that the indiscriminate use of foods and a reckless diet have little or no derogatory influence on the highest mental vigor and strength; or that nature will repair and overcome excesses of this kind, and that good mental work requires excessive food to supply the loss of energy. The best teachings of science show that the indiscriminate use of food impairs the efficiency and vigor of the brain, and favors the production of toxic or poisonous agents which injure and destroy the capacity for healthy mental work.

Scholastic training, culture, and large knowledge are all secondary to physical health, living close to nature, and exact observance of its inexorable laws.—*T. D. Crothers, from a paper read before the Association of Medical Editors, Atlantic City, June, 1909.*

THE MEDICAL FORUM



Is Absolutely Pure Water the Most Healthful?

IN view of the oft-repeated assertion that any mineral held in solution in water is injurious, and that distilled water is decidedly better than water containing any mineral salt, the following quotation from Dr. Carl Rose, of Dresden, Germany, recently made in the *Dental Review* by Dr. G. V. Black (physician and dentist), of Chicago, is significant:—

"Children who have grown up in regions in which calcium salts, carbonates or sulphates, are abundant in the soil and in the water used ["hard water"], have much better developed salivary glands than those who have grown up in regions of soft water, and have used that entirely. Those children who have used very hard water are able to secrete more than three times as much saliva in a stated time as those who have lived in regions of soft water. Those children who lived in regions of very hard water have less caries in their teeth than those who used only soft water. This last may perhaps be accounted for by the increased washing of the teeth by the greater amount of saliva passing over them, affording greater cleanliness, and in so far inhibiting caries.

"Further consultation of the records of examining physicians shows that in the regions of hard water the percentage of persons who are well developed and able to do military duty, is very much greater than in the regions of soft water."

It would seem that investigations like these would outweigh any amount of theory regarding the superiority of distilled or very soft water as a beverage.

Undoubtedly distillation is necessary where there is an excessive mineral constituent, and is very advantageous where

there is a large amount of non-volatile organic matter present; but should the ordinary "hard water" be distilled? These observations would seem to point to a negative answer.

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The Passing of Drug Therapy as an Exclusive System

TIME was when drugs were the sole reliance of the average physician. That time is rapidly passing: there are now few physicians who do not make use of some non-drug remedies; and some of the more advanced question seriously the efficacy of many of the drugs most highly esteemed by the profession.

Only recently Dr. Wilfred M. Barton, professor of pharmacology and therapeutics (remedies and treatment) in the medical department of the Georgetown University, Washington, D. C., published an article in the *Journal of the American Medical Association*, entitled "Pharmacological Fetishes," which begins with the following significant expression:—

"The last few years have witnessed a healthy growth in the spirit of iconoclasm [idol destruction] in medical thought. . . . If it were not for these periodical reformations, the mind of the average physician would be little better equipped than that of his superstitious empirical prototype of a thousand years ago."

He says that the movement did not appear any too soon, and that it has come to stay until it has accomplished its purpose.

Among the remedies he mentions as highly esteemed by the profession, but proved to be absolutely inert for the purpose for which they are administered, are:—

Valerian for hysteria.

Tannic acid for internal hemorrhage.

Alcohol and ether hypodermically for shock and collapse.

Colchicum for gout.

Potassium iodid for sclerosis.

Potassium chlorate for stomatitis.

The hypophosphites for neurasthenia.

Lithium salts for the uric acid diathesis.

Calcium salts for internal hemorrhage.

Valerian, he says, owes its supposed efficacy to its abominable smell. Regarding colchicum as a remedy for gout, he says:—

"Many use it. Many have abandoned it. It may be fairly stated that it is not as extensively used as it was ten or even five years ago. Something has shaken confidence in it."

He concludes that "colchicum may therefore be placed in that large and ever-growing class of drugs of doubtful and uncertain utility."

Of the hypophosphites he says, "This delusion has made many millionaires, but never effected a cure."

Regarding the lithium salts he says:—

"How lithium ever obtained its tremendous vogue with medical men is one of the great mysteries of pharmacology." "The opinion of pharmacologists at the present time is that the salts of lithium are entirely superfluous."

Yet people are still drinking so-called "lithia water," and helping to make millionaires of the proprietors.

The doctor has no thought to discredit the efficacy of all drugs, but to show that some of the drugs most popular among the profession are useless.

After all, doctors are men, subject to the same tendency as other men to accept current opinion without much

criticism, and conservative in the matter of abandoning what is in general use, even after it has been proved to be ineffective. Nevertheless the practise of medicine constantly improves, perhaps as much as in any way, in the elimination of drugs once thought useful, and in the adoption of various non-drug methods which have proved to have real merit.



Drugless Healing Versus the Medical Profession

SUCH is the title of an article written by a physician to physicians, which has appeared in at least two medical journals. The object of the article appears to be to call the attention of medical men to the fact that by neglecting the use of certain drugless remedies, particularly mental healing, they are allowing many of their patients to leave them and finally be cured by drugless healers. The paper opens:—

"I believe the profession does not fully realize the rapid growth of drugless healing in this country. In order to prepare a paper of this kind, I have been to considerable labor and time and expense to get at the real facts, and to get reliable statistics."

He then proceeds to show by means of figures the rapid growth of drugless healing in the United States, and predicts:—

"In twenty years at the outside the doctors will be out of business. The present tactics pursued toward the drugless healers by the medical profession, if continued, will only hasten its own downfall. . . . First we tried ridicule; then persecution; then prosecution; then medical laws, to buy and legislate them out of existence. All this has only helped them to increase so much faster. . . . Therefore to combat successfully with this drugless healing in our country we must change our tactics entirely, or meet with defeat, as we have in the past."

He next enumerates some of the reasons why drugless healing has progressed so rapidly. Among these are:—

1. Statements are made by medical

men, declaring their want of confidence in drugs. These, he says, are so much ammunition in the hand of the enemy.

2. Medical men have shown a lack of progress, and are not making any gain in the conquest of such diseases as consumption, pneumonia, heart-disease, etc. Then follows this remarkable statement:—

"It is a fact, and not a pleasant one to contemplate, that many of the above diseases are being cured by the drugless healers. Thus they grow and fatten at our failures. While we as a profession have loudly protested that certain diseases are incurable by medicine, the drugless healers have cured them without medicine." (Italics inserted.)

3. Neglect of chronic diseases, including nervous diseases. Many of these pass to drugless healers.

4. A fad and mania for operations, mutilating and unsexing women.

5. "Meddlesome midwifery,"—instrumental delivery when unnecessary.

The doctors have raised the standard of education, etc.,—

"until it has reached the point where doctors are graduated loaded down with technical knowledge and lacking the practical knowledge of 'how to heal the sick.'"

"We have had medical laws enacted making it a crime to heal the sick." [Connect this with the former admission that "it is a fact, and not a pleasant one to contemplate, that many of the above diseases are being cured by the drugless healers."] These laws have proved a 'boomerang' to the doctors. . . . While we have become so well protected with our medical laws, the people are learning how to cure themselves without our assistance."

Note the admissions: (1) medical laws are to protect, not the people, but the profession; (2) the non-professional men actually cure diseases.

Perhaps further comment is unnecessary. The men quoted in this and the previous article are loyal to the profession, and believe in drugs. Their utterances are, therefore, the more significant. The editor can not help feeling, however, that the article on "Drugless Healers" was written when the writer was having

a fit of the blues. He has made the case against the regular profession worse than it really is.



When the Doctors Disagree

A RECENT issue of the Boston *Medical and Surgical Journal* contains an article entitled "Some of the Vagaries of the Obstetrician from the Standpoint of the Pediatrician." For the benefit of the uninstructed, we might say that the obstetrician is the manager of the baby's first personally conducted excursion,—the stork doctor,—and the pediatrician is the physician who manages some of the other excursions, and not infrequently the baby's last excursion: so that both of these classes of physicians have much to do with babies.

Dr. John Lovett Morse, assistant professor of pediatrics of Harvard Medical School, does not hesitate in this article to attempt the demonstration that obstetricians are using antiquated methods in the treatment of children. If Dr. Morse is right, the obstetricians are far behind the times. If they are right in their methods, Dr. Morse must be entirely wrong. Here are a few words on the vagaries of infant feeding:—

"It is probable that more divergence of opinions exists among both scientific workers and practical physicians on the subject of infant feeding than upon any other important question in medicine. Beyond the recognized fact that maternal nursing is vastly superior to all artificial feeding, however scientifically and properly the latter may be carried out, there is no agreement in reference to the reasons why cow's milk should be so much more difficult of digestion, to the proper strength of the food in its various constituents, or even to the amounts required by the child."

These admissions are by no means infrequent. Here is a statement of the *Medical Record* of January 16, to the same effect:—

"One need only to follow the pediatric literature for a few months to find every possible substance recommended for the

modification of infant food, from carrot soup and keffir to 'three top ounces from three quart bottles of milk.' That no such great difficulty is met with in the practical management in the great majority of artificially fed children as might be supposed from the literature on the subject is probably a fact, provided that pure milk can be obtained. It is the latter problem that has more importance for the well-being of the infants of the community than any other feature of the question."

✱

Another Unsettled Question

THAT the problem of how tuberculosis is transmitted is by no means settled is forcefully shown in a recent (July) number of *Archives of Pediatrics*, which contains two articles making statements diametrically opposed to each other. After all the study that has been devoted to the subject, one would suppose there would be a closer agreement regarding so important a matter.

Drs. Laird and Shaw say, in effect, that while there may be some danger from tuberculosis through the food, the overwhelming danger is of infection from tuberculosis patients. To quote:—

"Infection during life may take place through the air (inhalation infection) and from the food (alimentary or ingestion infection). The inhalation form is probably by far the most common route. Holt found involvement of the lymph nodes and lungs in ninety-nine per cent of his autopsies on cases of tuberculosis, and Albrecht about the same percentage. This may take place through the nasopharynx, tonsils, respiratory or alimentary tracts. Children are especially exposed to infection. There seems to be an irresistible impulse innate in the child to place everything in the mouth—toys, fingers, etc. In the home of a tuberculous adult the dangers to the child are enormous. Dust of a room inhabited by a consumptive has been found virulent for six weeks. Towels in a tuberculous household are fertile sources of infection.

"Infection through the intestinal tract is minimized by some, and magnified by others. Albrecht made a most careful search in his three thousand two hundred thirteen autopsies, and found primary intestinal infection in six tenths of one per cent. He denies the possibility so

strongly urged by Behring, Ravenal, and others of the tubercle bacillus passing through the intestinal mucosa and mesenteric lymph nodes without leaving any trace in the intestine. Comby says he has never seen a case of primary intestinal tuberculosis.

"There is a tendency to overrate the danger from the milk of tuberculous cattle. In a paper before this society two years ago, one of us (Shaw) stated that such cattle are a menace to public health, and in rare instances have given the disease through their milk, and while efforts to stamp out the disease in cattle should be made, yet the attention of the public should not be diverted from the great and very real danger of human contagion. If tuberculous milk is as virulent as so many declare, it is difficult to conceive how any child escapes infection."

Dr. Edgar P. Copeland takes the other extreme view, namely, that the principal danger is of infection through the food, which naturally resolves itself into infection from meat and milk. He says, in part:—

"With respect to children, it would certainly seem true that in the light of the constantly growing mass of evidence, the importance of the inhalation theory has proportionally decreased. Von Behring, Calmette, Guerin, Delarde, and others in Europe, and Schroeder and Cotton in the United States, have shown experimentally in animals, and clinically in children, the greater importance of ingestion. They have pointed out all but conclusively that our ideas of what constituted the evidence of the intestinal origin of the disease were entirely at fault. Mesenteric lymph nodes have been shown to contain tubercle bacilli even in the absence of detectable lesions, and the thoracic lymph nodes have been shown to be the primary points of manifest lesion irrespective of the site of infection and inoculation. Coupled with these facts comes the knowledge of the negative potency of the tubercle bacilli in dried sputum."

It would seem, in the light of the testimonies in favor of both methods of infection, that it is not safe to disregard either. The most scrupulous care should be exercised with regard to the treatment and destruction of sputum and the disinfection of rooms occupied by tuberculous patients, proper ventilation of assembly rooms and the like; but on the

other hand, there should be no relaxing of vigilance regarding food which may have come from tuberculous animals, or even with regard to vegetable foods which may have been handled by consumptives, and which are commonly eaten raw.



A Work on Hypnotism Reviewed

THE Maryland *Medical Journal*, commenting on a hand-book of suggestive therapeutics, applied hypnotism, etc., has this fine touch of sarcasm, which may be appreciated by those who know something of the methods of professional hypnotists:—

"We would give a higher value to the work if we were quite sure that the professional hypnotist's accustomed subordination of truth to therapeutic ends may not have extended also to the needs of possible purchasers for psychic instruction, and if we had not a lurking suspicion that the pursuit of hypnotic methods had a blunting effect upon diagnostic acumen."

There is a certain "sure-to-cure" air possessed by the average hypnotist that reminds one of the usual patent-medicine advertisement. The cure is guaranteed until the fee has changed hands, and then —?



Plague and Vivisection

LAST fall a number of dead rats were discovered on a London dock where no poison had recently been placed. One of these being submitted to Dr. Klein, he inoculated some of the lung juice from the dead animal into a guinea-pig, producing a bubo, and from that into a second guinea-pig.

The second guinea-pig soon became so ill that it was killed, and the damaged tissue surrounding the swelling was found to be crowded with typical plague bacilli. Search in adjoining warehouses discovered sixty-seven live and two hundred eight dead rats. The search was

continued, other dead and live rats being found, and half of these examined by Dr. Klein revealed the presence of plague. Here was an epidemic, or rather an epizootic, of plague — the old black death — detected on the docks of London in time to prevent its spread to human beings.

The *Lancet* in its mild way comments:—

"The sum total of animal suffering in this case, except for the very large number of rats which were apparently attacked with the disease in the ordinary way, was the inoculation of two guinea-pigs and one mouse, coupled with the violent death of one of the former. But against these three inoculations has probably to be placed the saving of suffering and perhaps of life to a considerable number of rats which would possibly have contracted the disease had its spread not been prevented."

Perhaps this might appeal more forcibly to some of our antivivisectionist friends than the probability that this animal experiment resulted in the saving of human life.



The Zoophile-Psychosis

PROF. CHARLES L. DANA, M. D., LL. D., in a recent issue of the *Medical Record*, describes the zoophile-psychosis (which in plain English means that particular form of disordered mental action characterized by excessive love of animals). It is a trait that has been remarked by other observers, but had never, perhaps, been so fully described as in the paper by Dr. Dana.

Raymond and Janet report the case of a woman who was overcome with remorse because she had given away her cat, and the animal had afterward died. She had the usual symptoms of the disease — defect of attention, brooding, inability to work, insomnia, etc. She was always surrounded by four cats, which she loved and looked after more than her children. She lost a child, but did not much mind it. She lost a cat,

and was melancholy for eight months.

Dr. Dana relates the case of a man always fond of horses. His work brought on a nervous state.

"He did not care so much about dogs. His concern for horses, originally a natural and humane one, grew on him as his health failed, so that he finally gave up keeping them or using them because their possible discomforts worried him so much. A little trouble with his horse would keep him awake nights. He came to the city, and then the horses of other people bothered him. It gave him real trouble to see a horse checked up or whipped or docked or driven fast. At last he could not travel about the city with any comfort; the sight of a horse checked up would give him so much distress, and the chance stroke of a whip by a cab driver was like a blow on his own body. . . . He would discuss his feelings with great candor, and recognized that it was an unnatural and unreasonable state of mind, but he could not shake it off."

Careful treatment afterward caused a return to health and cessation of this unpleasant symptom.

One wonders whether many who are afflicted like this man, have a badge of a certain society, and hale into court people who cause animals to suffer much less than humans suffer right along without thought of complaint. A man limps down the street, and nothing is thought of it. A horse limps, and his owner is promptly arrested. Perhaps it is all right. I am still trying to understand it.

Dr. Dana tells of another patient, a

woman whose interest centered mostly in sick cats. Her house was full of them. If she heard a "meawing" in the night, she compelled her husband to go out and, if possible, bring in the stray cat. In this way she made life miserable for him. She was unsocial, unsexual, jealous, and exacting, and did not —

"have any insight or appreciation of her lack of consideration for the human side of her household, or of the real folly of her point of view."

Does this explain the intensity of the antiviv—?

We admire the noble work that has been done for the protection of dumb animals. We would not cast ridicule on anything but the excesses and extremes indulged in by those who have become so unbalanced in their devotion to animals that they have ceased to have any human sympathy.

If they recognize their disease and take treatment for it, they have our sympathy. If they secure a little brief authority and cause helpless children to suffer the pangs of hunger while the provider of the family lies in jail for driving a limping horse or for committing some similar offense, or if they attempt in the legislature to prevent all animal experiment, we can only consider them as undesirable citizens, unfriendly to their own race.



The Medical Missionary At Work



In the Neglected Continent

DR. R. H. HABENICHT, who represented our medical work in South America, spoke at a meeting of the Medical Department of the General Conference held in Washington, D. C., May 13 to June 6, as follows:—

“I am glad to have the privilege of saying a few words in regard to our medical work in South America. We have a field there that is certainly very needy. In the large cities of South America, there are a number of physicians; but out in the country, and in the smaller cities and towns, there is a crying need for help in this line.

“The city of Parana, the capital of our province, has fifty thousand inhabitants, and only five physicians; the city of Victoria, with twenty thousand, has two physicians; Diamante, twelve miles from us, has one physician. In the neighborhood we have ten railroad stations, with a population varying from five hundred to four thousand, without a single physician. We have from seventy thousand to one hundred thousand persons in villages of from three to five thousand each, without a single physician to help them. We are located in the midst of this community.

“When people in that part of the country wish a physician, they go to the doctor’s office. They are ushered in, but before being allowed to see the phy-

sician, they must pay the usual fee. If one asks a physician to go out into the country, the physician replies, ‘I will go, but I must have my pay before I go.’ Perhaps the man has not the money with him, and he goes back home. If he returns with the money, he gets the doctor; but by that time the patient may be dead.

“The qualifications of physicians in South America are exceedingly difficult. American physicians are really prohibited. I am the first American physician to receive any recognition whatever, and I have only a provincial license. The national license is impossible to North American physicians.

“On passing my examination in the province, we began our work, and it grew rapidly. We received the people into our home, and taught them the truth the best we could. We carried the message to them wherever we went. We used our medical work to open up fields, and the Lord gave success in preaching the truth, so that churches were organized as the result. Our work has grown until we have not been able to care for the people who come to us.

“Mrs. Habenicht and myself, being the only workers in this line, were often rushed day after day, until perhaps we would not go to bed during a whole week. I sometimes have traveled sixty miles in a wagon to see a patient, and

upon returning home have found as many as ten wagons waiting for me, with their patients, or a wagon waiting to take me off again fifty miles or so in another direction. Sometimes Mrs. Habenicht would be called to attend some other person while I was away, and the children would be left alone until one of us returned. And when we got back, the people were filling the house, as many as eighty coming in one day.

"So we have worked, and the Lord has given success in bringing the message to the people. We can count a goodly number who are to-day rejoicing in the light of present truth because of what we are trying to do in our medical work.

"Our home was used to receive the people; but during last summer's vacation we turned our school building into a sanitarium. Within ten days every room was filled, until we did not have a place to take another patient. Sometimes we had fifteen in one room.

"We had to give the treatments ourselves, because we had no nurses. Our doctors here would feel shocked if I should tell them of conditions under which we have had to do some of the most critical operations for the saving of life. One case I will mention. In getting ready to perform an operation which required the opening of the abdominal cavity, we had to prepare at the patient's home. As we began cleaning up, we took out from under the bed three ducks' nests and one goose's nest. But we do our best, and make it a practise never to begin on a surgical case with-

out asking God to bless us in the work. And God does bless in it.

"We need help in our work. Nurses can work there. The Lord will open the way before them. But they must have the language. We are trying to build a small sanitarium, and must have nurses to help us. The five who recently came to us from the United States are now in school studying the language. Why can not ten of our bright young people who have finished their ordinary school work here, join us there, and study nursing, and at the same time learn the language? In the meantime they will get a drill in treating the diseases of the country, which are very different from those here.



NEW SCHOOL AT ENTRE RIOS,
ARGENTINA, S. A.

"I hope your interest will be awakened in our field, and that you will give us the help we need so much. If we can once get onto our feet, we shall be able to run. During the last summer we had about twenty persons at work on the sanitarium building, and we had from twenty-five to thirty patients. Notwithstanding the fact that many of our patients were poor, our income from the work was sufficient to pay all our expenses at the time we had so many workmen.

"Every branch of the work is a part of one great whole, and we are all to work together to place the work where God intends it shall stand. May we have your prayers and assistance in the work to be done in South America, so that when the work is finished, we shall see a great number of precious souls gathered around the throne of God as a result of our work."

Cairo, Egypt

Ida Schlegel

AFTER a stay of a few months in Switzerland, to which country I accompanied a patient, I am back in Cairo, which I count my second home. I have been here nine years. During that time I have had pleasant and sad experiences. But the Lord is faithful and merciful, and has led and guided me. Some workers have had to leave this field for their health's sake, but I have always been in good health, and I thank and praise the Lord for this.

Working mostly among Europeans, I have learned only the most necessary words in the Arabic language, but I am still trying to learn more as I have opportunity.

It is not easy to nurse in an Arabic house. In most of them, including those of the rich, are all kinds of insects. The servants are usually very dirty and lazy. If somebody is ill, all the relatives and friends come to the house, and the greater number go into the room of the sick one, and sit on the floor, talking, smoking, and drinking coffee, with all the windows closed. The people are very fearful of pure, fresh air and water.

Two months ago I stayed with a woman who had a small wound. For days and days she did not want to wash even her face, for fear it might injure her. Her grandchild was very ill with pneumonia. At different times I was sent for to come and see the child, only four months old. Whenever I went

there, several women were sitting on the floor, talking loudly, sometimes smoking, with the room closed, the sick child in the arms of one or the other. They never left it quiet in bed. Day and night it was in somebody's arms, and when it cried a little, they shook it. I told the mother, a young, intelligent woman, that this was not good for the baby. She said she knew it, but her mother-in-law and her grandmother were there, and she could not do as she wished. After some days, the baby died.

When any one dies, for many days the friends come to the house, and sit and cry, not saying a word. If the people of the house are rich, they arrange curtains to form a big tent by their house, with couches and benches inside. The men stay there, and the women occupy the house.

For the third week I am nursing a French woman at night. As she sleeps some, I can do some writing. The mosquitoes are very numerous in this house. Nobody could sleep without a veil or mosquito-netting.

This past winter was very pleasant. I did not feel the cold as I had in previous winters.

We are still a very small company here. Others are interested in the truth, and we hope and pray that God will give us wisdom to do his will in everything. We look forward to the time when we shall be gathered into the promised land.





EDITORIAL

Unsigned articles are by the editor

What Form of Proteid?

IN support of the theory that man should use flesh meats in his dietary, it has often been urged that the body can build itself up to the best advantage on foods identical in composition with itself, or, in other words, that animal proteid is much more acceptable and much better utilized by the body than vegetable proteid.

The logical conclusion of this argument which, in itself, is a *reductio ad absurdum*, is stated in the following extract from a lecture by Frederick Gowland Hopkins, recorded in *American Medicine*, June, page 289:—

“The most sensible person choosing an effective protein is a cannibal. In consuming his own kind, he is eating exactly the right kind of stuff.”

This statement was not made in a spirit of humor, but seriously, being based on a series of experiments made by a German chemist showing that if dogs are fed on dog meat, they require less than if fed on other meat.

The editor of *American Medicine*, commenting on this, says:—

“The question of the best protein diet by no means will be settled by this sensational statement of Hopkins. Since it has been definitely established that the proteid of human tissues is fixed in its molecular character, the plea of the dietists has been for a proteid approximating as closely as possible the proteid of the body. It is doubtful if any diet placing a minimum tax on the processes of metabolism would be best in the long run.”

“Study of peoples and races has shown conclusively that the strongest have been developed from foods of greatest variety and complexity.

“Our acquaintance with cannibals has been very limited, but from all we have been able to learn, their abilities never get far beyond the gastronomical.”

How many species live on their own kind? The vast majority of animals live on plant food, and carnivorous animals consume by preference animals of other species, usually the herbivorous. Plants obtain their nourishment from the inanimate creation. Every fact concerning nourishment seems to be against the theory that an organism must have nourishment identical in composition with its tissues.

Physiological chemists have about reached the conclusion that the complex proteids used as food, whether animal proteid or vegetable proteid, are broken up into much simpler substances and then rebuilt into the proteids peculiar to the body. Whether one obtains proteid from beans, or cheese, or fish, or cow, or missionary, this proteid is all first broken up into its component parts to be resynthesized into a form of proteid peculiar to the eater.

This might indicate that all proteids should be equally valuable as food; but there is a difference in digestibility which must be taken into account. For instance, beans have their proteid so surrounded by an envelope of cellulose that

it is digested with more difficulty by those of delicate digestive processes.

Again, other proteids may be undesirable because they are liable to be infected with disease germs. The suspicion is gaining ground that leprosy is transmitted through the consumption of infected fish. Milk and meat may transmit tuberculosis and other disease.

Another disadvantage of certain pro-

teids is that they are accompanied by certain waste products which place an extra burden on the excretory organs. For instance, all meats contain extractives and purin compounds, which are not utilized in the body, and which not only increase the work of the liver and kidneys, but may also have much to do with certain disorders of metabolism frequently found in "good livers."

Carelessness With Infectious Diseases

IN a recent issue of the Bulletin issued by the Chicago Department of Health, Health Commissioner Evans protests against the practise of taking babies convalescing from infectious diseases to parks and sanatoriums.

At one of these infant sanatoriums there were reported ten new cases of whooping-cough in one day. As Dr. Evans says: "A mother who takes her child just recovering from a contagious disease to the park or any public place where children congregate, and gives such disease to some other child, does a cruel and criminal thing. If a child contracting a disease in this way dies, the one who carried the disease to it is guilty

of murder just as surely as she would be were she to carry poison into the park and place it where the little visitors could get hold of it."

These words are none too strong. We sometimes wonder how a mother can take a child, still convalescing from whooping-cough, or measles, or some similar disease, into a church or other assembly where children are present. Is it sometimes a sullen feeling that the disease came to them through the carelessness of somebody else, and it is no more than right that they should "get even"? If people would be conscientious in this regard, it would do much to limit the spread of serious and fatal diseases.

The Development of Medicine

MEDICINE? O, yes; purena, kaskerettes, liquorzoon, Puffey's malt whisky, and the like! That is the customary idea, something in a bottle or in a pill-box; but that is a shrunken, shriveled definition of the word that has come into use in connection with a one-sided method of treating disease.

Medicine is not, as many suppose,

synonymous with drug; it has a broader signification. It includes everything that antagonizes disease, whether in the way of prevention, alleviation, or cure, and embraces the work of the physician, the nurse, the teacher of hygiene, and the health officer. The latest development of medicine is preventive medicine.

The crudest, and most primitive, type of medicine was (or *is*, for it is still in

existence) that of the "medicine man." This is the medicine of the savage, and consists of amulets, fetishes, incantations, and so on, conforming to the idea that disease is caused by demons that must be removed or appeased.

That the attempts of the medicine man add to the misery of the patient, and not infrequently hasten his death, does not appear to weaken in the least the faith of the savage in the barbarous custom.

The next step in medicine was drug medication — the use of drugs, often of a poisonous nature, on the theory that something very potent is needed to drive out the evil conditions. Internal medicine has always been a part of the armamentarium of the medicine man. Not infrequently he gives nauseating, disgusting, and even very injurious mixtures in the belief that these will dislodge the evil spirits.

As with the medicine man, so with the early drug man the methods were crude, the remedies drastic, and the results all that could be desired by the undertaker. The tendency among drug practitioners has been to discard large numbers of formerly used drugs as useless or positively harmful, to decrease the dosage, and to use simpler mixtures. Some very prominent physicians express a strong doubt that drugs do much good, after all.

Another type of medicine has come to be known as "physiological medicine," or "physiological therapeutics." It consists of physical measures, including therapeutic use of exercise, rest, air, sunlight, water, electricity, massage, diet, etc., the aim being to place the patient under conditions favoring the proper physiological functioning of the body.

As with the forms of medicine previously described, so with this form, there are associated quacks of various stripes and colors, the principal stock-in-trade, in some cases, being antagonism of scientific medicine as taught in the schools:

but on the whole, there has been a growing tendency to place these methods on a sound scientific basis, and to break down the old-time conservatism of the drug men.

The methods we have been considering have to do with the cure of disease. It was a long step in advance when the idea was conceived that disease has a tangible cause depending partly, at least, on the manner of life of the patient. This idea has developed into what is comprehensively known as preventive medicine, the greatest triumph of medical science.

In its first developed form, preventive medicine had to do with personal habits. The campaign to promote improved personal hygiene was largely educational in its scope.

The child first learns to play individual games. As he grows older, he becomes interested in "team play," such as baseball or football, where a number of players work together to accomplish the same end. Team play in medicine is the fully developed form of preventive medicine,— public hygiene,— which has to do with discovering the external causes and carriers of disease (such as animal parasites, bacteria, insects, etc.), public education along these lines, and administrative control of conditions which make for health or disease, embracing food inspection, factory inspection, quarantine, compulsory vaccination, destruction of mosquitoes, rats, etc.

These various forms or types of medicine have not followed one another in chronological order. In fact, all are now being practised in America. Some aborigines still revere the medicine man. In fact, even among civilized Americans, are those who, though intelligent in general, are not above wearing some charm about the neck, or carrying some trinket in the pocket, in order to "ward off sickness."

Others there are — many of them — who rely entirely on drugs for cure, whose faith in this form of medication is so strong that they will take almost anything in the world for the relief of their troubles so long as it comes out of a bottle with a catchy label.

Comparatively few have an intelligent knowledge of the fundamentals of personal hygiene. True there are those who avoid colds by shutting every crack to keep out drafts. There are those who studiously observe supposed health maxims handed down from their forefathers,

and so on, but not so many have an adequate knowledge of the requirements of the body.

Public hygiene is a generation or two ahead of many people. Perhaps it developed after they were forty — the age (if I may be permitted to misquote Osler) when the gray matter "sets." At any rate, they are incapable of perceiving the benefits of public hygiene. As the reactionaries of Russia antagonize every movement for a modern government, so these antagonize everything in the line of administrative medicine.



The Soy-Bean

DR. JOHN RÜRAH has an article in the July *Archives of Pediatrics*, "The Soy-Bean in Infant Feeding," which would be valuable for any physician desiring to extend his knowledge of infant foods. This copy of the *Archives* may be obtained by sending thirty cents to E. B. Treat & Company, 241 W. Twenty-third St., New York City. Dr. Rüräh has not yet completed his experimental work with the soy-bean as an infant food, but has published this as a preliminary report of his investigations.

According to the record of the North Carolina Experiment Station, the bean is a palatable vegetable, but the doctor evidently does not fancy very well the taste, for according to him, "the bean cheese is apparently not very well suited to the palate of people except in the Orient. I do not think the beans will gain much favor as a foodstuff for many in America until further studies have been made in preparing them for the table. I have

eaten them in a number of different ways, and think that the taste for them would have to be acquired."

In the report from the North Carolina station it is suggested that the beans be soaked until the skins come off, and that they be stirred until the skins rise to the surface, to be skimmed off. The beans are then boiled until soft, and seasoned to taste.

To make a gruel for children, Dr. Rüräh advises to soak the beans overnight, stir and skim to remove skins, add three times the amount of water, and boil to a smooth gruel, strain if necessary, and add a small quantity of salt. This gruel is retained unusually well, and seems easily digested. The stools are not more frequent than with other food, and are of a light-brown color. The gruel has nearly the same food value as milk, and with some children may need diluting. Five per cent of sugar may be added when it is thought necessary to increase the fuel value.

SOME BOOKS

Tuberculosis a Preventable and Curable Disease, by S. Adolphus Knopf, M. D., 8mo, 394 pages, 115 illustrations; \$2 net, by mail \$2.20. Moffatt, Yard & Co., New York.

The fact that this book is written by Dr. Knopf would, to those who know him, be an assurance that it is a useful, valuable, up-to-date popularization of our knowledge of tuberculosis.

Few if any medical books have been translated into so many languages as was Dr. Knopf's prize essay on tuberculosis issued in 1900.

The doctor brings to his task such an intimate knowledge of the disease, such a love for his fellow men, especially the unfortunate, and such a conviction that tuberculosis can be eradicated, that his book is destined to prove an important factor in the warfare against this disease.

This book was prepared to meet the wants of the patient and his family, the physician and the sanitarium, the legislator and the educator. Each of these classes exerts an influence one way or the other in the warfare against tuberculosis, and it is Dr. Knopf's purpose to bring to each class the knowledge needed to carry on an efficient antituberculosis fight, and the inspiration to spur them on to efficient work.

To the patient and those living with him, the book teaches the most simple and practical means of preventing the spread of the disease. It teaches that the conscientious consumptive is in no way a menace to those around him. It teaches the patient that he, for his own good, must seek the advice of a competent physician, and not attempt self-treatment. It gives timely instruction to physician and nurse, both as to treatment and as to prevention of the disease. Chapters for health officers, municipal, State, and national, for school-teachers, for the clergy and philanthropist, add to the value of the work.

Exercise in Education and Medicine, by R. Tait McKenzie, A. B., M. D., Professor of Physical Culture and Director of the Department, University of Pennsylvania. Octavo, of 406 pages, with 346 illustrations. Cloth, \$3.50 net; half morocco, \$5 net. W. B. Saunders Company, Philadelphia and London.

The country has been overrun with "systems" of physical culture prepared by so-called professors. There have been relaxing systems, resistive systems, systems with apparatus and systems without. Many of these have done some good, for almost any exercise is better than none; but the good has not always been entirely un-mixed with evil, and certainly has not been equal to the extravagant claims of prospectuses and advertisements.

It is therefore refreshing to take up a work, like the one under consideration, written by a man who comes to his task with an experience qualifying him to speak with authority. This book gives a good working knowledge of the physiology of exercise, and considers the merits and demerits of the various systems of exercise used in colleges and other institutions in this country and elsewhere.

Special attention is given to playgrounds, municipal gymnasiums, physical education in schools, colleges, and universities, and in institutions for the blind, deaf, and defective.

Not the least important section of the book is that devoted to the treatment of diseased conditions, including flatfoot, spinal curvatures, and other deformities, circulatory diseases, obesity, gout, diabetes, gastric disorders, constipation, rupture, and nervous disorders, including occupation neuroses, infantile paralysis, neurasthenia, stammering, chorea, and locomotor ataxia.

Every physician and nurse who uses physiological methods of treatment will profit to add this book to his working library.



Chats with our Readers

DEAR FRIEND: I regret very much to learn of the poor physical condition of —. I suppose she has had a great deal of sadness in her life, and that she has passed many a painful and sleepless night. I tell you, it is the mental trouble that does more than anything else to wring out one's life like a dish-rag.

Sometimes we think the statement made by a prominent writer on health topics, that nine tenths of the sickness originates in the mind, is an exaggeration; but I am coming more and more to understand it, and to know that the writer of that statement knew what she was talking about. It is SO.

Many a bad stomach that is blamed to bad eating is due far more to bad thinking — worry, jealousy, fear, dread, anxiety, a smiting conscience, a disappointed ambition, and the like. Look at the face of the dyspeptic. We usually think it is the dyspepsia that has produced the hopeless face.

Possibly it has to some extent; but back of it all is a hopeless mind that has produced both the dyspepsia and the hopeless face; and now there is a vicious circle in which the dyspepsia produces more hopelessness, and the hopelessness more dyspepsia. It is a well-nigh discouraging picture.

And well it may be for the man who tries to cure such a complex on the basis of the quality of the stomach juice. Lavage and diet and fomentations will fail every time with such a patient, unless something is done to get at the real cause of the trouble.

This is why the writer already referred to has spoken so highly of the value of the Christian physician who can bring healing to mind and soul as well as to body. I sometimes think that if we paid more attention to the soul secrets of the patient — the skeleton in the closet that is doing all the damage — and less to the stomach secrets, we would do far better by our patients.



NEWS NOTES



Typhoid Fever Costly.—According to a recent estimate, typhoid fever annually costs the United States ninety million dollars.

To Prevent Infant Mortality.—In November the American Academy of Medicine will hold a conference in New Haven, Conn., to consider means to prevent infant mortality.

Public Health in Louisiana.—The president of the Louisiana State Board of Health expects to visit every parish in his State to give public lectures on health questions.

Kansas Awake to Health Matters.—Kansas has appropriated ten thousand dollars a year for the next two years to be applied to the education of the people on the subject of public health.

San Francisco Free From Plague.—Surgeon-General Wyman reports that they now can find no trace of plague in San Francisco, either human or rodent. Science has scored one more point against the bacillus.

Provision for Helpless Child.—A special appropriation of two thousand dollars was made by the legislature of Pennsylvania for the education of a Harrisburg girl, nine years old, who was born deaf and blind.

Typhoid Fever Reduced by Filtration.—The last report of the health officers of Philadelphia shows a marked diminution in the amount of typhoid fever, which they attribute to the fact that the water-supply is now filtered.

A "Patriotic" Governor.—It is said that the governor of Texas has vetoed a bill providing for a State tuberculosis sanatorium, giving as his reason therefor that an institution of this type would attract consumptive poor from other States.

Cuban Department of Health.—While we are wrestling with the question whether we shall have a department of health, or a bureau of health under some other department, the Cuban government has been launched with a full-fledged department of health and charities, headed by a cabinet officer, the secretary of sanitation and charities.

Bacteria in Whey.—Recent experimentation demonstrates that if milk be coagulated by means of rennet, about ninety per cent of the bacteria will be removed in the clot, and the resulting whey will be comparatively free from germs.

A Triumph for Simple Living.—Weston, the pedestrian, at the age of seventy has crossed the continent in one hundred five days, on a diet consisting largely of eggs and milk. He finished in good shape, and thinks he could make the return trip in ninety days.

Enzyme Treatment Does Not Cure Cancer.—Dr. William Seaman Bainbridge, after an exhaustive study of the subject, reports that the enzyme treatment recommended by Beard, even when supplemented by important details not suggested by Beard, does not cure cancer.

Infant With Smoker's Heart.—In a medical school examination in England a child less than four years old was found to be suffering with tobacco-heart. The father, who had taught the child to smoke, was making money by exhibiting the youthful prodigy.

Died Martyrs to an Idea.—*American Medicine* gives an account of two persons, one a chaplain, the other a soldier, who, going to the Philippines, refused vaccination, took smallpox, and were dead within a few weeks of their arrival. Both men were pronounced antivaccinationists.

Meat-Free Diet for Inebriates.—The Salvation Army, following the observation that animal food tends to increase the craving for stimulants, has established in its Home for Inebriates a dietary consisting largely of fruits and vegetables, and eliminating flesh meats.

Legislative Restriction of the Drink Evil.—As a result of the recent temperance congresses, a bill is pending in the Austrian Legislature to reduce the number of public houses, and to diminish the hours during which liquor may be sold, to ten. The bill also provides punishment for repeated intoxication, and for selling liquor to intoxicated persons.

A Government Study of Injurious Drugs.—The Bureau of Chemistry of the United States Department of Agriculture has been conducting a series of investigations on the injuriousness of acetanilid, antipyrin, and phenacetin, which are published in Bulletin No. 126 of the Bureau of Chemistry.

Consumptives Can Not Marry.—According to the marriage law now in force in the State of Washington, tuberculous patients in the advanced stage can not obtain a marriage license. The law also denies marriage license to sufferers from some other contagious diseases, and to habitual criminals and drunkards.

Animal Tuberculosis Increasing.—Notwithstanding the effort being made by individuals, and by State and national governments to stamp out or limit the amount of animal tuberculosis, the disease is steadily increasing among live stock, as shown by recent reports of the Department of Agriculture.

Children's Teeth Defective.—President Darlington, of the New York Department of Health, states that during the past season the mouths of 386,744 New York schoolchildren were examined, with the result that 290,167 were found in need of dental work. Dr. Darlington urges that dental clinics be established for the care of the teeth of schoolchildren.

Bacillus Carrier in Custody.—"Typhoid Mary," a cook who has for a long time been a typhoid bacillus carrier, innocently responsible for the infection of a large number of persons, has been detained in quarantine for two years in a New York hospital. Recently she attempted by legal means to obtain her freedom, but the judge decided that she must remain in quarantine.

President-Emeritus C. W. Eliot, of Harvard, Honored.—The faculty of Harvard University at its commencement exercises conferred on its former president, amid the unbounded enthusiasm of those present, the honorary degree LL. D. and the unusual honorary degree M. D. It is said that President Eliot has accomplished more for medical education than any other man in America.

Rhode Island Dental Hygiene Conference.—A successful conference in dental hygiene was held in Providence, R. I., March 31 to April 3, under the auspices of the Rhode Island Dental Society, the Rhode Island State Board of Health, and the Rhode Island Dental Hygiene Council; and a permanent organization was effected for the purpose of spreading essentials in the principles and practise of dental hygiene.

Effort to Diminish Infant Mortality in Germany.—Because of the excessive mortality among infants in Germany, an institution has been founded under the patronage of the empress, whose function is to study the subject of infant nutrition and hygiene, to make public the resulting data, and to assist public health officials in the conservation of infant life.

Hydrophobia Epidemic.—In a recent epidemic of rabies in Pennsylvania it was necessary to quarantine thirteen of the western counties. Rabid dogs had bitten more than one hundred persons, of whom one had died, and sixteen were dangerously ill. More than five hundred dogs were killed. Yet there is uproar if universal muzzling is suggested as a means of stamping out rabies!

Treatment of Cold in the Head.—Dr. Grayson, in the *Therapeutic Gazette*, believes this condition to be due to a combination of chronic nasal catarrh, chronic intestinal intoxication, and some accidental condition,—perhaps some weather change. He advises cleansing of the bowel, twenty-four hours' fast, and active exercise. He considers drugs of secondary value.

Cow's Milk Must Be Clean in Chicago.—The Chicago milk inspectors refuse to allow cows to be kept within the city limits without a license. And in order to obtain such license, it is necessary to comply with sanitary requirements, and to have a cow that has stood the tuberculin test. The department is determined that no babies shall be fed from tuberculous or unhealthy cows within their jurisdiction.

Increase in Cancer.—Professor Orth has recently published statistics prepared as a result of studies in a Berlin pathological institute. In 1875, 4.9 per cent of the deaths were due to cancer; in 1883, 7 per cent; in 1904, 10.7 per cent; and in 1908, 12 per cent. As the means of determining cancer have not materially improved during this period, Professor Orth believes these figures show an actual increase in cancer.

Many Germs in Top Milk.—An investigator has recently determined from an examination of thirty samples of bottle milk that the top layer, after the milk has stood for some time, has from ten to five hundred times as many bacteria in a given quantity of milk as the mixed milk. The bacteria nearly all rise to the top with the cream. There is even a greater difference between centrifugal cream and the milk. If milk is from a tuberculous cow or has disease germs, the chance is far greater of being infected from the cream if it be unpasteurized than from the milk.

Passengers Must Furnish Drinking Cups.—In harmony with the desire of the State Board of Health the Iowa Central Railroad has abolished public drinking cups on its trains. Water is provided, as usual, but passengers must furnish their own cups.

Hucksters Must Be Quiet.—An ordinance has been passed by the New York City board of aldermen providing that pedlers shall not make any unnecessary noise, such as blowing a horn in calling attention to their wares. The penalty may be a forfeiture of any amount up to five dollars.

Is Diabetes Infectious?—Dr. Alfred Key, of Portland, Maine, gives some convincing reasons for believing that diabetes may be due to the action of yeast. Yeast produces the same kind of sugar that is found in diabetes. He has found yeast frequently in the blood of diabetic patients. Beer drinkers are very prone to diabetes, which may be because of the yeast in the beer. The feces of diabetics give evidence that the yeast cell is present in the alimentary canal of these patients. Microscopic slides of certain discharges from diabetics show white blood corpuscles enveloping yeast cells. The yeast plant may prove to be not quite so harmless as we are apt to think it.

Harvard Establishes a Department of Hygiene.—The Harvard Medical School has established a new department—the Department of Preventive Medicine and Hygiene, and has appointed to the professorship Dr. M. J. Roseneau, who has rendered distinguished service in connection with the United States Public Health and Marine Hospital Service. Dr. Roseneau's work as an instructor, as an investigator, and as an administrative officer has eminently fitted him for this position.

Vital Statistics.—Four States have this year passed laws enforcing the registration of deaths in harmony with the recommendations of the American Medical Association. Because of imperfect or inefficient registration laws, it has been impossible to prepare vital statistics for a considerable proportion of the population of the United States. The registration States at present are: California, Colorado, Connecticut, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, South Dakota, and Vermont. The States which have recently passed registration laws are: Delaware, North Carolina, Missouri, and Arizona. Tennessee has passed a law which is regarded by the chief of the division of vital statistics as inefficient.

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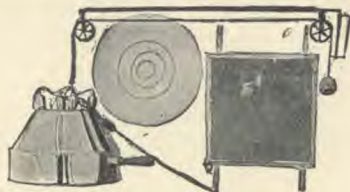
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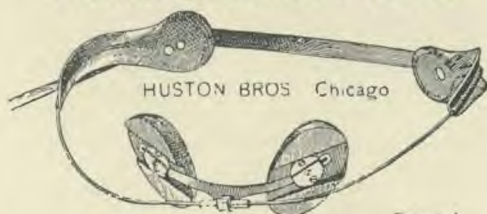
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