Life & Health

THE NATIONAL HEALTH MAGAZINE

July *1916*

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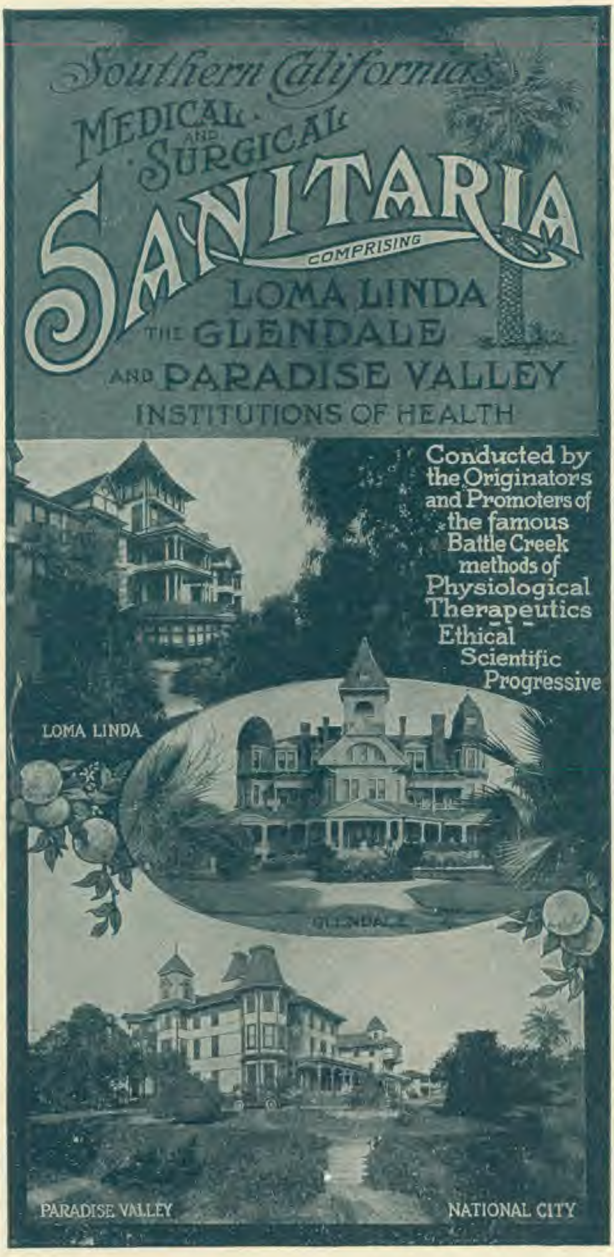

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LIFE AND HEALTH — WASHINGTON, D. C.

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LAST December Mr. Cornforth began a new series of lessons on the science and art of cooking. His first three lessons, on "The Combination of Foods," have met with considerable favor. For those who have not had the privilege of seeing the entire series, and for those who desire to have them in a more compact form for ready reference, it has been decided to issue these three lessons, together with the lesson on "Methods of Cooking," in a neat, covered pamphlet, with page the same size as "Life and Health."

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LIFE AND HEALTH

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LOOKING DOWN ON FISH CREEK GRADE

In parts of Arizona it requires a combination of muscle, brains, and money to build a road.

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Life & Health
THE NATIONAL HEALTH MAGAZINE

JULY
1916

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

G. H. HEALD, M. D., Editor — L. A. HANSEN, Associate Editor

Do You Know That—

OBESITY menaces longevity?

Light promotes cleanliness?

It's the baby that lives that counts?

Dirty refrigerators may make sickness?

America's most valuable crop is babies?

A clean mouth is essential to good health?

Bullets may kill thousands; flies, tens of thousands?

Sags in roof gutters may act as mosquito-breeding places?

Physical training in childhood is the foundation of adult health?

Headache is nature's warning that the human machine is running badly?

The defective citizen of today is oftentimes the unhealthy child of yesterday?

The U. S. Public Health Service issues publications on hygiene and sanitation for free distribution?

MUST MAN BE TAUGHT HOW TO EAT?

G. H. Heald, M. D.

PASSING strange, is it not, that man, the only rational animal, does not know how to eat? Strange but true it is that the mass of mankind is unable to select food so as to make possible the greatest efficiency and the longest life. The millions eat what appeals to their palate,— so far as they can afford it,— their menu being a resultant between their appetite and their ability to provide. The comparatively few, deemed more fortunate, who are under no necessity to make a compromise between their gustatory desires and their purse, often fare even worse than their poorer neighbors, in the way of gout, arteriosclerosis, and other degenerative results of high feeding.

We may divide men into two classes: Those who are undernourished, and those who are overnourished. The poor are liable to be underfed as regards the proteins and the so-called vitamines, and the rich are liable to be over-nourished as regards, particularly, the proteins. It is true that, in Western countries, as the standard of living has bettered, we find the poorer classes adopting, as far as possible, the heavy animal dietary of the rich, so that the diseases incident to overnutrition are now not confined by any means to the well-to-do.

But not often do we note an intelligent effort to adjust the menu to the physiological needs of the body. Not a little study has been given to the problems of nutrition, and many facts have been established; but physiologists are not yet in agreement as to the quantities and proportions of food materials best adapted to varying ages, weights, and conditions of life.

It is agreed, however, that there are certain essentials which must be present in sufficient quantity, or nutrition will fail. Not only must there be proteins, fats, and carbohydrates, but there must be certain kinds of proteins; for proteins are not alike, and some proteins will not support life.

This is one important reason why a dietary should not be too restricted. Provided the food were weighed out — as it is in certain animal experiments — so as to include a proper amount of every necessary ingredient, it is possible that people might thrive on a very restricted diet; but in actual practice, where the housewife is guided not by the chemical analysis of the foods, but by the market prices and the tastes of her family, the chances are that some one or more necessary ingredients will be insufficient or wanting.

The greatest efficiency results from a dietary supplying a proper proportion of every necessary ingredient and no great excess of any. Unquestionably a dietary containing a proportion of animal food more nearly reaches this standard than many of the vegetarian dietaries accepted by the people as a result of poverty. But this does not militate against a properly selected vegetarian dietary.

The greatest physical endurance has been credited to men who have lived on such a simple diet, and intellectual giants have maintained their vigor while living on such a diet. It is not the simplicity, nor the absence of certain animal products, that renders any diet unsuitable, but the fact that some one or more necessary food elements are either wanting or present in insufficient quantity. This condition is very liable to occur when the food is selected on the basis of the most rigid economy, and with no knowledge of food values.

Mr. Cornforth has been endeavoring in his series of articles to develop a knowledge of food values and food combinations which should be helpful to LIFE AND HEALTH readers. The two articles following, by Mrs. Naud and Dr. Hirshberg, consider the subject of appropriate diet from two viewpoints.

THE DIET AND DISPOSITION

Alden Carver Naud

WE are all to a greater or less degree the victims of our stomachs. What one is or shall be is governed to an incredible extent by what he eats. Hence it is that our food largely determines our destinies.

Some one has said, "Tell me what a man reads, and I will tell you what he is." It were better to say, "Tell me what a man *eats*, and I will tell you what he is." For what is eaten oftentimes determines the course of reading and thinking, and helps in creating the pattern of life selected for the weaving.

The children of Israel preserved their identity as a nation throughout centuries of intermingling with other peoples, because of the attention they bestowed on the question of their foodstuffs, and they preserve it today in the same way. Through their sojourn in Egypt, throughout the Babylonian captivity, and in spite of their dispersion over the face of the earth since the fall of Jerusalem, the Hebrew people has remained a "peculiar people." The Jew has never departed from the law of the early fathers, and is today a product of what his belief regarding food has made him.

The Jew touches no "unclean thing." In the eyes of most Gentiles all things are clean. In their difference of viewpoints lies the difference in their lives.

The Indian lived largely on a meat diet. He was of necessity a rover, following game from one locality to another. He was fierce and warlike, with a bloodthirsty nature and an inherent desire to prey upon living animals, human or otherwise as the case might be.

The Chinaman, with a diet of rice, remained for centuries quiet and unobtrusive. When the outside world thrust itself within the borders of the Celestial Empire, the little copper-skinned individual gradually became inured to a different manner of living; his dietary changed; and the Chinaman of today and the Chinaman of yesterday are vastly different specimens of humanity.

The Great Teacher as he uttered his precepts in Palestine, remembered to instil ideas regarding the problem of sustenance. The keynote of his instructions was for simpler living. There are on record his wonderful words regarding the futility of worrying with reference to food. He provided simple meals for his followers. He said, "Man shall not live by bread alone," and mentioned spiritual things as of greater import. He reproved Martha for her anxiety about serving. On one occasion he said, "The life is more than meat.'

How much healthier we should all be in this generation were our menus less elaborate! And if healthier, then happier also; for health and happiness are strangely synonymous terms.

"The white man's burden" is largely a burden of flesh. The meat diet is largely responsible for the present high cost of living. Yet the laborer will exchange his hard-earned wages week after week for steaks and chops and roasts, albeit he oftentimes toils indoors or is engaged in sedentary pursuits. Under these circumstances a heavy diet is far from meeting his particular needs. Cloying flesh foods taken ill-advisedly stimulate the nerves to undue sensibility, and derange the digestive apparatus and the circulatory system and eventually the entire physical economy. When these strongholds are assailed, the surrender of the citadel is quite certain to result. A sane diet would obviate the irritation engendered by overstimulating foods.

Aside from the actual physical harm which is the direct result of heavy, overburdening viands, there is the worry caused by the expense of the food and the evils attendant upon this anxiety. When the head of the house begins to worry over the inadequacy of his pay envelope to meet the household expenditures, it is time to arrange for retrench-

ment. Many a man is considered a "crank" whose disposition would greatly improve were he to be fed properly and less expensively. No matter how famed a housewife may be for her skill in cooking, she is not wise if she does not make some radical change in her menu and methods when she observes that her husband is becoming less genial and lovable.

If women would serve simpler meals, there would be fewer unhappy homes. Many wives and mothers wear themselves out with the drudgery, responsibility, and expense of the meals their families partake of day after day, and in a majority of cases the provisions dispensed are not so satisfactory as simpler, plainer foods would be.

While the mother is expending so much of her time and attention, so much of her mental and physical energy, on the preparation of foods, the members of the family are cheated out of the very elements they need most. The mother becomes old and nervous and irritable before her time, and her moods and manners are reflected in the rest of the family. This condition is aggravated by food that directly assails the nerves and irritates the system, until there is constant friction all around. There is a perpetual sense of annoyance and agitation, when there should be relaxation and repose.

The chief difficulty is that the ordinary woman knows too little about food elements and food values. She loads her table with an abundance of highly seasoned meats and desserts, unmindful of the fact that a superabundance of food is as detrimental to her family as a dearth of nourishment would be. She permits her family to wash down their food with tea and coffee, without a thought as to whether or not these beverages are injurious.

When one stops to consider the matter, it is actually surprising to learn how inconsiderable a quantity of nourishment the body really requires.

O that housewives might realize how wholesome and palatable some of the cheapest and most easily prepared foods are!

Milk, rice, cereals, honey, eggs, and vegetables, together with nuts and fruits, comprise a list that adapts itself to all purses, and lends itself to an infinite variety.

Every housewife should have in mind the various members of her family and cater to the especial needs of each when she prepares the daily rations. Most cooks do not realize the different effects produced by the various food elements. Most parents know that sweets in excess will spoil the disposition of the best babies, yet these same parents fail to realize that "men are only boys grown tall," and indulge themselves without restraint, regardless of the effects produced on their own dispositions.

If each person were to study his own personal needs and select food containing such elements as best suit his individual requirements, and eat the right quantity at correct intervals, how much stronger and healthier every member of the human race would become, and what onward strides could be made by the pygmies of the present day!

Overeating and indulgence in improper food are the two greatest evils to overcome in arranging for a proper course in dietetics.

When a boiler generates too much steam, there is a hiss and a splutter as the safety valve equalizes the pressure once more. So, when the nerves are overstimulated by injudicious living, hysterical outbursts occur.

It would be far more conducive to the harmony and amicability of the home life were the diet so planned as to conserve the nerve forces rather than to dissipate them in irritability and discord.

How much healthier and happier the average family would be if relieved of the burden the various phases of the food problem give rise to! and with what cheer and good will the bigger, more worth-while things of life could be undertaken!

DISTURBANCES CAUSED BY TOO EXCLUSIVE A DIET

Leonard Keene Hirshberg, A. B., M. A., M. D. (Johns Hopkins)

IT is well known from the researches of Dr. E. Weill, professor of the Faculty of Medicine of Lyons, and Dr. G. Mouriquand, also of the Faculty of Medicine of Lyons, that when food is too exclusively selected from a limited range of substances, grave consequences may result, some of which indeed may determine death. Living exclusively on polished rice, for instance, brings about a disease known as beriberi, which manifests itself by heart disturbances, with a tendency to collapse and drowsiness, or even more commonly, by neuritis. These doctors have instituted further research on this subject, devoting particular attention to the disturbances caused in infancy and childhood by a too monotonous diet, which does not contain all the principles indispensable to normal nutrition, and therefore to health. Many of these nutritional affections are not yet understood.

Every one who has to deal with the young must have come across instances of these nutritional disturbances associated with marked pallor, loss of weight, weakness of the lower limbs, and digestive troubles, which appear to be due to the use of a too restricted diet. Medical observation yields only vague impressions, and before entering upon the investigation of these maladies, the professors thought it desirable to have recourse to animal experiment in order that they might be guided in the course of their further researches.

With this object in view, since July, 1913, they have fed several series of pigeons exclusively on one kind of grain, — rice, barley, wheat, maize, or corn,— and compared the results with those obtained on a mixed diet.

The pigeons placed on a diet of polished rice of best quality lost weight first, then supervened disturbances of the muscle-nerve system — uncertain flight, a gait at first halting then frankly drunk, and pronounced weakness of the legs, which gave way under the weight of the body. In about a month this state of impotence was in some instances so marked that the subjects could hardly drag themselves along, and flight had become practically impossible. Thrown into the air, the pigeons fell to the ground like inert masses or reached the ground by a very precipitate flight. Some of the pigeons died within a month, others lived somewhat longer. Some, when placed on a mixed diet, practically recovered. In brief, these physicians succeeded in reproducing beriberi experimentally. A number of other observers have had similar results.

Beriberi usually makes its appearance in these birds when they are fed exclusively on rice from which the hulls have been removed in the process known as polishing. Most observers infer therefore that the hull contains some very essential nutritive matter; and as a matter of fact, experimental beriberi no longer makes its appearance when the animals are fed on whole rice.

The existence of beriberi in man has long been known. It is particularly liable to supervene during expeditions in the course of which rice tends to become the staple article of food. Beriberi has been found even in infants.

Inasmuch as attention was devoted more to the dangers associated with an unduly restricted diet rather than to the disease beriberi, it occurred to the savants to ascertain whether the pigeons would react unfavorably to articles of food other than rice when fed exclusively upon them. A second series of birds was therefore fed on pearl barley of the first quality.

As when fed on rice, the pigeons began to lose weight, and had digestive disturbances; and in the course of three or four weeks signs of palsy made their appearance in the legs or the wings. This was shown by a staggering gait and a short-

ened flight. In some instances these symptoms of ataxia [lack of power to coordinate muscular movements] were fairly comparable with those caused by an exclusively rice diet.

In one pigeon, however, there appeared very peculiar symptoms of the vertigo or small-brain type. Three weeks after being placed on this restricted diet, the pigeon was scarcely able to stand on its feet, was unable to fly, and remained in its cage, lying on its side. When taken out of the cage, it would stretch its wings, and seem to roll over on itself from behind forward, and go on turning head over heels for three or four minutes. It would then stop in a sitting posture, often with the head in extreme extension, the contracture being so strong that it was difficult to bend the head. The stiffness was almost like meningitis. The pigeon died twenty-eight days after the exclusively barley diet had been begun.

In other instances the death of the pigeons took place in the absence of any premonitory palsy, the birds being in a state of pronounced exhaustion.

It will be seen, therefore, that nervous phenomena akin to those following an exclusively rice diet are apt to supervene after a few weeks' exclusive feeding on barley.

These results are due to the restricted diet. The fact that these investigators were able to bring about the disappearance of the symptoms by abandoning the exclusive diet in favor of a mixed diet of barley, rice, wheat, maize, potato, and fruits, proves this. With this mixed diet the symptoms began to retrogress in the course of a few weeks. Though relapses were frequent, persistence with a mixed diet cured the birds.

One pigeon three weeks on rice, presented symptoms of neuritis with marked ataxia. A mixed diet did much to mitigate these symptoms. Later this pigeon was placed exclusively on refined wheat, and within a few days the vertigo phenomena recurred in a very pronounced form. When, however, whole wheat, corn, fruit, and vegetables were given, the bird improved. Attention is thus called once again to the dangers associated with a diet too restricted.

ZUNI WOMEN GRINDING MEAL, NEW MEXICO

ARIZONA'S ORIGINAL DRY FARMERS

Don Duffie

THE white man's railroads happen to pass close to many villages of the New Mexico Pueblo Indians, though their Arizona kindred, the Hopis, still enjoy the seclusion of seventy-odd miles of dry and shadeless front yard between them and the trail of the iron horse. To call on them takes time and usually money, though the following incident will show how it is possible for one who likes to walk to invade even this isolation on a pathetically emaciated purse: —

I was spending a day in Flagstaff, Ariz., regretting my financial inability to visit the Hopi pueblos, when I happened on a caravan. This fleet of the desert consisted of two wagons, each drawn by six or eight Indian ponies, and piled high with everything from sacks of flour to new sewing machines. The crew consisted of a substantial-looking Navajo man of about forty-five years, and three boys between fourteen and eighteen. The destination was a place bearing the brass band appellation of Tuba, about ninety miles out in the Painted Desert, and only two miles from a Hopi pueblo. They were too heavily loaded to take me, but finally did consent to take my two grips for a dollar, and let me walk. The interpreter was dismissed, provisions were laid in, and we were off. The first day or two the road lay through magnificent pine forest, which covers half the State, then we entered desert. The man waved his hand dramatically over the trail ahead, saying in broken Spanish, "Much far; no water." He was right.

As near as I could make out, the Indian idea of freight hauling seemed to be to pile a load up about so high, no matter whether it was wool or cement, then put on whips enough to make the ponies draw it. That next day they used whips lavishly, and seemed to recognize no speed limit. One of the ponies died in harness; the others looked terribly discouraged. We wound along the trail through the midst of a landscape that seemed anxious to make up in extent whatever it lacked in verdure and variety. Yet in the frying sand under my feet, where lizards scurried for cover, bloomed the most surprisingly dainty little flowers. About sundown the fatherly man made the white lad climb up into the seat beside him; it did not require much making. It was late at night before we finally stopped, but we were within reach of water for the ponies. Soon we were all

A TYPICAL HEADDRESS

REMNANTS OF A VANISHING RACE

Though the natives of the Southwest are not slow to make use of some of the implements of civilization, they cling tenaciously to their old customs.

wrapped in our blankets, lying on the sand, under the dewless glitter of icy stars. The stranger never can understand the enormous difference between day temperature and night temperature on the desert.

Next day the pace was not nearly so hot; I had time to explore. About ten o'clock I came back to the trail from investigation of some strange rocks, to find the caravan in camp, with the horses turned out to botanize. The man, pointing at them, imitated a stagger, and said, "Horse no good!" After lunch, each

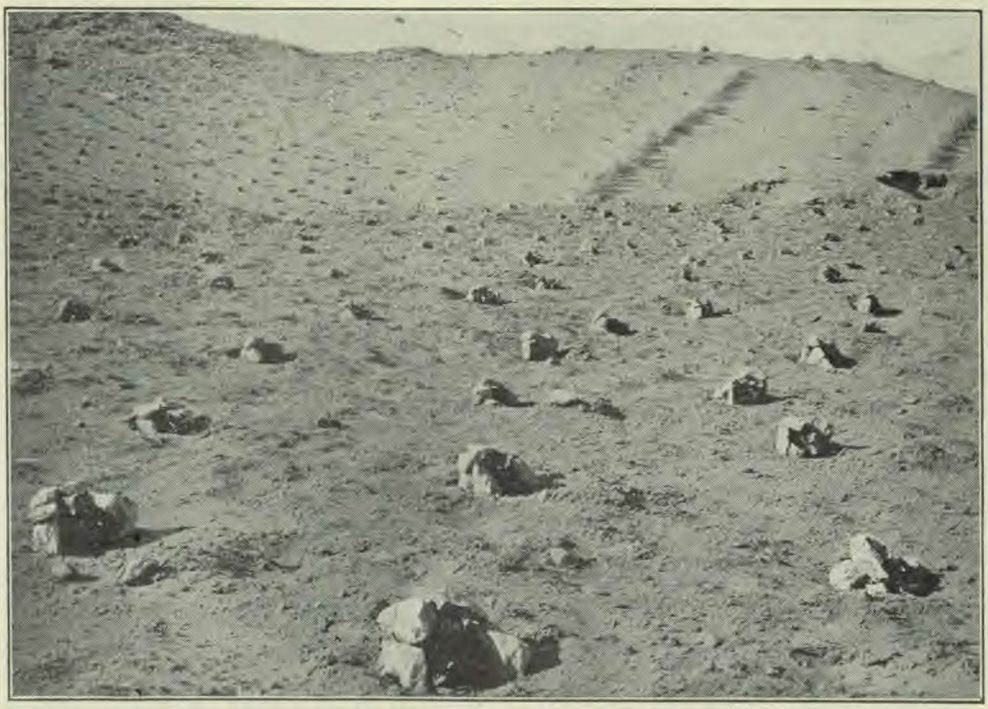
Indian picked out as good a horse as he could from those left, swung aboard, and with a mute, helpless look of farewell at me, all proceeded to pass into perspective toward some vanishing point in the purple mountains miles off to the left. Until three o'clock I sat in the shade of the wagon, writing letters and observing lizards, which, as a substitute for human society, are a flat failure. Then from the purple mountains appeared a horseman. For two hours I watched him coming, at a gallop, straight for the wagons. He was a new Indian boy. He took from the wagon two sacks of flour and a can of baking powder, rolled them end to end in an old blanket, made me help swing the roll across his saddle, then with a silent, elfish smile at me, he climbed aboard and headed back to the purple.

One sack I could have stood, but two were suggestive of indefinite duration. I took a canteen of water, a day's rations, my roll of blankets, and started that night for Tuba. At deep dusk I floundered across the dry sands of the Little Colorado River, where long lines of large tracks radiated from cavernous holes under the rocks of the bank.

The moon rose, I struck the trail on the other bank, and walked, till tired, through the most witching moonlight effects, then made a queer little camp and turned in. The expedition seemed to be assuming a distinctly unsocial character.

In the morning my bundle of blankets was left beside the road, with an arrow marked in the sand pointing my way. The country was becoming more weirdly chaotic every mile. Not even the sagebrush or lizards could stand it. About noon I saw, five miles ahead, the handsomest thing in the world, a clump of green trees!

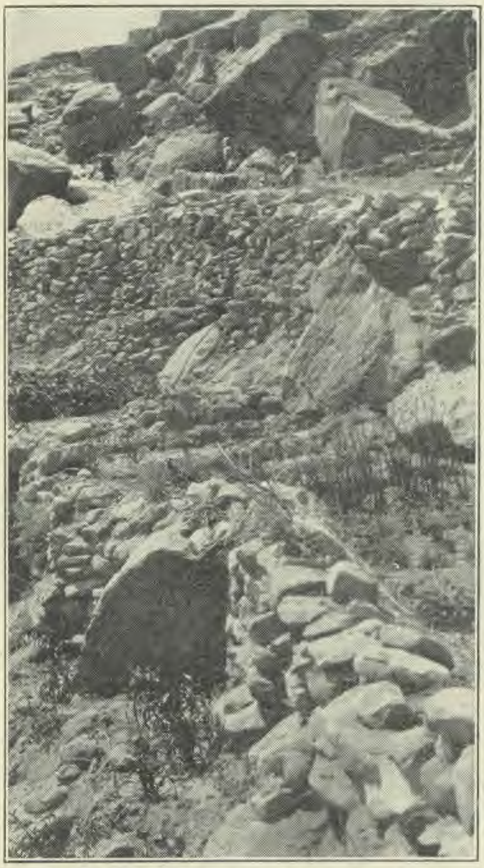
Under those trees, in the sand of the dry Moencopie Wash, I overtook another Navajo caravan, and learned that I was entirely off the Tuba trail and headed toward Lees Ferry, about twice as far.



NATIVES FARM WITH THE ODDS ALL AGAINST THEM

In the foreground is a planting of beans, each hill being partly surrounded with rocks, in order to conserve the moisture. In the background is a sand dune, across which may be seen hedges, placed there for the purpose of preventing the drifting of the sand.

But they said I could follow up the dry bed of this stream and find Tuba. In doing so I came upon a Navajo hydrotherapy institute. It was a little dome-shaped affair of sticks and earth, just big enough for two or three men to crouch in. The treatment, as described by Mr. James, consists of piling a heap of red-hot stones in the center, covering the door with a blanket, and producing an excellent steam bath by throwing water on the hot stones. Another treatment of theirs is a pagan singing ceremony, with laying on of hands. A government doctor told me that they might as well do that as anything, that medicines have little effect on them, and that he had finally arrived at the one prescription of a compound cathartic for all ills.



THE FARM IS CARRIED TO THE WATER

Where the soil is, there is no water; and where the water is, there is no soil. The women have here built up walls, behind which they have made terraces of soil carried on their heads from a distance. The near-by spring at this place makes irrigation a comparatively easy matter.

As I followed the stream, which now began to have pools of salty water in it, Navajo flocks and houses began to appear, and at sundown I was welcomed at Tuba. The place was a sure enough oasis, with plenty of water and fertile fields. It was an old Mormon colony that the government had purchased for the location of an Indian school. Here also is what was said to be the largest Indian trading post in America, owned by one Preston, "the trader that even the Indians like."

The next day my Indian friends arrived, with all my scattered belongings. I had missed the trail at the river in the moonlight, and they had tracked me at least six miles out of their way to get my blankets, the boys even following till they came to the other crew that set me right — all with apparently no thought of reward.

Overlooking the Hopi pueblo of Moencopie, two miles from Tuba, are the neat stone buildings monumental to the tireless energy of the Mennonite missionary, Mr. Frey, who most graciously entertained me.

Moencopie is the only Hopi colony where water is plenty. It was founded by Indians from Oraibi, fifty miles away as the Hopi runs. Such a boon was the water that these athletic farmers would run over in the morning, work during the day in their fields, and lope back to Oraibi at night.

A company of missionaries starting on horseback for this same Oraibi, sixty-five miles as the white man rides, invited me to go along. It was my first offense against equestrian art, but by putting a bedquilt and all possible separation between myself and the saddle, I lived to jolt into Oraibi the next afternoon. Here I no longer missed the absence of chairs in the Indian homes.

Agriculture as practiced by these Indians seems forlornly desperate. There is no rain from planting time till August, and no water for irrigation. The accompanying picture shows how mois-

ture is conserved by building a little grotto of stones over each hill of beans, for shade. In the background will be noticed small hedges in one of the rippled sand dunes that the wind slowly moves across the desert, the hedges being put there to discourage such drifting. These sand dunes are the "natural reservoirs of Arizona." On them the crafty Hopi grows wonderful peaches and melons, also corn and the like. But here, as Burton Holmes says, farming is literally a "pursuit." It is most disheartening for the farmer to wake up and find that the reservoir has moved over on top of the bean patch, leaving its own crop of peach trees sprawling three feet in the air on their bare roots, like gigantic spiders.

The missionaries found the Indians planting corn fifteen or twenty kernels in a hill, and from twelve to eighteen inches deep, and of course proceeded to show them the right way. But only for one seared season! Next year they planted Indian fashion, and got corn. They explained it that at that depth the roots find moisture, but to reach the surface, the combined energy of many kernels is required.

But to mature the crop, rain must come. To this end is offered the famous prayer of the snake dance, in which the people's need is earnestly told to the little brother of the earth, the rattlesnake, who though dumb to man, can talk with the gods. The snakes are then released upon the mystic desert to go tell the gods how these man people who have treated them so kindly will perish unless they have rain. And the most derisive unbelievers seem to admit that copious rains do follow this nine-day ceremony with uncanny precision.

This pueblo of Oraibi, ten years ago the happy home of a thousand of these dusky desert farmers, is now half deserted and fast tumbling to ruin, all due to the long-standing fight over education. These people say that the white man's education is not good for the Indian, that their children come home from school fitted for neither the life in the pueblo nor the ungodly world outside. Almost always they choose the former, though not so well fitted for it as if they had stayed at home. The only reason why they do not all "go back to the blanket," as admitted to me by one of the local government men, is that some have at school acquired habits not commonly regarded as virtues, which it

NATIVE MASONRY

The women are the builders. In this section rough stones are used in place of bricks, but the walls are smoothed up with a stucco of clay applied with the hands.

takes money to satisfy. And money is not plentiful in the pueblo.

These pueblo people insist that their case is not like that of the nomadic tribes of woods and plains Indians, whose mode of life simply cannot continue in the presence of civilization. They point out that the United States Bureau of Indian Affairs is not showing them any more economical use of land than they have always practiced, and it has not lowered their death rate or their slender criminal record. If left alone in their desert, they can handle their own affairs, be prosperous and happy. To which the bureau replies, An Indian is an Indian; you shall be educated.

This question has brought bitter feeling into these gentle homes. Two factions have arisen, the friendlies, who say it is no use to protest, and the hostiles, who say, "Give me liberty or give me death." In 1906 at Oraibi a battle about as bloody as a pillow fight raged between the factions, resulting in the hostiles, slightly in the minority, being driven from their homes out into the desert. Six miles away they founded the new pueblo of Hotevilla, near the spring by that name, dedicated to liberty. But before the new homes were half up, United States troops came, and for the crime of wishing to live their own lives, the men were taken to the penitentiary or put at hard labor in convict road camps, assured that they would not see their families again until they promised never to oppose education. But they never did promise.

Meantime the children had been torn from the breasts of their frantic mothers and carted away, and the women, bereft of homes, husbands, and babies, were left there on the edge of a bleak cliff without food or shelter, through a hard winter. They built such shelter as they could from the meager materials at hand. They snared rabbits, and food was smuggled to them from Oraibi; so they lived. Then one afternoon the brave little Mennonite girl who had cast her lot with them returned to announce, "Your men are coming." Some did not believe; some went up on the high places to watch; others quietly set about getting supper for the returning dear ones.

In view of all this, it is not strange that the visitor is not welcome there till the people are satisfied that he is not part of any such conspiracy. My own visit to Hotevilla, meeting these brave people, seeing customs so quaintly inverted from ours,—women building the stone houses, while men weave the women's dresses,—and a hundred endearing glimpses of this ancient civilization, was generous reward for all discomfort of the trip. Before leaving the desert, I was warned that to print the story of Hotevilla would result in my being barred from the reservation forever. Here's for finding out.

Takoma Park, D. C.

THE COUNTRY DOCTOR

W. Livingston Larned

The doctor is human, and has collectively the same virtues and vices as other people. There are black sheep in every profession, and the profession of medicine is no exception; but there is more of the milk of human kindness, and more work done without hope of remuneration, in the medical profession than, perhaps, in any other. Some men of brilliant intellect have misused their gift in abuse of the doctor, and at least one magazine smudges its not-too-clean pages with diatribes against the profession. The following appreciative letter, written by W. Livingston Larned to the *Medical World*, may not apply to all physicians, but there are thousands of this type of doctors scattered all over this country.

MOST people have excellent cause to remember with profound respect and love and *gratitude* the country doctor. He is an heroic figure in many, many instances, self-sacrificing, poorly paid, pure gold straight through to the very heart of him.

And, in the aggregate, what a mighty man he is, indeed a giant of practical, constructive purpose — a strong bulwark, standing betwixt the nation and its own foolhardiness. We could ill spare him from this life's feeble scheme of things.

Do you remember him as you knew him in boyhood? Does the mental picture of his kindly, tender face come back from the shadows of forgotten yesterdays? We rather fancy his picture will never quite fade nor be lost in the maelstrom of this generation.

The storm beat among the slender birches and tore at the green hedge of the front yard on that bleak night when he brought you into being. With the infinite patience of a father, his strong hand helped to minimize the mother-suffering, and, hours later, after the gale had spent, he sat in the dancing firelight, watching — watching — until her safety was assured.

Each day his rig stopped under the big trees and his cheery voice sang out, as he came up the gravel walk to the little white cottage. You tingled with the restless activity of babyhood as he poked his fat finger in your dimples and squinted over his glasses at your tiny flower-like tongue, and chuckled you and laughed with you, and told everybody what a "fine, bouncing boy you were," to be sure.

There were strange, serious days, you know, when, with the clock's face forgotten, he came to your crib side. That was when they had well-nigh given you up, and the little mother had cried for hours and hours, kneeling in the darkness of the low-ceilinged bedroom. There he was, true to his post through storm and shine — *on guard!*

Pretty soon, if you recall, they were happy once more, and mother crooned her lullabies, and jasmine and roses smiled from every corner of the garden, and as you slept in your carriage, not far from the white gateway, he tiptoed through the grass and tucked a morning-glory in your wisps of yellow hair. "We'll make a President of him, my dear," was what he said, that bright morning, as he patted the little mother on the arm.

Then came the toddling days and the days of childhood's manifold minor sufferings — of this and that. A hundred times little mother was anxious, and a hundred times the quick stopping of the old rig in the turnpike brought relief.

You must be, indeed, *ungrateful* if you can forget all this. True, it is of the misty past, but this venerable man, in his quiet, black coat and his old soft hat, is woven deep into the fabric of your entire life — he made it possible.

Was he too old-fashioned the late afternoon when he raised little mother from the brink of the grave? Yes, you know what happened then, for you were old enough to appreciate. Sixteen you were. They had not told you until it seemed God had called her from across the ramparts of infinity. Then they led you softly into the darkened room with its odors of medicine and oppression, its

drawn shades and its solemn, reverent hush. You were to see her this last time. She had called for you in a moment of consciousness. She wanted her "little boy." You were leaning across the sheets kissing her, and they were cold, bloodless lips, when they drew you back again. It was *his* hand, and he transformed the reprimand into a caress. Even in the gloom you saw how thin and pale and terribly, terribly sick she was. Little mother! You choked; it was all frightful, unbelievable, ghastly.

And shortly after, as you knelt in the quaint, old-fashioned parlor, convulsed with uncontrollable grief, once again his hand touched you and patted you, and his rough beard brushed your cheek as he said, "There, there — we'll see if we can't have mother back once more — we'll see — we'll see."

And when May's showers and pink blossoms swept in at the open casement of your upstairs room, he had, indeed, brought her back; a bit wan and white and unsteady on her feet, but little mother just the same, and the two of you had a fine cry together as the doctor stood at the doorway, smiling through his own tears.

The last time you were home, they took you out to the peaceful country plot in God's acre, where they had made a bed for him under one of the fine old trees he loved so well.

And they told you of how, as a very, very aged man, he had caught cold, driving in a blinding storm; had fallen ill while on his way to give relief to the suffering.

How many nights, through snow and thunder, in sickness and in health, irrespective of himself or his personal state, had he fared forth on his missions of divine mercy!

Never a home in all the broad countryside but that knew his skill and his unfailing guidance.

He had robbed death of its sting, and had pushed the grave steadily, surely, bravely back from the portals of a thousand homes.

His mode of living was old-fashioned; we grant you that. In fact, as we remember, he looked rather seedy in his shiny black coat and his faded soft hat; but, Mr. Man, you did not think him "out of date" that pitifully anxious night he met the Holy Will on the threshold of death, and gave you little mother again.

TURKISH WOMEN WALKING IN PARK

This fine park on Seraglio Point, Stamboul (Constantinople), was opened in 1913.

LOCAL BATHS

L. A. Hansen

AMONG the more common measures of hydrotherapy that may be utilized in home treatment are some of the local or partial baths, such as the foot, leg, and sitz baths.

The Hot Foot Bath

is one of the commonest and one of the most useful measures of hydrotherapy. It does not require elaborate facilities, can be given without much trouble, and yet may be very effective.

A vessel large enough to receive both feet in comfort is necessary. The water should reach above the ankles. A large wooden candy pail is a suitable vessel.

Prepare the foot bath at a temperature of from 100° to 105° F. to begin with, and gradually increase the heat as can be borne in comfort and without faintness. The bath should be continued from five minutes to half an hour. At the close, give a dash of cool or cold water, dry thoroughly, and cover. Care should always be taken in drying the feet to dry between the toes and on the soles.

The foot bath may be given in bed. Place newspapers, rubber cloth, or oilcloth on the bed, protecting the patient with a blanket or sheet, drawing the covering over the legs and the tub.

The hot footbath is valuable for equalizing the circulation by dilating the blood vessels of the lower extremities, thus relieving congestion of the brain and other organs of the upper half of the body. It will very often relieve headache. It is a good treatment for breaking up a cold, and is excellent for warming one when chilly. It is good also for tired and aching feet.

The Leg Bath

is given in practically the same manner as the foot bath, excepting that the leg bath requires a vessel deep enough to immerse the patient's legs to the knees. A cloth or pad should be put under the knees over the rim of the tub, and a blanket or other covering placed over the knees when necessary to protect from chilling. Remove one leg at a time, pour over it water of about 60° and rub thoroughly.

The effect of the leg bath is the same as that of the foot bath, only in greater measure. It is a derivative,[1] and it is also a sedative.

If the foot or leg bath is given as a means of producing perspiration, the patient should be well covered with a blanket. Hot water or hot lemonade may be given to drink to help induce perspiration. A cool compress should be applied to the head or around the neck. A Turkish towel folded three or four times may be used as a compress. If desired, the perspiration may be prolonged by placing the patient in bed and covering well after it has been started by the foot or leg bath; the patient being first dried somewhat after the bath.

Fomentations to the back or spine may be applied to advantage in time saving and with good effect, while the foot or leg bath is being given. It is necessary for the patient to lean forward slightly.

Alternate hot and cold foot or leg baths are given by having two vessels,

[1] Derivative: a term applied to a treatment or agency which draws fluids from one part of the body to another, in order to lessen a morbid process.

one containing water as hot as may be borne, and the other, water at about 45°. The feet or legs are first placed in the hot water for two minutes, and then in cold for fifteen to thirty seconds. The alternations are continued for ten to fifteen minutes, closing with the cold. The head should be kept cool.

The Sitz or Hip Bath

is best given in a regular sitz bathtub, but may be given satisfactorily in an ordinary washtub elevated by placing a block of wood under it at the back. The temperature of the water should be from 100° to 105°, and may be increased to 110° to 115°, or as hot as may be borne.

The body of the patient should be immersed from the upper part of the thighs to the waist. The legs should be covered with a blanket, and another blanket placed around the patient, pinning at the neck.

A foot bath should be given at the same time, at a temperature two or three degrees above that of the sitz bath. Place towels or pads at the patient's back and under his knees. Keep his head cool by a cold compress, having a pail of cold water at hand.

The duration of the sitz bath is from five to fifteen minutes. Two or three minutes before the close of the bath, lower the temperature of the water to about 95°. If the patient is sweating, pour cool water on his shoulders, chest, and back, or rub with a cold, wet towel.

The hot sitz is recommended as an excellent means of relieving pain in the hips and the pelvic region due to inflammation of the pelvic organs, and for relaxing the sphincter of the bladder to overcome the retention of urine. In the last-mentioned disorder the bath is prolonged until relief is obtained.

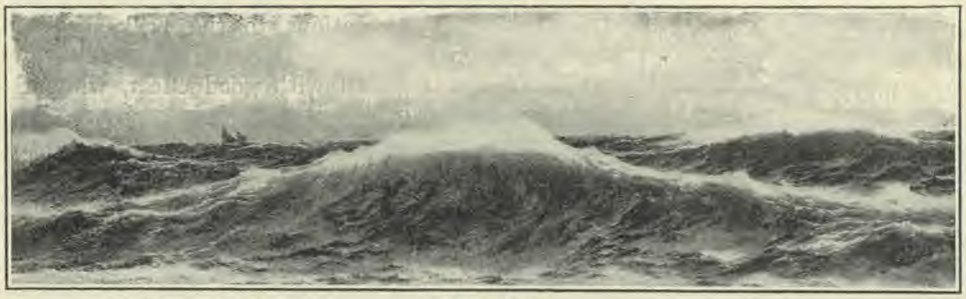
An effect much the same as that of a hot sitz bath may be obtained in a regular bathtub, letting the patient sit upright in water deep enough to reach the waist. The shoulders should be covered with a sheet, and the head kept cool by a wet towel. The temperature of this, the half bath, should be 100° to 102°, and then gradually raised to 108° or 110°.

The Cold Sitz Bath

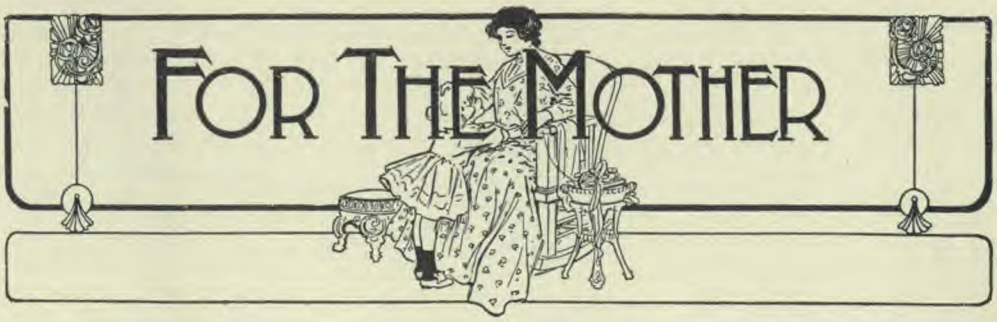
is sometimes used to stop hemorrhage of the uterus or of other pelvic organs. The temperature of the water should be from 55° to 75°. The feet should be placed in hot water. Chilling may be prevented either by rubbing the body or by placing a hot fomentation cloth or a hot water bottle to the spine.

The usual duration of this bath is from two to fifteen minutes, depending upon the temperature of the water, the comfort of the patient, and the effect desired. The colder the bath the shorter the duration, is a general principle.

There might be conditions that would require special caution in giving or taking some of the foregoing treatments. Remember, it is always best to secure competent medical advice. If in doubt as to whether you should take a hot sitz or a cold one—don't. See a good doctor.



THE WAVE



EARLY TRAINING OF MOTHERS IN THE CARE OF BABIES

Sigmund A. Agatston, M. D.

The following extract from a paper by Dr. Agatston is taken from the *New York Medical Journal*. While it was written with specific reference to conditions in New York City, it is of general application. Many mothers in city and country fail to observe the simple rules that pertain to the health of their children.

FULLY to appreciate the conditions which play an important rôle in the causation of malnutrition, digestive disorders, and high mortality of infancy and childhood in the poor and congested districts of the city, it is necessary to observe them, not alone by doing clinical work, but also by visiting the homes. Some years ago, while a member of the summer corps of the health department, I was strongly impressed by the absolute ignorance of the mother in the proper care of her children, which, it seemed to me, was the most important cause of summer diarrhea. It may be interesting to mention some of the gross errors committed by these mothers. Regularity of feeding is practically never observed. If you ask the average mother how often she nurses her baby, the usual answer is, "Every two hours," "Every hour," or "Whenever the baby is hungry." They generally answer in a manner that seems to imply that they think your question is irrelevant and has no connection with the baby's illness. The older infants are fed with the same frequency as the younger ones. It is not uncommon to see digestive trouble in babies who get nothing outside of breast milk.

The trouble may first begin through overfeeding, or some disturbance of the breast milk on account of illness of the mother, nervous shock, etc. The baby will first suffer from indigestion and colic, which will cause it to cry frequently. Then the mother, in her anxiety to quiet the baby, will put it to the breast as often as it cries, which, while pacifying the child for the moment, will often make things worse.

Irregularity of feeding in bottle-fed babies will cause trouble more readily than in the breast-fed. It sometimes happens that a nursing baby cries frequently, owing to the above-men-

1. Daily bath.
2. Plenty of fresh air.
3. Feeding at regular intervals of not less than three to four hours; nothing except water between feedings. When the baby cries, it does not always mean hunger.
4. Positively nothing besides milk during the *first six months.*
5. After the sixth month, orange juice, once daily an hour before a milk feeding; barley water, used in diluting milk in bottle-fed babies, crust of bread and zwieback, when teeth are present, given after breast or milk feeding.

tioned cause. Without consulting a physician, the mother decides that the baby is hungry owing to insufficient amount of breast milk, and proceeds to start the child, between the breast feedings, on artificial feedings of her own selection with disastrous results.

Another gross error committed by the mother is the indiscriminate feeding of babies with all sorts of improper foods, such as raw fruit, cake, candy, vegetables, and insufficiently boiled cereals. It is of common occurrence to see a young infant sitting in a high chair at the dinner table being fed by different members of the family, who think it great fun to give the baby a taste of almost any article of diet, including even tea, coffee, and beer.

The dread of the second summer, which is accepted as a source of unavoidable evil, is almost universal. Some mothers refuse to wean their babies until the sixteenth or eighteenth month, expecting thus to meet the dangers of the second summer. They do not seem to realize that the mixed feeding is at all a factor in making the second summer dangerous. They may be giving the child at once breast milk, bottle milk, and mixed diet, yet they feel that the fact that it has not been weaned altogether, protects it from the evils of the second summer. The constant use of pacifiers is another source of trouble, especially as these are anything but scrupulously clean.

In the face of these facts, it is no wonder that digestive disturbance, rickets, scurvy, and malnutrition, all of which contribute toward the high mortality, are so commonly found among these babies.

In order to combat these existing conditions successfully, it is necessary to educate the mothers persistently and systematically.

The proper care of infants could be taught in a brief and concise manner. The points in the accompanying insert must be strongly impressed.

6. When the baby is bottle-fed, use raw whole milk (certified if possible). Parboil the milk during hot summer months. During the *second* month use from twelve to fourteen ounces of milk to ten ounces of water, divided into seven bottles. Add two ounces of milk for each succeeding month, so that during the *third month* from fourteen to sixteen ounces of milk to ten ounces of water are given; during the *fourth month,* from sixteen to eighteen ounces of milk to ten ounces of water; etc. After the third month relinquish the night feeding, and divide the whole quantity into six bottles. Always add a flat tablespoonful of milk sugar to each ten ounces of the mixture. Fill all the bottles for the day in the morning, and keep them on ice until used. Before using, immerse the bottle in hot water, until the milk is sufficiently warmed. Babies do very well on these mixtures, and their simplicity makes them easy to follow out. The quantities correspond approximately to caloric requirement.

7. During the *second year,* children may have milk, eggs, orange juice, prunes, apple sauce, baked potato, oatmeal gruel (cooked four hours), farina, barley, bread, and soup. Feed every four or five hours.

8. No raw fruit of any kind during the first two years.

9. Do not use pacifiers.

10. When baby does not seem well, do not try home remedies, but consult a physician. If you treat without knowing the cause, the baby will probably get worse.

HOME COOKING SCHOOL

CEREALS: THEIR FOOD VALUE, AND HOW TO COOK THEM

George E. Cornforth

THE dry cereals are among the most concentrated and nutritious foods, having about 87 per cent nutritive value. They furnish, in round numbers, one hundred calories, or food units, to the ounce. This nourishment is divided as follows: —

Water	10% to 12%
Protein	10% to 12%
Carbohydrates	65% to 75%
Fat	5% to 8%
Mineral elements	1% to 2%

Oats contain the largest proportion of fat and protein. Yellow corn comes next in fat content, wheat comes next to oats in protein content. Rice contains the smallest proportion of fat and protein. Oats digest least easily. Rice digests most easily.

It has been said that wheat contains all the elements required to nourish the body, in about the right proportion. This is true of the proportion of protein and carbohydrate, but not of the proportion of fat. Cereals are deficient in fat. This fat, however, is supplied by the foods that are usually eaten with cereals. Neither are the mineral elements present in the right proportion. Cereals contain too much magnesium and too little lime. It has been known that white flour products do not properly nourish young children, and it has been supposed that whole wheat preparations would keep them in health, but this has been found to be untrue. Some other food must be supplied that contains more lime and less magnesium. Milk is such a food. Nuts also contain more lime than cereals contain. Milk and nuts, therefore, balance cereals in making up their deficiency of fat and in giving the proper proportion of mineral elements. Fruits and new vegetables also contain more lime than magnesium, and for that reason they may supplement a diet of cereals.

I believe that the benefit to be derived from the use of cereals in the diet is due to the fact that cereals, used as cereals, are mostly *whole* cereal preparations, and if white bread is the only food prepared from cereals that the person has been eating, benefit might come from eating preparations of whole cereals. If the person has been in the habit of eating bread made from whole cereals, no great benefit would probably be derived from the addition of breakfast cereals to the diet. Some years ago, when cereals began to be used in the form of mush, whole cereal preparations were used; but it seems that people *will* have refined foods, and now there are on the market cereal preparations that are no better than white flour products; important elements of the grain, such as the bran and germ, having been removed. Cream of wheat, for instance, would more properly be called "starch of wheat." It is just about as deficient in mineral elements and cellulose as white flour.

The oat grain has been tampered with less than other cereals in preparing it for eating.

The nitrogenous part of wheat, its building food, is called gluten. The nitrogenous part of corn is called zein. Zein is different from the protein constituent of other cereals. It seems to lack something, and as a result of this lack, animals fed no other protein food

except that contained in corn fail to develop normally. It does not seem to supply all that is necessary for the building of body proteins. I sometimes wonder if people who live largely on corn contract pellagra because their diet does not supply a sufficient quantity of the right kind of protein.

The Cooking of Cereals

The cooking of cereals being among the simplest of cooking processes, it will be easy to begin practice work by learning to prepare them.

Cereals are the seeds of cultivated grasses. In them is stored the nourishment on which the young plant grows when it begins life. This nourishment is stored in a permanent form in which it will not easily deteriorate, because it must not decay from harvest time to planting time. It is in a dry, concentrated, insoluble form. When the seed is planted, it absorbs water; the diastase becomes active and changes the raw, insoluble starch to sugar, which is soluble and ready to be used to nourish the young plant. In order to prepare cereals for our nourishment, a somewhat similar change must be brought about in them. This is done by the use of water and heat. The cereal absorbs the water, the heat causes the starch to become soluble, or to dissolve, in the water, and the heat also softens the cellulose framework of the cereal. To render the starch soluble requires a comparatively short time, but thoroughly to soften the cellulose may require several hours' cooking, according to the size of the grain or the fineness to which it has been ground.

To properly cook cereals a sufficient length of time a double boiler is necessary. This insures proper cooking of the cereal without scorching it, and prevents the pastiness caused by long, active boiling.

A fireless cooker is ideally adapted to the cooking of cereals. To cook some cereals a sufficient length of time necessitates cooking them the previous day if they are to be used for breakfast, then reheating them in the double boiler in the morning. In a fireless cooker the cereal will cook during the night, and be warm for breakfast, or require only a short heating.

That the cooked cereal may always have the proper consistency, definite proportions of water and cereal should be used.

Cream is a sufficient dressing for cereals. They are largely carbohydrate, and to add sugar to them is like carrying coals to Newcastle. But cream supplies fat, in which cereals are deficient. Eating sugar on cereals is like eating sugar on bread and butter. Cereals digest better if eaten without sugar. Stirring raisins, stoned dates, or chopped figs into the cereal before it is served is better than using sugar with it. It is well to eat something hard, like zwieback, with cereals, to encourage mastication; or nuts may be sprinkled over the dish of cereal. Cereals being so largely starch, their digestion is begun by the saliva in the mouth; therefore they should be well masticated.

General Rules for the Proportion of Water to Grain in Cooking Cereals

Scotch oatmeal ("steel-cut oatmeal") and all wheat preparations except whole wheat, rolled wheat, and Graham flour, require four measures of water to one of cereal.

Whole wheat requires three measures of water to one of cereal.

Rolled wheat, rolled oats, and rolled rye require two measures of water to one of cereal.

Graham flour requires two or three measures of water to one of flour, according to the quality of the flour.

Corn preparations (corn meal, hominy, etc.) and barley require five measures of water to one of cereal.

Rice, when cooked in a double boiler, requires three or four measures of water to one of rice, according to the size and quality of the rice.

If the grains are cooked in the afternoon and warmed up the next morning, more water will be required. Fine wheat preparations and corn meal will

require six measures of water to one of cereal. Rolled cereals will require three measures of water to one of cereal.

Use one teaspoonful salt to one and one-half pints of water.

General Directions

1. Measure both water and cereal.
2. Have the water boiling in the inner cup of the double boiler, set directly over the fire, that is, without the outside boiler.
3. Stir the cereal into the water slowly enough not to stop the boiling of the water.
4. Continue the boiling and stirring till the cereal thickens the water.
5. Set the inner cup of the double boiler into the outer cup, which contains boiling water.
6. Do not stir the cereal after this.
7. Keep the water in the outer boiler boiling for the required length of time to cook the cereal.

Whole grains, and especially flaked grains, should not be stirred during cooking, because this will break or crush the grains and produce a pasty mass.

Flaked grains, such as rolled wheat, rolled oats, and rolled rye, should not be boiled directly over the fire. To avoid breaking the flakes have the water in both the inner and the outer part of the double boiler boiling, the former placed inside the latter, the salt added to the water in the inner cup. Carefully stir the flakes into the water. Put the cover on the kettle, and do not stir again, unless it is necessary to lift carefully the flakes in the water. Simply allow the cereal to cook the required length of time in the double boiler.

Time Required for Cooking Cereals

Rice cooked in a double boiler, and fine cereal preparations, one hour.

Rolled oats, rolled wheat, and rolled rye, three to four hours.

Cracked wheat, oatmeal, and fine hominy, four to five hours.

Whole wheat, pearl barley, and coarse hominy, six hours.

Golden Grains

2½ cups water
½ cup corn meal
1 teaspoonful salt

Heat the water to boiling in the inner cup of the double boiler. Add the salt. With a batter whip stir the corn meal into the water. Continue stirring till the mixture is thickened. Then set the inner cup into the outer cup of the double boiler, which contains boiling water, and continue cooking one hour. Serve with cream or maple sirup. If desired, three-fourths cup of dates that have been washed, stoned, and cut into small pieces, may be stirred into the cereal before serving, making golden grains with dates. Serve with cream.

Baked Corn Meal Cubes

Use two cups water, instead of two and one-half as in the preceding recipe. After the cereal has cooked the required length of time, turn it into a bread tin that has been wet with cold water. After it gets cold, cut around it and remove it from the tin. Slice it into one-inch slices, and cut the slices into one-inch cubes. Beat two eggs slightly, and add to them two tablespoons of water and a few grains of salt. Roll the cubes in fine zwieback crumbs, dip them into the egg mixture, then roll them again in the crumbs. Lay the cubes on an oiled pan, and bake them in a hot oven till nicely browned. Serve with maple sirup.

Rolled Oats, Rolled Wheat, or Rolled Rye

2 cups water
1 cup of the cereal
¾ teaspoon salt

Have the two parts of the double boiler together, with water in the outer part, and the two cups of water and the salt in the inner part. Let the double boiler set over the fire until the water in the outer part has been boiling five minutes, to heat the water in the inner part. Carefully stir the flakes into the water. Put the cover on the kettle, and allow the cereal to cook three hours. Add boiling water to the outer kettle as may be necessary during the cooking. Serve with cream.

Pearl Barley

½ cup pearl barley
2½ cups boiling water
1 teaspoonful salt

Put the barley into a small saucepan. Pour boiling water over it, and whip it with a batter whip. Pour off the water. Pour on more boiling water, whip again, and pour off the water. Repeat the process till the barley is thoroughly clean, and the water that is poured off is clear. Put the washed barley, water, and salt into the inner part of a double boiler, and put the two parts of the double boiler together, with boiling water in the outer part, and continue the cooking for five hours, keeping the cover on the inner part of the double

(Concluded on page 338)

EDITORIAL

FOODS SHOULD BE RELISHED

NOT infrequently letters come to the Questions and Answers department in which the writers complain of indigestion, constipation, coated tongue, and a whole gamut of symptoms indicating food poisoning. In many of these cases the correspondent volunteers the information that he (or she) does not use meat, tea, or coffee, and has been trying for years to live up to all the light on health reform.

The fact is, the questioners have failed in some of the essentials of health reform; for one who has indigestion, constipation, and a host of other disagreeable and life-shortening symptoms is *not* living health reform in the spirit, though he may be following it in the letter. He may be conscientious; he may be careful to regulate his conduct according to the best light he has; but he is violating some physiological law. The proper adjustment of our bodies to our surroundings tends healthward; and when the tendency is the other way, there is a reason for it.

One physiological law, which we have been very slow to learn, is that *good digestion depends upon relish.*[1] This has been worked out carefully on dogs and other animals, and also on human beings. It has been shown that the use of monotonous foods, foods that do not give pleasure in the eating of them, foods that are swallowed simply because they contain the required amount of protein, fat, carbohydrate, and salts, do not stimulate an adequate flow of digestive juice, and digestion is therefore slower and more imperfect. Moreover, the thick and ropy saliva deposits a substance which becomes tartar on the teeth and fur on the tongue. The tartar in the course of time causes the teeth to loosen, and the septic mouth contaminates all the food that enters it. The coated tongue being unable to taste food, the condition goes from bad to worse, for even savory foods can no longer adequately stimulate the salivary and other digestive glands.

A prominent dentist who is also a physician and surgeon has made an extended study of this subject. He first learned that the quality and quantity of the salivary secretion depend on the kind of food eaten. Certain of the foods, as the acid fruits, increase the secretion of saliva. Later he learned that the secretions of the stomach, pancreas, and liver are similarly affected. In other words, he learned that "what is best for the mouth is best for the remainder of the alimentary tract;" and that "the mouth is the most important part of the whole canal." If digestion is right in that part of the canal over which we have control, it will be right the rest of the way. If digestion is wrong, the cause is largely in the mouth. This simplifies the problem, and makes it more hopeful.

[1] "If the food eaten is not relished, the body will not be so well nourished."—"*Ministry of Healing*," *p. 300.*

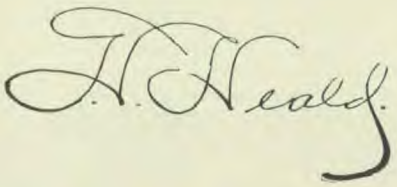
Digestion is largely controlled by a "reflex arc," consisting of nerves carrying sensations, such as taste, to the brain, and other nerves carrying secretory and other impulses from the brain to the glands and other structures of the alimentary tract. This doctor found that by severing one part of this arc, the pneumogastric nerve below the heart, so as to prevent the messages from the brain reaching the stomach and other abdominal organs, the stomach dilated, the food remained in it undigested, fermenting and decomposing, and finally caused death through blood poisoning. He believes that a milder but more prolonged effect of a similar nature is produced in the human subject by blocking up the other end of the arc, that is, by diminishing the taste perception, first by a habitual diet of a nonstimulating character (that is, not stimulating the salivary glands to activity), and secondly by the formation of a coating on the tongue which prevents the tasting of even foods with marked flavors.

In order to test this theory, he fed animals on boiled and neutralized foods (neutralized with carbonate of soda). If the experiment was begun early enough, the animal died before it was six months old. Development was retarded in a marked degree in all cases. Starch and lime in excess were excreted from the bowels. The salivary glands did not develop properly. After death nearly all the animals showed a markedly diseased condition of the stomach. According to the doctor, all that had been done in this case was to take the normal taste out of the food; but according to recent studies the vitamines may have been destroyed by the soda and heat.

In another series of experiments, the doctor showed that the poisons from the germs of the human mouth may cause increased blood pressure in animals, and he thinks this may account for a large proportion of the high-pressure symptoms — cold feet, pale complexion, headache, and constipation — which occur in human beings with bad teeth. By feeding rabbits with a culture from the germs of decayed teeth, he caused illness, with loss of appetite and constipation.

Whether or not we grant that these experiments are conclusive, we must admit that bad mouth conditions in the human are nearly always accompanied with bad conditions elsewhere. A normal saliva is one of the best preventives of bad mouth conditions; a proper diet is the best assurance of a normal salivary secretion; and a diet that is insipid, tasteless, unappetizing, is not a proper diet.

Fletcher was not so far off when he taught that the function of the mouth is to taste and enjoy food, not to bolt food. There is a much larger proportion of dyspeptics among those who do not care what their food tastes like than there is among those who are particular as to the taste of their food.



SCIENCE AND DIET

Influence of the Proteins on the Growth of the Young

BEFORE the Section of Physiology and Experimental Medicine of the American Association for the Advancement of Science, held in Columbus, Ohio, December, 1915, a number of papers were read on the influence of diet on maintenance and growth.[1] One paper, "Proteins in Growth," by Ruth Wheeler, refers to the experimental work performed by a number of investigators, which shows that certain of the amino acids are essential to maintenance, and others to growth. That is, if certain of the amino acids are absent from the food for a prolonged period, death must result. If certain others are absent, life may be maintained, but growth will cease. The last paragraph of Mrs. Wheeler's paper follows: —

"Many of the results of nutrition studies cannot be used with confidence in problems of human nutrition until more is known about the differences in the amino acid content of the flesh of different species. The pig can use twenty-three per cent of wheat proteins for growth, but we cannot yet be sure that this is true of the child; and so of many of the other interesting and valuable contributions cited. They suggest wonderful possibilities — future possibilities — for the dietitian. A child who is undersized and frail can sometime be fed just the right combination of milk, eggs, and cereals to furnish the amino acids he needs in the right proportion, with no large excess of any one to overtax the excretory system or to overstimulate metabolism; a worn-out neurasthenic can be given just the right amino acids to replace worn-out tissues, and enough glycocoll to stimulate metabolism — in gelatin perhaps. We have some slight clinical evidence that this last works out."

[1] The complete text of these papers is given in the *Scientific Monthly* of March, 1916.

The Mineral Nutrients in Practical Human Dietetics

FORBES in his paper read before the American Association for the Advancement of Science confesses that we know very little about the subject. This may be disconcerting to the ordinary reader, who would prefer to read something from some one who knows all about it. The difficulty with one who pretends to know most about dietetics is that he probably knows too little of the subject to perceive his own ignorance. Those who have given the most profound study to nutritional physiology are the most ready to acknowledge that they know little of the subject.

Forbes says that calcium, phosphorus, and iron are more likely than other minerals to be lacking in human dietaries, and continues: —

"On this account especial interest attaches to their occurrence in food. Calcium is especially abundant in milk, and is also contained in considerable quantities in eggs, vegetables, and fruits. Phosphorus is abundant in milk, eggs, nuts, peas, beans, and such cereal products as contain the outer seed coats. Iron is found in largest quantities in beef, eggs, beans, peas, green vegetables (especially spinach), and in the outer seed coats of the cereals.

"The foods which are poorest in minerals are polished rice, pearl hominy, white flour, bolted corn meal, and other cereal foods which lack the outer seed coats. These foods, because of their highly digestible character and lack of salts, are apt to be constipating."

The normal food of infants, he says, furnishes its full mineral requirement. but in giving diluted cow's milk, the proportion of minerals is lowered. He advises that milk be diluted with whey instead of water, the whey to be prepared artificially by means of rennet.

"With combinations of whey, skim milk, cream, and milk sugar," he says, "you can play any dietetic tune you please on the infant organism, and with these foods the intelligent parent can rear any infant which can live at all."

In order to get a high ash content in the food, he suggests that it is a good practice "to utilize the water in which foods are cooked, in so far as this can be done without detracting from the acceptability of the food, since the cooking-water dissolves out much mineral matter." The abundant mineral acts not only as a nutritive, but also as a laxative.

The usual dietaries of prosperous Americans, he says, do not lack in mineral nutrients. "But we are not all prosperous, and some of us choose unusual dietetic combinations. The central features of improperly chosen diets are usually an undue dependence on meats, and on foods made from finely milled cereals or other cereal foods lacking the outer seed coats, and too little use of milk and vegetables."

Food Selection for Rational and Economical Living

In his paper read before the American Association for the Advancement of Science, C. T. Langworthy, the nutrition expert of the United States Department of Agriculture, gives information of value to those whose duty it is to supply the family larder.

Not the least important part of his very practical paper is the test by which the housekeeper can judge whether "her efforts to provide a rational diet as part of her good housekeeping are meeting with success."

> "It seems fair to say that the child who continues to approximate the average for his years with respect to weight and height, who is apparently normal in respect to work and play, and who exhibits none of the obvious symptoms of ill health, cannot be very faultily fed, any more than can be the adult who remains in fairly constant weight for long periods of time, . . . and has other attributes of good health."

He follows with this important caution: —

> "As one reaches middle life, it is wise to be more abstemious in matters of diet, as in other things; for the body is 'slowing down' and becoming less active, and so needs less food."

INFERIOR FOOD AND WRONG FEEDING

Poisoning from the Use of Canned Vegetables and Fruit

Bolduan[1] describes an instance of poisoning from the use of canned vegetables, in which twenty-one persons became ill after eating bean salad, and eleven died. The symptoms came on twenty-four to forty-eight hours after the meal. The beans from which the salad was made had "a peculiar rancid odor, somewhat resembling that of Parmesan cheese," but no signs of decomposition. The beans were very tender, "soft as butter," and were therefore not further cooked. The rancid odor increased after the salad had stood awhile. Some of the salad was inadvertently placed on the stove and allowed to boil. Those who partook of this boiled salad were not poisoned. Laboratory work afterward showed that the poison in this salad is one that is destroyed by boiling, and that it is caused by the presence of the germ *B. botulinus,* which often causes poisoning in connection with the use of canned meat; but not rarely, it would seem, it causes poisoning from the use of canned vegetables or canned fruit. In the case above mentioned, it was supposed that "the bacilli had been carried into the can along with some little piece of left-over meat, such as might be found in any kitchen;" but from some later examples of botulinus poisoning, it would seem probable that the food may be infected without the agency of meat.

In the *California State Journal of Medicine* for April, 1916, there is an article on "Botulism; Its Occurrence in

[1] "Bacterial Food Poisoning," E. B. Treat & Co. See our book list on page 343.

California," in which Dickson gives an account of several cases of acute poisoning with symptoms very similar to that produced by *B. botulinus,* but caused by the use of canned fruit or vegetables.

In November, 1913, twelve persons at Stanford University were poisoned, one fatally; in 1910 twelve persons were poisoned from eating canned pears, and eleven died; later there was an outbreak in Fall Brook, Cal., in which five persons died after eating canned apricots.

Continuing, Dickson writes: —

"The more recent cases have occurred within the past few months. In Hillsboro, Oregon, a woman and forty chickens died after eating canned corn; and in San Jose, Cal., a woman and eight chickens died after eating canned string beans. In both of these instances the patients died after an illness which in every way resembled botulism.

"The most important fact concerning these cases is that, with two exceptions, all were produced by eating spoiled canned vegetables or fruits, and that in all of the latter the vegetables or fruits had been canned at home. Among the several hundred cases which have been described in the European countries the only outbreak in which the poisoning was traced to vegetables was that which occurred in Darmstadt in 1904 [the case mentioned at the beginning of this article], in which twenty-one persons became ill and eleven died after eating a bean salad which had been prepared in a cooking school."

But after the outbreak at Stanford University an investigation was undertaken, which showed it possible for the *B. botulinus* to develop its toxin in canned beans and peas in sufficient quantity to cause the death of animals when they are inoculated.

It would seem, then, that botulism, a form of food poisoning, may not infrequently result from the use of canned fruits and vegetables, and that this danger is minimized by boiling such foods before eating. However, canned foods giving off the least rancid odor should be considered as infected, and unfit to be eaten even by poultry. Inasmuch as we know no certain antidote for the botulinus toxin, it is better to avoid any suspicious canned food. It is well to remember that *B. botulinus* is an anaerobic germ; that is, it grows in the absence of air, and for this reason would grow in canned goods. The ordinary canning by the housewife does not destroy all the germs present, but by excluding the air it prevents the growth of the ordinary fermentative germs, which need oxygen for their growth. If the anaerobic germs are present, they can continue to grow.

In the bacteriological laboratories the domestic method of destroying germs would not be considered efficient. There it is the custom to sterilize by the fractional method; that is, to repeat the sterilization on three successive days in order to destroy the spores which by that time will have hatched out. Inasmuch as the housewife does not take the trouble to do this, there is always the possibility that some anaerobic germ, such as the botulinus, may be present in the food; and as this does not produce the ordinary types of fermentation, the food is likely to be eaten, though actually it is much more dangerous than would be some other decomposed or fermented foods.

Children Underfed or Poorly Fed are Handicapped for Life

BEFORE the New Jersey State Association of Medical Inspection and School Hygiene, Dr. Ira S. Wile read a paper on malnutrition,[1] in which he calls attention to some of the causes of malnutrition in early life. "Poor food lacking in lime and other salts leads to weakened teeth and consequent decay. Following decay, infection, and toothache, improper mastication results, the appetite decreases, and malnutrition supervenes." Thus we have early in life a vicious circle, poor nutrition making poor teeth, and poor teeth increasing the malnutrition.

But the malnutrition can be traced back to the nursing period for —

"Michaels has shown that children who have been breast-fed for ten months or more present only nine per cent of carious teeth in the early school period, compared with twenty-two per cent among children fed on cow's milk. The relative starvation in proteins, lime, iron, cal-

[1] *New York Medical Journal,* May 15, 1916.

cium, and magnesium during the first five years of life helps to produce the child-suffering from malnutrition upon entrance into the public school."

Now this matter of nutrition is vitally important to the child's future welfare, for —

"chronically underfed children are vulnerable to contagious disease and susceptible to protracted colds and bronchitis. Then poor musculature and sluggish circulation make them more likely to fall victims to the various diseases to which they are exposed through the intimacy of school life, and as a result their absences are more numerous. For the same reason their convalescence is retarded, their complications are more numerous, and their loss of education and training through absence is far greater than that of other children of the same age in a better state of nutrition."

Not the Fault of the Food Perhaps, but the Fault of the Eater

In "How to Live" some instances are given showing how certain foods acquire an undeserved reputation for being indigestible. After stating that "many have mistaken ideas as to their own idiosyncrasies," the writer continues: —

"For instance, many people think that nuts never agree with them, when the trouble really is that they do not masticate them properly. Many think peanuts indigestible, not realizing either the importance of mastication or the importance of avoiding overroasting. The ordinary peanuts are overroasted. Peanuts very slightly roasted and very thoroughly masticated seldom disagree with one. Others believe that bananas never agree with them, when the fact is they eat them too green. The banana vender usually finds that the ignorant public buys his fruit best when its color is an even yellow, and he puts aside for himself the only bananas ripe and fit to eat, namely, those which are mottled with black."

Some who cannot eat apples without suffering from flatulence will find that by paring the apples (apple skins contain large numbers of putrefactive germs) and thoroughly masticating them, they will have less trouble, especially if they partake of apples only at intervals of two or three days.

Those who have trouble with raw bananas will find thorough mastication a help, and baked bananas will cause less trouble than raw. The same is true of apples.

In many cases where fruits disagree there are mouth conditions that should be remedied — the presence of caried or "decayed" teeth, or of disease of the gums. The attention of a dentist and the practice of frequent mouth cleansing, especially before meals, will tend to minimize the putrefactive troubles resulting from the use of fruits.

* * *

"THE GREAT AMERICAN FRAUD"

Five Hundred Millions for Patent Medicines

Did it ever occur to you what the American people are doing to put unearned wealth into the pockets of a few patent medicine exploiters? Miner Chipman opens his article on "Industrial Preparations for Peace," in the March 4 *Scientific American*, with the following paragraph: —

"Five hundred million dollars are annually expended by the people of the United States for medicines. At least eighty per cent of this five hundred million dollars is spent without the advice of a physician. The Panama Canal has cost to date approximately three hundred and seventy-five million dollars. If eighty per cent of the medicines for which these five hundred million dollars were spent could be dumped into the three hundred and seventy-five-million-dollar canal, we would materially increase the efficiency of the people of the United States, and the canal as a highway of commerce. Think of it! An amount equal to the Anglo-French loan, blown in for medicines, eighty per cent of which were taken without the advice of a competent physician."

Compared with These Scoundrels the Highway Robber is a Saint

The highway robber gives a man his choice, his money or his life; the patent medicine faker takes both. He lives in respectability, often defended by his community (Rochester, for instance), while his victims, after giving him the little pittance they needed — oh, so much! — for food, clothing, and shelter.

drop into paupers' graves. A New York physician with a large dispensary practice, who has seen much of the evils of patent-medicine doping, expressed himself as follows: —

"It is discouraging to see what faith many people still have in the lying labels on patent medicines. Every day we see patients who come to be relieved of a cough, and to be strengthened and built up, but who have had the cough and increasing weakness for some months. These poor fellows didn't do a thing for themselves all those months, except swallow patent medicines whose labels promised miracles. *The man who puts faith in such labels is a fool; the man who sells such stuff is a thief; the man who manufactures flavored booze-and-sugar water and makes up the lying labels is a murderer.*"

He gives the following as typical of the cases he meets almost daily: —

"One poor devil came for treatment recently. He had had a cold for about six months, and yet, during all that time, did nothing for himself but eat pounds of cough drops and drink quarts of patent cough medicines. He was in the last stage of tuberculosis, and was so weak that it was not safe to let him walk a few steps to the ambulance, and yet he had been at work as cook and dishwasher only the night before."

His trust in patent medicines had kept this poor fellow from taking proper treatment until it was too late, and had kept him in a position where he probably exposed hundreds of others.

CANCER AND PELLAGRA

New York State Health Department Publishes Latest Cancer Information

ADMITTING that the medical profession has not succeeded in solving the mystery of cancer, the New York State Department of Health has devoted the March number of its monthly bulletin, *Health News*, to a careful consideration of what is now known regarding the disease. From an editorial by Commissioner Hermann M. Biggs, the following is quoted: —

"There is nothing that any one of us can do to prevent the occurrence of cancer except in avoiding certain specified causes of local irritation. On the other hand, there is incontrovertible testimony as to the probability of its cure in a large percentage of cases if taken in time. That cure consists in the complete surgical removal of the growth at the earliest possible moment. Early diagnosis, early removal — there is not now nor has there ever been any other successful method of curing the disease."

A number of noted scientists have contributed articles to this issue. These articles consider the question of cancer increase, of false ideas regarding "cancer villages," "cancer families," and the like, and give warnings regarding fake cancer cures. Says Dr. Francis Carter Wood, director of cancer research at Columbia University: —

"No form of internal medicine will cure cancer; that we know absolutely. Nor will any fluid injected under the skin cure cancer. Cases of cure by such means which are reported in the papers are merely instances of mistaken diagnosis, for the quack relies upon the ignorance of people as to what a cancer is and what it is not. Any small lump is called a cancer by the quack; then if it disappears, he will say that he has cured it. As a matter of fact, a great many tests have been made of the cancer cures which are sold in this country, and none of them has been found to be of the slightest value in the treatment of real cancer."

It is made perfectly plain that cancer is comparatively easy to cure if it can be taken in time. Dr. John A. Hartwell, director of surgery in the Cornell division of Bellevue Hospital, declares that if the simple truth be thoroughly established that cancer begins in a comparatively innocent form and in most instances in a recognizable form, it can be successfully combated, and emphasizes the need of better education in the early recognition of cancer.

Commissioner Biggs, in anticipation of a popular demand for information regarding cancer, has had printed a large edition of the *Health News* for March. Any one who desires the full information as contained in the magazine may secure a copy of the publication, free of charge, by addressing the New York State Department of Health at Albany.

Two Views of the Nature of Pellagra

In the *Southern Medical Journal* of April, 1916, Lavinder, one of the best-informed men in the United States on the subject of pellagra, says some very sensible things — sensible because not dogmatic — regarding the cause of the disease. In his final paragraph, he says: —

"Finally there is the relation between diet and pellagra. Throughout all the literature of pellagra, both early and late, will be found the thought, in one form or another, that this disease is very closely associated with a poor diet, and especially a diet lacking in nitrogenous principles. Among all the complex and discordant things which surround this disease this is one outstanding *fact*. Its importance with us has not been sufficiently appreciated. The exact relation between food and pellagra is, however, not understood, and until that occurs we cannot know what etiologic significance diet may possess. At present the most hopeful outlook for etiologic studies seems to be in approaching the disease from the dietetic side."

Following Lavinder's article is one by Yarbrough, of Alabama, who says: —

"Pellagra is simply an auto-intoxication, the result of a carbohydrate diet, in which there is practically no protein. This carbohydrate or alcoholic material, when taken into the stomach, is quickly converted by the normal heat of the body into what the distillers call 'sour mash.' The production of this sour mash three times daily for weeks and months finally so cripples metabolic activity as to allow this fermented material to be taken into the circulation without the necessary chemical change; the victim's metabolic function has been practically destroyed by eating alcohol, and the result is the varied and complex symptoms we call pellagra."

Yarbrough claims that with this view of the disease he has been enabled to treat successfully eighty-one cases during the past four years. He gives a number of interesting case histories. Regarding treatment he says: —

"Too much stress cannot be placed upon the necessity of immediately eliminating all carbohydrate or alcoholic material from the diet. The proteins to be substituted should be selected with the greatest care, because upon this decision largely depends the momentous issue of life or death. So long as there is nausea, vomiting, or diarrhea, the diet should be absolutely restricted to milk, meat broth, and fresh fruit juices, preferably orange. After these symptoms have subsided, the whole list of proteins may be allowed *ad libitum*, fresh fruits and vegetables to be preferred."

But diet is not everything, for —

"contrary to the opinion of physicians in whom great confidence may be placed, diet alone is not sufficient to bring relief to these sufferers. A mild case of recent origin may in time be relieved in this way. Many of our patients would have gone promptly to their reward if diet had been the only means employed.

"The Gibraltar on which we mainly rely is nitric acid, twenty to thirty drops of the dilute acid in a glass of water, as nearly on an empty stomach as possible, or one hour before meals."

But this is not all that is necessary: —

"The simple administration of nitric acid and the substitution of the proteins for the carbohydrates is not all that is necessary in the successful treatment of pellagra. Close personal attention to details is of the utmost importance. Complications must be met as they arise, by means best suited to each individual case."

Notwithstanding the apparent good results from the treatment outlined above, one cannot avoid holding the judgment in suspense. There are facts relating to the epidemiology of the disease not at present explainable on the theory that it is a disease wholly dependent on a faulty diet.

OUR WORK AND WORKERS

SAVED TO SERVE

L. A. Hansen

STREET boys called him "Whiskers." He did wear them a bit long, but they did not strike us as being odd looking. In fact, we thought the man's beard gave him a sort of dignified bearing, and we called him "Father Newton," not in a religious sense, but simply as designating him according to his place in the mission family, and in respect for his years.

The old man had come to our little mission in his aimless wanderings, for he was homeless and without kindred as far as we ever learned. Something about the place invited him to stay awhile. There was nothing to draw him elsewhere, and nothing to push him on. He had no need of going just to be going, for he had already done plenty of that.

In his knock-about life he had received his share of knocks, and had not stood them any too well. Financially he was "broke," healthwise he was broken, and in every way otherwise he was practically gone to pieces. Religion he had not known enough of to do him much good. Contact with the world at large had made him distrustful.

Statistics show that but a small per cent of converts come from those of advanced years and settled habits. Our old man gave no special evidence of being an exception to the general rule in this respect. However, we took courage in believing that Providence had brought him to us, and that he was committed to us for a purpose.

We shall not draw out the story. The old man did turn Christian. A comfortable bed, good food, kind care, and an atmosphere of quiet had the effect to put him to earnest study of the principles of religion. Our expression of confidence and trust drew him into the family until he seemed one of us.

Do not expect a marvelous disclosure of hidden romance in this connection. There was none, so far as we knew. The man did reveal himself to be possessed of some education and of a mind that had a good remnant of reasoning power. He applied himself quite fully to reading and study, and soon took his stand for Bible truth.

From being a piece of human driftwood this old man became a responsible and trustworthy member of our working force. He took a genuine interest in the place and its needs, keeping the meeting hall and reading-room in order, meeting callers acceptably, and giving out tracts and other reading matter.

Thus this man found a new environment. He became a member of a different class of society. Life became a new thing to him. He became conscious of other possibilities in himself, and realized a new usefulness with a real joy and a satisfaction he had never before known. It was the transforming of a life, and we are simply telling again an old and oft-repeated story.

What shall we say is the power that stops a man of advanced years in his wanderlusting, and halts him in his sinful course, to settle him into a steady life and make him a man of worth? Is it not a power higher than man's? And may we not point to this case as but a sample of what God would do for many another who may be going like the tramping pilgrim, hither and yon, without definite aim as far as the real end of life is concerned? The same power that reaches the convert of the slum mission and gives him strength to break his long-set habits of tobacco using, liquor drinking, and dissipation, must work for any and every man who wants to live the better way and fill the larger place.

THE RIGHT TO PROHIBIT

Elihu, Jr.

Many good people not among the intemperate class look with disfavor on every legal effort to suppress the liquor traffic, because, they say, by so doing we are interfering with the personal rights of others. We recommend the following pages to the careful attention of all such, feeling sure that none will fail to see in the true basis of civil law just where the right to prohibit is founded.

ALL just civil law is an authoritative expression by civil government of personal human rights. Every true law exists first of all in the personal authority of the individual. These rights and this authority are the personal heritage by birth of every human soul. What, then, are these inalienable human rights?

1. DEFENSE OF LIFE.— First of all, every person has the right to preserve and defend his own life or that of any other person. Failing in this, he becomes guilty before God and his fellow men. If he fails to defend the helpless, he is worthy of scorn and detestation. In some cases failure to defend makes him partaker of the crime.

2. DEFENSE OF PROPERTY.—Every one has a right to defend his property from any and all attacks. The law of Moses said, "If a thief be found breaking up and he be smitten that he die, no blood shall be shed for him." Defense of a neighbor's property is none the less imperative. Again, under some circumstances failure to defend would make a man partaker in the crime.

3. DEFENSE OF CHASTITY.— It is the plain duty of every man to defend his own or the family of another from all impure attacks. He who fails to defend is a villain or a weakling. A woman who fails to defend her honor to the extent of her ability is counted little better than a harlot. In all these cases the act of the individual is paramount to all acts of the civil powers, and the unwritten law justifies the avenger.

4. DEFENSE OF REPUTATION AND CHARACTER.— It is not permissible to do bodily injury in return for slander or reproach. Every man's best defense is a correct course of conduct. The civil law assesses damages where it is shown that slander has proved a financial loss to the assailed. This line of defense lies very close to the defense of property, for the best business asset any man can have is a good reputation and character.

5. THE BASIS OF ALL CIVIL LAW.— These rights to defense of life, property, chastity, and reputation form the basis for all civil law. There are no personal civil rights that may not be classified under these four heads, and all jurists agree that they form the foundation of all just civil enactments.

In representative government, when we send men to the halls of legislation, we delegate to them the authority that we possess by reason of these inherent rights. These legislators, thus clothed with the personal authority of all the citizens, are empowered to make authoritative civil laws.

EXTENT OF THE RIGHT OF DEFENSE.— We prohibit or regulate the sale of poisons and all articles that are dangerous to life and property and chastity, and we shut up or kill the mad dog or any dangerous domestic animal.

Now we are aware that there are many people not in the intemperate class who look with disfavor on every legal effort to suppress the liquor traffic, because they think such a suppression would be an interference with the personal rights of others. To such and all others we now appeal. Does the sale of intoxicating drinks interfere with the comfort and happiness of the community where sold

and used? Has that woman and those helpless babes down in that hovel any right to the necessities of life which could be purchased with the money the drunken husband squanders on liquor? Where is their defense when he loses control of himself through having the drink constantly placed within his reach?

Must I be held responsible to use my time and means to supply the necessities of life to the starving, chilling, wretched ones made so through failure to keep the bottle out of the reach of the poor weaklings?

Does the sale and use of the liquor endanger human life? Does it make men dangerous in their families and in their community? How many murders have been committed by men who took the intoxicant to nerve them for the bloody deed!

Is the sale of intoxicants harmless to life and property? Are men who drink fit to run railroad trains or steamships, to drive automobiles, or to handle horses? Are they fit to act as night watchmen or policemen to guard the lives and property of waking and sleeping citizens?

If you can answer these questions affirmatively, let the liquor flow! Employ a drinking chauffeur for your auto, or a tipsy dude to chaperon your family to the watering place, or call a drunken doctor when you are sick. But the writer will prefer a leave of absence from such conditions and surroundings.

Is chastity safe where liquor is permitted to flow? Should you send your family to a resort for rest and pleasure where drunken guests were harbored, if you could find a clean, sober place? Should you consider your sister or your daughter safe with a man who would lead her to places where drink was sold, and would drink himself and try to induce her to drink?

Will you answer the question truly, Is the sale of liquors that make men and women drunk, a menace to virtue?

What about the reputation of a man who is sober only part of the time, or of a town only a part of whose inhabitants are ever sober? Are such men and places what they ought to be according to your ideal?

If you had an important case in court, involving your life or property or reputation, should you want a judge who drank, or a jury of tipplers? or would it please you if your witnesses were under the influence of liquor?

Now, what is the matter with the whole liquor business? The strongest impeachment against it is that it is a constant menace to life, property, chastity, and reputation. Every principle of law involved in the defense of human rights may be justly invoked against it.

To prohibit its manufacture and sale as a beverage is no infringement of any man's rights; for no man has a right to damage himself and his family with the drink habit, and no man has a right to force the community to tolerate and repair the damage he inflicts on society when he brutalizes himself and debases others with strong drink, just because some one can make money out of the business. Who is the brave, wise man — he who bars out the enemy, or he who lets him in and then endures the damage he inflicts?

Brother, what will you do, when the opportunity is offered you, to help cast out this giant evil that is doing so much to debauch human society? Thousands who are suffering from the curse of drink will bless you, and many a weakling who cannot resist the temptation so constantly set before him will live to show his gratitude for having the bottle put more nearly out of his reach.

We do not need to shut up the drunkard, as we would a mad animal, after the liquor men have taken his money in exchange for a curse. All we need to do is to shut out the maddening drink.

"If thou forbear to deliver them that are drawn unto death, and those that are ready to be slain; if thou sayest, Behold, we knew it not; doth not he that pondereth the heart consider it? and he that keepeth thy soul, doth not he know it? and shall not he render to every man according to his works?"

ITEMS OF INTEREST

From Beer to Malted Milk.— A Denver brewery has been converted into a factory for the production of Mannah, a malted milk.

State Prohibition Commissioner.— Virginia, for the enforcement of her prohibition law, has created the office of State Prohibition Commissioner.

Moral Feature Films.— The Moral Feature Films Corporation, established for the production of prohibition films, is located in the Storey Building, Los Angeles, Cal.

Police Failures Due to Liquor.— According to Major Miles, of the Chicago Civil Service Commission, more than ninety-five per cent of all complaints against policemen brought before the commission are the result of drinking liquor.

Prohibition Interferes with Warden's Work.— Complaint was made by the warden of the North Dakota penitentiary that the State prohibition law is so well enforced that he cannot get enough convicts to run the prison twine works.

Nonagenarian Never Drank.— C. R. Post, of Fort Worth, Tex., aged ninety years, and father of the late C. W. Post, of postum cereal fame, never took a drink of liquor in his life. Is his survival of his son due to the fact that he has not been addicted to the seductive cereal?

Scotland Liquor Sellers Fined.— In Glasgow a saloon keeper was recently fined thirty pounds, about $150, for allowing two women to drink stout after 9 P. M. In Dundee a licensed grocer was fined twenty-five pounds for violating the liquor-control order by supplying liquors on credit.

Drunken and Abusive.— Near Tacoma, Wash., some drunken men ran their car into a ditch, and when a passer-by pulled it out for them they insulted him. They got a good beating for their rudeness, however, and it possibly may result in their signing the pledge, or at least using liquor temperately [!] for some time to come.— *Automobile Dealer and Repairer.*

Characteristic Symptom of Nicotinism.— In *Motor* for April is an article on garage fires, in which Thomas P. Brophy, acting chief of the New York Bureau of Fire Investigation, is quoted as saying, "My experience in investigating garage fires in the greater city has convinced me that seventy-five per cent of all these conflagrations are caused by employees' smoking in defiance of the regulations in force." But what can you expect but violation of regulations when men addicted and enslaved to tobacco are employed? The garage, with its vaporizing gasoline and oily floors, is no place for a tobacco user.

United States Bans Liquor Advertisements.— Calendars containing liquor advertising have been barred from federal buildings by the United States government.

Law Against Liquor Advertising.— Mississippi's law prohibiting all forms of liquor advertising, which was signed by the governor on March 17, went into effect about May 15.

Liquor Restriction in South Australia.— In March a law closing all liquor saloons at six o'clock went into effect in South Australia. No night carousing there, and husbands are more likely to be at home with their families evenings.

"No Thank You."— Sacramento, Cal., has its "No Thank You League," whose members pledge themselves that they will not take an intoxicating drink in a saloon at another's invitation or expense. Each member wears a "No Thank You" button.

Drink Inflames Lawless Passions.— A number of Mexican soldiers had been drinking, and were threatening to invade the United States. Colonel Rojas, one of Carranza's commanders, attempting to restrain them, was killed by the irresponsible and liquor-crazed rabble.

Cashing Checks by Saloons.— Citizens of Montclair, N. J., have made a protest against the payment of employees of the town by checks, many of which are cashed in saloons each week. A good way to get around this misuse of checks is to print across the face in bold letters, **VOID IF CASHED IN A SALOON.**

Testimony from Pueblo.— J. Knox Burton, commissioner of public safety, Pueblo, Colo., says that "only a few public buildings formerly occupied by saloons are now vacant. Saloon bums and beggars have left town, and the number of idle men is smaller than ever before. Merchants generally say that their business is improved. Even bank deposits show a large increase."

Befuddled with Beer, Killed a Man.— A Massachusetts man who paid $100 fine for driving a motor car while under the influence of liquor, evidently did not learn his lesson, for in a little more than a year he ran down and killed the chief of police. Standing before the judge, with tears in his eyes he admitted that he had drunk a pint of ale before the accident. He thought its only effect was to make him "jolly." He was found guilty, not of manslaughter, as he should have been, but of operating an automobile while under the influence of liquor, and was given a year in the house of correction. Such a sentence the first time would probably have saved the life of the chief of police. The man who has taken liquor is not fit to run an automobile.

WHAT TO DO FIRST

Treatment of Burns

EDITOR LIFE AND HEALTH: I note in a recent issue of LIFE AND HEALTH an item regarding picric acid as a moist dressing for burns. To use picric acid as a moist dressing is to counteract all its best uses and properties. It should not be a moist but a dry dressing. Apply the solution (saturated aqueous solution or saturated 50 to 75 per cent alcoholic solution) to the burned surface. Puncture all vesicles and reapply the solution. Let dry, or fan until perfectly dry. Then dust very lightly with stearate of zinc. The principle is the formation of a dry, tanned surface. The burn should be redressed every day, reapplying picric acid and stearate of zinc. If blebs are persistent, better remove the separated epidermis entirely, as pus is likely to form.

A year or so ago picric acid was used at the San Bernardino County Hospital as a wet dressing, but it failed to give satisfactory results. All the good results that should accrue from its use were secured, however, when it was used as a dry dressing.

Do not apply the alcoholic solution to any but very limited areas. The aqueous solution, however, rarely causes trouble even on burns that are quite extensive. The picric acid is a most excellent stimulant to dermatization [the growth of skin], next I believe to scarlet red. I have had so much experience with it that I could not refrain from making this correction. I never, except in case of suppuration, apply a moist dressing to a second-degree burn. Carron oil, ointments, etc., are not conducive to healing. Wherever there is any epidermis, dryness is essential to rapid dermatization. Exposed muscle tissue or the center of a granulating area (without epidermal grafts) should be kept moist. For this purpose salt solution is good, isotonic if the surface is clean, hypertonic or an active antiseptic if the surface is infected. The dermatizing edge should be as dry as possible, and scarlet red applied every other day or every third day. Talcum powder or stearate of zinc should be dusted on the healed skin up to the healing edge, to keep it dry and prevent maceration. Powder should always be applied very lightly and never allowed to cake, as pus is likely to form under it if this occurs.

If these principles could be fully understood and intelligently applied, burns would occasion much less trouble in the healing and much less scarring afterward. A heavy wet dressing of picric acid may cause coagulation on the surface while there is still pus beneath, and thus prevent rather than hasten healing.

G. K. ABBOTT, M. D.

EDITOR LIFE AND HEALTH: The following remedy has cured so many people of eczema that I am sending it to you for publication in LIFE AND HEALTH: —

Eczema

Powdered zinc oxide, 1 dram
Powdered starch, 1 dram
Powdered salicylic acid, 10 grains
Vaseline (or petrolatum) ½ ounce
Zinc ointment, ½ ounce

Perspiration

To prevent the odor of perspiration, use common baking soda in the bath water; also use the soda dry as talcum powder is used, followed with talcum powder.

Grape Juice Stains

Common borax and peroxide of hydrogen made into a paste will remove all trace of grape juice stains. A. M. V.

CEREALS; THEIR FOOD VALUE, AND HOW TO COOK THEM

(*Concluded from page 325*)

boiler, of course. Or the barley may be cooked in a fireless cooker. If so small a quantity of cereal as this recipe calls for is cooked in a fireless cooker, it will be necessary to use heated soapstones in the cooker, or to set the dish containing the cereal in a large dish of boiling water, in order to have a sufficient volume of heat to hold the cereal at the cooking temperature for a sufficient length of time. Even then it may be well to remove the cereal from the cooker and reheat it once during the cooking. Serve with cream.

To stir raisins into cooked pearl barley makes a palatable blend of flavors. Use three-fourths cup to the quantity of cereal given in the preceding recipe.

To cook cracked wheat, whole wheat, Scotch oatmeal, or coarse hominy follow the directions given for cooking pearl barley, varying the quantity of water according to the cereal. To stir figs cut into small pieces into cooked Scotch oatmeal makes a very palatable dish.

CURRENT COMMENT

Diseases of Cardiorenal-Vascular System

DURING recent years abundant evidence has been presented demonstrating an increasing mortality in this country from chronic diseases of the vital machinery. Even though no such increase were apparent, the fact that in 1913 approximately 130,000 citizens of the United States between the ages of 30 and 60 years died of these maladies, evidences a tremendous loss of life from preventable or postponable disease. . . .

Conceding that premature physical decay is one of the most pressing public health problems of the hour, it is natural that we should seek some principal cause for the encroachment of these chronic maladies that are responsible for it. . . .

Whatever the primary fundamental causes may be that sap our vigor and bring about premature decay, we may be fairly certain that they could be excluded by the practice of personal hygiene and by rational eugenics. By leading a hygienic life, we may escape the operation of these forces, whatever they may be, that seek to destroy us.— *American Journal of Public Health.*

Vacation — or Look Before You Leap

ASSUMING that you have not selected the place for your summer vacation, the following suggestions may not go amiss: —

Ordinarily, the questions asked when one is seeking a place to spend the summer or to send the family for the summer, include the character of the food and sleeping quarters, the temperature, the accessibility to the city. But the all-important question, "What is and has been the healthfulness of the proposed summer home?" is frequently omitted. Therefore, in choosing a summer residence, the first thing to have in mind is the sanitary environment.

Is the water that is used for drinking purposes good? Perhaps it is, and again, it may be contaminated with matter that may lead to typhoid fever. Typhoid fever is a disease that summer tourists frequently contract.

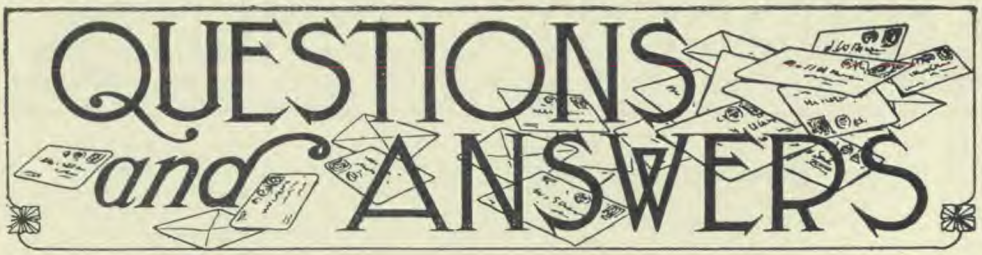
Is the house screened against the pesky fly and the malarial mosquito? Is the summer home located in a swampy region? If so, kerosene the swampy ground and screen the house. See, too, that the outhouses are properly constructed and screened. What methods are in vogue for the proper disposition of the garbage and waste from the kitchen?

What kind of cows furnish the milk, the cream, and the butter? Have they been tuberculin tested? Are they clean, and cared for properly?

In brief, Are the comforts of the place you have selected for your vacation as ideal or as nearly ideal as are the comforts of home? If you are unable to make a personal inspection, or to obtain the advice of persons who have spent a vacation period at the place where you propose to spend the summer, or if you have any doubt in your mind whatsoever, consult or write to the health officer of the locality under consideration.— *Bulletin, D. C., Department of Health.*

Alcohol and Immunity

THE present campaign against the undue use of alcoholic liquors differs from the crusade of a generation ago in attempting to support all of its movements by the best evidence that science can furnish. It is likely to succeed all the better because the facts already ascertained to be true, and sifted by critical analysis from the mass of conflicting statements advanced in the earlier period, in themselves furnish a sufficient warning against excessive indulgence. Today it merely remains necessary to mobolize these facts and advance them in the form of reasonable arguments rather than exaggerated claims. Recently we presented evidence regarding the untoward effects of comparatively small doses of alcohol on some of the fundamental neural activities in man. The inevitable outcome is the establishment of a depression even of the simplest forms of motor processes. There was nothing whatever to suggest true stimulation or increase in efficiency. There is not a little evidence pointing to an unmistakable lowering of bodily resistance to disease after the prolonged administration of alcohol.— *Journal A. M. A., March 25, 1916.*



Questions accompanied by return postage will receive prompt reply by mail.

It should be remembered, however, that it is impossible to diagnose or to treat disease at a distance or by mail. All serious conditions require the care of a physician who can examine the case in person.

Such questions as are considered of general interest will be answered in this column; but as, in any case, reply in this column will be delayed, and as the query may not be considered appropriate for this column, correspondents should always inclose postage for reply.

To Remove Hair.—"What is the best method of removing hair from the face of a woman?"

For removing hair I have seen the following recommended, the title being "The Best Depilatory." I have had no experience with the recipe, but as it was in a reliable medical journal it may be useful: —

Barium sulphide	2 dr.
Starch	2 dr.
Zinc oxide	1 dr.

Mix a small amount with a few drops of water, so as to make a kind of paste; apply to hairy part, leave on for two or three minutes, and rub off. It leaves a clean surface, as if shaved by a razor.

Chocolate and Cocoa.—"Will you kindly give a detailed outline of the relationship of chocolate and cocoa to real coffee and tea; that is, do they contain some of the same harmful ingredients as do tea and coffee?"

Regarding the relation of chocolate and cocoa to coffee and tea, I will say that they are all xanthine bodies, alkaloids somewhat nearly related to uric acid. Undoubtedly caffeine, the alkaloid of tea and coffee, sometimes called theine in tea, is very much more potent than theobromine, the alkaloid of chocolate and cocoa. Moreover, chocolate and cocoa contain a considerable proportion of nutritive material, especially protein, so that they are in a sense food drinks. Nevertheless, I would not recommend either of these as a routine drink.

Tomato and Rhubarb.—"Kindly inform me whether the tomato is a fruit or a vegetable, and what its value is as a food. I should like also to know the value of rhubarb as a food. I have been told not to use tomato soup."

In the kitchen the tomato is a vegetable. To the botanist it is a fruit. Tomato has small food value in the sense of producing tissue or furnishing energy; yet it is a valuable article of food, for the reason that it furnishes certain salts which are needful for the body. Some persons who have high acidity of the stomach are disturbed after eating tomato.

Rhubarb contains an acid which is not used in the body, and which is more or less injurious. If it is eaten in more than very moderate quantity, there is a possibility that some of this acid will not be eliminated fast enough, and it may cause more or less trouble. However, the normal person can use rhubarb to a limited extent without apparent injury.

Limestone Phosphate.—"Is there any virtue in the inclosed advertisement?" (An advertisement gotten up to resemble the ordinary reading matter of the newspaper, advising for rheumatism a mixture containing limestone phosphate.)

I have no faith in the advertisement you sent me. This is a proprietary remedy, or, in common parlance "patent medicine," although the advertiser attempts to hide this fact.

The regular medical profession has no drug which it calls limestone phosphate. Quite likely this is calcium phosphate, which probably could be bought at a fraction of the price of this advertised drug, although I have not investigated this. It is very often the case that men take some common drug that sells for a small price, give it some fanciful name, and sell it for ten times as much. Doctors are sometimes fooled by a ruse of this kind, paying $1 or $1.50 an ounce for medicine that is sold right along for fifteen cents an ounce. I do not think calcium phosphate has any particular value in rheumatism.

Chronic Laryngitis.—"I have what the doctor calls chronic laryngitis — constriction below the Adam's apple, constant clearing of the throat, mucus sufficient to make talking difficult. The trouble is much worse when I overeat or have indigestion. I have a hearty appetite. Would drugs relieve my trouble?

A chronic condition is usually due to some persistent cause. The continual use of ardent spirits or tobacco would cause a chronic sore throat.

Without knowing more about your case, I should suggest your trying a diet of hot water for three or four days — nothing else. I feel quite confident that this will very markedly reduce your symptoms, and if it does, it will

point you to some of the things you might do toward a permanent cure.

I doubt whether anything in a bottle would be of permanent value to you. Probably tonic and eliminative treatment would help. Such treatment is best administered in a sanitarium. However, you can give yourself tonic treatment, in the form of cold baths, beginning, perhaps, with cold hand rubs, and finally sprays or cold plunges, being sure always to dry yourself vigorously and to take exercise afterward, so as to secure a good reaction.

A very simple form of eliminative treatment, or such as will secure free perspiration, is the hot leg bath, using water as hot as possible, and adding more hot water as it can be borne. You should be inclosed in a sort of tent improvised from a blanket, so as to keep the steam in and facilitate sweating. While sweating freely, you might take a rapid cold spray or hand bath, or have some one administer a pour of cold water, followed with a vigorous rub and drying.

Worms.—"Is it true that every one has worms, and is it necessary? Some do have worms, do they not? What is the cause? Are they more common in children than in adults?"

It is not true that every one has worms. And it is certainly not true that worms are necessary. It is a fact that a considerable proportion of people do have worms. I do not know that worms are more common in children than in adults.

The worms are usually taken in through the mouth, with either food or drink. The use of partially cooked meat is responsible for tapeworm, and perhaps some of the other worms. The use of uncooked vegetables may be responsible for the presence of some worms.

The hookworm ordinarily gains entrance to the body through the skin of the feet.

Children are most often affected with small pinworms, or seat worms.

Another very common form of worm is the roundworm, which is similar to an angleworm, only considerably larger. The pinworms are about the size of a pin.

Auto-Intoxication.—"What is the best remedy for auto-intoxication? Will wearing an abdominal supporter correct the trouble?"

One cannot cure names. A doctor may tell you that you have auto-intoxication, and prescribe a certain treatment; and he may tell some one else that he has auto-intoxication, and prescribe some other treatment. It is the patient that must be treated, and not the name auto-intoxication.

The abdominal supporter might help. The only way to determine that would be to try it.

There are various things done for the relief of auto-intoxication, such as the use of sour milk, the avoidance of flesh foods, the prevention of constipation, and the use of large quantities of water. But every case must be considered on its own merits.

Fish and Flesh.—"Do you consider fish a flesh food?"

I should say that fish is a form of flesh, but some persons use the word flesh when referring only to land animals. The Standard Dictionary gives this definition of flesh: "Animal food or meat as distinguished from vegetable; in a restricted sense, the meat of mammals and birds as distinguished from fish."

Sleepiness.—"For some time I have been troubled with intense sleepiness in the evening. I seldom eat very heavy food, and seem to be in perfect health; so I do not know why I should be so sleepy. I often want to study, read, or sew in the evening, but generally it is impossible for me to do so, and thus my evenings are wasted. Do you think it would hurt me to drink a little tea for supper? I have always been very averse to tea and coffee, but yesterday I got some tea and drank a little for supper. I was not sleepy the whole evening; so it must have been the cause."

Tea will certainly overcome that evening sleepiness, but it will increase the condition which causes the sleepiness, and will require you to use more and more until you become a confirmed tea toper.

Without knowing more regarding your habits, I should suggest that you do not get enough sleep at night. It may be that if you will take, say one or two hours' sleep in the afternoon, you will be able to do good work in the evening. Or you may find it an advantage to retire earlier and do your reading early in the morning. You will find that you can read much better when you are fresh.

Not knowing more about your condition, I can make no further suggestions regarding the overcoming of the difficulty, but I believe that even with your present condition, if you will take the afternoon sleep or do your studying in the morning, you will get better results.

Digestive Disorder and Constipation.—"What can I eat to overcome constipation, heartburn, sour stomach, and sluggish liver? Should I leave stewed fruits and jellies alone?"

It is difficult to treat digestive troubles by mail, but I will suggest in your case, for breakfast a simple meal of milk (or cream) and coarse cereals — shredded wheat, corn flakes, and the like. A little cracked wheat is good; as is also zwieback, prepared by drying in the oven stale bread, Graham bread preferred. It may be eaten with milk.

For dinner use macaroni or other paste foods, green vegetables, and parsnips, asparagus, cauliflower, etc., in their season. You may find it better to avoid potato.

Confine your fruits largely to baked apples without sugar, and baked bananas, and if you use stewed fruits, use as little sugar as possible. I think you should secure your protein largely from milk, using eggs for a change.

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$1.60, $2.00, $3.00.

To Cure Tobacco-Chewing Habit.—"Is there any practical cure for the habit of tobacco chewing?"

I know of no certain cure for this habit. The best remedy, I think, is the use of the will-power. I have known a good many persons to give up the habit in this way alone.

One treatment for the cigarette habit has met with considerable success, and it is possible it would also be efficient in enabling one to overcome the chewing habit. In order to take this treatment, have the druggist put up a solution of nitrate of silver, one grain to an ounce. Take about a teaspoonful of this in the mouth, say once a day, rinsing the mouth out thoroughly; but do not swallow it. As far as possible, avoid contact of the lips and face with the nitrate of silver, as it may blacken the skin.

Liquid Paraffin.—"Kindly inform me how to take liquid paraffin, or mineral oil, for constipation."

Directions for the use of liquid paraffin usually come with the bottle. It is necessary for one to determine for himself just how much to use. It may require a tablespoonful three or four times a day, or one half that amount or even less may be sufficient.

It will be well for you to use other laxatives also, such as bran, either taken in a glass of water in the morning or incorporated in your bread or mush; or you may use agar. You should use liberally of coarse vegetables and fruits, though not at the same meal. An important part of your treatment should be abdominal exercises, as described elsewhere in LIFE AND HEALTH.

Varicose Veins.—"Kindly advise me how best to treat varicose veins forming on side of leg. Would massaging and an electric vibrator help?"

In some cases it has been attempted to treat varicose veins surgically, by removing a portion of the vein.

So far as I know, the most successful practice is the use of an elastic stocking or bandage so applied as to give proper support to the skin without being tight enough to cut off the circulation. The instrument makers have stockings proper for this purpose.

Perhaps you are on your feet too much, and if so the obvious remedy would be to arrange your work so as to perform it in a different position.

I have had no experience with massage or vibrators for this purpose, and do not know what might be expected from them.

Quitting Coffee.—"I am struggling with a coffee habit of thirty years or more. I cannot remember the time I did not have coffee, and I am thirty-six and a half years old. All my resolutions to discontinue its use have thus far proved as ropes of sand."

Try one of the cereals, and if necessary take cocoa or chocolate occasionally. It may not be best to break away too suddenly from the coffee habit.

Monotony of Diet.—"Is it well to eat the same foods (even of good foods) at every meal?"

One should not continue using the same article of food constantly. No matter how good it is, there should be a change.

Starch and Acid Combination.—"Why is starch and acid a bad combination, when nature supplies us such a combination in some of the acid fruits?"

Very few acid fruits have an appreciable amount of starch. The green apple contains a large percentage of starch and acid, and that may account for its indigestibility. When it ripens, the starch practically all turns to sugar. The banana contains considerable starch but very little acid.

The result of a combination of starch with acids would depend on the individual. Persons who have difficulty in digesting starch should avoid all such combinations. There are many persons who can use starch and acids together without very much trouble.

Obstinate Cough.—"Kindly advise me what is the best thing to do for an obstinate bronchial cough."

The first thing for you to do is to be sure that your cough is not due to tuberculosis, for that is very likely to be the case. You might try this remedy to relieve the cough, although it will not relieve the condition which is producing the cough: —

Get an ounce of tincture of benzoin at the drug store. Place about six drops on a lump of sugar and let it dissolve slowly in the mouth, so as to obtain the local effect in the throat. This remedy is especially helpful in the morning. It may be necessary to take several doses in succession.

I have found that for a condition of incipient tuberculosis acid milk — four or five cupfuls during the day — works very well. To prepare this you will want a quantity of dilute hydrochloric acid. The cheapest way to obtain this is to buy the chemically pure hydrochloric acid at the drug store, and dilute it yourself,— about one part of acid to ten of water,— remembering that the concentrated acid is very corrosive, and even a whiff of it is worse than ammonia. About a teaspoonful of this dilute hydrochloric acid to a glass of milk, or just sufficient to curdle the milk, is the quantity you will want to use. Pour the acid into the cup, and then the milk, so that the milk and the acid will mix without using a spoon. The milk should be swallowed in such a way as to prevent contact with the teeth. The mouth should be rinsed thoroughly after taking the milk, to prevent corrosion of the teeth.

This acid is not a drug. It is a normal constituent of the gastric juice. If you have beginning tuberculosis, a week's course of acid milk may help you materially. You should, however, place yourself in the care of a physician.

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Free Physical Examinations.— A Philadelphia gas company offers free medical examination to all its employees. These examinations often reveal conditions unsuspected by the employees, which if neglected would later become serious. Similar service is being given to their employees by an increasing number of industrial concerns. It is not philanthropy, but the assurance of greater efficiency.

Needs More Tuberculosis Hospitals.— That New York State needs accommodations for at least 3,316 more patients in tuberculosis hospitals in order successfully to combat the disease, is asserted by the New York State Department of Health in the April number of *Health News*. Even this number of new beds would not be enough to care for all suffering from tuberculosis, it is declared, as investigation shows that there are at least five living cases to every annual death.

Apparent Cure of Lepers.— July 12, 1915, according to the report of the Philippine Health Service, twenty-three persons were set free at the leper colony and permitted to return to their homes, repeated examinations having failed to find any further trace of the disease. As a measure of safety, each of these persons is required, once in three months for a period of two years, to report to the district health officer of the province in which he resides.

Nuts and Fruits in the Diet of Young Children.— Scott, in the *New York State Journal of Medicine*, March, 1916, speaks of the high food value of nuts, particularly in respect to protein and fat. Nuts, he says, are digestible if properly prepared, and should, with fresh fruits, form part of the diet of children after weaning. They are best given in the form of freshly prepared butters made by rubbing nut pastes with fresh fruit juices. Such foods act as mild laxatives. The fruit juices are also of value in scurvy and in many forms of digestive disorders.

Decline of Tuberculosis Death Rate.— The National Association for the Study and Prevention of Tuberculosis has issued a statement that the death rate from tuberculosis has decreased very materially in ten years, the mortality rate per 100,000 population being 200.7 in 1904 and 146.8 in 1914. It is believed that this decreased mortality is due largely to the antituberculosis movement which has been active during the past ten years. This decrease in mortality would mean a saving of about 60,000 lives yearly, a result well worth all the labor and expense the antituberculosis campaign has cost.

The Organism of Mumps.— Recent experimental work seems to establish the fact that mumps is caused by a "filterable virus"— some organism small enough to pass filters which would retain the organisms known as bacteria. A number of diseases which long baffled bacteriologists seem to be due to such minute organisms. It is now believed that immune serums can be prepared to protect against mumps, similar to the serums which confer immunity against scarlet fever and measles.

Diet in the Causation of Mental Disease.—In the (London) *Lancet* of March 11, Charles Mercier attempts to show that mental disease may be brought on by a deficiency of protein in the diet, or by an excess of fat, starch, and sugar. Most of the cases showed marked improvement or complete recovery when the diet was changed. Among the symptoms were confusion of mind, depression, screaming fits, emotional hyperexcitability, defects of memory, and even hallucinations. Mercier does not believe that diet is usually a factor in the production of mental disease, but that it is in a certain number of cases.

Health Preparedness.— Commissioner of Health Biggs of New York, urging the people of the State to make the most of "clean-up week," said, "We should do everything to place our houses and premises in a sanitary condition for warm weather. Our first duty is to give the entire household a thorough house cleaning, especially the cellar. Rubbish and filth should be removed, the house should be carefully swept and dusted with windows wide open; floors and woodwork washed; bedding and upholstering shaken, cleaned, and aired; and the entire inside of the house exposed to fresh air and sunshine." The second duty, according to Dr. Biggs, is to see that the outside premises are sanitary and attractive.

Dental Hygiene in Public Schools.— Owing to the faulty condition of the teeth of the New York City school children, more than ninety per cent of them needing dental treatment, it has been recommended that in one or more centers a trial be made of surface cleaning of the teeth of the children, and that these same children be given instruction in mouth hygiene. At the same time provision is to be made to train women in oral hygiene, the same upon passing satisfactory examinations to be registered as oral hygienists who may operate under any licensed dentist or school authority or public institution, to remove lime deposits, accretions, and stains from the exposed surface of the teeth, but shall not perform any other operation on the teeth or the mouth tissues.

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Coated Tongue.— According to a doctor writing for the (London) *Lancet,* Sept. 25, 1915, coated tongue is not by any means always associated with digestive disturbance. Fractured skull has been known to be followed almost immediately by coated tongue. But we do not wish to frighten those who anxiously study the coat on their tongue by suggesting that theirs might be a case of fracture. Often coated tongue seems to be a nervous symptom. To study it and worry about it will of course increase the nervous condition, and consequently the fur coat. Let it alone.

Pharmacological Superstition.— According to Dr. H. C. Wood, Jr., in the *Journal A. M. A.,* April 8, 1916, we are still following a number of worthless therapeutic practices "based on abandoned theories of pathology, technical pharmacological errors, misinterpreted clinical observations, or mere relics of medieval superstition." Among the drugs which he says are worthless are "salts of lithia, sarsaparilla for syphilis, Basham's mixture as a diuretic." Moreover, the latter is irritant to the stomach. Chloride of iron is unsuitable as a blood builder, and opium is useless as a local anodyne.

Camphorated Oil.— Inasmuch as camphorated oil is a common household remedy, supposedly harmless, it should be known that there have been repeated deaths from swallowing a small quantity, as little as a teaspoonful. A teaspoonful of camphorated oil of the usual strength contains twelve grains of camphor, a dangerous and possibly fatal dose. As in a recent case, if camphorated oil is given internally it is probably given by mistake. Inasmuch as this mixture is not a "poison" in the ordinary sense, the bottle probably has no poison label or other warning mark. No one should ever give medicines without first knowing what they are.

National Highways.— Provision for an investigation and report to Congress of a preliminary plan for a system of national highways by the corps of engineers of the army is made in a joint bill now pending before the Senate and House Committees on Military Affairs. The bill was introduced in the Senate by Senator John K. Shields of Tennessee, and in the House by Representative John H. Small of North Carolina. In particular this bill embodies the principle of having conducted, before the work of construction is begun, a scientific investigation and survey of the highway routes upon which federal funds are to be expended. It seeks, it is said, to prevent the hit-or-miss building of roads by the federal government which are located, not by expert surveys, but by local political influence,— roads which begin anywhere within a State and end nowhere in particular.

Sanitation of the Country Store.— The country store is both a collecting and a distributing agency of foods. It sells foods of many kinds to the farmers, and at the same time buys from them butter, eggs, fruits, vegetables, poultry, and other products of the farm, for shipment to the city. If the shelves and counters are laden with dust, if cobwebs hang in every nook and corner, if flies, bugs, and vermin inhabit the place, the food products are certain to be more or less contaminated and likely to become dangerous to health. The reports from various State officials indicate that many stores have been found in the past to be in such a condition. A clean, light, well-ventilated store attracts customers, and the progressive merchant needs no other incentive to keep his floor, shelves, and counter spotlessly clean, which necessitates screening from flies and the elimination of all other insects. Some storekeepers, however, seem to require prodding from food and health officials to induce them to maintain that degree of cleanliness which will insure that the food they handle will be free from contamination. Some of the States have very effective sanitary laws which require frequent inspection of all establishments where foodstuffs are put up, manufactured, or kept for sale. Other States depend upon the general provisions of pure food laws which require that foods shall be free from contamination. A few of the States lack either a law that will reach the unclean store nuisance, or means for enforcing the law.

Chloroform for Sunstroke.— In the *Journal A. M. A.*, Oct. 9, 1915, Dr. Geo. C. Hanson reports a number of cases of sunstroke so severe as to be practically hopeless. He tried, as a last resort, the administration of chloroform lightly, with the result that the pulse and temperature dropped, and rapid improvement in symptoms occurred. After half an hour, he gave the ordinary treatment, with good results in all the cases reported.

Cleanliness and Health.— Commissioner Biggs of New York calls attention to the fact that of two city suburbs in England, one had well-paved streets, attractive houses, well-kept lawns, many trees and shrubs, and good sanitary conditions; while in the second, those things which contribute to beauty and cleanliness inside and outside had been neglected. The first suburb had a death rate of seven per thousand, and the one with insanitary conditions had a death rate of seventeen per thousand. The moral, according to Dr. Biggs, is so plain that residents of New York State [and all other States] will not neglect an opportunity to do their part toward a more cleanly, sanitary, and healthful commonwealth.

Effect of Diet on Growth.— Osborne, Mendel, and others have obtained some remarkable results in the retardation and resumption of growth of animals, effected by changes in the food. By omitting some ingredients in the foods, they cause young animals to cease growing for extended periods, and then by means of a full diet they cause the animal to resume growth at a normal or even more than normal rate. It is as if we should stunt a boy at the age of fourteen, and keep him at that small size until the age of forty, and then by a resumption of an adequate diet cause him to grow up to full stature. This has been done repeatedly with laboratory animals, the growth taking place long after the normal period for growth had ceased. By repeated changes in the diet, it is possible to stop growth, start it again, stop it, etc., at will.

Clean Country Stores.— Competition in cleanliness has been secured in one State by means of colored placards which the inspector gives the merchants who keep their stores in a sanitary condition. A store in excellent condition gets a large white placard, one in fine condition gets a blue placard, and one in good condition gets a red card; the store that falls below the latter grading gets no card. The proprietors are permitted to keep the placards posted in a conspicuous place as long as the store is kept in the condition represented. There is keen competition among the merchants to get and keep the best placards. The buying public knows what the different colored placards signify, and are particularly partial to the white placard stores. Other States have adopted a score card system similar to that used in grading dairies. The inspector scores each store where foodstuffs are sold, according to certain points indicated on an inspection card. The scores are made public through the local press or by means of bulletins or circulars.

To Make Baby Week Permanent.— The Wisconsin Federation of Women's Clubs has started a State-wide movement to make baby week a permanent activity by the introduction of a system of all-the-year follow-up work. That such work is an important means of saving baby lives is attested by the success of baby campaigns in such cities as Montclair, N. J.

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