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IS IT SAFE TO EAT AND DRINK IN PUBLIC?

Pluto—the Devil's Purge

Diet and Efficiency

The Need for Health Insurance
By John A. Kingsbury

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HEALTH LECTURE BUREAU

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Purely Personal

A. O. OF LOS ANGELES writes: "Professor Sherman, we printed your article 'Diet and Long Life in the July issue speaks about the protective foods, but he fails to give a list of such foods or the proportions in which they are to be eaten. Can you supply such a list?"

We are soon going to have an article giving complete information on this subject. Another diet article soon to appear is one on high calory diets which will give practical advice to those who want to gain weight.

Z. G., A READER FROM THE Bronx, writes to criticize us for giving too much space to articles devoted to sex problems. Says Z. G.: "I have heard a good deal of criticism about HEALTH AND HYGIENE being more of a sex magazine than a health magazine, since it makes sex problems a main feature of many of its issues."

WE HAVE TRIED not to overemphasize the subject of sex. However, there is no denying that it is a subject that is full of interest for many readers, as well as one upon which there is a vast amount of erroneous information. Consequently, we have generally included one sex article in each issue. It seems to us that the important thing is that we take the subject of sex up repeatedly, but rather that we take it up in a sound and sensible manner. This we have always tried to do, and we think we have been quite successful.

HOWEVER, WE SHOULD like to know if many more readers are of the same opinion as Z. G. Think the matter over, cut it down and write us a note letting us know whether or not you think that sex rears its head too consistently in the columns of HEALTH AND HYGIENE. We'll appreciate your opinion as a guide to future policy.

THE ARTICLE in last month's issue on "The Thomash system of hair and scalp treatment apparently caused quite a stir among our readers. We have received a great many letters praising the article, not a few of them from Thomas customers, both past and present. Past customers say they now realize why they were not cured, and present ones say (Turn to page 103)
DEAR DOCTORS:

Could you give me any information about a new drug called benzedrine sulphate? I understand it is administered to persons suffering from muscular degeneration, depression, and fatigue. What are the effects of taking this drug? Can it be taken by mouth? It may be administered by mouth.

DEAR DOCTORS:

We are informed that college students have been using it as a "pick-up," a practice greatly to be condemned. The drug should be prescribed only by a physician and the dosage carefully regulated. Benzedrine has not been in use long enough to enable us to state authoritatively that long-continued use is without danger. It took several months before the reducing drug, dinitrophenol, was found to be dangerous.

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* * *

Cancer of the Bowel

Utica, N. Y.

DEAR DOCTORS:

Will you kindly answer the following questions concerning cancer of the bowel: (1) How long does it take a cancer to develop from the beginning to the time when it is past the operating stage? (2) Can it be retarded even in the non-operative stage by radium or x-rays? (3) Is the cause hereditary?

Answer—(1) It is impossible to answer your first question as you word it, because there are several types of cancer, some of which develop slowly and continue to grow at a slow rate, while others may develop rapidly. Moreover, some cancers may arise where there previously was a harmless type of tumor or an overgrowth of the normal tissues. Others may develop in an area where there is constant irritation and injury to the bowel. (2) While x-ray and radium have been revolu­tionary in the treatment of certain cancers in other parts of the body, they have not proved so useful in cancer of the bowel. Even here, however, a small percentage of cases have shown good results, and therefore if advised by a physician, the method should be given a trial, more especially since it can frequently control intractable pain. (3) The hereditary factor is of no significance in the great majority of cases of cancer of the bowel. As we have stated above, it is thought that inflammations of long duration, various bowel diseases, and changes in the bowel tissue may at times go on to cancer. In some cases there is no evidence of any previous disease.

* * *

Dust from Metal Grinding

Pontiac, Michigan.

DEAR DOCTORS:

I should like to ask about the effects of steel dust. I work in an automobile plant where I grind metal. I have been doing this for the past three years with no ill effects, although I do not wear a respirator. I should like to know the symptoms involved and how I may avoid them.—F. N.

Answer—In grinding castings or other metal parts, there is comparatively little danger from inhaling metal dust. The particles of metal are too coarse to get down deep into the lungs and, as a result of taking Pluto, we are sure the company is duly sorry. In cases of such obstruction the administration of a strong "physic" such as Pluto is equivalent to signing a death warrant for the patient.

Most cases of constipation are best treated by careful regulation of the diet combined with strict regularity in toilet habits. The appearance of blood in the stools, or any unexplained change in bowel regularity, calls for immediate medical examination. By early attention to such warnings, much suffering can be spared and many lives saved.

When the advertising writers for Pluto go to work, they give free rein to their imagina­tions and compose a series of fairy tales comparing favorably with the best efforts of
Glands and Personality

HERE YOU ARE, ladies and gentlemen, the world’s greatest collection of freaks and monstrosities, brought together at a tremendous expense and now to be seen for the small sum of ten cents, two nickels, the tenth part of a dollar. Step right up and get your tickets. . .

Side-show freaks are familiar to all of us. Circuses and amusement parks exhibit various curious human specimens: men over eight feet tall, dwarfs less than three feet in height, men and women who are either enormously fat or unusually thin, human beings with “pigeon” heads, “lion” heads, and “dog” faces, bearded women, and effeminate men. The list of such anomalies is too long to enumerate fully.

The Hormones

In general, our height, weight, appetite, texture of hair, skin, teeth, energy, and reproductive instincts are directly associated with the functioning of the endocrine glands. If even a single one of these glands is abnormal as to function, symptoms and signs quickly become manifest. Needles will reveal the importance of the glands.

The body (both human and animal) consists of a bony skeleton wrapped with muscles which are covered by skin. Within the skull lies the brain. Within the thorax (chest cavity) are the heart and lungs. Within the abdomen are situated the organs of digestion (stomach, liver, and intestines); elimination (kidneys and bladder); and reproduction (uterus, ovaries, and prostate). The extremities are for locomotion. Each tissue has its special function. The combined action of the hormones controls the development and function of all the glands.

The endocrine glands are six in number: the pituitary, thyroid, the parathyroids, pancreas, the adrenals, and the sex glands or gonads (ovaries or testicles). The pituitary is the master of them all. It lies at the base of the brain and is no bigger than a green pea. Its secretions, of which there are many, govern the skeletal and muscle growth and development, sexual development and function, milk secretion, the functioning of the thyroid, adrenals, and gonads, the urinary secretion, fat and starch metabolism, and blood pressure. Giants and dwarfs differ in that the former have an overactive pituitary and the latter an underactive one.

Pacemaker of the Body

The thyroid, situated at the base of the neck, is the pacemaker of the body, the throttle governing the speed of body function. Depending on whether it is underactive, normally active, or overactive, the functioning of the heart, lungs, brain, and the organs of digestion and elimination will be underactive, normal, or overactive. Persons with overactive thyroids (hyperthyroidism) are generally thin and high strung because they burn up more fuel than is necessary, leaving little body reserve. Persons with underactive thyroids (hypothyroidism) are generally fat, sluggish, and often constipated.

The endocrine glands have a great influence on both your physical and mental make-up. The first of a series of articles on the glands of internal secretion.

HEALTH AND HYGIENE

The Famous Pluto Springs!

A Story of Deceit

Taking this at its face value, one would expect that the concentrated form is simply ten times as strong as the natural product. But on studying the company’s own analyses, we find that the concentrated form contains eighty times as much of the ingredient “concentrated.”

Pluto comes in two forms, the “natural” and the “concentrated.” The “natural” product is supposedly bottled just as it gushes from Mother Earth, but according to the American Medical Association not one drug store in the neighborhood of ten times as strong as the natural product.

But this is not the end of the tale of fraud and deceit. On one occasion a considerable number of bottles supposedly containing a quart were found actually to contain a little more than one and one-half pints. The company pleaded guilty when brought to court for this offense.

In fact, pleading guilty is becoming a chronic habit with the Pluto people. As recently as June 6, 1937, the Federal Trade Commission issued a press release in which the French Lick Springs Hotel Company agreed to cease employing false advertising blurbs themselves were stolen from a competitor.

It has even been charged that Pluto’s advertising blurs themselves were stolen from a rival mineral water concern. Years ago the American agent of a Spanish company complained that a “Pluto-creatic” confession had stolen whole sentences from his advertising. It is of interest to observe the remarkable resemblance between the claims made for these two waters:

Claims Made for a Spanish Water in Pluto in 1893

"The . . . water Pluto emerges as a gushing spring from a tertiary soil, rock, and
Continued on page 103"

SEPTEMBER, 1937

HEALTH AND HYGIENE

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Claims Made for a Spanish Water in Pluto in 1893

"The . . . water Pluto emerges as a gushing spring from a tertiary soil, rock,
Continued on page 103"
The adrenals—two in number and each about the size of a hazel nut—are perched on top of each kidney. They are concerned with the maintenance of blood pressure, the heart action, sexual development, and the growth of skin and hair. Excessive function of one part of the gland causes masculinization of the female, as seen in bearded women with gruff voices. Reduced function causes profound weakness which, if unrelied by injection of adrenal extract, results in death.

Lastly, we have the gonads or sex glands. As their name implies, their main function is that of reproduction. In the female the ovaries are situated inside the abdominal cavity. Each ovary is about as large as a walnut. In men the testicles are situated in the scrotum and produce the sperm or male seed.

A great deal is now being done by the

(Continued on page 103)
Our advice is to avoid, as far as possible, the drinking of beverages, including water, from common drinking glasses which have not been properly cleansed. Insist that beverages be served either from the bottle in which they have been sealed or in single service containers.

Recognizing more than ever before the danger common eating and drinking utensils can cause to public health, up-and-coming health departments throughout the country have conducted special drives to raise the standards of sanitation in all places where they are used. Backing up their activities in this respect, some of the city councils and state legislatures have passed new ordinances and laws where none, or inadequate ones, existed before. However, while all but two states can boast of a law abolishing the "common cup" in public places, not all of them can show that they have taken the next step and banned the common use of glasses and utensils which are not properly disinfected between uses, and which therefore in reality are "common cups."

Few People Know the Laws Governing Sanitation

Laws and ordinances that do regulate the cleansing of eating and drinking utensils vary widely from state to state. In some, the specifications are brief and general; in others, definite details are given as to the actual methods to be followed by proprietors in providing patrons with sanitary utensils. Typical of the more specific type of ordinance that is of St. Petersburg, Florida, passed in 1929. It reads in part:

All dishes, glasses, knives, forks, spoons, and other utensils or articles used in the preparation and service of food or drinker which being so used shall be thoroughly washed in hot water with soap or suitable cleansing agent and then shall be sterilized by being exposed to live steam or boiling water in an autoclave at a temperature of not less than two hundred and twelve (212) degrees Fahrenheit for a period of five (5) minutes or by being placed in an antiseptic solution, and then rinsed in clean water. However, in lieu of the above requirements, or when it is found impossible or inexpedient to use live steam or boiling water, sterile dishes, cups and spoons, manufactured from paper, wood or any other suitable material, which have been kept in dust-proof containers before using, may be used for one service only. These shall be destroyed when removed from the service counter.

It is probably safe to say that very few citizens—although they may feel vaguely that "the government" offers them some sort of health protection—know whether a law regulating sanitary conditions in public eating and drinking places is in effect in their community. Fewer still would know exactly what regulations their law contains. On the other hand, those who trustingly assume that they are amply protected by law might be somewhat disillusioned if they watched the dishwashing process by which some of the utensils they so confidently used in public places were "cleansed." Obviously it is not enough to enact laws; they must be constantly enforced if they are to serve the purpose for which they were intended.

That restaurant patrons in modern America should have to risk their health seems understandable human trait that proprietors and em­ployees should have to risk their health seems understandable human trait that proprietors and employees will be unaware of the law unless they are working in cooperation with the New York City Sanitary Code and the Richmond Housewives League. Following is an interesting quotation from one of their articles:

Violation of the city ordinance requiring proper sterilization of glasses and other utensils in restaurants is punishable by a fine of from $2 to $25, but lack of sufficient inspectors makes it impossible to properly enforce the ruling, officials at the City Health Department said today, following complaints by local physicians that the sanitary ruling was not obeyed here.

The public was urged by Dr. W. A. Brown, city epidemiologists, to report places known not to be taking proper sanitary precautions to the Health Department, and to demand services from the paper cups when they are suspicious that the sterilization ordinance is not being carried out.

It would require a ten or twelve hour supervision by hundreds of inspectors to enforce the ordinance in all the restaurants, soda fountains and similar places throughout the city, Dr. Brown said.

Undoubtedly, he added, improper sterilization of glasses is a menace to health, since not only is it possible to contract trench mouth, syphilis and tuberculosis by this means, but any other disease which is transmitted through the upper respiratory tract, such as diphtheria, smallpox, scarlet fever, common colds and influenza.

Officials of the State Health Department joined with those of the city in stressing the danger from the use of improperly sterilized glasses, and also recommended the use, of paper cups where the customer feels uncertain that the glasses are not properly sterilized.

As to reason number two: lately a great many eating and drinking place proprietors have been haled into court for violating glasswashing ordinances. Violators get off far too easily, however. Many of the cases have been dismissed, and the others have been settled by fines as low as $1. The average fine is probably around $5. At this rate, it is easier for a lax proprietor to pay his fine and continue in his

8,000 New Health Inspectors

Approximately 8,000 members of Local 302, Cafeteria Employees Union, have become voluntary health inspectors to enforce Sanitary Code regulations. They are working in cooperation with the New York City Department of Health.

The drive was launched by Local 302 with instructions sent to each of the 8,000 members to take proper precautions to sterilize all eating and drinking utensils. Union members are instructed to report any violation of the New York City Sanitary Code to the shop chairman or to the union direct. Such violations referred to the Department of Health for action.

The Union points out that the proper enforcement of the Sanitary Code will not only protect the health of the members who eat where they work, but also the health of the two million patrons of cafeterias in New York.

(1) Health department activity is often handicapped by "politics."
(2) Leniency on the part of courts toward violators of health ordinances.
(3) Lack of public support of, or interest in, health department work.
(4) Failure of patrons to complain about uncleanliness at point of sale.

Amplifying the first reason: it is only natural to expect that some health inspectors, who in many instances owe their jobs to local or state politicians, will be afraid to step on too many toes in their efforts to keep proprietors of public places strictly in line with the law. If an inspector becomes too enthusiastic in his insistence on thorough dishwashing, for instance, he may lose not only his friend and political ally, but his job as well. Industrious business men in any community usually "get their way."

All this means, of course, that no matter how excellent a certain health code may be, or how carefully defined are its instructions for the operation of eating and drinking places, proprietors will be unaware of the law unless health department officials inform them of its regulations and insist upon their obeying them.

As to reason number two: lately a great many eating and drinking place proprietors have been haled into court for violating glasswashing ordinances. Violators get off far too easily, however. Many of the cases have been dismissed, and the others have been settled by fines as low as $1. The average fine is probably around $5. At this rate, it is easier for a lax proprietor to pay his fine and continue in his
old ways than to bother with any change that might cost him more effort and perhaps more money. In fact, such a fine instead of showing him the error of his ways, is likely to prove an insulting annoyance to him and to make him rebellious. It follows that without the willing co-operation of proprietors, the health officer’s job of enforcement becomes extremely difficult.

In the third place, every individual knows that it is discouraging to work diligently and enthusiastically at some altruistic task, and then find that the very people for whose benefit they are expending their energies, receive the whole thing very indifferently. That is exactly the way some health officers and inspectors feel when they are in the thick of a campaign to secure health safety for all those who eat and drink in public places, only to discover that the general public does not seem to care enough about their endeavors to lend support. Perhaps the Health Department does succeed in enlist­ing the aid of the local newspapers in publicizing their work—how many readers are likely to take more than passive interest in such items? The chances are that those who show signs of active interest do so because they have friends in the businesses affected; in which case, they may take sides in favor of and against their friends’ inter­ests. Others may even worry about a “clean-up” crusade, fearing that the extra work in­volved will only add to their already heavy tax burden. Lack of applause for effort is usually enough to discourage anyone, and an official who gets paid the same amount whether he performs his duties with special enthusiasm or in a routine manner is no exception.

**Silence as Good as Approval**

Regarding the fourth reason, the public is to blame on still another score. It is to their own advantage to complain at the point of sale about any unclean utensils they receive or about any insanitary habits of employees they notice. Meekness in customers is bound to beget careless­ness in proprietors and employees. So long as there are no complaints from the owner is just as likely to condone unsanitary practices—if they are less trouble for him—than sanitary practices which might be more bothersome or costly. Therefore, it is obvious that each patron has a responsibility not only to himself, but to his fellow-citizens to object to anything unclean he sees. Silence and continued patronage are as good as approval. Until public agencies can be effectively brought into action, individual patrons of public eating and drinking places will have to solve the problem of sanitation themselves. The task before them is not an easy one, but it can be accomplished. Even if one individual became very active in his community, pointed out the need for more adequate laws or stricter enforcement of existing laws to his friends or to a club group, and succeeded in arousing their interest in such a problem, the ball would be started rolling and it would only be a matter of time until results would begin to show. Eventu­ally, even “politics” might be made an aid in­stead of an obstacle to the cause of health protection. To the extent that such objec­tives as the enactment and enforcement of adequate sanitary laws could be made part of the platform of certain candidates. The popu­larity of such a program should be assured, for it seems difficult to conceive of any fair-minded citizen rejecting a reasonable opportunity to insure himself, family, and friends of adequate public health protection.

**Our Rat Population**

Today it is estimated that there are 123,-000,000 rats in the United States—almost as many rats as persons. Half the total is estimated to be on farms; 34,000,000 on non-farm country residences and in towns with less than 10,000 population, and 29,000,000 in cities of 10,000 or more. According to the Department of Agriculture, rats cause an estimated annual loss of $189,000,000. Of this sum, $63,000,000 is lost on farms, an average of $10 per farm; $68,000,000 in small towns and on non-farm residences, and $58,000,000 in large cities.

Rats carry bacteria and parasites, and a number of their own diseases are transmissible to man and domestic animals. In addition, they contract and spread some human and livestock diseases.

Methods of suppressing rats are given in Farmers’ Bulletin 1533, “Rat Control.” Methods of shutting rats out of buildings and premises are described in Farmers’ Bulletin 1658. Rat Proofing Buildings and Premises.” Copies of these publications and of the new Circular No. 423, “The House Rat,” may be obtained at 5 cents each from the Superintendent of Documents at Washington, D. C.

**Health and Hygiene**

Health departments are again alarmed at the increase of rabies or "hydrophobia," the deadly disease spread by household animals. Prevention and treatment discussed.

**Dog Bites Man!**

Today is famous only for his epistle “If a man bites a dog—that’s news!” Today, because of a neglect of facts; long known, it is again becoming news when a dog bites a man. One medical journal heads its leading editorial "The Rabies Menace," and the public is again made aware of rabies or hydrophobia. One begins to realize the danger after learning that during the warm days of late spring of this year over 100 people were bitten every day by dogs in Chicago alone. This is an increase of more than fifty per cent over 1936, and more dogs than ever are being found with rabies.

What is the story of rabies and what can be done to prevent, and, when necessary, cure it? Hydrophobia, as rabies is popularly called, means "fear of water," a poor name, since the dog with rabies tries to drink, even though it is difficult for him to do so. Of all animals the dog is most likely to have the disease and to give it to other animals and to man. The cause of the disease has never been discovered, but the diagnosis is made by finding little bodies (called Negri bodies, after the man who first saw them) in the brains of men or animals who die of rabies. Whatever the cause, it is present in the saliva or spittle of the animal with the disease.

The "Mad" Dog

Rabies, in the dog, lasts about a week. The animal first becomes dull and uneasy, and starts to lick anything or anybody about it. The rest­lessness is progressive. Contrary to popular belief, the rabid or "mad" dog does not usually foam at the mouth. The saliva, however, does become thick and sticks to the lips and teeth. Sometimes the dog’s lower jaw hangs down because the disease paralyzes the jaw muscles. As a result the animal looks stupid and dull, and this has given rise to the name "dumb madness." Under these conditions the dog cannot bite but the saliva is very infectious. People have caught the disease by putting their fingers in the dog’s mouth in an attempt to remove what they think is a foreign substance. The mad dog or his dog’s claw or cracked, hoarse bark which sounds somewhat like the coughing of a child with croup. The high-pitched, open-mouthed bark is usually followed by several howls. Other animals are attacked on sight by the mad dog, especially if they try to escape. As the disease progresses and the paralysis spreads, the animal becomes continually more unsteady on its feet. Finally, the dog becomes so feeble that it has to drag its legs. The head and tail droop, the mouth hangs open, the tongue sticks out. The dog drags itself to a secluded, sheltered place to lie down and die.

**Symptoms in Human Beings**

Man need not be bitten by the mad dog, cat, or other animal in order to become infected with rabies or hydrophobia. In fact, ninety per cent of cases of rabies occur without the victim being bitten. The deadly saliva can do its work by merely coming in contact with skin that has been wounded, scratched, or scraped. Once a person is infected, the disease becomes noticeable in from six weeks to three months’ time. It appears earlier if the site of the wound is the head or if the victim is a child. The period of waiting is called the incubation period, and during this time the germ of the disease is steadily growing inside the body.

When the disease finally breaks out in the patient, he begins to be restless and mentally depressed, and to have indefinite fears. This lasts a day or two and then excitement sets in. The dog becomes thick and sticks to the lips and teeth. Sometimes the dog's lower jaw hangs down because the disease paralyzes the jaw muscles. As a result the animal looks stupid and dull, and this has given rise to the name "dumb madness." Under these conditions the dog cannot bite but the saliva is very infectious. People have caught the disease by putting their fingers in the dog’s mouth in an attempt to remove what they think is a foreign substance. The mad dog or its dog’s claw or cracked, hoarse bark which sounds somewhat like the coughing of a child with croup. The high-pitched, open-mouthed bark is usually followed by several howls. Other animals are attacked on sight by the mad dog, especially if they try to escape. As the disease progresses and the paralysis spreads, the animal becomes continually more unsteady on its feet. Finally, the dog becomes so feeble that it has to drag its legs. The head and tail droop, the mouth hangs open, the tongue sticks out. The dog drags itself to a secluded, sheltered place to lie down and die.
to the lips and teeth, and the victim spits constantly because he is afraid to swallow. After two or three days of such terrible suffering, he dies.

How can we cope with a disease so sudden and drastic in its effects? The simplest and easiest way is to prevent dogs from biting or infecting people. This is best done by enforcing the practically universal laws which forbid having a dog in public without a muzzle and leash.

Small children, since they are more or less helpless, are especially susceptible to the danger of being attacked by stricken dogs. Only a few weeks ago in Chicago, a dog, believed to be rabid, ran into a school classroom, bit four pupils, ran out again and bit two more children on the street before he was captured!

The danger from rabies would be practically wiped out if the laws concerning dogs were strictly enforced. You can protect yourself and your children by insisting, especially to the police officers, that no dog be allowed in public without a muzzle and leash. Forty years ago, England wiped out rabies in two years by enforcing the law. When enforcement became lax the disease reappeared.

**Rabies Prevalent in Winter**

Contrary to popular opinion, the so-called "dog days" of July and August is not the period during which the most cases of hydrophobia are contracted. It has now been definitely proven that fewer animals go mad in the summer than in any other season of the year. Figures gathered by the United States Public Health Service over a period of six years from approximately half of the states in the nation show that rabies is most prevalent in the spring, and that the winter season is only a little less dangerous. It is evident therefore that hydrophobia is not a warm-weather disease, and that dogs should be just as vigilantly leashed and muzzled during the winter as during the summer months.

If a person is bitten, the wound should be cauterized (burned) with fuming nitric acid, preferably by a doctor. Carbolic acid or iodine are useless. A toothpick dipped in the acid should be twisted a few times in order to be sure that all parts of the wound are reached by the acid. To be sure, such a procedure involves pain, but the result is worth it.

The dog should be captured and turned over to the health authorities to be watched and put to death if their investigation warrants it. If the dog cannot be captured alive, his body, or at least his head, should be sent to the health department so that the brain can be examined for Negri bodies. If these bodies are found, treatment of the bitten person can be started.

**Louis Pasteur's Great Work**

The name of Louis Pasteur is linked with the treatment of rabies, as it is with so many other great scientific discoveries. Pasteur realized that the germ of the disease did not remain in the saliva deposited on the skin but spread quickly to the brain and spinal cord, where it grew. It was therefore possible to use the nervous organs of experimental animals as living hothouses where the virus or germ which caused the disease could be cultivated and grown. Pasteur also found that it was possible to weaken the virus, as well as to make it more powerful, and that under certain conditions the body was able to fight off the virus. The body's powers of resistance have their greatest opportunity when the virus does not become powerful too quickly, as it usually does when it is transmitted to a person directly through the bite of a dog.

Immediately after being bitten, the patient is given a series of injections of dissolved animal spinal cord containing the living virus. The first injection is very weak in its virus content and mildly stimulates the body to form substances that will neutralize the virus. Gradually stronger and stronger doses of the virus are administered until the body has mobilized a good defense. Then, when the virus deposited by the mad dog six weeks before has passed through the incubation stage and is ready to act, it meets the defenses which the body has built up as a result of the series of injections.

A remarkable feature of the Pasteur treatment is that it gives nearly 100 per cent protection. This may be seen by the fact that out of 6,156 cases treated at the Pasteur Institute in Paris between 1924 and 1933, only one death occurred.

Although several attempts have been made to substitute a less cumbersome procedure for the Pasteur method, Pasteur's work still stands. More time and money might profitably be devoted to a study of the work which Pasteur so brilliantly began.
The small child who is ill can’t protest effectively when he is misinterpreted. It is necessary to know how to keep him as comfortable and safe as possible.

can’t protest and has to lie quietly and take the consequences. This is certainly no way of bringing the fever down or making the patient comfortable, but rather a means of preventing the body from giving off heat. The logical thing to do is to keep the room at an ordinary, comfortable temperature and to keep the child lightly covered—a cotton garment is all that is necessary. Flannel bedclothes merely keep the patient hot. A sponge bath with lukewarm water will make him more comfortable and may bring the fever down.

Consulting neighbors and relatives is a common practice, and just as useless as many of the other things that are done to “help” the patient. Your neighbors and relatives almost always know as little about disease as you do, and naturally you will run into all sorts of conflicting ideas. Your neighborhood druggist is almost in the same position, and as likely as not his main interest is in selling you the preparation that is most profitable to him.

While Waiting for the Doctor

From the foregoing you have probably begun to wonder whether there is anything you can do besides calling the doctor, a step which, unfortunately, cannot always be afforded. Yes, there are several rules which, when followed, can be of great benefit. Whenever the child is sick, the first thing to do is to put him to bed. Don’t hesitate because he may miss a few days of school. This precaution may save him from a severe illness that would make a much longer period of absence from school necessary. Isolate him from other members of the family. He may be developing a contagious disease, and even the common cold and sore throat are contagious. Although the child may be only mildly sick, the next member of the family who contracts the disease may get it in a far more severe form.

In cases of fever, aspirin is usually a safe drug to use, and sponging with lukewarm water, as previously mentioned, makes the patient more comfortable. However, a fever which lasts over twenty-four hours is an indication that the doctor should be called.

When the doctor is to be called, there are some things you can do that will aid him in arriving at a diagnosis more rapidly. In the first place, prepare the child’s mind for the arrival of the doctor. Explain to him that you are calling the doctor to help you get him well. Tell him that the doctor will examine him, and explain why this is necessary. These steps usually insure that the child will cooperate and be quiet during the examination. A crying, uncooperative child makes the physician’s examination unsatisfactory. Don’t ever use the doctor as a bogey-man.

If the child happens to urinate before the doctor’s arrival, save the urine specimen. The doctor may want to examine it. If the urine looks bloody or in any way unusual you should get a urine specimen ready. When the child has diarrhea (loose stools) by all means save a stool specimen in a diaper or in a pot so that the doctor can look at it.

These simple measures may save you a lot of trouble and facilitate the physician’s work. Certainly they will save you some expense, and they may prevent the harm that is sometimes done when a mother feels that she must “do something,” but does not know definitely what it is that she may safely and wisely do.

Sudden Death On the Streets

As a result of the recent outbreak of sex crimes against children the more liberal newspapers of New York City have suddenly realized the urgent need for more and better playgrounds. Outraged editorial writers have drawn heavily upon the gruesome details of the latest child rape in order to point out that if adequate playground facilities were available the menace of the sex maniac would be materially lessened.

We are heartily in favor of expanding playground facilities and we deplore the recent sex crimes as much as anyone else. However, in the current newspaper furore over the need for more playgrounds we seem to detect the workings of an old newspaper formula which is sometimes expressed as follows: If 2,000 Chinese died in an earthquake, that’s news; if 2,000,000 Chinese die annually from starvation, that’s an old story.

It is manifestly absurd to adduce the sex crime as evidence of the pressing need for playgrounds; far more telling, if less sensational, evidence of this need exists in the figures which show the frequency of fatal and disabling accidents among children on our city streets, as well as the prevalence of serious childhood illnesses due to lack of sunlight, fresh air, and proper recreation.

Figures compiled by the National Safety Council indicate that about 1,450 children under fourteen years of age lost their lives in 1936 when they were hit by automobiles on the streets of our cities. In spite of this slaughter, which is growing larger each year, the traffic-congested streets are still the only places in which the majority of our urban children can play. Besides sudden and violent death on the streets we must consider the terrible toll taken annually by tuberculosis, rickets, and other diseases that flourish wherever children are undernourished and reared in ill-ventilated, poorly lighted tenements and in streets and alleyways where the sun seldom shines.

It is these facts rather than the occasional sex crimes—deplorable though they may be—that should awaken the community to the needs of its children. Moreover, it is apparent that what is needed is a far-reaching program of playground construction rather than a reorganization of present facilities. Already there are signs that reactionary interests are trying to cloud the issue by pointing with loud cries of shame to the fact that many of New York City’s school playgrounds are closed during the summer vacation period. Certainly there is no good reason why these playgrounds should remain closed, and steps should be taken to open them immediately. It is interesting to note, however, that the man who has been most loud in his denunciation of the practice of keeping the playgrounds closed is none other than Park Commissioner Robert Moses, the same man who last May closed the playgrounds under his jurisdiction and made it necessary for Mayor La Guardia to open them with a police guard.

A vast playground construction program would be a worthy project for the W.P.A. Already the W.P.A. in New York City has done excellent work in this field, having constructed 149 new playgrounds and ten new swimming pools. Extension of this work both in New York and other cities would not only put to work thousands of men who cannot now find jobs, but it would be an investment that would yield rich returns in terms of health and safety for our children.
THE NEED FOR HEALTH INSURANCE
By JOHN A. KINGSBURY

There are few greater needs today, in promoting the welfare of our nation, than a comprehensive national health program. Within the framework of our economic system and under existing conditions of social insecurity, compulsory health insurance must have an important place in any such program. A comprehensive health program should be designed not only to protect all the people from contagious disease, to promote their health and vitality, to give special protection to mothers and children, but also to furnish protection against wage-loss and to make good medical service available to all the people.

There are five broad elements in a national health program. No one of these is a substitute for any other. If we would have real protection of the nation's health, we must have all five. Briefly, they are:

1. A strong, coordinated public health program—coordinated among the federal, state, and local agencies. The Surgeon General of the Public Health Service is our recognized leader in this cause. He has mapped out a campaign and the nation is following him enthusiastically.

2. A comparable public service for maternity, infancy, and childhood. The Children's Bureau, under the leadership of Miss Lenroot, has the vision and the courage to fight this cause. We are giving her our earnest support.

3. A tax-supported development of those medical services which only government can furnish. This means principally state action, aided financially and technically by the federal government. It deals with mental disease, tuberculosis, care of the handicapped, provision of specialized and expensive medical centers, and so on.

4. Medical-care insurance, state-wide in scope, with federal financial and technical aid, and broad enough to guarantee comprehensive service of high quality to people of small and modest means and—through contributions made on their behalf from tax funds—to cover people without income.

5. Compensation for wage-loss from temporary and permanent disability. The machinery of the federal-state system of unemployment compensation and of the federal system of old-age benefits can deal with this program.

There are other elements to be considered in a national health program. The special health aspects of education and nutrition, the provision of decent and healthful housing, the means for vocational rehabilitation of the handicapped, the care of the halt, the lame, and the blind—these and many others all have appropriate places within the broad framework outlined in the five categories which I have enumerated.

More Public Medicine Needed

No sensible group in our national life would object to four of my five cardinal points. A particular group objects to the fourth—medical-care insurance. They have fought every move to modernize our health program. Latterly, these persons have attempted to hide their real purpose by pretending to take a positive instead of a negative and obstructive position. They are now shouting for public health and for medical care of the indigent. But this, if I may be permitted to mix my metaphors, is only a red herring. They now say they want a public health program—because they know that an aroused public has already decided we shall have it; they say they want a system of medical care for the indigent—because they are asking for their system and they know there is little likelihood of getting it. What they really want is to divert public attention from the greatest need of all—a social insurance system which will give medical care to all who need it.

I do not favor compulsory health insurance as an alternative to public medicine or as an alternative to an extension of federal, state, and local public health facilities. We now have pub-
The public medicine, notably in the care of the insane, suffering from remediable sickness. I am convinced that the most promising and productive channel into which we can direct customary expenditures for health and medical services is a nationally subsidized system of contributory, compulsory health insurance. The combination of public health tax funds, public medical service tax funds, and health insurance contributions is the only answer to America's need for health security. Add provision for contributory insurance to give workers protection against disabling sickness and invalidity, and the broad framework will be fashioned to furnish substantial security against sickness and its dreaded consequences.

It seems to me there can hardly be disagreement as to the need for a comprehensive national health program. "Here is one-third of a nation ill-nourished, ill-clad, ill-housed—now," said the President of the United States in a recent address. Social workers of the nation know this is not an over-statement of the deplorable condition in which over forty million of our fellow citizens find themselves today. Indeed, the President might have added, on the authority of his own Committee on Economic Security, that "illness is one of the major causes of economic insecurity which threatens people of small means in good times as well as bad"; that "in no other occupational group is one-half of all dependency traced to the economic effects of illness."

The Committee on Economic Security reported: "As a first measure for meeting the very serious problem of sickness in families with low income we recommend a nation-wide preventive public-health program," to be "financed by state and local governments and administered by state and local health departments, the federal government to contribute financial and technical aid." The Committee then went on to say: "The second step we believe to be the application of the principles of insurance to this problem." The Committee informed the President, however, that it was not at that time prepared "to make recommendations for a system of health insurance." It had enlisted the cooperation of the groups representing the medical and dental professions and hospital management in developing a "plan for health insurance which," it said, "will be beneficial alike to the public and the professions concerned." The avowal by the groups had, the Committee stated, requested an extension of time "for the further consideration of these tentative proposals, and such an extension has been granted to March 1, 1935." The President was further informed that his Committee had effected arrangements for a close cooperative study between its technical staff and the technical experts of the American Medical Association. Are we being inconsiderately hasty if we now call for action on health insurance?

Health Insurance in England

It is very significant that when the President's Committee on Economic Security set up its professional advisory committee this was the first time in the history of social insurance that the professions concerned with health insurance were brought in at the beginning by the government to help formulate an official program. In Germany, more than half a century ago, health insurance was virtually established by the edict of Bismarck as a measure not only of economic, but also of political, security. In Great Britain, a quarter of a century ago, hardly consulting the medical profession, Lloyd George put the National Health Insurance Act through Parliament while the doctors remained aloof or in opposition until the eleventh hour. Today it is very difficult to find a physician in Great Britain who is not making at least a decent living or one who would consent for a moment abandoning health insurance. The Journal of the American Medical Association and other American medical journals to the contrary notwithstanding. Indeed, the British Medical Association and the panel committees of doctors all over Great Britain have gone on record over and over again for extension of the benefits of national health insurance to embrace not only the workingman but all members of his family as well, and also to extend the medical benefits to include hospitalization and the service of various specialists.

Note the following quotation from a statement by Dr. G. C. Anderson, Medical Secretary of the British Medical Association:

Soon or late, I predict, every modern civilized community must acknowledge its duty to make provision for the health of its members if they cannot secure it for themselves. ... I think that, after twenty-two years, we may be said to have passed the experimental stage in Great Britain. Today we can evaluate the merits and defects of our health insurance plan. That it has some defects may be freely admitted, but they are emphatically not those which the American Medical Association has thrust into the foreground.

Chiefly, the American Medical Association and its members who oppose national health insurance allege that it has proved to be a failure and detrimental to the interests of both profession and public. ... Nothing could be farther from the truth. ... As a matter of fact most of our physicians are for panel service. ... Without such steady influence, many would have found it difficult to earn a living by the exercise of their profession alone.

Monkey Wrenches in the Machinery

I have already remarked that in the formulation of a national health insurance plan, the United States is the only country where the professions were let in on the ground floor. Here they were invited and urged to participate in the formulation of the plans. The President's Committee on Economic Security delayed its final report—until now is long overdue—to give the doctors, the dentists, the hospital administrators, the nurses, and the public health authorities not only every opportunity to be heard but every facility for criticism and suggestion concerning the program under consideration. How did they utilize such opportunity? The dentists helped; the hospital people helped; the nurses helped; and the public health people helped. Each gave intelligent and critical advice and counsel. But the "doctors cooperated" with the President's Committee with a technique which has its own unique efficiency. While certain of their leaders and officers were in the full confidence of the official studies which were still in progress, and while the President's...
The past thirty years have witnessed the growth of the youngest of the medical sciences—the science of nutrition. First, it concerned itself with the proper amount of food needed by a human being for a healthy existence. The calorie—a unit of heat or energy—was clearly defined and the requisite daily quantities of calories for various ages and occupations were established. It soon became evident, however, that getting an optimum quantity of calories daily did not in itself bring vigorous health and that, on the contrary, one could eat “well” and yet become ill. A person subsisting on bread, cereals, and milk could gain weight and even do a hard day’s work but after a time he would falter, slow down, and finally become ill with any of a number of ailments. Getting enough calories, therefore, was not the whole story. There were apparently other elements necessary to a satisfactory diet and the nutrition sleuths of many countries worked diligently to find them. The discovery of the vitamins and the minerals followed, leading to the crowning achievement of the science of nutrition—the formulation of the “well-balanced diet.”

National Eating Habits Vary

As a result of these researches we all learned that quantity is only one aspect of a good diet and that the quality of food—the kind of protein, the amount of vitamins, minerals and salts present—is equally if not more important than quantity. Good diet, therefore, appeared to have two factors only—quantity and quality. Yet if we had been more observant we would have discovered a third factor—time.

In the eating habits of many nations this factor had been receiving a certain amount of attention for centuries. In America it was expressed in the catch phrase “Three square meals a day.” But in the Scandinavian countries, in Germany, and in Austria the importance of the time factor was acknowledged by the habit of eating five or six times a day. It was natural that the intervals at which food is taken should finally become a topic of scientific investigation, and to this subject Drs. Howard W. Haggard and Leon A. Greenberg of Yale University devoted themselves.

Scientific Studies

They set out to discover and formulate the principle of the best meal-time intervals. How often should we eat? Is there a day sufficient? Or do we work and feel better when we eat five or six times a day? To millions of people this is not the most important problem of existence. For many millions throughout the world the most important problem is how to get sufficient food to make skin and bones hang together—one square meal a day is sufficient science for them. The work of Drs. Haggard and Greenberg may appear highly academic to those who can find no work or who are living on a bare subsistence level. But the clue of these millions must be to fight not only for the right to live but also for the right to live well, to live at a level that is possible in a world with such tremendous productive resources.

As with almost all of our customs, the three-meals-a-day convention arose out of economic conditions. The rise of the factory system brought certain working conditions with it. The working day was long and hard and only one interval was allowed for eating. People got up, rushed through breakfast, went to work, had half an hour or so for lunch, went back to work, and returned home for the big meal. Breakfast is now generally a light meal. But this is so chiefly because a large breakfast makes it necessary for someone to get up early to prepare it. With living conditions as they are, * Diet and Physical Efficiency, Howard W. Haggard, M.D., and Leon A. Greenberg, M.D., Yale University Press.
such preparation is possible in only a small per-
centage of households. As for lunch, the dis-
tance from the home to the factory and the
insufficient time given for lunch prevents the
worker from eating his principal meal at noon.
At this point we can hear the skeptics say;
"Grumbling that the three-meal arrangement dis-
aire out of economic conditions, it has not also
obtained the sanction of custom because it has
been adequate for our needs? We've been get-
ing along pretty well on three meals a day.
Why make life more complicated by eating five meals a
day?" Drs. Haggard and Greenberg, however, have
proven that eating five times a day does not make life more
complicated, but that on the contrary it makes it simpler and
easier by increasing muscular efficiency and
well-being.

The subjects for their investigation were
chiefly workers engaged in the manufacture of
tennis shoes in a factory located in southern
New England. The majority of the workers
ate three meals a day; a few ate two, omitting
either breakfast or lunch; while others ate
four meals, and some ate five. By meals is
meant the taking of any food, whether it be
cake, a bar of chocolate, a glass of milk, a
sandwich, or an ice-cream soda. These
snacks must be considered meals because they
are rich in carbohydrates or sugar and are
quickly utilized by the body. They may yield
60 to 70 per cent of the calculated 100 per cent
energy. For those of our readers who have never
worked in a factory we may mention that this
system of efficiency levels established by so-
called efficiency experts is the rule and not the
exception.

More Meals — Greater Efficiency

The production rate of each operator was
calculated by the doctors as the number of
shoes sewed per hour for each hourly period in
the morning and afternoon sessions. It was
observed that the average daily output for the
operators who ate two meals a day (i.e., who
omitted lunch or breakfast) was only 172 shoes
per hour. That of the operators eating three
meals was 182 shoes per hour. Another group of
workers who were accustomed to eating
three meals a day were, for the purpose of
experiment, given two extra meals. The meals
were supplied without cost to the worker and
consisted of a glass of milk and a piece of cake,
given at the beginning of the third working
hour in the morning and again at the begin-
ing of the third hour of the afternoon, or,
about midway between breakfast and lunch and
between lunch and supper. The hourly pro-
ductive rate of this group rose an average of
about six per cent above that of the group who
ate only three meals a day.

The extra meals not only added to the indus-
trial efficiency of the operators, but the workers
themselves noticed that when they ate the two
extra meals they felt less tired than on the days
when they ate only their customary two or three meals.

These experiments prove that for the best
muscular efficiency and well-being, five or six
meals a day are better than three. The objec-
tions that might be raised that this system of
frequent feeding gives the stomach no oppor-
tunity to rest. The fact is, however, that the
stomach does not need a rest. It has been con-
clusively proved by x-ray studies and observa-
tions on animals that the stomach does not rest
when it is empty; on the contrary, when it is
empty, the stomach contracts vigorously. It is
this contraction, occurring several hours after a
meal, that gives rise to the sensation of hunger.

Small Meals at Frequent
Intervals Are Best

Drs. Haggard and Greenberg point out that
it is large meals and not frequent meals that
put a burden upon digestion. Many of us have
experienced the uncomfortable sensation in
the midriff and the feeling of laziness and dis-
inclination for thought or work that follow a
large meal. These discomforts do not appear
after small meals taken at frequent intervals.
As a matter of fact, the person who is con-
valescing, the invalid, and the patient with a
stomach ulcer are fed not at long intervals but
are given small amounts of food at frequent
intervals in order to lighten the burden of diges-
tion. As far as digestion is concerned, all the
advantages lie with small meals eaten at fre-
quent intervals.

Stomach Does Not Need Rest

A second objection that may be raised against
changing the eating schedule to five or six
meals a day is that "we will become fat from
eating so much food." This does not follow
since the total quantity of food eaten on a five-
meal-a-day schedule need not be any greater
than on a three-meal-a-day schedule. The total
number of calories contained in the meals de-
termine whether weight is gained or lost and
this number need not be greater with five meals
than with three meals. As a matter of fact, the
size of the meals is automatically reduced
as the number is increased. This fact was
strikingly shown in the study of the shoe oper-
ators. The workers observed that during the
periods when they were provided with mid-
morning meals they no longer ate all of their

The only possible disadvantage of the five
or six-meals-a-day schedule lies in an unwise
choice of food for the smaller meals. There
may be a tendency toward an unbalanced
diet. Too often the smaller meals may be taken
in the form of sandwiches, ice-cream sodas,
pasta, and candy. On a three-meal-a-
day schedule most people know that they should
have a variety of food, including milk, vege-
tables, fruit, and meat. However, the addition
of a mid-morning and mid-afternoon meal may
curtail the amount eaten at lunch and dinner
so that essential foods may not be included in the
diet.

To guard against this danger the additional
meals should be selected with the same care as
the "regular meals," that is, they should fulfill
the need for vitamins, minerals, and good pro-
teins such as are found in milk, eggs, meat, and
vegetables. Candy, pastry, and soft drinks
should not be eaten for the mid-morning and
mid-afternoon meals. Milk, vegetable salads,
soups, stews, and fruits should be the foods
selected. Any variation or combination of these
diets is permissible.

We see, therefore, that the food eaten at the
two extra meals is not to be added to that of
the regular meals; rather, it is subtracted from
them. The same amount of food in all is
eaten; the only difference is that the intervals
between meals are shorter.

Guard Against Speed-Up

We do not know if this schedule of eating
has been introduced into other factories or in-
dustries. The studies of Drs. Haggard and
Greenberg show that such a schedule will raise
the industrial efficiency of the workers. It is
desirable that workers should feel less fatigue
during working hours, but it is not desirable that
the rise in industrial efficiency should entail the
setting up of higher efficiency levels by em-
ployees and the efficiency experts. The work-
ers will welcome a five or six-meal-a-day sched-
ule but they should resist any attempt on the
part of the employers to exploit the increased
efficiency by setting up new and higher pro-
duction levels with a corresponding pay cut. If
this is permitted, the five-meal-a-day schedule
will mean not improved health for the workers
but rather impaired health and efficiency and,
in the end, even physical and mental break-
down.
You can contract this troublesome ailment in your own home as well as in public places. Thorough instructions about the nature and treatment of a widespread malady.

Curing Athlete's Foot

NOT since the time when the mouthwash manufacturers scared the public with the "four out of five" pychoreia slogan has there been an advertising natural like "ath­lete's foot." Whereas it was formerly a gap­ping, raw-gummed, bleeding mouth that of­fended the eye, today it is the athletic foot that protrudes at us from the printed page, the bill­boards, and the signs in drug store windows. There are dozens and dozens of trade marked salves and solutions advertised for the cure of this condition and the makers of these remedies reap a truly rich harvest.

Defining the Terms

For the purpose of clarity it is desirable to state that athlete's foot is also known popularly as trench foot and ringworm. The term trench foot originated during the World War, when the soldiers who were saving humanity had to stand ankle and knee deep in the muddy and flooded trenches. The germs responsible for the disease are very fond of moisture and therefore the ailment spread rapidly among the troops.

Ringworm is a different kind of skin erup­tion which is caused by a germ that is closely related to the germ of athlete's foot. Ring­worm appears in the form of oval or circular spots with a raised scaly border and a clear cen­ter—true rings. These eruptions are quite con­tagious, occurring chiefly among children who contract the disease from each other or from their animal pets. It is generally a simple mat­ter to cure this condition in a short time. Prac­tically no other skin diseases caused by fungi (the vegetable germs causing ringworm, ath­lete's foot, and related diseases) manifest them­selves in the form of a ring and therefore the term "ringworm" for all fungous infections is misleading. Moreover, it is not a worm that causes the disease but rather a vegetable germ (fungus) which can be seen only under the microscope.

The term "athlete's foot" was coined be­cause of the fact that athletes were particularly likely to contract the infection when walking bare­foot in common shower baths and damp locker rooms. This condition is known medi­cally as dermatophytosis, epidermophytosis, or tinea of the feet, the first being the generally accepted medical name.

Let us consider the germs responsible for dermatophytosis or athlete's foot—the fungi (singular: fungus; adjective: fungous). They are germs belonging to the plant order and are higher in the scale of development than ordinary bacteria. Under the microscope these fungi appear as shiny long and short threads which twist and branch out in tree-like fashion and which sometimes bear spores or tiny ovoid seeds that are able to stand very adverse conditions and later grow into mature fungi.

The exact name of the germ that causes athlete's foot is epidermophyton interdigitale, and it is as tough and hardy as its name is difficult to pronounce. It may be readily seen under the microscope by taking some of the scales from between the toes, softening them in a chemical solution, and squeezing them flat on the glass slide. This is the exact and reliable way of making the diagnosis.

Serious Complications

The appearance of the infected area may vary considerably. In its simplest form the in­fection may cause only a slight scaling between the toes, often only between the little toe and its neighbor. Very often this may go unno­ticed, or, if any attention is paid to it, it may be passed off as due merely to the heat. That this is not the case may often be proved by the discovery of living fungi under the micro­scope and the growth of the scales on artificial culture media in the laboratory.

A more severe degree of infection is indi­cated by the appearance of superficial or deep cracks in the skin between the toes. The scal­ling may increase considerably, and, since the perspiration between the toes cannot evapor­ate, the retained moisture causes the skin to turn very white and to become of­fensive. Pus producing germs may enter through the cracks in the skin and complicate the picture by causing redness and swelling of the feet and legs, as well as enlargements of the glands in the groin. If this happens medical attention and rest in bed may be necessary.

In the more stubborn fungus infections blis­ters of various sizes may develop on the feet and hands. Usually the blisters on the feet contain actual fungi, as proven by microscopic examination. They are usually of superficial in­fection and, though it is a common body reaction which is caused by a germ that is closely related, that is not the case may often be proved by the appearance of superficial or deep cracks in the skin between the toes. The scal­ling may increase considerably, and, since the perspiration between the toes cannot evapor­ate, the retained moisture causes the skin to turn very white and to become of­fensive. Pus producing germs may enter through the cracks in the skin and complicate the picture by causing redness and swelling of the feet and legs, as well as enlargements of the glands in the groin. If this happens medical attention and rest in bed may be necessary.

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Sal Hepatica

ARE YOU one of the many who run to the drug store for a bottle of Sal Hepatica as soon as you feel a cold coming on? If so, you should be interested in the stipulation that the Bristol-Meyers Company (Rockefeller Center, New York City) has entered into with the Federal Trade Commission.

The company has agreed to stop advertising that the product is an effective treatment for a number of ailments, or that it will cleanse the system thoroughly unless the statement is qualified to indicate cleansing of the intestinal tract. Indeed, cleansing of the intestinal tract is about all that can be expected of Sal Hepatica, for, as the company admits, its effect is nothing more than an effervescent salt which will act as a laxative when taken in small doses and as a cathartic when taken in large doses. It cannot, therefore, as the company now admits in its stipulation, be relied upon as "competent treatment for colds, headaches, indigestion, upset stomach, or unnatural fatigue, nor as a preventive of more serious physical conditions in cases of constipation." (PR, June 24, 1937.)

The boys who do the advertising copy for Sal Hepatica will now have to think up a few new ones in order to sell the stuff.

McKesson's Milk of Magnesia Tooth Paste

EVERY TIME the tycoons of the drug industry get together at their trade conferences, poisons go out to the newspapers that the industry is going to regulate its own practices so that the consumer will be protected against fraud. It is therefore surprising to note how often the offenders named in the reports of the Food and Drug Administration are large and powerful companies with nationwide reputations—the very ones who would be expected to take the lead in the sort of house-cleaning that is perennially being proposed.

A case in point is that of McKesson & Robbins Company of Bridgeport, Connecticut. This leader in the drug industry has recently admitted that it used false and fraudulent claims in advertising its McKesson's Milk of Magnesia Tooth Paste. A shipment of the product was seized at San Francisco together with circulars which stated that "Bleeding gums, the forerunner of the deadly pyorrhea, known as Gingivitis and Vincent's Disease, commonly known as Trench Mouth, are distinctly benefited by its use." (NJ 26491.)

After the company had admitted the fraud the goods were released under bond on condition that the circulars be removed and destroyed.

It would be a salutary thing if the newspapers gave as much publicity to such infringements of the law as they do to the often repeated but seldom practiced resolution of the drug trade to amend its practices. But, of course, if the newspapers gave any publicity to infringements they would quickly find that the fat advertising contracts of the drug companies would be withdrawn.

About all the consumers can do at present is to organize for the passage of effective drug control laws and the dissemination of sound consumer information, and to boycott products which they find are falsely advertised.

We Are Sued

The Post Institute, makers of Ultraod, the so-called "hair-grower" that we exposed in this department in the July issue, have brought suit against us for $50,000, claiming that we libelled them and their product. We filed an answer to their charges last week and now we are waiting to see what happens. We will keep our readers informed.

Painting—A Dangerous Trade

MOST of us have probably at one time or another watched a painter at work. Perched high on his scaffold, executing graceful brush strokes that covered the wall of the ceiling with paint, he probably didn't seem to us to be having too bad a time of it. Possibly the penetrating odor of the paint or the general messiness of the job as indicated by the painter's spattered overalls provided a hint that the job was not altogether pleasant; nevertheless, we probably put the job of painting down in our minds as a comparatively easy one, as well as one that was obviously not attended with any great risk.

To get an idea of how utterly false an impression of the hazards of a trade one can get from superficial observation, it is only necessary to read the excellent 100-page booklet, Occupational Hazards and the Painter, written by Aaron B. Gersh, and published by District Council Number 9 of the Brotherhood of Painters, Decorators, and Paperhangers of America. In this book is presented a dramatic picture of the multitude of poisonings and accidental injuries that arise out of the job of painting and that put this trade near the head of the list of hazardous occupations.

Living with Poisons

The painter is surrounded by poisons. He lives with them. He gets a small dose of them with every breath he takes while he is on the job. Every movement he makes is attended by poisons. The painter is surrounded by poisons. The painter is surrounded by poisons. The painter is surrounded by poisons. The painter is surrounded by poisons. He gets a small dose of them with every breath he takes while he is on the job. Every movement he makes is attended by poisons.

Accidents of this kind are almost wholly preventable but the speed with which the painter is forced to work make it impossible for him to carry out every step and operation with the caution that it deserves.

Painting has not undergone the same advances in technique that have characterized other branches of the building trades. Unlike these other branches, where the derrick, the power hoist, the pneumatic riveter, and other modern devices have mechanized operations that were formerly performed by hand, painting, with the single exception of the development of the spray gun, is still performed manually. The only advances in the industry in the last twenty years have been in the field of the chemical composition of the paints.

Therefore, the increase in working speed which modern building industry demands has been borne entirely by the painter; today he must cover more than twice as much space as he was called upon to cover in the same length of time twenty years ago. When a painter has to cover 3,500 to 5,000 square feet of wall space a day he has precious little time to check up on the condition of ropes, scaffolding, ladders, and other equipment.

Painters Die Young

Furthermore, it goes without saying that working at such breakneck speed takes its toll on the health of the painter. With physical fatigue comes loss of mental alertness, and this in turn brings frequent tragic results. The relationship between fatigue and accidents is effectively illustrated by a graph in Mr. Gersh's book which shows that accidents are infrequent in the early part of the morning. As the day wears on the accident rate rises and reaches its peak shortly before the lunch hour. During the afternoon the rate drops again. After lunch there are a few accidents but as the worker tires later in the afternoon the accident rate again rises. It is clear that well-spaced rest periods would be an important factor in the elimination of painters' accidents.

An examination of life expectancy tables reveals the astonishing fact that the average length of life of the painter is less than forty-six years, an exceedingly unfavorable figure.
when it is considered that the life expectancy of the population as a whole is sixty-two years. What are the conditions in the painting trade that bring death so prematurely to the painter?

The question is not a difficult one to answer; the trouble lies in the poisonous chemicals that go to make up our modern paints. Paint is a mixture of pigment and vehicle (the fluid portion), either of which may be poisonous. A painter may breathe a mixture of fumes of benzine, wood alcohol, petroleum ether, amy1 acetate, and other poisons, all on the same job. Mr. Gersh lists more than thirty separate poisons that are present in paint. All of these poisons are inhaled by the painter little by little over a period of months and years. Slowly and insidiously, often without dramatic symptoms or warning signals other than perhaps a run-down feeling, these poisons carry on their destructive work within the body, attacking various vital organs and finally taking their toll in severe sickness and death.

**Lead Poisoning**

Lead—usually in the form of the basic carbonate—is an important constituent of paints and is the most frequent cause of poisoning among painters. The symptoms of lead poisoning have been described in previous articles in *Health and Hygiene* (February and April, 1936) but it is to be noted here that a few of the more outstanding ones. At first the painter will notice a lack of appetite, particularly for breakfast. He will also have a bad taste in his mouth upon arising in the morning. Indigestion and obstinate constipation precede the more dreaded lead colic, sometimes known as "painters' colic." Severe and unrelenting cramps in the abdomen, lasting for hours on end, make this complication a terrifying experience. Paralysis of the arms may occur following nerve degeneration, and insomnia, nervousness, and convulsions may also take place if the brain is affected.

Lead poisoning can be detected at an early stage if blood examinations are made. Attempts at prevention have thus far been unsatisfactory. Masks which filter out the lead cannot be worn for any length of time. Until an efficient and comfortable mask is perfected the only methods of eliminating this scourge from industry are the substitution, whenever possible, of sub-lethal substitutes, the application of proper ventilation, and the establishment of a shorter working day.

Other poisons of which benzol, wood alcohol, turpentine, aniline, toluol, zyol, arsenic are only a few, also affect the painter, and their elimination might be even more desirable. Research leading to the substitution of harmless chemicals for these poisons. Unfortunately new poisons are constantly being introduced into the composition of paints before much is learned about the old. Thorographic investigation of the poisonous properties of new chemicals before they are introduced to the trade would stop the practice of using painters as human guinea pigs.

The introduction of the spray gun in painting has greatly increased the hazards of lead and benzol poisoning. This is particularly true in the automobile factories where the spray gun is most widely used. Since the paint is emitted from the gun in a fine spray the chances for inhalation of the fumes and the consequent disastrous results are necessarily greater.

The National Safety Council on Spray Coating reaches the following conclusions after a thorough survey of the hazards associated with spray gun painting:

We would then urge as our most important and fundamental recommendation that manufacturers of paints, lacquers, shellac, varnishes and vitreous enamels to be used in spray coating should so far as possible eliminate benzol, lead and free silica from their products and where this has been done should clearly label such products containing less than a certain maximum amount of lead or benzol or free silica as the case may be; and that the employers using the spray gun for indoor or booth work should so far as possible insist on obtaining and using only materials so labeled.

**The Compensation Aspect**

Mr. Gersh gives a thorough survey of the operation of the Workmen's Compensation Act of New York State with regard to accidents and occupational diseases suffered by painters. By means of individual case records he makes clear the shortcomings of the Act in placing so great a burden upon the injured or sick worker. The drastic curtailment of income and subsequent earning power, as well as the distressing mental condition in which the painter is left as a result of the diseases prevalent in his trade, indicate the great need for further liberalization and extension of the Act. Furthermore, there are many states where the... (Continued on page 104)
snake venom is entirely inert when taken by mouth. When the wound caused by a snake bite is sucked in order to prevent the poison from spreading throughout the body, the ingested poison has no effect on the system.

* * *

Whooping Cough Injections
Fort Wayne, Indiana

Dear Doctor:

Would you please give me your opinion of whooping cough injections? My doctor says they have been perfected and that they are as effective as diphtheria injections. The other day I heard a doctor on the radio say that the whooping cough injections have not been perfected as yet and that in some instances they have been known to bring on whooping cough. Who is right?—M. P.

Answer—Your questions about whooping cough injections are justified. It is not true that the injections used to protect children against whooping cough are just as effective as the injections against diphtheria. There has been much more experience with diphtheria over a great many more years and the Schick test is available as a test to determine whether a child has developed some protection against diphtheria. The injections against whooping cough have been used extensively only in the last five or six years and the reports that are available where they have been used are much fewer in number than the reports on injections against diphtheria, nor do they show such good results. Besides, there is no simple test like the Schick test to find out how much protection the child has developed after getting the whooping cough injections. It will be necessary to get reports from large groups of children who have been injected and have been under observation for at least five years by competent investigators before the real value of whooping cough injections can be more definitely evaluated. However, it is not true that whooping cough injections have been known to bring on real whooping cough.

The greatest number of deaths and serious complications resulting directly from having whooping cough occur in children during the first two years of their lives. In older children, death and serious complications occur much less frequently. The greatest amount of work has been done in Chicago by Dr. Sauer, who has reported very excellent results with a vaccine that he has perfected by growing the whooping-cough germ (bacterium Bordet-Gengou) on human blood serum. It is generally accepted that of those children who get the injections four months before the time they come in contact with other children who have active whooping cough, about 50 per cent will not get the disease, about 25 per cent will have only a mild case, and less than 25 per cent may still get real whooping cough.

Now you may understand why physicians may honestly feel it advisable to use the Sauer vaccine. It is used very early, during the fourth or fifth month of the baby's life, so that the infant may get the maximum protection during the period of its life when whooping cough is most dangerous if contracted. Even then a period of four months elapses from the time the injections are given to the time the child acquires its full protection. In children over two years of age the use of the vaccine is optional since at best it gives a 50 per cent complete protection, and since the danger of whooping cough is less than when the child is younger.

Most children get some reaction from the injection from one to two days after each injection; some have fever, get very cranky, refuse food, or vomit; some have no noticeable reaction. They all have some pain and swelling in the arm where the injection is given.

Most pediatricians (baby specialists) recommend the use of the Sauer pertussis (whooping cough) vaccine during the first year of life since it provides about 50 per cent protection and rarely causes more than a slight or moderate local and general reaction.

We have a limited supply of back numbers of Health and Hygiene, and while we last, we are offering them at the low price of 10 cents each or for 25 cents. The issues available are those from April, 1936, to the present, except August, 1937. A complete 16 issues will be sent upon receipt of $1.00.

DON'T FAIL to take advantage of our special combination offer by which you can get the new issue of Photo History free of charge. For details see the back cover of this issue.

PLUTO WATER

(Special Water) (Plato Water)

terrestrial soil; rock formation, rich in glauberite, crystals of calcium-sodium sulphate . . . .

... it does not, therefore, owe its efficacy to the salt dissolved by percolation through the soil . . .

... a clear, colorless water of specific gravity 1064 . . .

The agent who complained about this type of plagiarist characterized it as "almost petty Arsey." We sympathize with the makers of the Spanish water who had their advertising copy cribbed, but our concern is more for the thousands of Pluto users who have been cheated or harmed by the product. It is they who have the greatest right to complain of the deceit that has been practiced on them.

GLANDS AND PERSONALITY

(Continued from page 78)

medical profession to alleviate the diseases which have their origin in the malfunction of these glands. Much can be done with the knowledge and the gland extracts that are already on hand. Active extracts of the pituitary, thyroid, parathyroid, parietal, adrenals, and gonads have been isolated and are being used daily in a great many conditions with gratifying results.

The foregoing account is only a brief sketch of the main functions of the endocrine glands. We have purposely simplified the matter because of the complexity of the subject. Nothing was said about the extraordinary body and behavior changes that occur at adolescence, all of which are a result of the stimulus of the glands, nor were the important effects of one gland upon another mentioned. Diseases of the endocrine glands were merely mentioned, yet this constitutes one of the most important phases of the entire subject.

These points will all be dealt with more thoroughly in later articles which will take up the various endocrine glands separately and deal with them in greater detail.
DANGERS IN PAINTING  
(Continued from page 100)

laws are very much more inadequate than in New York State; how much worse off the painters are in these states we can only imagine. Mr. Gersh and the New York District Council Number 9 of the Brotherhood of Painters, Decorators, and Paperhangers of America are to be congratulated for their splendid contribution to our knowledge of occupational diseases which affect the painter. That this booklet has been published by a trade union is indicative of a new and progressive interest on the part of the trade unions in a field of workers' welfare which they have thus far woefully neglected. Other trade unions should emulate this splendid example in their own trades.

The first step in combating the scourge of industrial disease is to make surveys and reports of this sort. Following this step, industrial disease clinics under trade union auspices must be established to carry out the preventive programs that will grow out of the amassed facts. Such clinics could enlist the support and financial aid of our federal and state departments of labor if a unified and militant trade union movement demanded such support.

Occupational Hazards and the Painter, with Special Reference to New York, by Adolph B. Gersh, 99 pp., 26 illus., Brotherhood of Painters, Decorators, and Paperhangers, District Council Number 9, N. Y., 50 cents.

Abracadabra

An ancient physician by the name of Serenus Sammonicus recommended for aches and fevers the following remedy:

A paper was folded in the form of a cross and suspended from the neck by a strip of linen, so that it reached and rested on the pit of the stomach. This was worn for nine days and then cast before sunrise in a stream running eastward. On the paper was inscribed the following:

ABRACADABRA

This is no worse than Alka-Seltzer.

ATHLETE'S FOOT  
(Continued from page 97)

The usual treatment of these complicated cases consists of the application of soothing substances if the feet are inflamed or blistered. X-rays are frequently used both on the inflamed feet and the blistered hands. Persistent efforts are made to clear up the infection between the toes for if this is not done the hand will continue to break out with the blisters. Self-diagnosis and treatment are not advisable since they are either useless or dangerous. It is for this reason that we do not advise the use of any particular fungicidal preparation in this article.

Preventing Infection

Finally, a word should be said about the manner of infection and its personal and social implications. In this country a majority of people today have fungus infections in the spaces between their toes, whether they are aware of it or not. This is in great part due to our habits of frequent bathing and to our indulgence in athletic sports, especially swimming. The bathroom, the swimming pool, and the damp locker room floor are the greatest sources of infection, for these places furnish an ideal place for the germs to thrive and grow. The person walking barefooted in these places should be discouraged as much as possible. The feet should be washed and rinsed thoroughly after a swim or shower, and as soon as the feet are dried it is well to step directly into slippers.

For those who have already contracted the disease part of the treatment is to discard or wear and which a flat, open container of formalin has been placed. The shoes should be left in the box for twenty-four hours and then permitted to air for three or four days in order to remove all traces of formalin or benzine. Socks may be sterilized by sending them to the laundry or by boiling them.

HEALTH and HYGIENE

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Are You Safe At Home?

38,500 persons in the United States died last year as a result of preventable accidents in the home—one every 15 minutes. 5,620,000 persons were injured at home last year—four times as many as were hurt in automobile accidents.

YOU MAY BE ONE OF THOSE WHO WILL BE INJURED IN 1937

Conditions which cause accidents in the home can easily go unnoticed—that's why so many accidents happen. The time to check up on your own home is NOW, before the accident happens.

Next month we are beginning a series of illustrated articles on

Home Accidents

These articles will cover every phase of the subject and will be continued from month to month. By following them you can learn what measures to take in order to guard against the many common house-hold accidents.

READ

HEALTH and HYGIENE

And make your home a safe place.

Other articles coming in the October issue:

COOPERATIVE MEDICAL SERVICE
By DR. KINGSLEY ROBERTS
Medical Director of the Bureau of Cooperative Medicine

CARE OF CHILDREN'S TEETH

HOW IS YOUR HEART?

TEACHING YOUR CHILD SEX