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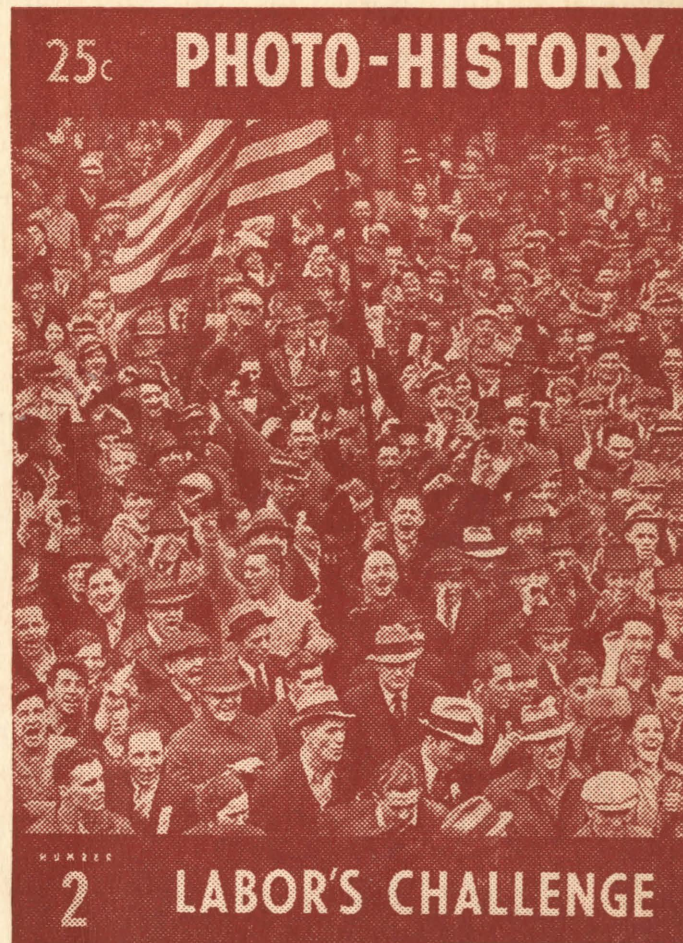
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SEPTEMBER, 1937

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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

The Popular Health Magazine Written by Doctors

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A. O. OF LOS ANGELES writes: "Pro-
fessor Sherman in his 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 sub-
ject. 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 prob-
lems a main feature of many of its
issues."

WE HAVE TRIED not to overempha-
size 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 arti-
cle in each issue. It seems to us that the
important thing is not 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 and then sit down and write us a
note letting us know whether or not you
think that sex rears its head too consis-
tently 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 Thomas" system of hair and
scalp treatment apparently caused quite
a stir among our readers. We have re-
ceived 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

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*Drawings by Chas. E. Colahan
and Mischa Richter*

CARL MALMBERG Editor
SADIE FRANKLIN, Business Manager

HEALTH AND HYGIENE

Magazine of the People's Health Educational League

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weeks. Please send old address along with the new.

Strong cathartic salts are the chief ingredients of this widely sold product. An exposé of a laxative that has been misrepresented to the public for years.

Questions and Answers

If you wish to have any health problem discussed write to HEALTH and HYGIENE. Your letter will be referred to one of our doctors for reply. However, diagnosis of individual cases and prescription for their treatment will not be undertaken. No letter will receive attention unless it is signed and accompanied by a self-addressed, stamped envelope.

Benzedrine Sulphate—Not a Pick-Me-Up Akron, Ohio.

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 to "pep one up"?—V. S.

Answer—Benzedrine sulphate is related chemically to adrenalin and ephedrin. It may be administered by mouth. It has many effects on the body, causing a rise in blood pressure in some patients, an increase in heart rate, and a feeling of exhilaration and increased ability to work. It overcomes fatigue and depression. It is not a substitute, however, for adequate rest, sleep, and food.



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.

* * *

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?—S. K.

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

(Continued on page 101)

Pluto – The Devil's Purge

PREVIOUS articles in HEALTH AND HYGIENE have discussed the subject of constipation and have dealt with a number of patent medicines sold for its cure or prevention. We have pointed out that constipation, like headache or cough, is merely a symptom and may be due to many different conditions having little or nothing in common. Just as the treatment of a headache caused by a tumor differs from that of one which is due to the fact that one's husband stays out late at night, so also constipation which is due to a tumor of the intestines should not be treated in the same way as constipation arising out of faulty training in bowel habits.

We have shown how lightly the glib salesmen for *Bromo-Seltzer*, *Rem*, and innumerable other patent medicines dismiss the whole question of the fundamental differences in the cause, and therefore in the treatment, of nature's danger signals. With a magnificent disdain they brush aside the scientific evidence branding them and their products as cheats, frauds, and menaces to health. As long as business is good, let the *Bromo-Seltzer* addicts become hopelessly enslaved to the drug. And as long as the French Lick Springs Hotel Company continues to earn handsome dividends, what does it matter if every user of *Pluto* water aggravates his bowel disturbance with each dose, thus rendering cure progressively more difficult? If, in an occasional case of intestinal obstruction the patient dies 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



Richter.

Mischa Richter

Grimm or Baron Munchausen. The dreams of the opium-eaters are prosaic and rational compared to the claims made for *Pluto*. For example:

"Will quickly relieve and permanently cure such afflictions as indigestion, constipation, kidney, liver and stomach trouble, rheumatism, nervous disorders, acute or chronic alcoholism. . . ."

"A swift and sure specific for indigestion, constipation, kidney and liver disease. . . ."

"Exercises a specific influence both in the prevention and cure of inflammation of the biliary tract."

"Renovates and builds tissue."

"Restores the functions of the stomach."

What are the ingredients of this magic potion? Strangely enough, *Pluto* is simply ordinary Epsom salts, Glauber's salts (another strong saline cathartic), a small amount of table salt, and two other salts (calcium sulphate and magnesium carbonate). The first two ingredients are the ones which produce the effects.

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 a hundred carries this form of *Pluto*. It is the concentrated form that is widely sold. According to the manufacturer's statement this "is the same water [as the natural product] except that it goes through a process of boiling, eliminating the free gases, making the water in the neighborhood of ten times as strong as the natural spring water."

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 Glauber's salts, nearly 100 times as much Epsom salts, and about the same amount of table salt. It would, of course, be quite impossible to prepare the concentrated form from the natural water by a process as simple as boiling the latter. *Pluto* water is for practical purposes nothing more nor less than a strong solution of Epsom and Glauber's salts. One can buy these salts in any drug store at the merest fraction of the cost of *Pluto*.

Not content with selling Epsom salts under a trade name, with a resulting manifold in-

crease in the price to the consumer, the company has resorted to a number of utter frauds in the exploitation of the product. For years the company advertised in its booklets and elsewhere that the "natural" *Pluto* contained sulphur in several forms, and added gravely that this ingredient "is by many considered the most important constituent of the water." In what manner the sulphur would be of benefit is not disclosed, nor does medical science support the belief that it would be of any benefit; but even if it were true that the sulphur contributed anything of value, it would make no difference because repeated analyses failed to reveal any trace of sulphur in *Pluto*! Furthermore, as any chemist knows, it would be utterly impossible for this alkaline water to contain sulphur in the acid forms claimed by the company. To put it differently, *Pluto* has falsely claimed the presence of a substance which would be of no value even if it were contained in the water.

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 and misleading advertising. The company admitted the falsity of the claims made in the past regarding the value of *Pluto* in constipation, gall-bladder disease, liver trouble, "cleansing the body of health-destroying poison," and so on.

It has even been charged that *Pluto's* advertising blurbs themselves were stolen from a rival mineral water concern. Years ago the American agent of a Spanish company complained that a "*pluto*-cratic competitor" had stolen whole sentences from his advertising. It is of interest to observe the remarkable resemblance between the claims made for these two waters:

<i>Claims Made for a Spanish Water in 1893</i>	<i>Claims made for Pluto in 1937</i>
--	--------------------------------------

"The . . . water emerges as a gushing spring from a tertiary soil, rock	Pluto emerges as a gushing spring from a tertiary soil, rock
---	--

(Continued on page 103)

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.

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. Needless to say the importance of the glands is enormous.

The body (both human and animal) consists of a bony skeleton enveloped by 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. Where do the glands come in?

In the endocrine glands are produced certain important chemical substances called hormones. These chemical substances are deposited directly into the blood stream. Each gland manufactures a different hormone, and some of them manufacture more than one. The hormones are very potent, and although minute in quantity

they have a decisive effect on the most vital body functions. Many of them are vital to life itself. Carried by the blood stream to every tissue and cell of the body, they stimulate these tissues so that they are able to perform their functions. The skeleton grows, the muscles contract, the brain functions, the individual eats, sleeps, reproduces—all in response to stimuli from these glands. The combined action of their secretions constitutes the very essence of body metabolism. It might be said that a full appreciation and understanding of their role constitutes a pleasure akin to the engineer's enjoyment of a complex machine or the artist's appreciation of a finely executed work of art.

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.



Lyon and Engel

The fat lady, the human skeleton, the giant and pygmy, the bearded woman, the dog-faced boy, the effeminate man, and all the other usual circus freaks are generally persons who are suffering from glandular misfunction.

The parathyroids, four in number, lie in back of the thyroid. Each is no larger than a split pea. Their secretion governs the metabolism (burning) of phosphorus and calcium in the blood. These elements are highly important because the strength of the bones and teeth is partly related to the concentration of these elements in the blood.

The pancreas, situated behind the stomach, is connected with the metabolism of sugar, the body fuel. The hormone is not secreted by the entire pancreas but only by certain special small groups of cells in the gland called "islands." The hormone in this instance is called insulin. Too little insulin results in diabetes. Too much insulin results in severe hunger pains, and if the excess is very great death may result. Insulin is now commercially available and has made a normal life possible for the diabetes sufferer, who was formerly doomed.

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 unrelieved 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 man 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)

Carelessness in cleansing dishes and utensils is a frequent cause of infection among restaurant patrons. An article telling how safety is to be achieved.

Is It Safe to Eat and Drink in Public?

IF IT is safe to eat and drink in public, why do so many patrons furtively wipe each piece of silverware on their napkins before using it? There must be some grounds for the suspicion that prompts them to make such a gesture—futile though it be—to protect their health. Is it not that they realize that forks and spoons come into intimate contact with the mouths of numerous strangers during the course of a day, and that danger lurks in such promiscuous use of personal articles.

High Prices Don't Exclude Germs

Why do they stop at silverware, though? Don't cups and glasses also touch the lips? Obviously a customer's role as "assistant dishwasher" must stop somewhere, and it is awkward to try to wipe off the rim of a glass that has water in it, or the edge of a cup filled with steaming coffee.

These silver-polishing patrons may seem a little silly to those who go through life unworried about the existence of that unseen world of enemies—disease germs. But the menace of disease germs is well known by now. Even school children possess a greater knowledge of them than did eminent physicians of a hundred years ago. Most modern medical men are convinced that germs do cause numerous diseases and that they may be transmitted either directly from person to person or indirectly through eating and drinking utensils.

The hazards of eating and drinking in public places are discouragingly numerous, depending upon a myriad of accidental factors, but largely upon two controllable ones: the efficiency of the local health department and the working methods of the management and personnel of the eating place in question. The

stricter the health department is in insisting upon sanitary practices in the operation of eating and drinking places, the fewer the health risks patrons have to take. Even so, a great deal depends upon the cooperation of the management and the personnel. After all, it is in their hands each customer, whether he realizes it or not, places his health; and if they are careless—behind the back of the health inspector—in the handling of food and dishes, the customer may suffer unpleasant consequences.

The main danger for the customer is the possibility of taking into his system disease-producing germs left on utensils by former patrons. Even the so-called "exclusive" restaurants, which may exclude certain patrons because of price, cannot exclude germs, for these places are bound to number among their patronage people with infectious ailments, such as colds, tuberculosis, and trench mouth.

The Common Drinking Cup

"It is probably no exaggeration to say that every day there are in the United States, on an average, at least one million persons who are infected with or recovering from a communicable disease and each of these is a source of danger to others through the common drinking glass," said Dr. J. Lynn Mahaffey, New Jersey State Director of Health, in a recent newspaper article. Speaking for the Department of Health, he declared:

The department believes that such diseases as diphtheria, sore throat, scarlet fever, infantile paralysis, and the common cold are caused by germs conveyed from person to person directly. These germs may also be conveyed from one to another by the use of eating and drinking receptacles which have not been properly cleansed between use.

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 is that 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 drink after 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 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 unnecessary. Surely something is being done about the situation? Yes, something is being done, but only to the limited extent possible under the present health department set-up. Most departments are under-staffed, and it is simply physically impossible for inspectors to get around to all food-handling establishments in their territory frequently enough to force proprietors to abide by the law at all times. It is an understandable human trait that proprietors will relax their vigilance after the inspector has left, and the longer the lapse between visits the more "relaxed" in their watchfulness proprietors are likely to become.

"Can't Enforce Sterile Glass Rule in City" ran a recent headline in the Richmond (Va.) *News Leader*. In crusading against unclean glassware in soda fountains and restaurants, the *News Leader* has aroused widespread interest and enthusiastic backing by local physicians,

dentists, the Parent-Teacher Association, and the Richmond Housewives League. Following is an interesting quotation from one of their articles:

Violation of the city ordinance requiring proper cleansing and 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. Browne, city epidemiologist, to report places known not to be taking proper sanitary precautions to the Health Department, and to demand drinks served in 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. Browne said.

Undoubtedly, he added, improper sterilization of glasses is a great 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.

Aside from the ordinary human lapses into carelessness that can be expected of most proprietors and employees, and aside from the absence of ade-

quate health department enforcement machinery, there are four major reasons why the health of the public suffers neglect in public eating and drinking establishments:

- (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 uncleanness 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 a friend and political ally, but his job as well. Influential 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



Mischa Richter

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 will be 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.

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 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 unsanitary habits of employees they notice. Meekness in customers is bound to beget carelessness in proprietors and employees. So long as there are no complaints an 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-diners 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 a foe, 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 1638, "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 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!

TO MOST of us Charles Dana of the old *New York Sun* is famous only for his epithet "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 can-

not 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 or rabid dog has a 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. He has difficulty in breathing, but especially in swallowing. The sufferer gets very thirsty, but when he tries to drink he experiences a cramp of the throat muscles that makes drinking impossible. These cramps are often started by such slight stimuli as hearing a slight noise or seeing a bright light. As in the dog, thick saliva clings

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 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 inserted into each of the tooth marks and 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.

A child's quick recovery from illness may depend on whether or not you know what to do until the doctor arrives. Practical advice for mothers.

Taking Care of the Sick Child

O H, DOCTOR, I'm so glad you're here. Jimmy has been sick for two days. I've done everything I could and he's no better. I gave him a good dose of *Castoria* as soon as I noticed he had fever, and rubbed *Vick's* on his chest. Yesterday my neighbor, Mrs. Smith, told me that her Johnny always gets better when she rubs camphorated oil on him, and I tried that."

Nine times out of ten some such story greets the doctor upon his arrival. It is natural for the anxious mother to feel that she just must do something when her child becomes ill, and the medical profession is largely to blame for not making it more widely known that it is not always necessary to "do something." As a matter of fact, "doing something" may do much more harm than good.

What Not to Do

The most common procedure is to give the child a "physic" or laxative as soon as he becomes ill. This measure is usually of no curative value. Certainly, if the child's bowels have been moving regularly, there is no indication for it. An infection in the throat or nose cannot be cured by a laxative. But worst of all, it can do great harm if given when the child is complaining of a bellyache, particularly if the bellyache should be due to appendicitis. In such a case a ruptured appendix with consequent peritonitis and death may result. If the child is constipated the safest thing to do is to give him a small enema with plain water.

Does rubbing ointments on the child in case of a "cold" do any good? It is extremely doubtful that it does. The odor is frequently irritating to the nose, and the skin can be markedly irritated, especially in infants. It is not unusual for bad rashes to be caused by the application of ointments or camphorated oil. If the child has

a rash, the application of medicine to it may make it worse, or it may change the appearance of the rash so that the doctor cannot make a diagnosis.

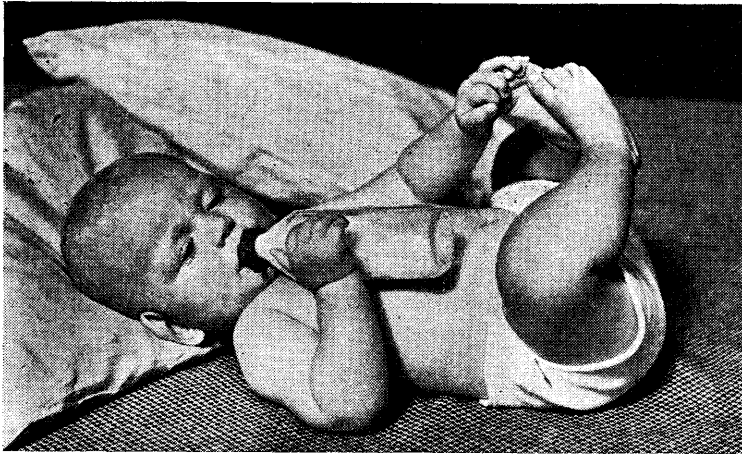
The value of nose drops is questionable, and in the case of oily drops there is a danger of pneumonia if the oil gets into the lungs. The development of a cough is an indication for an examination by the doctor and not for cough medicine. Cough medicine may relieve the cough, but it will not cure the disease that may be causing the cough.

Mothers frequently complain because a sick child will not eat. The mother forgets that she herself never feels like eating when she is ill, and that this lack of inclination for food is a natural phenomenon in acute sickness. A sick adult is lucky, however, in that nobody stands over him and forces him to eat. Don't force your child to eat when he is sick or convalescing from an illness. The digestive processes are disturbed during illness and there is no desire for food. As soon as enough improvement has occurred your child will make up for all that he has lost and more.

It goes without saying that where there is vomiting all food should be withheld, and that when water or fruit juices are offered they should be given in small amounts. Larger amounts of fluids, given at one time, will usually bring on nausea and cause the vomiting to continue.

Keeping Baby Comfortable

A widespread belief among lay people is that when the patient is running a fever it is necessary to keep him warm in order to prevent his "taking cold." Thus, an infant or child who is running a temperature of 104 or 105 degrees is kept in a stifling hot room and covered with several layers of bedclothes. The poor child



H. Armstrong Roberts

The small child who is ill can't protest effectively when he is mistreated. 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 luke-warm 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 luke-warm 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.

Editorial:

Playgrounds for Our Children

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 furor 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 die 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 grow-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.

Mr. Moses, Of All Persons! It is these facts rather than the occasional sex crimes

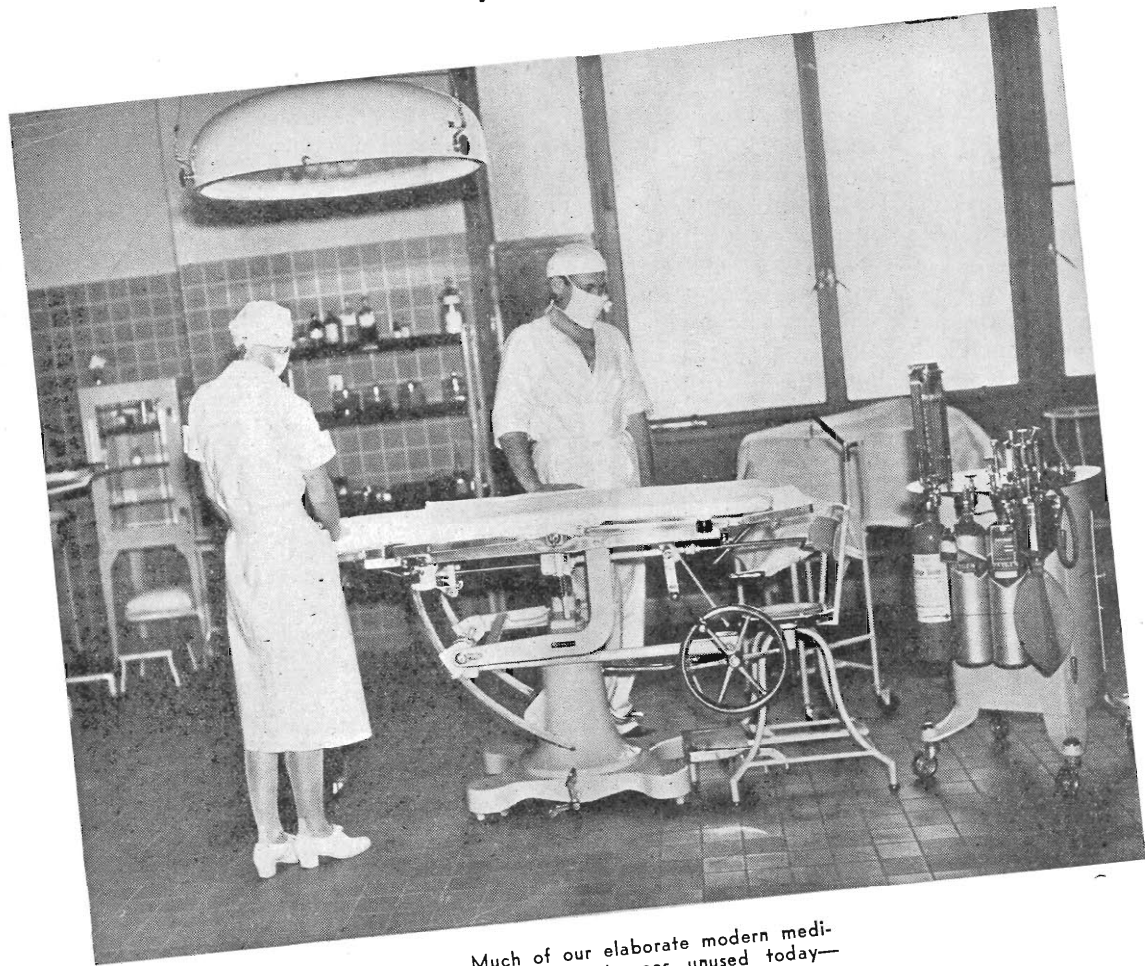
—deplorable though they may be—that should awaken the community to the health needs of its children. Moreover, it is apparent that what is needed is a far-reaching program of playground construction rather than a reorganization of present facilities. Already there are signs that reactionary interests are trying to becloud 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

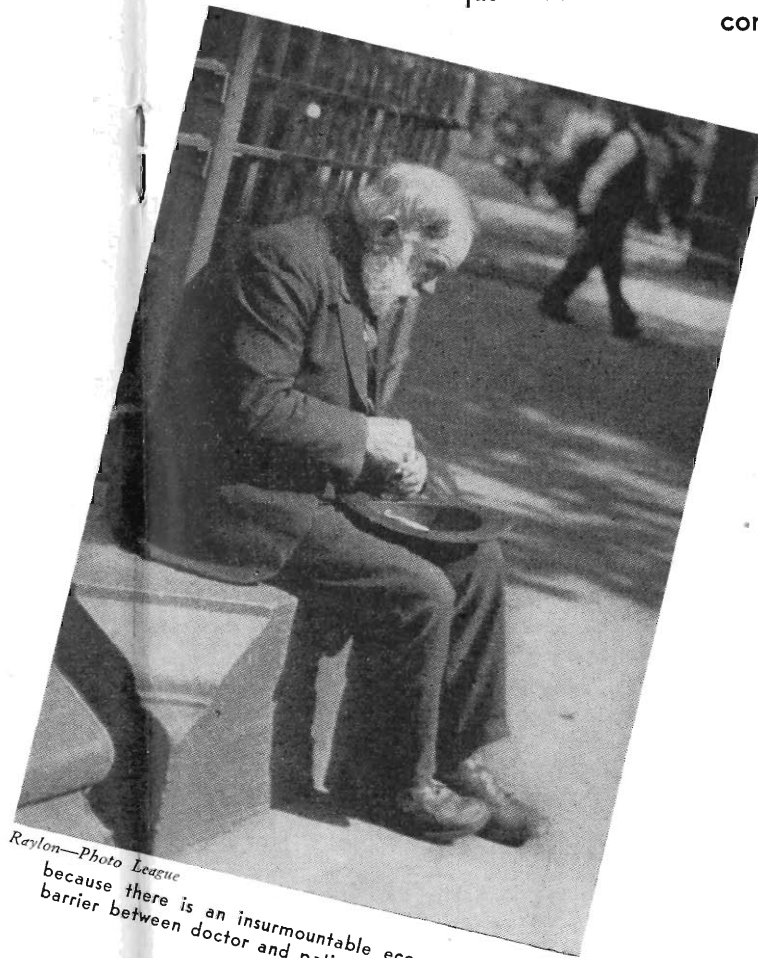
By JOHN A. KINGSBURY

This paper, written by one of America's leading authorities on public health, has just been awarded the Pugsley prize as 1937's most outstanding contribution to the literature of social work.



PWA photo

Much of our elaborate modern medical equipment goes unused today—



Raylon—Photo League
because there is an insurmountable economic barrier between doctor and patient.

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

* This article is an abstract of the address presented by Mr. Kingsbury at the National Conference of Social Work in Indianapolis, May 28, 1937.

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 forth.

(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-

lic medicine, notably in the care of the insane, the mental defectives, and the tuberculous. It is not a question of whether we shall have public medicine, but whether we shall have more of it—and I favor more of it. Public medicine is meeting a great need, and, in the main, it is efficiently administered.

I am in hearty accord with the plan for extension of public health facilities favored by the Surgeon General and by most of the leading state and local health authorities and by many voluntary health agencies. Of course we need more and better-equipped health centers; more clinics for specific preventive functions; more centers for the diagnosis and treatment of tuberculosis, and of the venereal diseases; and more maternity centers and baby and child welfare stations.

We are making progress both in the direction of public medicine and public health service. But our progress is too slow. We are reaching hundreds of thousands through these facilities and by voluntary health and hospital insurance, group medicine and contract practice; but we must meet the needs of tens of millions. While we are debating cleverly, tens of thousands are dying from preventable causes and millions are suffering from remediable sickness. I am convinced that we can meet the needs which confront us, and do this within the near future, only through a comprehensive national health program which includes compulsory health insurance, supervised and subsidized by the federal government.

Enough Money Is Spent

A national health plan should be flexible enough to permit the several states to decide whether their local conditions require greater or lesser emphasis on public medicine, on the extension of public health facilities, or on compulsory health insurance. But federal aid—financial and technical—should be available to the states equally for all three procedures. Within broad limitations laid down in federal statute, the choice of each procedure and the extent to which it is applied should depend upon conditions in each state and should fall within the sphere of state action.

We now spend in any normal year nearly four billion dollars (or \$30 per person) for health and medical services; and this is nearly enough to buy adequate medical care for everyone. The basic problem is not to find more money than is now spent for these services, but

to find new and better ways of directing customary expenditures into more productive channels and of reducing the burdens caused by unequal costs. It seems to me obvious that we are not going to obtain, in the near future, any considerable portion of this four billion dollar sum from tax funds. It would be absurdly optimistic to assume that within the next five or ten years Congress will add to the funds available annually to the Public Health Service so much as \$500,000,000 or \$200,000,000 or even \$100,000,000. Yet almost \$4,000,000,000 are required to bring adequate medical care to all the people. Expand the tax-supported public health program as we will, the complete answer to a great national need is not to be found along this road.

A Report Long Overdue

It is my judgment 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 normal times from one-third to one-half of all dependency can be 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 major 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 advisory 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." These advisory 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 committees 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 consider 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 local 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 and are able to 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 eager for panel service. . . . Without such steady income 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 it 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 their 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 effrontery. 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

Committee and its staff were still deliberating, the American Medical Association held a special session of its House of Delegates—the first since the World War—and passed resolutions condemning compulsory health insurance and important health and welfare sections of the then pending Social Security Bill! There were members of the Medical Advisory Board, be it said to their credit, who were independent of this action and were not party to this political trickery.

Like certain other big business organizations, still endeavoring to defeat other aspects of the New Deal program, the American Medical Association is exerting all its power to prevent compulsory health insurance from taking its proper place in the Social Security Act.

Politicians vs. Real Leaders

One wonders how long the real leaders of the medical profession, as well as the rank and file of doctors and the members of the various auxiliary professions—dentists, nurses, hospital workers and others—will permit the medical politicians, who too often control medical societies and the editorial columns of the journals, to continue to obstruct progress and to delay and forestall sound legislation. A ray of hope has just begun to shine over the horizon of organized medicine, shining from a massive report recently issued by the American Foundation, entitled *American Medicine: Expert Testimony Out of Court*.

The consensus of opinion of the 2,200 American men of medicine who are credited with the authorship of these volumes is clearly that the doctor "is no longer concerned exclusively with the care of the sick, but also with a guardianship of the health of the nominally well"; that "the present costs of medical care are tragically out of reach of a large part of the population"; that the state has a stake in the health of its people. This is progress, and much of it is quite obviously contrary to the official views of the American Medical Association. Keep in mind that the authors of this report, with apparently few exceptions, are members in good standing of the Association.

The *New York Times*, commenting editorially on this report, says:

Not social workers despised by the American Medical Association, but doctors themselves, a veritable Who's Who in medicine, wrote the Foundation's report. . . . It is now

doubtful if the entrenched officers of the Association truly speak for organized medicine. The 2,200 representative physicians demand far-reaching, socially-conceived reforms in medical education and practice because "the best is not yet good enough." But the Association through its journal advocates a policy of letting medicine evolve naturally (while millions lie ill without adequate care or die because it costs too much to have a doctor) and regards the practice of medicine as a vested interest akin to that of a plumbers' union in the installation of bathtubs or kitchen fixtures.

It now remains to be seen whether these medical leaders, members in good standing of the American Medical Association, will take an aggressive position in the ranks of organized medicine, or whether they will continue to permit themselves to be misrepresented by officers and editors who obviously do not speak for them and who are today the chief obstacle in the way of realization of a comprehensive national health program.

There is today no long-range plan before the social workers of America more important than concerted action for a health program. The social workers must line up against the entrenched officers of organized medicine; they must align themselves beside the leaders of organized labor and beside the real leaders of the medical professions.

Unity Is Needed

Let us put our shoulders to the wheel. We can have, as we should have, a comprehensive health program to meet a crying need of the people. It can be sufficiently flexible to meet the different needs of the several states: public health service for all—adapted through different techniques to urban and rural needs—public medical services where these are most appropriate; medical care through contributory insurance for the wage earners and salaried workers; and—for those who cannot themselves pay contributions—public provision of contributions instead of humiliating hand-out medicine; contributory insurance against temporary or permanent loss of earnings from disabling illness; federal aid and guidance over all. Here is a program worthy of the best traditions of social work, of the medical profession, and of labor. Let these forces unite in demanding its adoption, and no narrow selfish interests can thwart it.

The quantity and quality of food are not the only factors to be considered in the diet; scientific studies have shown that the time interval between meals is also important.

Eat Oftener For Health

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 calory — 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 three times 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 cue 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 percentage of households. As for lunch, the distance 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, "Granting that the three-meal arrangement did arise out of economic conditions, has it not also obtained the sanction of custom because it has been adequate for our needs? We've been getting 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 as much as 500 calories and therefore they often exceed in energy value the food eaten at a conventional breakfast or lunch.

Nearly all the subjects of the experiment ate their largest meal in the evening. Breakfast was usually small and eaten in a hurry, and lunch was obtained from a small package carried to the factory. Some of the workers ate occasionally or even habitually in the evening before going to bed. (Before beginning their investigation, the doctors questioned the workers about their eating habits and discovered that in some cases breakfast or lunch was omitted because of inadequate wages and that the tendency to omit meals was especially marked one or two days before pay day.)

The doctors proceeded to compare the in-

dustrial efficiency of the workers who ate two meals a day with those who ate three, and finally with those who ate five meals a day. After analysis of several operations within the factory, the one finally selected for study was the stitching of the canvas tops of the tennis shoes. The wage system was a guaranteed minimum wage plus a sum calculated upon the rate of production (piece work). "The pay scale had been carefully calculated by an efficient personnel department, and was based upon

production studies made on experienced and highly skilled operators. All of the operators were experienced but few apparently as skilled as those upon whom the pay scale had been calculated. The general average of production was only

60 to 70 per cent of the calculated 100 per cent efficiency." 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 beginning of the third hour of the afternoon, or, about midway between breakfast and lunch and between lunch and supper. The hourly productive 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 industrial efficiency of the operators, but the workers

How Many Meals a Day Do You Eat?

Scientific tests conducted by food experts have shown that efficiency can be increased by eating the right kind of food at proper intervals during the day. A new field of nutrition is opened up by the studies described in this article.

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 objection will no doubt be raised that this system of frequent feeding gives the stomach no opportunity to rest. The fact is, however, that the stomach does not need a rest. It has been conclusively proved by x-ray studies and observations 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 disinclination for thought or work that follow a large meal. These symptoms do not appear after small meals taken at frequent intervals. As a matter of fact, the person who is convalescing, 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 digestion. As far as digestion is concerned, all the advantages lie with small meals eaten at frequent 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 determine 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 operators. The workers observed that during the periods when they were provided with mid-

morning meals they no longer ate all of their lunch.

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 for the diet to become unbalanced. Too often the smaller meals may be taken in the form of sandwiches, ice-cream sodas, pastry, and candy. On a three-meal-a-day schedule most people know that they should have a variety of food, including milk, vegetables, 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 proteins 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 foods 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 industries. 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 employers and their efficiency experts. The workers will welcome a five or six-meal-a-day schedule but they should resist any attempt on the part of the employers to exploit the increased efficiency by setting up new and higher production levels with a consequent speed-up. 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 breakdown.

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" pyorrhea slogan has there been an advertising natural like "athlete's foot." Whereas it was formerly a gaping, 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 by walking barefooted 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 scal-

ing 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 of a soggy consistency. 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. The blisters on the hands are, however, of an entirely different nature. At first they are small and not inflamed, and of the same color as the skin. And, strangest of all, they are found not to contain the germs that are present in the infections on the feet.

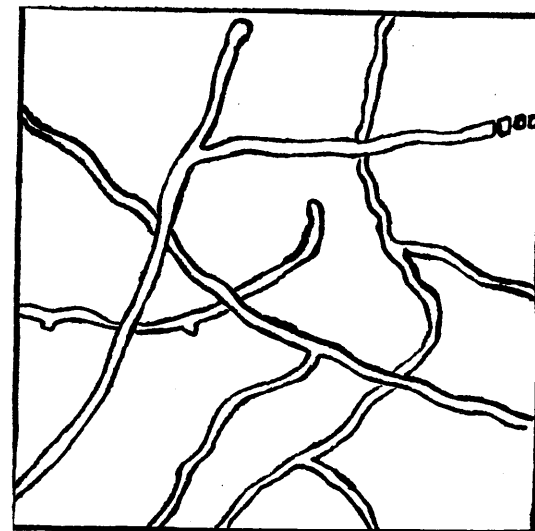
A Hidden Drama

What is the reason for this strange state of affairs? Behind it we have one of those hidden dramas which go on within the human organism. What occurs is briefly this: the fungi first infect the moist, enclosed spaces between the toes which provide an excellent medium for their growth. In this focus of infection they may remain for years without causing any trouble. Certain individuals develop sensitivity to these germs which grow deeply into the skin. Portions of the fungous mass may then break off and find their way into the blood stream, finally reaching the small blood vessels of the hands where they break through into the surrounding skin and attempt to grow. However, if the skin has become sensitized by repeated invasions of this kind it reacts violently and the result is an acute inflammation which manifests itself in the form of small water blisters. In behaving in this way the sensitized skin acts much like a well-trained watch dog who dashes out to attack the first intruder who appears on the scene.

Medical scientists do not know the exact nature or purpose of such sensitization, although it is a common body phenomenon. It is apparently a protective measure though it seldom acts perfectly. The task of destroying the invading germs is only partially accomplished; the germs are killed, but by their death complex chemicals are released which cause the inflammation that is visible to the eye in the form of blisters.

As long as the fungi remain on the feet these tiny blisters will continue to come and go on the hands. Often these blisters do not cause any serious difficulty other than a certain amount of scaling when they are drying up, but sometimes they become inflamed from the use of salves, soaps, or other irritating substances. In this case they may become chronic and serious enough to incapacitate the individual.

It should now be clear that treatment of athlete's foot cannot be applied mechanically to all cases and stages of the disease. This, however, is exactly what the advertised "cures" undertake to do. There are any number of salves and lotions of different compositions and color for which fungicidal (fungi-killing)



This is what the fungous growth responsible for athlete's foot looks like under the microscope.

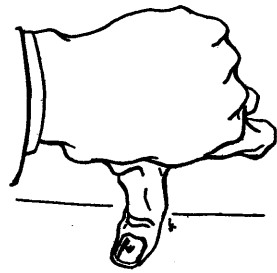
claims are made, but the number of effective chemicals is actually quite limited and they are all known to doctors. Sometimes there may be an effective ingredient in a proprietary mixture, but more often the product is entirely worthless. Don't waste your money on trade marked remedies for the relief of athlete's foot.

The treatment of fungus infections is a medical problem. The simple, uncomplicated case may be treated by any competent physician who will know what fungicidal salve or solution to prescribe. The complicated cases as well as those with secondary rashes on the hands are best treated by a skin specialist according to the needs of the particular case.

(Continued on page 104)

Thumbs Down!

Each month this department will inform readers concerning inferior and falsely advertised foods and drugs. PR signifies a press release of the Federal Trade Commission; NJ signifies a Notice of Judgment of the Food and Drug Administration of the Department of Agriculture.



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, it 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 press releases 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 and 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 benefitted 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 *Ultrasol*, 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.

Occupational illness and accidents take a heavy toll among painters. A trade union sets a fine example in investigating the conditions which affect the health of its members.

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 or 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 Adolph 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 risk of an accident; a precariously hung scaffold, a poorly built platform, a defective ladder, a horse that is insecurely placed—any of these may suddenly collapse and pitch him earthward from what is often a dizzy height.

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 ad-

vances in technique that have characterized other branches of the building trades. Unlike these other branches, where the derrick, the power hoist, the steam shovel, 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 tires 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 same situation obtains. After lunch there are 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, amyl 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 might be well to list here 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 substitutes for lead, the application of proper ventilation, and the establishment of a shorter working day.

Other poisons of which benzol, wood alcohol, turpentine, analine, toluol, zylo, arsenic are only a few, also affect the painter, and their elimination could be effected by further 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 ones. Thorough 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, shellacs, 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 as 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 Compensation Act. Furthermore, there are many states where the

(Continued on page 104)

QUESTIONS AND ANSWERS

(Continued from page 74)

rule, they are coughed up. Of course, they are irritants, and over a long period of time may give rise to a chronic inflammation of the breathing passages.

The real danger lies in inhaling dust from the grinding wheel itself. The material in the wheel may contain silica, and silica dust under certain conditions will produce silicosis, which is decidedly dangerous.

Protection against both types of dust can be assured by means of a respirator mask, which should always be worn when grinding or when near a grinder that is in use. It is also essential that there be a properly designed hood over the grinder with sufficient draft to carry away the dust.

Whether there are symptoms or not, anyone who works at a grinder should have his chest x-rayed. He may be developing silicosis even though it is not sufficiently advanced to give rise to complaints. If there are symptoms such as chronic cough or, particularly, shortness of breath, there should certainly be an x-ray examination, either by a private physician or in a large clinic. In this way, early silicosis can be checked if present. An examination may also enable the worker to obtain compensation.

* * *

Diabetes in Young People

Hammond, Indiana

DEAR DOCTORS:

I am fourteen years old and have been diabetic for one and a half years. I am taking insulin but it doesn't seem to help. Is there any other thing for the cure of diabetes? I read in the newspapers about some new kind of insulin which lasts a whole day. I am writing very fast because I have much school work. Thank you.—M.P.

Answer—It is not yet possible to cure diabetes. However, with the aid of insulin the diabetic patient can live a normal life in spite of the fact that he has the disease.

Diabetes is due to an insufficiency of the hormone known as insulin which is secreted by certain cells in the pancreas and which enables the body to burn or utilize sugar. To make up for the insufficiency insulin taken from the pancreas of certain animals such as the cow, sheep, or pig is supplied to the patient, thus making it possible for him to utilize the sugar he gets in his diet. Perhaps you are taking too little insulin or perhaps your diet is not correct. In any case you should seek the advice of your physician before making any change in treatment.

The new insulin that you ask about, protamine-insulin, is preferable to the old insulin only for

certain patients. You should not take it without your doctor's advice.

We suggest that you ask your parents to buy you a copy of Joslin's *Manual for Diabetics*, or a similar guide.

* * *

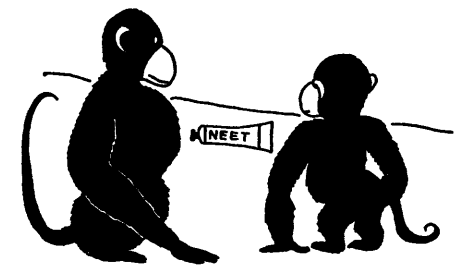
Neet—Not for Superfluous Hair

Pasadena, Calif.

DEAR DOCTORS:

A friend has recommended that I use *Neet* for the removal of superfluous hair. Is this a safe product for me to use for this purpose?—A. C.

Answer—As we have pointed out a number of times in the past, the only safe and permanent way of removing superfluous hair is by electrolysis performed by a physician skilled in this type of work.



The Federal Trade Commission has recently ordered the manufacturers of *Neet* to stop making false claims for their product. The company was ordered to stop claiming that *Neet* was not caustic, that its use discourages the growth of hair and delays its appearance for any material length of time, that it will permanently eradicate hair, or that it is used by surgeons to remove hair before operations. The Commission cautiously says that while *Neet* is not generally caustic, "it might have a caustic effect under certain conditions."

* * *

Snake Venom for Mental Disturbances

Tulsa, Oklahoma.

DEAR DOCTORS:

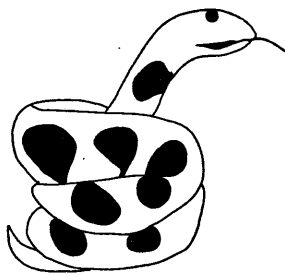
I recently saw a report in a newspaper that snake venom was being successfully used in treating mental disturbances in women during the menopause period. Is there any truth in these claims? I am enclosing the newspaper clipping.—P. T.

Answer—It is always well to discount the claims made for new medical discoveries when these claims appear in newspapers. Newspaper editors are not competent to judge the merits of various forms of treatment, and they are usually concerned chiefly with getting a good story.

For a long time romantically minded people have been trying to find a cure for various diseases in snake venom. Articles on the merits of snake

venom treatment have even appeared in reputable journals, but none of the claims made have ever been substantiated.

From the clipping you send us it is evident that the story about the use of snake venom for mental disturbances is another hoax. You will note that it is stated that the venom may be taken either with a hypodermic needle or by mouth. This in spite of the fact that it has long been known that



Chas. E. Colahan

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 DOCTORS:

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 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 in-

dividuals 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 (baccillus 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 for 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.

Build a Home HEALTH ENCYCLOPEDIA

We have a limited supply of back numbers of **HEALTH and HYGIENE**, and while they last we are offering them at the low price of 10 cents each or three for 25 cents. The issues available are those from April, 1936, to the present, except August, 1937. The entire 16 issues will be sent upon receipt of \$1.*

PURELY PERSONAL

(Continued from page 73)

"no more Thomas' for me." The following letter from L. T. of Jamaica, N. Y., is particularly interesting:

"Our speech instructor at college issued instructions last week concerning the final exam, namely: two six minute talks to be delivered extemporaneously on consecutive mornings.

"Into these talks were to be incorporated all the features of proper voice, diction, posture, etc., that we had studied for the past seven weeks. The topics for discussion, however, were to be chosen by the student.

"On the way home that afternoon I pondered over which subject to choose. Frankly, I was worried. When I arrived home my eyes fell on the purple cover of **HEALTH AND HYGIENE**. I scanned the front cover: it said something about The Thomas'. The title fulfilled one of the requirements of public speaking, namely, something of universal interest. I digested the article, made a short outline of Mr. Sturman's points, and delivered the talk the next morning, at the same time passing around Mischa Richter's absorbing cartoon: 'Before and After.' The talk made, shall I say—a hit!

"There was an immediate response on the part of the other members of the class. Questions were asked and answered. Several students asked where I had obtained my information, and I gave them the address of your publication. To climax all this my instructor asked me when the hour was up for my source material as well. Who knows—perhaps he'd visited The Thomas' . . .

"I just received my grade this morning through the mail. Thanks to **HEALTH AND HYGIENE** it was a B."

THIS LETTER, incidentally, wins the prize this month for the best letter on a reader's reaction to one of our articles. Each month we will select one such letter from those received and, as a prize, give the correspondent his choice of a free, autographed copy of either *100,000,000 Guinea Pigs* or *Diet and Die*.

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.

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If you are planning to move, please notify us of your new address as early as possible in order that you will not miss a single issue. The post-office does not forward magazines, and duplicate copies will not be sent out.

PLUTO WATER

(Continued from page 76)

(Spanish Water)

(Pluto)

tertiary 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. . . .

"It is a clear, colorless water of specific gravity 1070. . . ."

The agent who complained about this type of plagiarism characterized it as "almost petty larceny." 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, pancreas, 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 endocrines 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 combatting 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 Samonicus recommended for agues 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 into a stream running eastward. On the paper was inscribed the following:

ABRACADABRA
BRACADABR
RACADAB
ACADA
CAD
A

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 hands 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 beach, 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 stands a good chance of picking up some of the tiny germ-laden scales that have dropped off someone else's feet.

Going barefooted in these places should therefore 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 sterilize shoes and slippers which have been worn and which may therefore be a source of further infection. Sterilization may be accomplished by washing the insides of the shoes or slippers with benzene or gasoline and then putting them in a tightly closed box in 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 benzene. Socks may be sterilized by sending them to the laundry or by boiling them.

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**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 household 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