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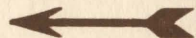
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HEALTH AND HYGIENE



OCTOBER
1936

FIFTEEN
CENTS

Health in Landon's Kansas

by DeWITT GILPIN

FABLES ABOUT PREGNANCY

EXPLAINING PLEURISY

WHAT ABOUT MILK?

The Concentrated Food Fraud

by CARL MALMBERG

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DOZENS of letters have come in acknowledging our request for suggestions on how to improve HEALTH and HYGIENE. But, wonder of wonders, with the exception of two notes, everyone considers the magazine flawless. One of the two dissenters asked for more news from the laboratories. (An article covering new discoveries will be featured in an early issue.) The other dissenter graciously begs that we discontinue publication—we're killing his patent-medicine business. The contest for suggestions will go on for another month. Remember, the writer of the best letter gets an autographed copy of 100,000,000 *Guinea Pigs*.

A FREE autographed copy of 100,000,000 *Guinea Pigs* is still available to anyone who sends in eight new subscriptions. We are grateful to the old subscribers who took the time and trouble to add four hundred new readers in the last month. Nice going.

WE ARE working out plans for a special subscription drive among members of unions, fraternal and social organizations. A year of HEALTH and HYGIENE will be offered them for less than \$1. As soon as plans are complete, they will be announced in the magazine. In the meantime we will appreciate correspondence from members of these groups telling us how people in their organizations can be interested in becoming regular reader.

LAST month's article “Good Housekeeping's Phoney Seal” created quite a stir. One newspaper reprinted most of the story while others used excerpts. One letter, typical of many others, stated that “for years I have used Good Housekeeping's seal of approval to guide me in making purchases. Now I know that the seal is worthless and is just another of Hearst's business affairs. I am very grateful.”

DEWITT GILPIN, whose story on health conditions in Kansas appears in this issue, is a western newspaperman. Carl Malmberg's expose of Benjamin Gayelord Hauser is the fourth article he has written for HEALTH and HYGIENE.

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Editors: EDWARD ADAMS and JOHN STUART

HEALTH and HYGIENE

Magazine of the People's Health Education League

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Scarlet Fever

Children are most susceptible to this disease. The first symptoms are fever and sore throat followed in a few hours by a rash. Not all physicians accept the present preventive measures.

SCARLET FEVER is an acute contagious disease, usually characterized by fever, sore throat, a rash, and certain complications. It is not as contagious as measles or chicken-pox, so that not every individual exposed to a case of scarlet fever develops it. Although scarlet fever is prevalent all year around, it occurs most frequently in the winter months. Children between the ages of two to ten are the most susceptible to the disease. The severity of the disease varies from year to year, with the result that some years one sees many severe cases with a fairly high percentage of deaths, while in other years the disease is a relatively mild one with a low percentage of deaths.

Although for many years it had been known that the *streptococcus* germ is found in the throats of people suffering from this disease, it was not until 1923, that Doctors Dick of Chicago showed definitely that the disease is caused by a *hemolytic streptococcus*. They did this by growing cultures of this germ from the throats of patients suffering from this disease, and then swabbing the throats of volunteer subjects with germs from these cultures. These people then developed typical cases of scarlet

er. However, there seems to be evidence that there are several different so-called strains of hemolytic streptococci which can cause the disease. These organisms produce a poison known scientifically as a toxin which causes some of the symptoms of the disease; namely, a rash, headache, changes in the tongue, vomiting and a mild swelling of the lymph glands. This is not the only way in which this germ acts, however. It also has a direct action which causes sore throat, and many of the complications of the disease, such as swollen glands, infected ears, and so forth. This direct action is the most serious action of the germ. The immunity which follows the disease is usually a protection against the actions of the toxin and not against the direct action of the germs.

An individual may also be naturally immune to the toxin part of the germ and yet be susceptible to infection with the germ itself. Thus it can be readily seen that one could suffer from a sore throat, enlarged glands, infected ears, and so on, caused by the scarlet fever streptococcus, without having the rash of the disease. Such cases can, of course, cause the disease in others who are not immune to the toxin. It goes without saying that all cases of sore throat following exposure to cases of scarlet fever should be considered as scarlet fever germ carriers and be isolated during their illness.

THE isolation of a germ causing scarlet fever led to some important advances in our knowledge and treatment of this disease. The Dicks were able to prepare the toxin produced by this germ. This toxin was then used for various purposes. In the first place the Dicks introduced the Dick test which they claim is a way of determining whether or not a person is immune to scarlet fever. This is done by injecting very minute amounts of the toxin into the skin of the forearm, and examining the area of injection within twenty-four hours. Where there is no reaction, the person is supposed to be immune; where there is a reaction (redness of the skin), the individual is supposed to be susceptible to the disease. This test, however, is not positively certain, and its value is questioned by some authorities. There are many facts which do not fit in with the notion that the Dick test is an absolutely accurate one. In addition, an anti-toxin against scarlet fever has been prepared by injecting the toxin into horses, and then using the serum from the blood of such immunized animals in the treatment of the disease in the early stage. This serum has been of distinct value, the only drawback being that in many instances, quite severe reactions (marked hives, high fever and joint pains) may result from its use. This does not occur so frequently as it did when the anti-

toxin was first introduced. Many doctors prefer to use convalescent serum, obtained from the blood of patients who are convalescing from scarlet fever. Convalescent serum works as well as anti-toxin when given in sufficient dosage, and has the advantage of not causing the reactions which anti-toxin sometimes causes. However, this does not mean that anti-toxin should not be used. It should be used in all severe cases unless convalescent serum is preferred by the doctor and is available in sufficient quantities. Finally, by injecting gradually increased amounts of the scarlet fever toxin into persons who are not immune to the disease as shown by their Dick tests, the Dicks and other observers claim to have produced an immunity to scarlet fever in such persons. However, medical opinion is not unanimous in accepting this method of protection against the disease.

THE disease is usually spread by the contact of people who are not immune to scarlet fever with patients having the disease, or with persons who have scarlet fever germs in their throats although they do not have the disease. The latter are known as carriers. Scarlet fever can also be spread by milk or other foods handled by people who are in contact with the disease or who are carriers. Other objects, such as clothes, toys, and dishes used by patients with scarlet fever, may spread the disease.

A period of three to five days and sometimes as long as a week elapses between the time a susceptible or non-immune individual has been exposed to the disease, and the time his symptoms appear. This interval is called the incubation period. It is a general rule that persons who are known to have been in contact with a case of scarlet fever, are quarantined for at least a week to make sure that they are immune and will not spread the disease.

The symptoms come on quite suddenly. The patient develops a fever and sore throat which at times is rather severe. Vomiting is a frequent symptom, and the patient in general does not feel well. Within twelve to twenty-four

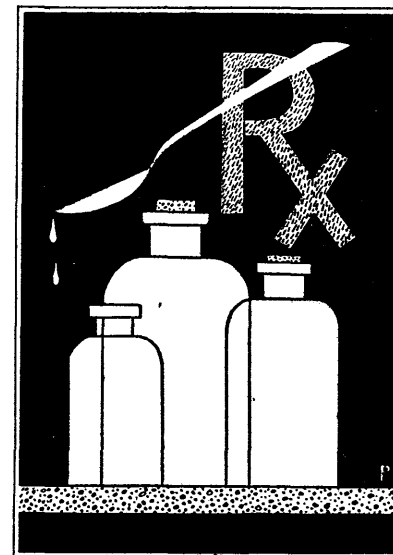
hours, the rash appears, first, as a rule, in the folds of the skin (the creases of the elbow and the folds on the abdomen) and then spreads over the entire body below the face. The rash can best be described as a general flushing of the skin with red pin-point areas. The hair follicles stand out and the patient has the appearance of having red goose pimples. The redness fades when the fingers are pressed down on the skin. The intensity of the rash varies with the severity of the disease, and increases for one to two days. It disappears in from three to five days. During the second week of the disease, the skin begins to peel off in fine flakes, although in the cases with heavy rashes, it may come off in sheets.

The appearance of the tongue undergoes certain changes which, in addition to the rash and sore throat, aids the doctor in the diagnosis of the disease. The tongue is at first heavily coated with small red swellings (the papillae) protruding above the surface. The coating then comes off, leaving a diffusely red surface with the papillae appearing as red swellings. This is known as the "strawberry tongue" of scarlet fever.

Most of the additional symptoms are those due to the so-called complications of the disease. They are in the main caused by the direct invasion of the tissues by the germs as contrasted to the rash, early fever, sore throat

and vomiting which are caused by the toxin produced by the scarlet fever germs. Thus secondary to the sore throat, the glands in the neck become swollen. This is found in all cases, but in some this swelling becomes rather marked, and may last for weeks. These swollen glands may cause fever for a long time. In some instances they become abscessed and have to be opened, while in other instances they form abscesses inside the throat. In the latter cases, the patient complains of difficulty in swallowing, and in turning the head.

Frequently, the germ invades the nose and



sinuses. These cases have a discharge of pus from the nose. In very sick cases, the discharge appears early in the course of the disease and is very heavy. Infection of the ears is another frequent complication. Of course, in such cases the patient, as a rule, will complain of earache. However, it has been observed in not a few instances, that the patients did not complain although the ears were inflamed. Adequate treatment of the ears is important, because the hearing may be affected.

Other less frequent complications are sore joints, which occur more often in adults, and kidney trouble or nephritis. In the latter complication, the patient suddenly begins to pass bloody urine, or scant amounts of smoky urine. The face becomes puffy and the skin becomes rather pale. In severe cases of nephritis, convulsions may appear.

Very early in the disease, in desperately sick patients, the germs causing the disease may invade the blood (septicemia). This is the most serious complication.

THE treatment of the disease varies with the severity of the case and the presence or absence of complications. It goes without saying that the patient should be kept in bed in a separate room. Only one person should take care of him. That person should wear a gown or apron which is kept in the room of the patient, and which is not worn outside the room. The hands should be washed very thoroughly after handling the patient, and before leaving the room. The bed clothes and dishes that the patient uses should be thoroughly boiled and kept away from other dishes and clothes.

It is of course necessary that the patient be watched by a doctor, whose functions is not only to diagnose and treat the case, but to examine the patient daily for any complications, at least until the fever has subsided for several days. Such examinations include inspection of the ears, and urine examinations. In mild cases it is not necessary to use anti-toxin or convalescent serum. In severe cases either should be used early in the course of the disease inasmuch as the anti-toxin or serum is of little value when the patient has been sick for some time. Where the germs have invaded the blood, it is recommended that the patient be transfused with the blood obtained from a donor who is convalescing from scarlet fever.

Generally, the patient should receive liberal

amounts of fruit juices and water. His diet should be a light one, and many physicians recommend a low meat diet in order to prevent kidney trouble. There is no definite proof that this prevents the complication. However, the patient should be protected from drafts, as there is some evidence that patients lying in drafty places are more likely to develop nephritis. Otherwise treatment is directed towards the care of the complications.

Swollen glands are treated with cold applications. If the glands become soft, hot applications are used until the glands are ready to be cut. Infected ears are early treated with ear drops. The ears must be watched, and if necessary, opened by the doctor. Infections of the nose may be treated by the use of antiseptic nose drops, although many physicians prefer not to use nose drops. These are the most common complications, and it is not necessary for our purpose to discuss the treatment of the less common complications. The patient should be kept in bed at least two weeks, and even then should not be allowed to get up if he has any fever or any complications. The quarantine period varies from three to four weeks, but if there are any complications, such as a discharging nose or ears, the patient is not released unless several cultures of the discharges are found to be free from hemolytic streptococci.

It is possible to protect those who have been exposed to the patient by injecting them with either some anti-toxin or convalescent serum when the latter can be obtained. This measure will produce what is known as a passive immunity to the disease. This immunity lasts only a few weeks. It is best to use convalescent serum for this purpose, as its use, as noted before, is not followed by the reaction that sometimes follows the use of anti-toxin.

It is of course very simple for a doctor to say that if your child has scarlet fever that he be seen by a doctor daily, be separated from the rest of the family, receive serum, a good diet and so on. But if you are a worker, you may not be able to afford a daily visit from your doctor, and you may not have enough room to separate your sick child from the others. Anyway you cannot stay away from work during the whole period of quarantine. Those of you who live in larger cities, can best cope with this problem by sending your child to the city or county hospital for contagious diseases where, as a rule, good care is available.

The Concentrated Food Fraud

Quacks and faddists prey on thousands of gullible persons. This article exposes Bengamin Gayelord Hauser, self-styled "health expert," whose diet hokum is supposed to cure most any disease.

By Carl Malmberg

QUACKERY in any form always constitutes a danger, but occasionally a quack appears whose theories are so absurd and whose disregard for the fate of his victims is so flagrant that he must be regarded as an out-and-out menace. When such a man combines his unscrupulousness with a talent for publicity and high-pressure salesmanship his influence is sure to be particularly vicious. Bengamin Gayelord Hauser, the self-styled "Viennese health expert," is such a quack.

Hauser has managed to acquire a certain reputation as well as considerable cash by lecturing to women's clubs and similar organizations. He is the author—and publisher—of a number of blatantly pseudo-scientific books on diet and health, and he has conducted mail-order courses of instruction in the same subjects. Finally, he has installed himself as "scientific" adviser and ballyhoo agent for *Modern Health Products, Inc.*, a commercial firm in Milwaukee, which deals in highly overpriced and largely valueless "health" products and accessories. Through these enterprises Hauser is able to maintain a spacious and well-appointed suite of rooms in one of the more expensive office buildings on Fifth Avenue in New York City.

Although there is no record to show that Hauser was ever graduated from any reputable medical school, he has not hesitated to put the initials "M.D." after his name on some of his stationery. He has also called himself a "naprapath," although just what this term signifies is a mystery. An idea of the sort of stuff out of which his lectures are concocted may be had by reference to the title of one of them: "How to Wash Out All Diseases by Eating God's No. 6 or Dissolving Foods."

From his "Institute" on Fifth Avenue he mails his home study courses in the "Hauser Method of Harmonized Food Selection," for which he has charged as much as \$25 or \$30 on the installment plan. I am informed by the Bureau of Investigation of the American Medical Association that Hauser is reported to have been arrested for his activities in Florida in 1929, and that it is believed he left the state rather than face the charges against him. Lately he has been active in popularizing what he calls a "Zigzag" diet for weight reduction.

I have described Hauser's system of diet in some detail in my book, *Diet and Die*. Briefly, his system is based on the assumption that the body is constantly manufacturing poisons which are the causes of all the diseases to which man is subject. This is by no means an original theory; it is one that is enunciated by at least two-thirds of the food quacks in the business. In order to rid the body of these accumulating poisons it is necessary to adopt periodically a special food regimen, and Hauser provides such a regimen in his "Eliminative Feeding System."

In the "Eliminative" system a person supposedly undergoes "a thorough housecleaning by living exclusively, for seven days, on the foods that dissolve and flush." Hauser strives to impress the uninformed reader with his knowledge of biochemistry by assigning specific functions to various chemical elements. The following partial list indicates Hauser's omniscience in this respect:

Hydrogen—a penetrator and juice producer; physics each cell.

Potassium—a neutralizer and flushing agent.

Sodium—a solvent for hard deposits; good for stiff joints, arteriosclerosis, and so forth.

- Iron—a solvent for all impurities.
- Sulphur—a cleanser and purifier.
- Chlorine—makes for internal cleanliness.
- Magnesium—nature's laxative.
- Manganese—a neutralizer and potent purifier.
- Oxygen—a dissolver.

SUCH a show of knowledge is, of course, pure nonsense. The terms "penetrator, juice producer, neutralizer, solvent," and so forth, are scientifically meaningless. Hauser also knows just what vegetables are rich in each of the above elements, and therefore it is a simple matter for him to inform us just which ones to eat in order to remedy any particular disease state.

In the "Eliminative" system the seven-day diet consists of the following daily allowance:

- (a) Vegetable salt water three times a day.
- (b) Ten or twelve whole acid fruits.
- (c) One quart or more of potassium broth.
- (d) One large, raw salad.
- (e) Cooked vegetables for dinner.
- (f) *Swiss Kriss* every night.

Like all faddists Hauser is partial to vegetables and abhors meat. The vegetable salt water may be made with ordinary salt, but *Nu-Vege-Sal*, "The Nutrofied Salt Seasoning" of which a small package may be obtained from the *Modern Health Products, Inc.*, for fifty cents, is advised. One pound of this salt, we are told, contains the mineral and vitamin equivalent of five pounds of green vegetables. Even at this rate it would be much cheaper to buy spinach.

The "potassium broth" is Hauser's unique contribution to the art of gastronomy. It is simply a broth made of carrots, celery, parsley, spinach, and vegetable salt (*Nu-Vege-Sal*, we are reminded, is excellent for the purpose). For those who wish to prepare their own broth Hauser recommends a special vegetable juice extractor at \$4.50; for those who do not wish to go to this trouble he offers an "original formula, double strength" potassium broth in powdered form at 75 cents a small can. Simply dissolve a teaspoonful of the powder in a cupful of hot water, and you have all the virtues of fresh vegetable broth! It is significant that Hauser, who like most faddists goes into rap-



Two of the products Hauser ballyhoos.

tures over the benefits of the so-called "natural" foods, especially fresh, raw vegetables, can get equally enthusiastic over a prepared, devitalized powder of unspecified composition. Of course, the fact that gullible people will pay 75 cents for 3½ ounces of the powder is sufficient explanation of his enthusiasm.

The *Swiss Kriss* which is to be taken nightly is simply a laxative herb tea. This laxative must be taken every night during the elimination period, regardless of whether or not bowel action is normal. In any case, it is fairly safe to say that it will not be normal at the end of the seven-day period.

Such a diet may cause a good deal of harm even to a healthy person, especially if repeated at frequent intervals, as Hauser advises. If nothing else, the indiscriminate dosage with a laxative presents a distinct possibility of harm. The real damage, however, is done to the unfortunate persons who are ill and who place faith in Hauser's ridiculous assurances that he can cure them. When Hauser states that "there is no disease on this earth that cannot be eliminated when the living elements of food are used," there are certain to be some sick people who will believe him, if for no other reason than that they feel a desperate hope that he is right. And it is a sad fact that among these sick people there are certain to be some who will either die or become much worse because they placed their faith in Hauser's hokum instead of getting proper treatment while there was yet time.

Hauser's unreliability is apparent in many of his statements concerning proper treatment for specific diseases. These statements are so preposterous and capable of causing such serious harm that Hauser has apparently not dared to include them in the books he has published. Instead, he has incorporated them in a fifteen-page mimeographed booklet which he calls a *Dictionary of Healing* and which he distributes to the subscribers to his mail-order course. Forty-eight ailments ranging from falling hair to cancer are discussed with their appropriate cures.

To a person who is stricken with appendicitis he gives the following advice: "Cut out all eating—not the appendix." He continues: "The first thing to do for the relief of pain and the removal of congestion is to give an enema. . . . To cleanse the bowels internally take a heaping teaspoonful of *Swiss Kriss* . . .

two or three times a day until all waste has been removed (italics mine—C.M.). Now, it is a well-known fact that the worst thing a person with an attack of appendicitis can do is take a laxative of any kind. Most deaths from appendicitis occur among persons who have taken a laxative before operative treatment. The appendix, already highly inflamed, may easily be ruptured by the bowel action brought on by the laxative.

HIGH blood pressure, according to Hauser's *Dictionary*, may be remedied "by just drinking lots and lots of potassium broth." Strangely enough, if it is *low* blood pressure that is troubling you the remedy is the same—"an abundance of potassium broth should be used."

Hauser has no hesitation about prescribing for such a serious disease as cancer. "Cancer is the result of total chemical disturbance," he says, "and we need never worry about this condition if we eat abundantly every day of fruit and vegetables." "Total chemical disturbance," is, of course, an utterly meaningless phrase, and the cancer victim who places his faith in fruit and vegetables is doomed to an agonizing death.

With the same glib assurance Hauser hands out his old wives' prescriptions for such serious conditions as diabetes, heart troubles, anemia, nephritis, glandular maladjustments, and many others. The least concern for the welfare of his customers would require that he proceed with caution when he is dealing with ailments as serious as these, but he is careful not to say anything that might cast doubt on his perfect understanding of every disease under the sun. When he does see fit to sound a warning it is usually some such gibberish as this: "Never mix the juices of two acid fruits. Acid fruits vibrate at a certain rate, and when they are thrown together they neutralize one another."

Certainly, it is significant that this falsifier of health information should be given an opportunity to broadcast his statements in the columns of a newspaper owned by the foremost falsifier of news, William Randolph Hearst. Hearst and his fellow fascists have little respect for science, and should they succeed in their designs for seizing power it is not unlikely that Hauser and charlatans like him would find themselves the recipients of official sanction which they would be only too glad to have.

Fables About Pregnancy

Are there any signs by which sex can be predicted? Can sex be controlled? Is the unborn child influenced by the mother's impressions? What really determines the sex of the child?

WHEREVER women congregate, one topic often discussed is pregnancy. Eventually they will drift into the subject of sex prediction. We all have heard about the uncanny ability of our mothers, grandmothers and great-grandmothers to prophecy whether the offspring was going to be male or female. They were just as sure of themselves on this score as the farmer in predicting weather.

The favorite signs used in foretelling sex have been handed down for generations. The most common one, of course, is the shape that the expectant mothers assumes late in her pregnancy. If the abdomen juts out to a point, they say it will be a boy. If the abdomen is rounded in outline, and the prominence is in the back, it will be a girl. If the child is active and keeps the mother awake nights by its forceful kicks, a son will be born. Strength and masculinity are supposed to be synonymous. Conversely, a quiet baby is indicative of retiring and shy femininity. If the mother vomits in the morning, she will bear a son; if she is sick later in the day, it will be a daughter. If her face becomes puffy and the nose broadens, a son is sure to be born; if the mother retains her normal profile, she will beget a girl. If the mother has a continual sleepy feeling, she can expect a daughter. Skin blotches mean one thing, a clear skin something else.

Each one has his own way of predicting sex. Any method will work in a series of two or three trials when we have only two sexes to choose from. But collected statistics covering large numbers of births have proven that *sex cannot be foretold* by any sign that the expectant mother presents.

Most people believe that the doctor is able

to tell the sex by listening to the baby's heart beat. Some physicians themselves are convinced that they can do it. If the heart rate is slow, it is supposed to be a boy, while a girl's is faster. But there are so many factors that may influence the fetal (unborn baby) heart sounds, that sex prediction by this method is purely guesswork. For example, we know that pressure on the navel cord, or the baby's head, or the action of certain medicines, or the general condition of the mother, may have some influence on the baby's heart rate.

FOR many years, a great deal of research has been done in an attempt to develop chemical and biological tests for sex prediction. In 1932, Doctors Dorn and Sugarman, two American scientists, published an article on foretelling sex. They reported that if a male rabbit is injected with the urine of a woman pregnant beyond the fifth month, and the rabbit's testicles examined forty-eight hours later, one could predict the sex of the unborn infant. The test was supposed to be correct in about 75 per cent of the trials. Unfortunately, no one has been able to confirm the test so that the work of Dorn and Sugarman has now been discredited.

At one time a great deal of faith was placed in the X-ray as a means of foretelling sex. Although the X-ray has value in diagnosing pregnancy after the fourth month and is also used to ascertain twin pregnancy, it has found no place in foretelling sex. The X-ray films show the bony parts only. The soft tissues of the baby do not appear on the plate. Since there is no difference between body outlines of boys and girls at this stage, the X-ray is of no help.

Scientists have also tried out ways and means of controlling the sex of the future offspring. If any methods are available it is certain that the present Emperor of Japan knows nothing about them. The poor fellow has had the hardest time trying to produce a son. Several years ago, a German physician by the name of Unterberger made a "brilliant" discovery. He claimed that if a woman douched with ordinary sodium bicarbonate solution just before coitus, or if the man sprinkled his sex organ with the same solution, and conception then followed, a male child would invariably be born. These claims have never been substantiated by other investigators.

Another advocate of controlled sex is a certain S. Albert Shaffer, M.D., Ph. N.D. (whatever that title stands for). He has written a small booklet entitled "Nature's Method of Birth Control and Sex by Choice". Dr. Shaffer's theory is based on the "well-known influence of the moon on vegetation, tides and human beings, combining old Hebrew, Mosaic and astrological laws." A human chart is included with the pamphlet. This chart is similar to many others which advocate the safe period. Here are a few choice excerpts from Dr. Shaffer's treatise:

"... the left ovary is the one which creates the ovum which will develop into a female child and the right ovary discharges an ovum which, if impregnated, will develop into a male child. . . ."

"... As indicated on the chart, the male ovum is charged usually within ten or twelve days after the last day of the menses, while the female ovum is usually discharged in from three to five days after the last day of the menses. . . ."

The theory that there are ovaries which produce male-creating ova, and ovaries which produce female-creating ova has been proven to be entirely fallacious by modern surgery. Countless women, after having one ovary removed by operation, have subsequently given birth to children of both sexes. Furthermore, as will be explained later, sex is determined not by the ovum, but by the sperm.

The next quotations from Dr. Shaffer are really rich:

"... Female passions are comparatively mild during the boy time . . . they are far stronger during the girl period and reach their highest intensity during the barren time. . . ."

"... A woman sleeping on her right side, especially immediately after intercourse, is more

apt to bear a boy, while on sleeping on her left side is likely to bear a girl. . . ."

Dr. Shaffer's theory of sex by choice is pure and unadulterated hokum. It is not based on any scientific facts. In addition, the "barren time" or the period when a woman is not apt to become pregnant, which he advocates, occurs exactly during the days when it has been scientifically proven that she is most fertile. One may get a good laugh from reading what Shaffer has to say, but one must not overlook the harm that may come to those who are gullible. There undoubtedly are many misguided souls who have followed his advice and have met with disappointment.

WHAT determines the sex of the child? One historian has estimated that 369 theories have been advanced. The theory of sex determination generally accepted today is known as the "Chromosome Theory".

All living tissues are made up of cells. These cells contain microscopic bodies called chromosomes which are responsible for transmission of hereditary characteristics. Each species has a constant and characteristic number of chromosomes. Every cell in man, for example, has 48 chromosomes, in the moth 56, in the domestic fowl 32, and so forth.

The sex cells, ova and sperm, differ from other cells of the body, in that they contain a special chromosome which determines sex. All ova have an X chromosome, while only approximately half the cells of sperm have an X chromosome. The rest of the sperm cells carry a Y chromosome. On union of a sperm and ovum, two combinations may result, either XX or XY. We know that XX develops into a female and XY becomes a male. Thus we see that sex is determined by the sperm. Since it is essentially a matter of chance which type of sperm, male or female-producing, unites with an ovum, it is clear that males and females will be born in approximately equal numbers. It also follows that the sex of the offspring is accidental and is at present beyond human control.

In addition to the many fables current on the prediction of sex, there are other prevalent superstitions that the unborn child may be influenced by the mother's impressions. It is assumed that if the mother is injured or observes an ugly sight, the child she is carrying will be "marked" by a corresponding defect.

This view gained widespread recognition because it had been supported in fiction by famous novelists and was acknowledged by men great in medicine. Modern science has proven conclusively, however, that there is no basis for this view. It has been shown that all imperfections found in humans also occur in the lower forms of life. There is no evidence to indicate that mental impressions play any part in these instances. In humans, the embryo is already completely formed at the end of six or eight weeks, at a time when most women do not realize that they are pregnant. And they do not begin to be disturbed about impressions until the pregnancy is well advanced. Therefore any disturbing events which may occur in the later months can have no effect. There are few mothers that have not had bad experiences during pregnancy. Accordingly, most babies ought to be born "marked," if the belief about maternal impressions is true. Obviously, this does not happen.

If a baby is born with a hare-lip or a cleft palate, this defect was not produced by the mother tripping over a threshold, as is commonly believed, but can be explained by the fact that an error of development occurred long before the mother's accident took place.

Women are told not to raise their arms over their heads and are advised not to hang curtains during pregnancy, because in doing so, the navel cord might strangle the child. This belief is a perfectly childish one. Nothing of the sort can happen. There is no direct connection between mother and child. Even their bloods do not mix. Each one has a separate and distinct circulation. Any such simple movements on the part of the mother have no influence whatever on the baby. If the child is born entangled by the navel cord, it is due to its own spontaneous movements.

"A seventh-month baby may live, an eighth-month child cannot survive." One hears this statement over and over again. It has gained almost universal credence. There is absolutely no scientific basis for this belief. An eighth-month premature infant is older, heavier and stronger (everything else being equal) than one born in the seventh month of pregnancy. Isn't it logical, therefore, that the eighth-month baby has a greater chance of survival than a younger one?

ANOTHER common fallacy is the idea that the eighth month of pregnancy is the most

dangerous one for the mother. Childbearing women, therefore, are usually cautious during that period. They are afraid to wander far from home. They keep off their feet as much as possible. If an accident occurs during the eighth month, as, for example, convulsions or bleeding, it does not happen because the eighth month is a bad month. The accident could just as well have taken place earlier or later. It is an end-result of something that was abnormal and had been brewing for a long time. If nothing had been wrong up to the eighth month, the chances are that the rest of the term will be uneventful. There is, therefore, no need for undue caution or worry at this time.

When a woman complains of heartburn during pregnancy, friends who think they know it all tell her that she is going to have a girl with long hair and that it is the hair that is irritating the stomach. How foolish this reasoning seems if one understands the position of the baby in relation to its mother's organs. Normally, the child lies with its feet up and its head down toward the pelvis. The baby's hair is far out of reach of the mother's stomach. Even if its position is reversed, with the head up and the feet down (breech position), no hair can come in contact with any maternal organs. The child is enclosed in a large bag of water (amniotic fluid and sac) and this bag is enclosed in the womb's very thick, muscular wall. There is no hair anywhere near the stomach. Heartburn is due to an excess of acid in the stomach, some of which flows back into the gullet, producing a burning sensation, and is very often due to indiscretions in diet.

To maintain a proper state of mind the expectant mother should close her ears to the talk of scientifically uninformed people. Many of these superstitions and myths could be completely eradicated through widespread, popular education in the development of the baby from the time of conception to birth. Innumerable social taboos stand in the way, however. Reading and discussion with the family physician would help greatly in exposing these old-wives tales for what they are worth. "Getting Ready To Be A Mother", by Carolyn C. Van Blascum, "Modern Motherhood", by Dr. Claude E. Heaton, and pamphlets on prenatal care issued by state health departments and the United States Department of Labor are all useful literature in dispelling archaic and unfounded ideas.

Explaining Pleurisy

This inflammation of the lung's lining is always the result of an infection which may be tuberculosis. Jobs which predispose workers to tuberculosis also influence the occurrence of pleurisy.

WHEN a doctor makes a diagnosis of pleurisy, he is not completely satisfied with this information. He always attempts to find out why the patient contracted the pleurisy and what its probable effect on his future is likely to be.

What is pleurisy? The name indicates an inflammation of some part of the pleura—the lining of the lung.

Each lung is a balloon which expands and sucks in air, or contracts and squeezes out air accordingly as the chest wall expands or contracts. To keep the delicate lung from contact with the chest wall, and to provide lubrication as the lung moves over the chest wall, there is a smooth, moist lining which covers the lung and the inner side of the chest wall. This lining, the pleura, consists of two layers—an inner layer covering the lung, and an outer layer, lining the chest wall. Between the two layers is a thin layer of fluid.

Pleurisy, then, is an inflammation of this protective and lubricating covering of the lung. All inflammation in any part of the body consists of an outpouring from the blood stream of protective substances. One of these substances is fibrin, which is responsible for clotting of the blood. So, early in an attack of pleurisy the smooth, moist pleura is covered with fibrin which is rough and dry. Now as the lung moves, it rubs against the chest wall causing pain. It is, therefore, torture to breathe, and coughing, which is another symptom, is doubly painful because the motion is more violent.

The inflammation may gradually subside in the course of a few days or weeks, and the patient may feel well without ever having the symptoms recur. But the pleura is not often restored to its previous smooth condition.

Usually scarred tissue forms which joins the two layers of pleura together.

Instead of subsiding in this manner, however, the inflammation may continue with a further outpouring of constituents of the blood. In this case, fluid accumulates between the inner and outer layers of the pleura. This is called "pleurisy with effusion." When enough fluid has gathered to prevent the two layers from rubbing, the pain disappears. The amount of fluid may vary from a few drops to a large quantity (four quarts or more) sufficient to fill the entire affected side of the chest, compress the lung into a small ball, and even push the heart over into the opposite side of the chest. When such large amounts of fluid collect, the patient is short of breath, and his skin may become blue because the compressed lung cannot fill with enough oxygen.

The fluid we are discussing here is thin and clear. In severe cases it may become thick pus, such as one sees in a boil. In these cases the pleurisy is called empyema, and is much more serious.

THE treatment of pleurisy calls for complete rest, along with the use of such drugs as are necessary to insure restfulness. In the dry type, the physician will also strap the chest so as to reduce the motion which causes pain and aggravates the inflammation. In the type with fluid, the doctor may withdraw some of the fluid by piercing the chest wall and the outer layer of pleura with a hollow needle. This relieves the pressure when the condition causes shortness of breath, and also allows the doctor to examine the fluid to ascertain the kind of germ that is causing the trouble.

With such treatment, nearly all patients recover. The fluid is gradually absorbed until none is left, although the fluid in some cases may last several weeks.

Then why is pleurisy important? *Because every case of pleurisy arises from an infection in the body; and this infection is almost always in the lung, sometimes in the form of pneumonia, and the infection may be TUBERCULOSIS.*

What makes one liable to such infections? To quote a standard authority: "Occupations or vocations which predispose to pulmonary tuberculosis or other respiratory diseases directly influence the occurrence of pleurisy. The same is true of such environmental factors as poverty, malnutrition, poor ventilation, dusty surroundings, industrial hazards, and ignorance as to the proper disposal of sputum."

Having been exposed to such conditions, the air passages afford a foothold to some germ, which sets up an inflammation (this is called an infection) in the lung, from where it spreads to the pleura. Now what happens depends on the type of germ encountered. If it is a pneumococcus or streptococcus the pleurisy follows the course described above, and recovery comes about.

But if the germ is the bacillus of tuberculosis, then it is very unlikely that the infection in the lung will heal without prolonged and careful treatment. In other words, we are dealing with a case of pulmonary tuberculosis, or "consumption", which, if neglected, spreads to involve both lungs and other parts of the body, and is often fatal. Even in the case of tuberculous pleurisy, however, the pleurisy almost always clears up. That is, pleurisy is in itself not serious as a rule, but is very important as a warning that infection exists in the lung.

It is for this reason that it becomes so important to attempt to discover the exact cause of the pleurisy and the condition of the lung.

THE first clue may be given by the history of the health of the patient's family, the nature and conditions of his work, the adequacy of rest and food, and the state of his previous health. If any of these factors suggest that the patient has been exposed to or is susceptible to tuberculosis they lend weight to the suspicion. Especially important are the following symptoms if they have preceded the attack of pleurisy; cough, however slight, loss of weight or strength, slight afternoon fever, night sweats.

Next, an X-ray picture is taken to determine the condition of the lungs. If a spot is found indicative of tuberculosis, the diagnosis is almost certain. But often no spot is seen, and often the fluid of the pleurisy covers up the lung, so that it is necessary to wait until the fluid has been absorbed before a good picture can be taken.

The surest way to diagnose tuberculosis is to find the causative germ in the sputum or the fluid. But in cases of pleurisy this is usually not possible. The last resort is to inject some of the fluid into a guinea pig; if even a few germ are present the animal will show signs of tuberculosis in a few weeks. But in many cases which later prove to be tuberculosis, even this test fails.

There is, therefore, only one safe course to follow. If the doctor can prove that there was a pneumonia, or that the pleurisy was due to some other germ, well and good; if not, the patient should be treated as if he had a mild case of tuberculosis.

This treatment is not drastic; it will mean merely strict rest for several weeks, followed by light work for a few months, coupled with good nourishment. Following the patient's return to work, he should be kept under periodic observation, with occasional X-ray pictures, and he should make sure that his conditions of work, dwelling place, food, and rest, are such as to insure against a return of the trouble. With such care, even if tuberculosis was present, the patient can be sure of rapid and safe recovery.

Not all chest pain is caused by pleurisy. Pain around the heart, particularly following exercise, pain which is not made worse by deep breathing, pain which radiates from the chest down the arm, is commonly associated with disorders of the heart. Occasionally, pain in the chest may be experienced because of bowel disturbances, such as flatulence and over-distension from gas accompanying constipation. Only a thorough examination by a physician can place the cause of the chest pain.

When you have pleurisy, keep the following facts in mind:

1. The pleurisy is sure to get well.
2. The pleurisy came from an infection; try to find out from where and why.
3. If the contrary is not proved, it should be treated as if it were tuberculosis. Properly treated cases of tuberculosis will recover.

Cosmetic Problems

Electrolysis

For the many readers who have been asking questions regarding the care of the skin and hair, HEALTH and HYGIENE'S skin specialist will discuss such problems every month. All questions must be signed and accompanied by a self-addressed, stamped envelope.

THERE is no medical cure for superfluous hairs. Inasmuch as we do not know the exact cause of this condition, no medicine can be intelligently and honestly offered to counteract this excess hair growth. Of course, it is known in a general way that the internal glands are at fault. But this knowledge is not yet exact and, therefore, adequate medical treatment cannot be devised. Much more study and investigation will have to be done before anything concrete can be expected in this field.

There is, however, something that can be done for this condition. If we will forget for the moment the matter of cost, we can say that at the present time the only and most effective and least harmful treatment for superfluous hairs is electrolysis. With this method, the hair bud and the hair sac are destroyed by means of a fine platinum needle which is attached to a galvanic electric circuit. The hairs must be destroyed one at a time and, therefore, the course of treatment is prolonged. Dermatologists who do this type of work use the single needle method. The writer believes that though the multiple needle method advocated by many beauticians may be somewhat quicker (and this is doubted by some) the single needle method leads to greater accuracy and thoroughness.

In the hands of a skilled operator there should be no infections or injuries to the skin. The writer also believes that this treatment should be performed only by a trained physician or by the technician operating directly under his supervision. The needle must be clean and the

ordinary rules of surgical cleanliness must be observed. There are many poorly trained laymen who do this work and it is usually among these that poor results are found. These people frequently cause infections and are then at a loss as to how to handle them properly.

THE removal of superfluous hairs by tweezing or depilatories is not permanent and in many instances makes the hairs more obvious. The use of X-rays for this condition is *positively dangerous*. There are some "beauty institutes" that advertise the painless removal of superfluous hairs by means of some special ray. They do not call it X-ray because of the adverse publicity already directed against this method of hair removal. Avoid such places because they are probably using X-rays.

For the average working woman the cost of electrolysis treatment is a serious problem. The cost of treatment by competent operators is, as a rule, beyond her reach. There are very few skin clinics which do this work and the amount of such work which a clinic could do, under present conditions, is slight. Under the present system of medicine, electrolysis treatment is a luxury, which can only be obtained by those with more than average income.

For those women with superfluous hairs who cannot afford competent treatment, we suggest that bleaching be tried. Place ten drops of ammonia in an ounce of peroxide and apply the mixture. Tweezing, depilatories and incompetent electrolysis operators should be avoided.

HEALTH IN LANDON'S KANSAS

HEARST'S CANDIDATE MAY HAVE BALANCED THE BUDGET, BUT AT WHOSE EXPENSE?

By DeWitt Gilpin

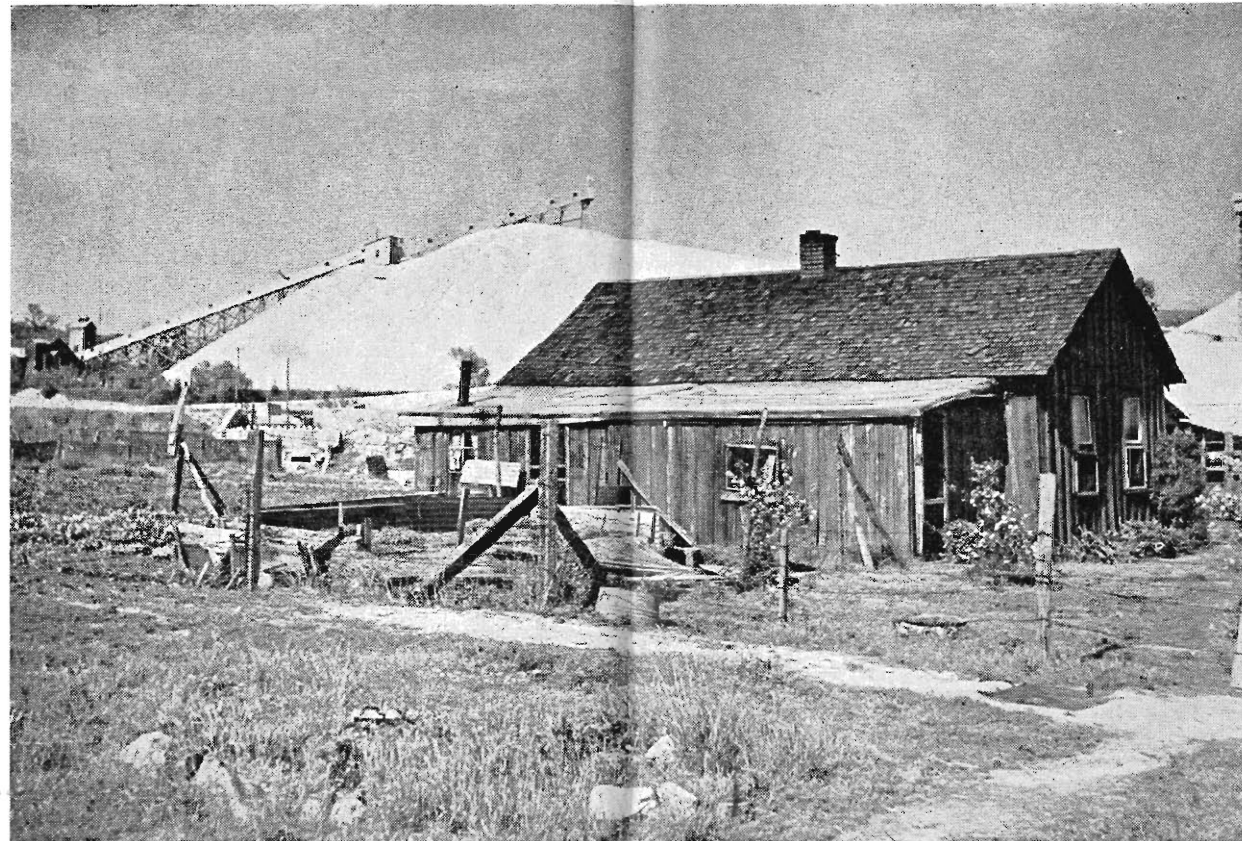
THE lead and zinc field of Kansas is located in Cherokee County. A small field, the population there numbers less than 12,000, yet—

1500 school children are known to be suffering with tuberculosis. Local medical authorities estimate that many more children are suffering the effects of the deadly disease—silicosis! More than 3000 adults are known to be in one of the three stages of silicosis—most dreadful of occupational diseases.

That is the brief, horrible description of health conditions in a small mining community of Kansas, the state over which presides Governor Alf M. Landon, handpicked presidential candidate of William Randolph Hearst. Governor Landon, so the record discloses, has not lifted a finger during his administration to correct conditions among the lead and zinc miners and their families. He has, on the other hand, opposed the building of a silicosis hospital in the county, refused his own board of health the necessary money to make a silicosis survey and made no attempt to enforce a section of the state mining laws which deal with working conditions in the lead and zinc mines. To round out a perfect batting average, he ordered out troops against the striking miners last year, smashed their picket lines, closed their meetings and allowed the criminal elements of the district, organized into a company union, to open the mines behind protecting bayonets.

Nor can Landon plead ignorance of the true state of affairs in the county. The records of the mine owners' clinic reveal that as far back as 1929 it was known that one-fourth of the miners were suffering from either silicosis or tuberculosis!

Medical authorities of the district, among them being Dr. Brookhart of Columbus, Dr. Lazenby of Treece and Dr. Jasper of Joplin, state that it is seldom that a pure case of



The white miniature mountain is the source of silica dust.

silicosis or tuberculosis is found but that usually the cases they diagnose are silico-tuberculosis—a complication of both diseases. In all cases, however, it is felt that the breathing of dust containing silica is the first factor in the contracting of either disease. This dust is breathed by the miners and is caused by dynamiting the ore from the flint and sand stone, thereby raising the dust which is very dense and settles slowly—eighteen inches an hour. Fans and exhaust systems to draw off the bad air are

never adequately provided. Much of the ore is taken from blind rooms to which there is only a tiny entrance and no outlet for bad air.

INJURIES and deaths by gas pockets and falling rocks are also common. G. E. Blakeley, labor commissioner of Kansas, whose department includes the inspection of mines, has never been inside of a lead or zinc mine. Asked why, he replied, "I started to go down in one

two years ago but at the last moment I sent an inspector ahead of me. He was hit on the head with a boulder and almost killed. I'm superstitious!"

Mine inspection is a farce. The labor commissioner's office, backed by Landon's desire to protect private business at any cost, maintains that they can do nothing about working conditions if the mine owners refuse to cooperate. Blakeley admits that "there is a lot of silicosis in the mines" but doesn't feel that the state can do anything about it. "It would cost a lot of money," he explains.

Vital statistics of Cherokee County show that between forty and fifty miners are listed annually as dying of silicosis or tuberculosis. These do not reveal the true picture. Dr. Lazenby, former mine company doctor, tells why:

"Before I came to this part of the country," he explained, "I was continually puzzled at the number of persons here who were listed as dying from 'a complication of diseases.' The mystery was quickly solved when I came here. 'Complication of disease' is an expression used by company doctors when miners die with silicosis or tuberculosis. They are able to get away with it because often persons in the last stage of the diseases contract some minor ailment which hastens their death."

Even more horrible than the plight of the miners are the conditions to which their families are exposed. They too are stricken with the same diseases, for they live in areas surrounded by great chat piles from which the wind sends silica dust into their shacks.

In the process of extracting the ore, the rock taken from the mines is crushed to powder-like fineness in the mills. This residue is piled over the entire region in miniature mountains, some of them being a half-mile in length, covering many acres, and rising a thousand feet in height. Treece, Kansas, and the little communities near it are completely surrounded by these mountains of death. Stealing a page from the Borgias, the mine owners cover the roads

and school playgrounds with this poisonous, deadly residue. At the schools of Tar Valley, Monarch and Treece, children kick up clouds of silica dust while at play and all around them, hardly more than a hundred feet away, rise the great chat piles.

Add horrors: Adjoining one side of the playground at Treece is a huge swamp filled with poison mineral water pumped from the mines.

Under such conditions it becomes understandable that, according to local health authorities, 36 per cent of all the school children in Cherokee County—population over 33,000—have tuberculosis and that 55 per cent, or every other child in the mine region around Treece, have either silicosis or tuberculosis. Consider the facts: Hundreds of little children and their parents doomed to early deaths by life in a region where night and day the very air which they breath is continually filled with poisonous dust! The terrible extent of tuberculosis was discovered by doctors from the Kansas board of health who came to the region intending to test a hundred cases for the disease. Hearing of their presence, frantic miners rushed to them in such droves that a thousand tests of children and adults were taken before the doctors could leave the district. Sickened by what they saw, and discovering evidence that silicosis was becoming increasingly rampant in the district, they rushed back to Topeka and asked Governor Landon for an increase in their allotment of funds from the state so that a separate silicosis survey could be made. Landon refused. There was a million dollar surplus in the state treasury but the famous balanced budget could not be jeopardized.

Dr. Lazenby estimates that over 3,000 miners and their families have silicosis and maintains that long experience in the district has convinced him that 8 per cent of the miners who have worked underground for any length of time are affected. Dr. Brookhart, county health officer, states that the average life of a hard-rock miner is less than ten years after employment and quotes figures from a federal survey taken in 1929 to prove it.

MINERS working now—mostly scabs since the majority of the union men who struck last year have never returned to work—receive wages ranging from \$1 per day to \$3, depending upon their skill, all work being piece-work. The last figure released by the mine

owners themselves concerning wages was in 1914, when the average weekly wage was shown to be \$12. Experienced miners estimate that wages now, over a yearly basis, would not exceed that amount. To what extent malnutrition, as a result of such starvation wages, is connected with the widespread tuberculosis is not definitely known but doctors and social workers unanimously name it as a contributing factor. The majority of striking miners work on WPA for the maximum Kansas wage, \$32 monthly, others are forced to exist on a county relief allowance that averages \$8 monthly, still others receive neither.

Adults suffering from silicosis or tuberculosis receive no medical attention or special diets from the relief committee. One doctor, Dr. Brookhart of Columbus, Kansas, is designated to care for these victims but calls upon them only at two-month intervals or in emergency cases. He has no funds available for treatment and explains that "after all there is nothing you can do for them." He points out that once silicosis advances to its second or third stage no known cure can be effected. Caught early enough, recovery is possible by removal to a dry climate away from the poisonous dust. Bound to the mines by debts and lacking funds to move, most of the miners remain until death claims them. Some leave, improve, and then return, only to die shortly. All doctors in the district comment upon that last fact—that once some recovery has been effected and the person returns to work in the mines he seldom lasts more than two years.

In a pamphlet on silicosis by C. O. Sappington, M.D., consulting industrial hygienist at Chicago, Illinois, silicosis is described as

"A disease of the lungs in which there is a general displacement of the normal elastic tissue; it is caused by the continuous breathing of microscopic particles of free silica dust over varying intervals of time."

After commenting upon the increased susceptibility to tuberculosis found in silicosis victims, Dr. Sappington states that

". . . not all persons are alike in the rapidity with which they develop silicosis under similar conditions of exposure. However, there is no immunity, natural or acquired, by which any individual may feel that he is entirely safe from the contracting of silicosis, if exposed to conditions which ordinarily produce this disease.

"Neither is there any known way by which a person may be free of silicosis after he has developed it . . . after a victim has reached the third stage and, in some instances, the second

stage, the disease goes on to a fatal termination, even if the employee has been removed from further exposure."

The last paragraph is a pertinent one due to certain developments now taking place in the mine field. The state platform of the Republican Party, written recently, promises that the next Governor of Kansas, not Landon, will see that a survey is made to determine the real extent of silicosis. Local authorities have interpreted this to mean that a silicosis hospital will be built in the district and are concentrating upon this point. Such a hospital, while needed, will only ease the last days of the already doomed victims; a real solution to the problem lies in a legislative attack upon the profit-mad mine owners, responsible for working and living conditions that spread the disease.

The only existing institution in the state which makes any pretense for caring for the people of the region is the state tuberculosis sanitarium at Horton. Under-staffed and overcrowded, it admits new patients only upon the death or removal of an old one. Only advanced cases are usually admitted and there is always a waiting list of at least fifty. In the words of Roy Jones, a miner dying with silicosis, one doesn't get in the sanitarium until "you are damn near dead." Two miles over the state line in Oklahoma the mine owners maintain a clinic. This institution, which hardly deserves its title, is operated solely for the purpose of moving miners suffering with advanced cases of the two diseases out of the mines in order to avoid suits for compensation. The men must submit to frequent examinations and are graded by an alphabetical card system. Their physical condition is recorded in the clinic and the men are given cards which they must show to obtain or continue work. Those with A and B cards can work steadily, those with C cards irregularly, those with D cards are barred from further work in the district. A D card means an advanced case of silicosis or tuberculosis.

Since the strike of last year the clinic has been put to a new and startling use. Militant workers, talking organization, are sent to the clinic, examined and handed a D card irrespective of their state of health!

LOW wages and miserable relief budgets have, in the last year, further reduced the living standards of the miners until they can only be compared to those of share-croppers in the deep South. They live in one and two

room shacks, usually simple affairs of boxing, the cracks covered with lathes and always unpainted and unpapered. Some of the more wretched homes have no floors. In the town of Treece and the surrounding communities, population over 1000, there isn't a single bathtub to be found in the home of a worker. Mine foremen and bossas are the only ones who can afford such luxury. Inside toilet facilities are, of course, unheard of. Crowded into the tiny shacks are often large families, the parents victims of silico-tuberculosis, the children eating and sleeping with the diseased adults.

Under the described conditions death has become commonplace. Little children, their lungs already filling up and hardening with silica dust, discuss with mature fatalism their condition. It gives one a queer sensation to have a child pause in its play to tell you that, "I've got 'con', but Jimmy ain't."

They talk about it, these spindle-legged, flat-chested, undernourished kids, like normal children talk about having warts or bruises.

Governor Landon's record in the case has previously been pointed out. During his four years as governor he has practiced a policy of cooperation with the mine owners, refusing to take any step that would interfere with their profit-making at the expense of human life and misery. Checking the silicosis plague in the district means only the installation of preventive devices in the mines and the oiling of the chat piles, roads and school yards in order to stop the dust from blowing. The mine owners' argument, that this costs money, has always proved sufficiently convincing for Governor Landon. Now that he has been lifted from obscurity by William Randolph Hearst there is no indication that he has any concern for the working people. His failure to enforce the child labor law in his state, his starvation relief program, his use of troops against the striking miners for the purpose of maintaining working conditions that threaten thousands with death by silicosis point out his future path clearly. Placed in Washington he would allow a free hand to those employers who will stop at nothing in their exploitation of their workers.

That is the conclusion that the doomed miners of Kansas wish that the people of America would draw from their plight—that big business is an institution to which Governor Landon will never say no. Not even if it means the mass murder of men, women and children.

What About Milk?

A near-perfect food, milk contains many vitamins and the ingredients necessary for energy, tissue and bone building. The rise of milk prices in New York State foreshadows a similar increase in other states.

ONE of the many features that distinguishes man from other animals is that he consumes milk after the suckling period is over.

The story of man's use of milk as a food goes back at least to 4000 B.C. The wandering tribes of Central Asia were the first to domesticate cattle and they soon discovered the excellent qualities of the milk secreted by their herds. A mixture of milk and honey was a highly esteemed drink among them. The ancient Greeks were also fond of milk and their physicians recommended it in the threatment of tuberculosis. The ancient Egyptians prized milk so highly that it found a place in their worship and art. The depicted the heavens as a cow with a full udder.

Milk continued to be consumed throughout the centuries but it is only in modern times with the development of the biological sciences that the great value of milk as a food began to be appreciated. Physiology, chemistry, and in the last two decades the sciences of nutrition have demonstrated that of all the foods none is more important than milk. It was conclusively proven that milk should be the principal food of infants and children and it was shown to be an important asset in the diet of the adult as well.

There are several important questions about milk which every person should be able to answer.

1. Why is milk such an excellent food?
2. How much should be included in the diet?
3. How can consumers be certain that the milk they drink contains all the natural healthful properties and is in addition free from disease?

In the first place milk is a "natural" for infants and children. It is the only food specifically prepared by nature for the young of mammals. For this reason we can assume that

such a food is most likely to contain food elements needed to sustain life. Let us see what these food elements are.

Every living thing needs a fresh supply of energy every day. It is obvious, therefore, that one of the most important qualities that a food possess is its ability to provide energy. Milk is such a food. It is furthermore a relatively cheap source of energy. One glass of milk will yield about 150 calories of energy. The cost of these calories is less than the cost of an equivalent amount of calories derived from most other foods. Bread, cereals, potatoes, corn, and so forth, are cheaper than milk as sources of energy, but fuel is about all that these foods provide whereas milk gives much more than that.

Milk is a good muscle builder. It is rich in the protein required for the development of muscles. A child cannot grow and form strong muscles without protein. Proteins are also indispensable to adults to replace the tissue proteins that are destroyed in everyday activity. An adult requires about three ounces of protein a day and a quart of milk will furnish one ounce of pure protein of the highest quality or about one-third of the total daily protein requirement.

Milk is also useful in the development of the bones and teeth for it contains plenty of calcium or lime. Children especially need lime which is most easily utilized by the body and can be obtained in considerable quantities from milk. One cup of milk contains as much lime as three and one-half cups of carrots, seven eggs or forty-two slices of bread.

Milk is also an excellent source of fat. The fat is present in the form of cream, which, with sugar in milk, yields the greater portion of energy value derived from milk.

THE vitamin content of milk contributes a great deal to its value as a food. It is, first

of all, an excellent source of Vitamin A. Professor Sherman of Columbia University, one of the outstanding diet specialists of the world, has stated that "milk is the most important of all foods as a source of Vitamin A. Of the three vitamins, A, B and C, Vitamin A is the factor of greatest practical importance to nutrition and health, because so many of our staple foods are poor in Vitamin A, and because a dietary poor in this vitamin causes such widespread weakening of the body and increases its susceptibility to so many infectious diseases."

Milk also contains Vitamin C but in such small amounts that it cannot be considered a good source of this vitamin. Vitamin C, indispensable for the prevention of scurvy and for the proper nutrition of the teeth, can be obtained in adequate amounts from fresh vegetables and fruits, especially lime, orange and lemon juice.

Milk also contains Vitamin D but not enough to prevent rickets which is caused by a lack of this vitamin. Because of this insufficiency, several methods have been used in the past few years to fortify milk with additional quantities of Vitamin D. One of these fortified milks is called irradiated milk because it has been subjected to ultra-violet radiation and contains ten to twenty times as much Vitamin D as ordinary milk. Exaggerated claims are being made for this milk by milk companies. It is the concensus of expert medical opinion that irradiated milk should not be depended upon exclusively for the prevention and cure of rickets, and that cod liver oil, the richest source of Vitamin D, should continue to be an indispensable item in the child's diet.

Milk is a good source of Vitamin G. This vitamin is necessary for the prevention and cure of pellagra, a disease caused by subsistence on a diet deficient in essential foods. Fresh meat and liver are the richest source of Vitamin G but when these foods are lacking, milk can be depended upon to prevent pellagra.

Milk is the most digestible of all foods. By digestibility we mean the completeness and comfort with which the contained foodstuffs are broken down in the stomach and intestines and assimilated into the blood.

Most of us think of milk as a fluid somewhat similar in consistency to water. Milk actually contains a high concentration of solid substances—to be exact 13 per cent of solids by weight. The solids consist of carbohydrate or sugar,

protein, fat, and minerals. In 100 pounds of milk there are 87 pounds of water and 13 pounds of solid foodstuffs. The percentage of solid foods in milk is more than is contained in onions, beets, carrots, pineapple, oysters, watermelon, tomatoes, asparagus, celery, lettuce or cucumbers. When we buy one pint or one pound of milk we buy more solid food than when we buy one pound of any of the other aforementioned foods.

For all the above reasons, milk has been called the most nearly perfect food. It is the most nearly and not the absolutely perfect food because it is not a reliable source of Vitamins C and G, and because it is rather poor in iron. Experiments have shown that infants and young animals whose diet is confined entirely to milk over considerable periods will develop anemia.

Because of these deficiencies we should not try to live on milk alone. For the child, milk is absolutely necessary. The youngster should have at least a quart daily supplemented by other foods especially orange juice, cod liver oil, fresh vegetables, and meat. For the adult who is able to obtain a well-balanced diet including meat, vegetables, fruit juices, butter, eggs and cheese, milk is not absolutely necessary. However, where the diet is limited because of low income, a pint of milk or more daily will have great nutritional value and make up, to a certain extent, for deficiencies due to lack of fresh meat and vegetables.

Families with incomes which are not sufficient to permit the purchase of adequate milk for every member, should make every effort to obtain a quart of milk daily for children up to the age of twelve. Nursing mothers and those who are pregnant should also consume about one quart daily. Adults and older children should try to obtain at least one pint daily.

When whole milk cannot be purchased or when its purity is questionable, consumers may obtain the concentrated milks including evaporated, condensed, and powdered milk. These "processed" or canned milks have virtually the same nutritional properties as whole milk, are clean and safe. In some regions an equivalent amount of nutritional value in the form of concentrated milk may be purchased at less cost than would be obtained from whole milk.

Buttermilk is cheaper than whole milk and, because of its taste, is preferred by many people to whole milk. Buttermilk is the residue which

remains in the churn after removal of the butter. It contains all the constituents of milk except the cream. For this reason it has less energy value and is deficient in Vitamins A and D.

For the great majority of the people milk is a wonderful food. For a very small percentage of children and adults it can be harmful. Eczema, asthma and certain disorders of the intestinal tract may be caused by sensitivity to milk. This sensitivity or "allergy" to milk is discovered by "elimination diets" and other tests. Exclusion of milk and milk products from the diet will produce complete cure. The diagnosis and treatment of these disorders due to sensitivity to milk can only be undertaken by a physician.

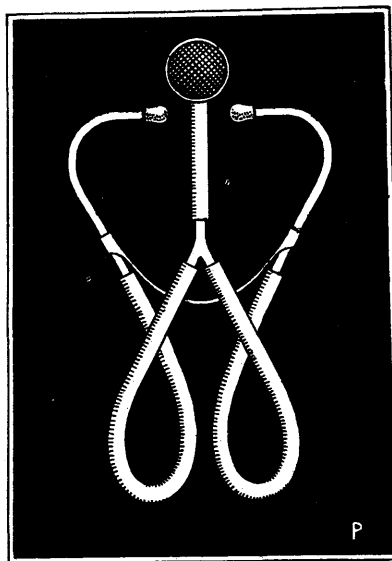
Lesser degrees of sensitivity in children and adults may be expressed by symptoms such as nausea, distension and belching. Such instances, however, are few and it may be considered a general rule that milk can be taken and thoroughly digested in considerable quantities by all normal people.

WHAT kind of milk should consumers drink and how can they tell when it is free from disease?

Milk is an almost perfect food for human beings and an absolutely perfect food for bacteria. The germs of typhoid fever, septic sore throat and tuberculosis thrive in raw milk and have been responsible for epidemics of milk-borne diseases of appalling magnitude. A few years ago a milk-borne outbreak in Montreal caused over 5,100 persons to be stricken with typhoid fever and killed over 500 of them. The United States Public Health Service receives reports each year of thirty to fifty outbreaks in this country. It is estimated that 5,000 children die every year in the United States from tuberculosis caused by drinking milk containing the tubercle bacillus. Septic sore-throat epidemics can be very serious. In Portland, Oregon, several years ago a milker infected a cow's udder and 487 persons became sick and twenty-two died of septic sore throat. These facts are of tremendous significance.

These diseases are caused by drinking raw milk infected with germs from the cow, the milker, or the dairy worker. These diseases can be entirely prevented by pasteurizing or boiling the milk. Boiling the milk is an effective preventive measure but many people do not like the taste of boiled milk. The only method of killing bacteria and preserving the taste of milk is pasteurization.

Health authorities today are unanimous in recommending pasteurization of milk. The most common method is to heat it to 142 degrees Fahrenheit and hold it at that temperature for thirty minutes and then rapidly chilling it. This treatment kills or renders harmless all disease germs which may be transmitted through milk. Pasteurizing milk does not lessen its food value in any way.



It is important for consumers to know whether the milk they drink has been properly pasteurized because in many communities the milk companies do not show proper vigilance in methods of production, pasteurization and bottling. The United States Public Health Service has drawn up model uniform regulations for the production and pasteurization of milk. About 700 American municipalities have adopted these regulations and are grading milk accordingly. If you have any doubt as to the safety of the milk distributed in your community write to the

United States Public Health Service, Washington, D.C. In New York City all bottled milk may be consumed with confidence as to its safety.

Certified milk is raw milk whose purity and safety is supposedly guaranteed by maintenance of fool-proof methods of production and bottling. This milk is no more nutritious and does not taste any better than Grade B milk. Properly pasteurized milk is just as safe or safer than certified milk and costs about five cents less per quart.

Arguments about the relative virtues of Grade A and B milk have been recently conclusively settled by the Consumers Union of the United States. This consumers' organization,

after extensive tests, showed that the main difference between Grade A and Grade B milk is in the price; that Grade A milk contains only two-tenths per cent more butter fat than Grade B milk and that the difference is not worth the extra three cents per quart of Grade A milk. In other words Grade B pasteurized milk is the cheapest and best milk available for people of average means.

For the past few months there has been a hurricane of advertising in newspapers and over the radio by milk companies and the Bureau of Milk Publicity of the State of New York fittingly recommending the great nutritional value of milk and also endowing it with another supposedly important property. You are urged to drink milk in order to alkalize. We propose to discuss in a future issue of HEALTH AND HYGIENE, the "alkalizing" fraud that has been fostered by drug manufacturers, milk producers and their publicity agents. It is sufficient to state now that these campaigns are promoting fraudulent notions for private profit and that the manufacturers and producers are guilty of down-right charlatanism. No patent medicine or food will alkalize the tissues of the body. The dark brown taste in the mouth, "fogginess," "jitteriness," fatigue and "under the weather feelings" are *not* due to acidosis. Acidosis is a serious condition occurring in severe instances of diabetes and nephritis. Milk does not alkalize and will not counteract acid poisons in the system because there are no acid poisons responsible for any of the above symptoms. The claim is pure humbug. Milk is a splendid food and does not require fraudulent, bombastic proclamations about non-existent virtues to persuade people of its excellence. Was this advertising campaign for milk a skillfully organized stage preparatory to the rise of the price of milk to which the people of New York are now compelled to submit?

THE campaign for increased milk consumption was perhaps also dictated by several very significant facts that have emerged during the depression about the nutritional habits of the American people. Up to 1929, the per capita milk consumption was steadily rising. Since 1929 there has been a steady fall to 38.8 gallons of milk per person per year or .85 pints per day. Scientists who have worked out the mass food requirements of the American people have estimated that for an adequate diet at a

minimum cost, not less than 65 gallons of milk per year or 1.4 pints per day is advised. From the authoritative data that has been collected it is obvious that milk consumption ought to be increased by 70 per cent. The consumption of milk continues to fall instead of rising. The decline is directly attributable to lowering standards of living for the great masses of the people. In 1934 a study of the milk habits of 3,413 families in Philadelphia, representative of that city's nationalities income and age groups and social conditions, was undertaken by the University of Pennsylvania and the United States Department of Agriculture. The results of the survey were startling. It was found that 13 per cent of children under 12 years, 30 per cent of adolescents between 12 and 18 years, and 83 per cent of mothers never drink milk or drink it only occasionally. Only a small percentage of these did not drink milk because of ignorance of its values. The great majority drank it irregularly or not at all because of low inadequate income. As per capita income rose, per capita milk consumption rose. These conclusions have been newly confirmed by a report issued this year by the Consumers' Council of the United States Department of Agriculture.

The recent rise in the prices of milk in New York State probably foreshadows a similar rise in other states. The people will be told that milk is very valuable and that even with a rise in price it is the most economical of foods. But a penny rise per quart makes an enormous difference to families on relief or with incomes of \$10 to \$15 a week. It will also make an enormous difference in the profits of the milk companies which in the instance of the Borden Company was \$4,482,348, an increase of \$352,304 over the 1934 earnings; or in the income of the National Products Company controlling the Sheffield Company which showed a profit in the first seven months of this year equal to the total of 1935. The spectacle of a rise in the price of an indispensable food in the face of low and falling consumption because of low income and wretched relief-aid offers a gruesome commentary upon our social system. Consumers should join organizations that are taking up the fight against the unwarranted rise in the price of milk. Mass action will provide the means for mass consumption of a natural life-giving food that is now out of reach of hundreds of thousands of American children and mothers.

Urine Analysis

The findings from an examination of urine are of little value in themselves. Other information is important before a diagnosis can be made. Those exposed to industrial poisons should have periodic urine tests.

MRS. SMITH has not been feeling well. After the week's washing and cleaning, her back aches dreadfully. A friendly neighbor suggests that she may be suffering from kidney trouble and advises her to have a specimen of her urine analyzed at the drug store.

Next day, Mrs. Smith receives an impressive report filled with unintelligible information. Quite naturally she turns to the druggist for enlightenment. He reads the report and finds that the urine contains a moderate number of pus cells and innumerable bacteria. These should not be present in normal urine. Mrs. Smith believes that her kidneys ought to be cleaned out, and accordingly she purchases a box of Father John's Kidney Pills. After a few days she feels much better. Her backache has almost disappeared, and everyone is happy (especially Father John).

The chief factor in the happy outcome of this case is that Mrs. Smith's kidneys are and always were in excellent condition. Her backache was relieved by giving her sore muscles a much needed rest. The pus cells came from a small amount of vaginal discharge with which the urine was contaminated, and bacteria will grow in any urine that has been standing for several hours in a container which was not originally sterile.

But other cases could be mentioned in which the outcome was not so fortunate. For example, an early tuberculous infection of a kidney might not be discovered by a routine urine examination. A patient thus deceived by a normal urine report would lose invaluable time and lessen his chances for eventual cure.

It is not the purpose of this article to enumerate the substances contained in the urine in health or disease. The examination of a casual

specimen of urine is of little value in itself, and may be very misleading. The doctor, in order to make a diagnosis, must gain as much information as possible. He gathers this information from a careful case history, physical examination and laboratory investigations. The urine report is just one item of evidence in the examination, and it cannot be properly evaluated without considering all the other clinical data.

It is true that in some illnesses, such as diabetes or chronic nephritis, the doctor may teach the patient how to perform simple tests for sugar or albumin in order to guide himself and the patient in the selection of a suitable diet. But, here, the diagnosis has already been established and the urine examination is merely an aid to proper treatment.

ANY change in a person's habits of urination should be looked upon with suspicion and is worth an investigation of his urinary system by his physician. By habits of urination, we mean the following:

1. Changes in frequency of urination.
2. Awakening during the night to urinate.
3. Noticeable increase or decrease in the total amount of urine voided.
4. Discomfort or burning during passage of urine.
5. Changes in color of urine. The presence of blood particularly demands investigation.
6. Character of the urinary stream, for example, difficulty in starting to urinate, weakness of the stream, involuntary dribbling, sudden interruptions of the urinary stream.

Industrial workers who are exposed to the poisonous metals such as lead, arsenic and mercury, should be examined periodically for signs of absorption of these metals. There are very sensitive tests for detecting their presence in the

urine but unfortunately most analytical laboratories do not have the necessary equipment for performing these tests. Minute quantities of these metals can be found in the urine even before the appearance of constitutional symptoms. It is therefore essential to the conservation of workers' health that these diagnostic tests be made available to all who are exposed to these metals.

Another urine test about which doctors receive many requests for information, is the Ascheim-Zondek test for pregnancy. Refinements of technique during the past few years have made this test much more reliable than formerly. The method in use today (known as the Friedman modification) consists of injecting the urine to be tested into a virgin female rabbit, and after two days, certain definite changes are observed in the rabbit's ovaries. This test is the earliest method of diagnosis for determining pregnancy. It gives results as early as one week after the missed period. The test is an accurate one in about 98 per cent of the cases. Without this test it is not possible to make even a presumptive diagnosis of pregnancy until two weeks after the missed period, and then it can be made only if the woman has been previously examined by the doctor. Without previous examination as a standard for comparison, the pregnancy must be advanced at least six weeks before *presumptive* diagnosis can be made.

THE routine examination of a specimen of urine is divided into three major groups of tests:

The first group comprises the physical characteristics of the urine, such as quantity, appearance, odor, color, density, and degree of acidity. Years ago, before a satisfactory test for sugar was available, the taste of the urine was included in this group of tests. Special technicians, comparable to the wine-tasters, were employed for their ability to detect small quantities of sugar by their keen sense of taste.

The second group consists of the examination by chemical methods, and includes the determination of the amount of normal constituents such as salt and urea, and also the detection of abnormal substances, such as sugar, albumin, bile.

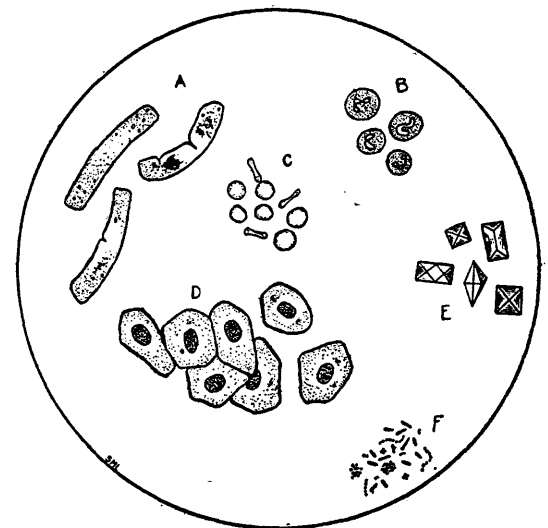
The last group includes the microscopic examination. After the urine stands for some time, many tiny floating particles settle out.

It is this sediment which is examined microscopically for the presence of blood, pus, crystals, bacteria and other elements.

In addition to the routine examination, there are many special tests which are often performed. Two of these have already been mentioned, namely the test for pregnancy and the tests for metallic poisons. It is often necessary to investigate the urine bacteriologically and to identify by means of cultures and special stains, the type of bacteria present.

To summarize, the following points are to be stressed:

1. The condemnation of the practice of self-investigation of urinary complaints by in-



A—Casts
B—Pus cells
C—Blood cells
D—Epithelial cells
E—Crystals
F—Bacteria

terpreting the urine report oneself or with the aid of the druggist.

2. The characteristics of the urine may vary within wide limits in entirely healthy individuals, and therefore too much importance must not be placed on the urine analysis alone. It must be considered as just one item of evidence in a series of investigations.

3. The necessity for periodic analysis of the urine of industrial workers to detect early cases of absorption of industrial poisons.

Consumer Briefs

As a regular feature, this department will give information on foods, drugs and cosmetics which make false advertising claims, or are dangerous, defective or adulterated, or which sell for a price entirely disproportionate to the actual cost of the product. NJ (notice of judgment) plus the file number indicates that the information is derived from the Federal Food and Drug Administration; FTC, from the Federal Trade Commission; PR plus date, from a release of a federal agency.

Hair and Scalp

THE Federal Trade Commission has issued a complaint against PRO-KER Laboratories, Inc., New York. This company advertises that its scalp treatments "correct or cure any scalp or hair disorders", "make the scalp healthy and strong," constitute "competent treatment for baldness," and other statements which have no basis in fact, according to government experts. The Federal Trade Commission describes these and other claims as grossly exaggerated and downright false. This does not prevent the company from making those claims on the radio, in newspapers, and elsewhere. We advise our readers to place their faith in the government investigators and not in the PRO-KER company. (FTC, PR 2894)

* * *

Egg Noodles

HOROWITZ BROTHERS and Margareten's egg noodles are labeled "strictly pure, no artificial color used." Both claims are false according to a recent investigation which revealed the presence of soy-bean flour and artificial coloring in the noodles. (NJ 25020)

* * *

Diseased Meat

SWIFT & COMPANY pleaded guilty to the charge of shipping diseased meat and was fined \$50—a modest enough penalty, considering that the poultry in one shipment were found to be afflicted with generalized tuberculosis. Other samples of meat contained tumors. (NJ 25001)

Swift's butter was reported to be moldy, filthy and decomposed. (NJ 25017)

Mineral Water

TARZANA mineral water has no more beneficial or healthful value than water, according to the Federal Trade Commission. The company marketing the stuff admits it now. This water has been advertised to cure or prevent rheumatism, arthritis, neuritis, high blood pressure and stomach ulcers. The public can get along very well without *Tarzana*. What is really needed is some preparation which will put a stop to the lying statements of unscrupulous advertisers for whom no claim is too imaginative and no selling trick too dishonest. (FTC, PR 2804)

* * *

"Mazon"

MAZON and *Mazon Soap* are widely advertised in various periodicals including certain medical magazines. The claims made for the stuff are characterized by the Federal Trade Commission as untrue. The FTC has brought suit against the company to keep it from advertising that it is good for many skin diseases; that *Mazon* has no substitute; and that *Mazon* "is the original treatment of its character." (FTC, PR 2869)

* * *

"Hollywood Mask"

HOLLYWOOD Mask, Inc. (Chicago), agrees to stop making questionable claims for its cosmetics. A few of the admittedly false claims are: that the nostrum will nourish skin, tissues and muscles; remove blackheads; penetrate the skin; eliminate dryness; banish wrinkles, and so forth. (FTC 2759)

Our Doctors Advise:

The doctors of the People's Health Education League, including specialists in almost every field of medicine, will answer readers' questions on health and personal hygiene. No letter will receive attention unless it is signed and accompanied by an addressed, stamped envelope.

Laxatives for Children

Santa Fe, N. M.

Dear Doctors:

I have seen in advertisements that Castoria is a harmless laxative for children. I want to know whether this is so and if there is perhaps a better preparation on the market.

—R. V.

Answer—There is probably no other type of medication that is more abused by people than is a laxative or cathartic. Many give or take it as regularly as a Saturday night bath. If more attention were paid to selection of a proper diet containing lots of water, leafy vegetables and fruit, to the establishment of a regular habit of evacuation and to sufficient physical exercise and activity, there would be much less need for taking laxatives.

Laxatives should never be given to a healthy child. Here, constipation should be treated by varying the diet in the direction of more fluids, fruits and leafy vegetables. In addition to dietetic variations, laxatives may be used as an aid at the outset. In sickness, except upon advice of a physician, laxatives should never be used if the child (or even adult) has abdominal pain or cramps, because the person may have an inflamed appendix which may rupture and cause peritonitis and death.

Where a cathartic is definitely indicated, the following is advised, though the best course would be to consult a physician. Milk of magnesia is a good mild laxative for children. It should be given in doses of 20 to 40 drops for infants under six months; and 1 to 2 teaspoonfuls for those over six months. If greater effect is desired, fluid extract of cascara sagrada may be given in doses of 5 to 20 drops, depending on the child's age. Cascara should be given only to children of two years of age or over. Castoria is a commercial preparation containing several ingredients, among which is cascara. It is always better to take a single, simple laxative than a "shot-gun" prescription (a mixture of many drugs administered in the hope that one of them will aid any one particular user).

Removing Corns

Salem, Oregon

Dear Doctors:

I have for some time been bothered with corns. Could you recommend a preparation which I could use in treating them?

—F. S.

Answer—Corns are produced by irritation and pressure upon the skin of the toes by shoes. The common variety is a hard, thickened, calloused layer of skin producing pain and discomfort. A less common variety is the soft corn which is a thickening of the skin between the toes due to irritation and moisture. In most of these cases the metatarsal arch is flattened and often covered with thick callouses. As a result of the flattened arch, the toes are flexed or drawn-in so that they are on a higher plane and thus impinge against the shoe. Tight, ill-fitted, short shoes are the most common cause of corns.

The treatment in these conditions depends on the size and number of corns present. When there are only one or two small corns present, apply the following medicine at night before going to bed:

Salicylic acid—11.0

Fl. ext. cannabis—10.0

Flexible collodion q. s. ad—100.0

In the morning protect the corn by means of small felt pads. Flexing and extending the toes so as to stretch the tendons should be practiced regularly. Orthopedic shoes with metatarsal arches inserted should be worn. If, after trying the above procedure, the corns still persist, surgical excision may be tried, or they can be cured readily by X-ray treatment.

* * *

Ulcers

Fairbanks, Alaska

Dear Doctors:

My brother has been told by a doctor that he has an ulcer. I would like to know more about the disease itself and possible treatment to cure it. We think your magazine is the most outstanding health publication we have ever seen.

—O. N.

Answer—Ulcers occur chiefly between the ages

of eighteen and forty, affecting men much more often than women. It consists of a localized destruction of the lining of the stomach (gastric ulcer) or the first part of the small intestine (duodenal ulcer). The latter site is much more frequently involved.

There are two types of ulcer cases clinically: one in which the main symptom is pain; the other where hemorrhage is the chief complaint. In the first group the pain is located usually in the pit of the stomach, occurs regularly one-half to three hours after meals and is relieved by eating or sometimes by taking bicarbonate of soda. In the second group, the first thing noticed by the patient is a change in the color of his stools to a dark, tarry black in appearance. Accompanying this is pallor of the skin, dizziness, palpitation of the heart and the other symptoms associated with loss of blood. In these cases the hemorrhage is due to the presence of a blood vessel in the area of lining which was destroyed. To establish definitely the diagnosis of ulcer, X-ray examination of the stomach and intestines is necessary.

The treatment varies with the two types of cases. Where pain is the main symptom, a soft diet with frequent feeding (every two hours) of milk and cream usually gives relief. Alkaline powders are often prescribed where the pain is very severe. In the bleeding cases, the patient is put to bed immediately for at least three weeks. If the hemorrhage has been very severe, transfusion may be necessary. After the bleeding has stopped (as evidenced by examination of the stool) then the same diet mentioned above is administered.

There are certain complications of ulcers which sometimes occur and can be treated only by operation. Rupture of the ulcer into the abdominal cavity is one of these. Another is the formation of very thick scars at the site of the ulcer, blocking the food passage-way. Proper diet and regular supervision and check-up by a physician is the most important part of the treatment of ulcer cases.

* * *

Youth and Sex

Dallas, Texas

Dear Doctors:

The question I ask is a little embarrassing to ask my friends, so I turn to you for help. It may be absurd and laughable, but please remember that this is a serious matter for me.

I am seventeen years old. At times I get strong sexual cravings. I am frequently disturbed by thoughts about sex and it upsets me. I also masturbate. What can I do? I have never had sexual intercourse. I have thought of going to a house of prostitution. But the fear of venereal disease makes me afraid to. Is it against moral law to have intercourse with a girl of my age? Will any harm come of it? Please consider my problem seriously.

—Q. H.

Answer—Such questions as you ask are neither laughable nor absurd. It is true that the problem is

an extremely personal one, and on its satisfactory solution will depend much of your happiness and peace of mind in the next few years. However, this does not mean that you are alone with your problem and that there is anything peculiar about your sexual needs. This might almost be called a normal problem for a person of your age, and its causes are not personal but cultural, social, and (even more fundamentally) economic. To be abstinent at the age of seventeen and still not have sexual desires would be definitely abnormal.

The repression of sex is one of the outstanding features of our social life. This repression is enforced not only by law but by convention (public opinion) and by religion. The whole emphasis is on individual denial. This is best expressed by religion which promises future rewards in another world for present denials in this world. In many states, any sexual intercourse outside of marriage is a punishable crime (although such laws are never enforced, just as prostitution is tolerated). And yet, for most young people, marriage is an economic impossibility.

No one who has the interests of society at heart should make use of prostitutes for the satisfaction of his sexual needs. Leaving aside moral and aesthetic considerations, to patronize prostitutes is to contribute to the exploitation of a badly exploited class. Recent investigations in New York City have shown how complete a monopoly racketeers have held in the business of prostitution. In addition there is the very real danger of contracting syphilis or gonorrhea. Although the use of a protective sheath and the procedures described in "Prophylaxis Against Venereal Disease" in the May *HEALTH and HYGIENE* diminish the danger, they do not eliminate it.

Extra-marital relations among young people have become much more common since the war. Society has also become much more tolerant of this type of relationship. It has even been suggested by a well-known judge that such relationship be legalized under the name of "companionate marriage." Before the war, such a suggestion coming from such a person would have been impossible. It shows that moral ideas are not fixed and permanent but are influenced by changes in cultural outlooks. Not every person can indulge in extra-marital relationships without harm (although probably most can). Not that such intercourse would do physical harm, but it may sometimes create conflicts in persons on whom, for one reason or another, tradition has a strong hold.

Moreover, there are certain practical dangers in extra-marital relationships. In the first place, there is always the risk of pregnancy. This might very well turn out disastrously for the girl involved since abortions are illegal and illegitimacy is so strongly condemned. Furthermore, for a girl, exposure of the fact that she is having sexual relations may result in serious social consequences. This problem is discussed in greater detail in "A Sex Problem Before Marriage" in the January *HEALTH and HYGIENE*.

A good deal of harm has been done by the idea that masturbation is harmful. There is not a grain of truth in this idea. The harm comes, not from masturbation, but from worrying over it. As a substitute for sexual intercourse, masturbation has the advantage that it cannot involve another person in any harm and that it satisfactorily relieves sexual tension. The whole problem is well discussed in Dr. Frankwood Williams' article on masturbation in the November, 1935, *HEALTH and HYGIENE*. When sexual needs are great and the possibilities for sex gratification limited, it is easy to forget that sexual intercourse is not an end in itself, but that it is only the most intimate way of expressing a feeling of love for another person. Obviously, neither masturbation, relations with prostitutes nor "affairs" with girls are a real solution of the problem. A genuine solution will come only with a reorganization of society, when economic security exists making early marriage possible, and when these problems are faced realistically.

You say that the question embarrasses you and that you are afraid that it may seem "absurd and laughable" to us. We might ask if such an attitude is justified. We feel that sex is one of the chief forms of experience for every individual and that it is a natural human function. Sexual expression, in one form or another, is neither a sin nor a disgrace. One need not be ashamed of having sexual feelings, to express these feelings physically, or to talk about problems arising in connection with sex. You will find that most of your friends have similar problems. Talking freely about sex tends to draw it into its proper proportion, just as avoiding talk about sex because of an undue sense of shame tends to over-emphasize its importance. Finally, we suggest that you read "Red Virtue" by Ella Winter, which tells how some of these problems are met in the Soviet Union.

* * *

Tapeworm Infection

Yazoo City, Miss.

Dear Doctors:

My wife is thirty-eight years old. She has no ailments except worms which pass from the rectum. The worms are white and each one seems to be the same length as the other—an inch long and a quarter of an inch wide. What do you advise?

—F. G.

Answer—Your wife is apparently suffering from a tapeworm infection. To be absolutely sure, her stool should be examined by a physician or qualified technician. We would suggest the following course of treatment for her:

First day: No lunch or supper. Tea, black coffee or water may be taken instead. At 6 P.M. one tablespoon of epsom salts in half a glass of warm water; repeat at 6 A.M. next day.

Second day: No breakfast. After the bowels have moved, take two tablespoons of the following mixture, prepared by your druggist:

Oleoresin and aspidium 6 cc
Powdered acacia 8 gms
Distilled water q. s. ad. 60 cc

Two hours later, two tablespoons of epsom salts in water are taken; two hours after this, a large soap-suds enema is given. All stool passed following the enema should be collected in a container and examined by a laboratory to see if the worm has been completely expelled.

* * *

Poisoning in Radio Factory
Chicago, Ill.

Dear Doctors:

I am an operator of a spraying machine which insulates filament wires used in radio tubes. The compound used in this insulating process is called Alundun. Alundun hardens very quickly and when it is touched or disturbed it breaks down into a dust which we workers inhale. Other men working on the spraying machine complain about headaches. The room we work in is not air conditioned and the company does not provide masks. You can imagine the general conditions in this factory when you consider that I earn only \$11 per week.

—C. K.

Answer—Alundun is one of a group of nitrocellulose acetate coating and insulating materials which are widely used in industry.

The most potent of the group of chemicals which go into the manufacture of Alundun is banana oil chemically known as amyl acetate. This substance has a sickening, sweetish odor. Inhalation of this substance causes a feeling of "dopiness" not unlike that experienced in the inhalation of ether. It also produces an irritation of the nose and throat as well as a sense of tightness in the chest. The caustic in Alundun may also produce feelings of irritation. Other symptoms may be due to other poisons present in the spraying process.

Prevention depends on proper ventilation devices to keep the vapor from rising; masks of special construction may also be necessary. Your trade union should be made to interest itself in these problems and to force correction of these conditions.

* * *

Bad Breath

Boone, Iowa

Dear Doctors:

For quite a long time I have had bad breath accompanied by a coated tongue. I seem to be in good health and receive dental care. How can I stop this condition?

—S. Z.

Answer—There are few diseases that are not accompanied by a coated tongue or bad breath or both. The most common causes of such symptoms in a person who is presumably in good health are:

1. Particles of food, especially strong-tasting food, in the teeth.
2. Dental infection, such as pyorrhea.

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