

HEALTH AND HYGIENE

W. J. ...
AUGUST
1936

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FIFTEEN
CENTS

Workers' Health vs. Steel Dividends

BIRTH CONTROL

THE SAL HEPATICA FIZZLE

STERILITY IN MEN

ALCOHOL MYTHS DISTILLED

WHAT IS NERVOUS BREAKDOWN?

SUNSHINE: USE AND ABUSE

Fifty-two Doctors write for this magazine!

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ON JUNE 4, because of the lack of seating space, 1,000 people were turned away from a symposium on Marx and Freud sponsored by HEALTH and HYGIENE. We feel that the attendance at this lecture was indicative of the wide interest in the subject. In order to reach people outside New York City, those who could not be seated, and those who did attend but would like a printed record, we hope to publish the three speeches by Granville Hicks, Dr. Frankwood E. Williams, and Dr. Emanuel Glick in pamphlet form. The pamphlet should cost approximately twenty-five cents or less. To determine the exact demand, and to assist us in making up our print order, we would like to know how many people want the pamphlet. Won't you send us a post card informing us whether you or your friends are interested? We will appreciate your response. Send the cards to

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By RACHEL LYNN PALMER and SARAH K. GREENBERG, M. D.

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Purely Personal

WE don't quite understand it. July scorchers tear the circulation of other magazines to shreds. Business managers walk around pounding their heads. But the man who looks after our circulation has a grand smile. The number of new subscribers in July, he reports, has mounted higher than in any previous month. And the past months have been darned good.

JUST to keep breaking old records, we will give an autographed copy of 100,000,000 Guinea Pigs to readers who send in eight new subscriptions. It's really an easy job. That Chicago man, whom we told you about last month, turned in twenty-five more subscriptions in July. We asked him how he does it. He writes, "Lend your neighbors, friends and relatives some back issues and the dollars for subscriptions are waiting when you call for the magazines." And now that the Cleveland libraries have become regular subscribers, why not ask your local library to take HEALTH and HYGIENE for a year?

TO all subscribers who have changed their addresses for the summer: Please be sure to notify us three weeks before you return home. We want HEALTH and HYGIENE delivered to you promptly. Send the summer as well as the permanent address.

BRAVOS and cheers for the new Soviet constitution. Here is one of the provisions of the new charter which should make American workers ask what is wrong with our own constitution. "Citizens of the U.S.S.R. have the right to material security in old age as well as in the event of sickness and loss of capacity to work. This right is ensured by the wide development of social insurance of workers and employees at the expense of the state, free medical aid, and the provision of a wide network of health resorts for the use of the toilers."

ALL of which should make us fight hard for similar laws in our own land. How badly they are needed was shown a few days ago by the death of three-year-old Donald Hastie in Hoboken, N. J. Little Donald slowly starved to death on the weekly \$2.50 allowed his family of five for food by the generous officials. Doctors told Donald's mother that he was malnourished. But what could she do with \$2.50? Now Donald is gone when genuine social security and relief laws could have saved him.

IN THIS ISSUE

August, 1936

VOLUME 4 NUMBER 2

Steel Unions for Life and Health	2
<i>Editorial</i>	
The Sal Hepatica Fizzle	3
<i>Another Fraud Exposed</i>	
Birth Control	5
<i>By Eric M. Matsner, M.D.</i>	
Sterility in Men	8
<i>Why Some Men Can't Be Fathers</i>	
Alcohol Myths Distilled	10
<i>The Effects of Drinking</i>	
Sunshine: Use and Abuse	13
<i>Dangers in Suntanning</i>	
Workers' Health vs. Steel Dividends	16
<i>Ammunition for the C.I.O.</i>	
Consumer Briefs	21
<i>Fake Foods and Drugs</i>	
Learn to Swim	22
<i>By Walter Shaw</i>	
What Is Nervous Breakdown?	24
<i>Causes of Mental Illness</i>	
Cosmetic Problems	27
<i>Face Creams</i>	
Our Doctors Advise	28
<i>Readers' Medical Questions Answered</i>	

Editors: EDWARD ADAMS and JOHN STUART

HEALTH and HYGIENE

Magazine of the Peoples' Health Education League

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EDITORIAL:

Steel Unions for Life and Health

Open Shop Spells Death

OLD man Carnegie knew how to veil blood and bullets with million dollar gifts. Behind each dollar donated for the erection of a library rests the story of terror against steel workers. Behind each philanthropic move is another sequel to the steel master's long history of spending millions for the maintenance of the open shop. From the 1880's to the present the steel barons have been concerned with only one thing in their relations with the men who produced their wealth. *No unions*—now or ever. And for this the employers have hired countless thugs, built fortifications seen only in war-ridden areas, called out the militias and bribed the courts. For unorganized men meant that greater profits would be reaped from greater exploitation. Men without the power of collective bargaining, assured wage standards just above the level of starvation; company-owned hovels where workers' families wasted their lives away; working conditions under which men lost their lives needlessly, became maimed, and were slowly ground down by the relentless speed-up system.

Steel workers understand that their only salvation lies in unionization. They understand that increased wages and fewer hours mean a chance for education, recreation, family and community life. Unionization from top to bottom means improved working conditions, greater safety measures at hazardous jobs and therefore fewer widows and crippled men.

That improved provisions for safety and health are the great benefits derived from strong organization was made clear in other industries. Alice Hamilton, outstanding authority on industrial poisoning in the United States, points to an example. "An investigation of lead poisoning in potteries was made by me in Trenton, N. J., and in the East Liverpool and Zanesville regions of Ohio in 1912. Potteries divided into white-ware potteries, which are organized in a strong trade union, and the art and utility potteries which are unorganized.

The women were entirely unorganized in both fields. In the white-ware potteries the contrast between the two sexes were striking. There were only 39 cases of lead poisoning among 796 men or 4.89 per hundred, and 29 cases among 150 women or 19.3 per hundred, but the women had many handicaps aside from that of sex idiosyncrasy. They were unorganized, underpaid, poorly housed, poorly fed, subject to the worry and strain of supporting dependents on low wages, while the men made high wages, were sure of their jobs and lived comfortably. In the unorganized pottery fields, however, in the tile works and in the art and utility potteries the men and women were in the same economic class, all making low wages with everything that that implies, and no appreciable difference was found there between the two sexes with regard to susceptibility to lead. . . .

"However, it is certainly true that economic conditions have an influence on industrial lead poisoning and that when the two sexes are working under the same conditions and living in the same way there is no such great contrast between them as is found when men are well paid and women poorly paid."

Unionization Is Sole Guarantee of Safety

THE conclusion from Miss Hamilton's investigation is as clear as a streak of lightning across a black sky. Organized men can force employers to install safe equipments and adequate devices on jobs. They can compel employers to compensate them for injuries commensurate with disabilities and time lost from the job. They can force the elimination of speed-up and its drastic effect on health. They can win free medical treatment (with doctors of their own choice) for physical breakdowns sustained because of the conditions under which they are employed.

The companies and their company unions have had their chance. They have failed. The answer to that failure is unionization under the banner of the Committee for Industrial Organization.

The Sal Hepatica Fizzle

Bubbling your way through "acidity"

MANUFACTURERS of patent medicines and their advertising agents owe a great deal to the ancient Romans. The Romans gave us a language, rich in impressively sounding words and syllables. It is from this language that the modern patent-medicine manufacturer has so frequently drawn to label his frauds and fakes. *Sal-Hepatica* has a beguiling Latin accent. It sounds dignified and authentic. It's the sort of word a physician might write on his prescription pad. But the Romans contributed a still greater service to the patent-medicine industry. They discovered the natural springs in the Danube River valley during one of Caesar's marches. These springs consisted of bubbling waters highly charged with carbonic acid and mineral salts, and were used by the Roman soldiers for a host of ailments. The waters held their popularity through the centuries, and now they are sold in bottles and drunk at natural springs on the continent and in America. About fifty years ago, chemists learned how to produce carbonated water artificially, by mixing approximately equal parts of tartaric or citric acid and baking soda, and adding the mixture to water. This is the formula now used by manufacturers in the production of tablets and powders that effervesce or fizz when added to water. *Alka-Seltzer*, *Bromo-Seltzer* and *Sal-Hepatica*, among others, owe their effervescence to this formula.

The effervescence serves to conceal the bad taste of the active drugs present in the patent medicine. In *Sal-Hepatica* it conceals the bad taste of two cathartic salts, Glauber's salt, or sodium sulphate, and sodium phosphate. *Sal-Hepatica* when strained of all its advertising gibberish is simply a commonplace cathartic-salt combination mixed with an effervescent powder.

The action of *Sal-Hepatica* is no different from that of any other effervescent cathartic-salt combination. The claim that it combats acidity is an old advertising wheeze that we see used in so many patent medicine advertisements. Cough syrups, cough drops, cold remedies, headache powders all claim to correct acidity, or, as

is said with so much pseudo-scientific sleight-of-hand, to correct deficient alkalinity. In previous articles in *HEALTH AND HYGIENE*, it was pointed out that the reaction of the body tissues is slightly alkaline and stable and that a change to an acid reaction of the body tissues occurs only when the body is seriously diseased, as in the last stages of diabetes, nephritis, and dysentery. Acidosis is a serious and frequently fatal condition that requires the most skilful medical care. In constipation there is no change in the reaction of the body tissues. The statement in *Sal-Hepatica* advertisements that constipation often increases the acidity in the system is false. It is pure advertising blarney.

But there is a more serious indictment against *Sal-Hepatica*. It claims to be a gentle laxative. Every physician, however, knows that cathartic salts such as sodium sulphate and sodium phosphate do not produce a uniform effect on the intestines. In some people a small dose or one such as is recommended on the package may have no effect at all. In others, the same dose may have a drastic, violent effect. Intestinal activity, like intellectual activity and the heart rate, varies widely in different people. Many perfectly healthy persons have a normal bowel movement every two days. Others equally healthy may have a single satisfactory movement in anywhere from two days to one week. There are instances reported where a healthy person has had a single good movement every three weeks. On the other hand there are many normal people who have two evacuations a day regularly. In other words there is a wide range of so-called normal bowel activity. It naturally follows that there is also a wide range in the response of the intestines to laxatives and cathartics. What is one man's gentle laxative is another man's drastic cathartic.

EVEN if cathartic salts like *Sal-Hepatica* had a uniform action in all people, their use should not be encouraged. Physicians prescribe cathartic salts very infrequently and only for

certain specific conditions. A single moderate dose may be prescribed as a test of liver and bile functions, or as a preparation for an X-ray examination. Constipation, however, is never treated with cathartic salts. A physician always attempts to discover the cause of the constipation and to remove the cause if possible.

A specialist in intestinal diseases discussed the use and abuse of laxatives and cathartics in the June, 1935, issue of *HEALTH and HYGIENE*. He pointed out that the causes of constipation may be grouped under two large headings—mechanical and functional. Mechanical causes are those conditions which obstruct the passage of intestinal contents or stool such as tumors, scars and kinks. The obvious and successful treatment of this variety of constipation is surgical removal of the obstruction. The functional type of constipation is far more common than the mechanical. There are two main varieties of functional constipation. One is known as atonic constipation and is characterized by a flabby ineffective activity of the muscles of the intestines and of the abdominal wall. There is insufficient muscular power to produce expulsion of the feces. A full diet containing an abundance of fruits and vegetables, regular exercise and proper bowel movement habits are prescribed. It may be necessary to supplement these directions with a prescription for a lubricant such as mineral oil. In several cases, the physicians may prescribe a laxative medicine, such as *Cascara*. But he will never prescribe a cathartic salt for he knows that such salts aggravate the constipation. The worst cases of constipation that a physician has to treat are those where cathartics have been taken habitually.

A second variety of functional constipation is known as spastic constipation, or irritable colon. In this form the muscular activity of the intestines is excessive, spasmodic and cramp-like, resulting in a clamping down on the bowel contents and thus interfering with the process of expulsion. A physician will prescribe a smooth, non-irritable diet and certain drugs. He will also try to help the patient correct the nervousness which so frequently accompanies this type of constipation. Above all he will never prescribe cathartic salts for not only will they aggravate the constipation as they do in the atonic form but they will also be responsible for "colicky" pains and the formation of mucus in the stool. The latter is a sign of beginning inflammation of the large intestine.

Cathartic salts may induce the development of piles or hemorrhoids in people complaining of either form of constipation. Where hemorrhoids are already present, they may be made much worse by the use of a saline cathartic such as *Sal-Hepatica*.

For those who have, as a rule, normal bowel function and who need an occasional laxative, we suggest a less expensive compound and one that is just as pleasant to take as *Sal-Hepatica*—aromatic fluid extract of *Cascara*. This is a standard non-patented medicine recognized by the U. S. Pharmacopeia and available in any drugstore. It acts more effectively and less drastically than *Sal-Hepatica*. A teaspoonful may be taken at night before retiring. Even such a mild laxative as *Cascara*, however, should not be taken over a long period unless recommended by a physician.

EVERY day the radio exhorts you to take *Sal-Hepatica* for that "logy, under-the-weather-feeling." We get that feeling every time we hear a radio broadcast of a patent-medicine fraud such as *Sal-Hepatica*. Simple constipation does not, as a rule, produce such a feeling. That "logy" feeling may be a symptom of any one of a host of disorders or diseases, or may simply be due to lack of ventilation or exercise. If any of our readers has frequent spells of a "logy, under-the-weather-feeling," we urge him to visit a physician. A timely visit may prevent serious trouble.

We Americans have also been made bowel and laxative conscious by high-priced advertising campaigns. *Sal-Hepatica*, *Eno Salts*, *Ex-Lax*, *Feenamint*, and numerous others are advertised at the cost of hundreds of thousands of dollars to convince us that many of our every-day symptoms are due to constipation, and that since we are constipated only one particular patented drug will remedy our trouble. Those campaigns are immensely profitable only to the manufacturers. The consumer simply bears another burden of exploitation. In fact, these manufacturers create the condition they claim to cure. The chronic use of laxatives is an important cause of constipation. *Sal-Hepatica* is no exception to this rule. By following a few simple measures about diet and exercise, the average case of constipation can be cured. When it does not yield to such a simple routine and is the cause of distress, medical attention, not *Sal-Hepatica*, is necessary.

BIRTH CONTROL

In the past, birth-control information was the privilege of the wealthy. Today this knowledge is within the reach of every married woman who desires it. Regulating the birth of children helps lead to healthy, happy family life.

by Eric M. Matsner, M.D.

NEW YORK newspapers have just reported the story of a family of ten children. The oldest boy, fifteen, has been "minding" the youngsters so that his father could go out and look for work. The housekeeper the father hired would not stay. It was too much of a job for any one woman, she explained. "Things were different when mother was alive," said the fifteen-year-old, who is trying his best to act as cook and nursemaid. The mother died when the tenth child was born. She was worn out from having babies too fast and from caring for so large a family.

The birth control question is still debated hotly from the point of view of morals, of economics, of the birth rate and its effect on war and peace. Birth control needs no further justification than its vital importance as a life-saving measure and a preventive health measure. In order to build not only a satisfactory sex life, but a healthy family life, every married couple should understand a reliable method of contraception.

First, a knowledge of birth control is essential for the proper spacing of babies. Spacing children means the planning of each conception and pregnancy with a view to the best time and season, both for the mother and the child. Too frequent and too numerous pregnancies undermine the mother's health and take her from the care of her children already born. In families where the mother must work outside the home, the questions of the number of children and the interval between their births become especially acute.

When children are born at too close an interval, their health as well as the health of the mother suffers. The Woodbury report on *Causal Factors in Infant Mortality*, issued by the Children's Bureau of the United States De-

partment of Labor, shows that babies born one year after the preceding birth die at the rate of 146 per thousand, while those born after a two-year interval die at the rate of 98 per thousand. The rate continues to decrease, though less spectacularly, to 86 per thousand for a three-year interval and to 84 per thousand for four years. It has also been shown that when the second baby is conceived before the first baby is a year old, the older baby is three times as likely to die under other circumstances. This is due, in part, to the fact that nursing is interrupted, but also appears to be due to the fact that the mother's energy is being drained by a new pregnancy and she cannot give so much care to the baby.

Birth control knowledge is essential to prevent abortions, which take such a tragic toll in women's lives and health. In his recent book on abortion, Dr. Fred J. Taussig states that at least 8,000 women die every year in the United States as the result of criminal abortions. Ninety percent of these abortions occur among married women, especially those between 25 and 35 years of age who have had several children. It is frequently the most intelligent and conscientious mother who resorts to abortion when she knows that another baby will take the food out of the mouths of the children she already has.

From the standpoint of mental hygiene alone, birth control knowledge is essential to family health and happiness. The fear of an unwanted pregnancy creates nervous tension in the home and does great harm to the proper balance of personality, psychiatrists state. Such fear makes normal sexual life impossible and frequently brings about sexual frigidity in the wife. For the mental health of the child it is important that he shall be wanted and planned

for. When a child arrives unwanted, the resulting financial problems and worries do not contribute to the harmony of the home atmosphere in which the child's character is formed.

IN the past, birth control knowledge has been a class privilege. The well-to-do could easily get all the available information from their physicians. They had only as many children as they wanted. The working man and his wife had to depend on such information as they could pick up from friends, from the corner druggist, or from the misleading advertisements in newspapers and magazines. All too often they have relied on some product that failed to prevent pregnancy. Many of these products are ineffective and some are actually dangerous to health.

Today 276 birth-control centers are functioning under medical direction in 41 states. Six years ago, in 1930, only 31 centers were reported. Just two years ago, in the summer of 1934, there were 146 centers. So, on the average, 4 new centers have been opened every 3 weeks during the last 2 years. It is an interesting sign of progress that 85 birth-control centers are now located in hospitals and in county and municipal health departments, and 63 are in settlement houses and community centers.

Workers' organizations have lent their cooperation in a number of cities to establishing birth-control centers. They have joined with other groups to raise funds for equipping a center and enlisting the support of the medical profession. In an industrial town near New York City, mill workers have taken the first steps toward organizing a clinic which they will maintain in cooperation with the birth control league in their state. In a West Virginia town a group of miners' wives took the initiative in starting a clinic. With the help of one of the field nurses of the American Birth Control League, these women interested local doctors in forming a medical advisory committee. They themselves are acting as the lay committee in charge of the center, which is proving a great boon to the families in this town, hard hit by the depression.

Frequently quarters for a birth-control center are secured without paying rent, in a settlement house, community center, private house or doctor's office. Equipment need not be elaborate; usually a few hundred dollars for

equipment and supplies will see the center through its first year. Since many clinics have only one or two sessions a week, the services of the physician and nurse are secured on part time. In many instances physicians are contributing their services. Volunteer workers take care of the case records and do the clerical work.

The public should be on guard against a number of so-called "birth-control clinics" which have been opened by commercial firms. The interest of these firms is naturally not in the reliability of the advice given, but in selling their products.

Research is constantly improving the methods of contraception available. Tests covering more than fifteen years have proved that the methods prescribed at the bona fide birth-control centers are safe and harmless. These centers usually prescribe a method used by the wife who must be examined and individually fitted with the contraceptive device by a physician who is familiar with the technique. The use of the method is simple, but after the patient has been fitted she must return to the clinic for a check-up visit, so that both she and the doctor will be sure she understands the method thoroughly. The device does not interfere with marriage relations. Whenever the couple wish to have another child, they can stop using the method. After childbirth, the woman should always return to her physician to be refitted.

It cannot be too strongly emphasized that the woman who buys a contraceptive device at a drug store and attempts to fit herself runs a great risk of becoming pregnant. Only a physician, and a qualified one at that, can prescribe the size and type of contraceptive she needs. Yet a company that is doing a nationwide business through drug stores sells its contraceptive device with the claim that "one size fits all normal women." A physician, conveniently stated to be living in London, England, is named as the author of a leaflet which this company distributes through druggists.

THE rapid growth of the birth-control movement has taken place in spite of federal postal laws which class contraceptive supplies and literature with obscenity. The laws, enacted in 1873, prohibit the sending of contraceptive supplies by mail or, in interstate commerce, by common carrier. There is a wide difference between the letter of the law and its

present-day interpretation. Recent court decisions have shown that these laws are no longer active in so far as they affect physicians. However, the fact that the laws are still on the statute books intimidates many conservative physicians and hospitals and keeps them from giving birth-control information.

Almost a thousand organizations, including many labor groups, have endorsed the efforts of the National Committee on Federal Legislation for Birth Control to amend the outworn federal laws. In the meantime progressive communities are going ahead and organizing the clinics so badly needed to protect the health of mothers and children. The laws of forty states do not interfere with the use of contraceptives in medical practice, and, according to legal opinion, the restrictions which the other eight states impose in their laws upon the distribution of contraceptive supplies and information do not apply to medical use by physicians. More than fifty Class A medical schools now teach their students the technique of contraception and receive text books on this subject through the mails.

The amendment of the federal laws will do much to protect the public from the unscrupulous manufacturers who now freely distribute and advertise contraceptives, thinly veiled as products for "feminine hygiene" or "marriage hygiene." The sale of dubious and high-priced contraceptives flourishes because the true nature of these products need not be brought into the open.

One method of birth control that has been widely advertised is the so-called "natural" or "rhythm" method. Books, charts and calendars, giving directions for the use of this method, have been circulated with the approval of high authorities of the Catholic Church. There is not enough scientific evidence to prove that the average woman can rely on this method. However, the method is being tested under

medical supervision and the results thus obtained will be a valuable addition to the present knowledge of contraception. The Catholic Church has now accepted as entirely moral the limitation of the family by the use of the "rhythm" method. Hence, the Catholic opposition to birth control is now based on a difference regarding the method to be used rather than on a fundamental difference of principle.

We still hear the old cry that the widespread knowledge of birth control will mean immorality and race suicide. Is a morality that is based on fear of pregnancy worth keeping? Birth control makes early marriages possible, since young couples know that they need not have their first baby until they are economically prepared for its coming and are adjusted to the responsibilities of married life. Early marriage lessens prostitution and venereal disease and obviates those psychological and personality problems that arise when the sex impulse remains too long thwarted.

The alarmists who preach "race suicide" fail to consider how deep-seated is the desire for parenthood. Most normal men and women want children—but they do not want to bring them into the world until they can give them at least a fair chance. Planned parenthood need not mean fewer babies—but it does mean better and healthier babies.

I believe that the birth-control center for the future will deal with all the aspects of human fertility—positive as well as negative. Counsel with physicians and psychiatrists on all the physical and mental problems of marriage will be available at such a center. Not only will advice on contraception be given, but men and women who wish to become parents and are apparently sterile will be helped to overcome this condition. Thus "birth control" will come into its true meaning—not to stop births, but to regulate them and plan for them.

Inquiries concerning the location of reliable birth-control centers in different parts of the country may be addressed to HEALTH and HYGIENE. —The Editors

Alcohol Myths Distilled

*Do teetotalers live longer than moderate drinkers?
Will the children of chronic drunkards be feeble-
minded? Why do men and women drink?*

ALCOHOL was one of the first drugs ever discovered by man. It still has the tremendous advantage over most other drugs in that it can be produced easily in great quantities, and with little cost. It competes with tobacco, coffee and tea in universal popularity, but is in a class of its own in the harm that it does. Morphine, cocaine, marihuana are all gross offenders, but alcohol is probably more destructive, from a medical and social standpoint, than all other drugs put together—chiefly because more people use it.

Compared to morphine, alcohol's usefulness as a therapeutic agent in medicine is slight. Chemists the world over are trying to find a drug which will relieve pain as efficiently as morphine but will not cause addiction. However, morphine still cannot be dispensed with; no other drug can take its place. This is not true of alcohol; in medicine it is not indispensable and only rarely valuable.

Despite the fact that alcohol does so much harm and has so little medicinal value, it still manages to do very well as a marketable commodity. This is the paradox of alcoholism. In discussing it, we shall have to consider the following questions:

1. What is the effect of alcohol on the human body?
2. Under what conditions is alcohol harmful?
3. What are the psychological effects of alcohol?

We shall have to touch on the problems of acute and chronic alcoholism, and, for the sake of completeness, mention some of the harmful effects, physical and mental, that are commonly ascribed to alcohol. Finally, it will be of some interest to discuss alcohol as a psychiatric problem. From the point of view of social consequences, alcoholism is certainly one of the most important of all psychiatric problems.

FIRST of all, we ought to know that alcohol is a narcotic, like ether and chloroform. Narcotics are substances which put us to sleep. There is the popular belief that alcohol has an exciting and stimulating action, and this is supported by the evidence of experience. Actually, alcohol always has a depressing effect upon the functions of the body. It appears to stimulate because it depresses the functions of inhibition and self-criticism. These are among the most highly developed functions of human beings and appear late in the evolutionary scale. These recently acquired functions (in the evolutionary sense) are the most susceptible to the action of alcohol, and the first signs of alcoholic intoxication are an absence of restraint and of self-criticism. There is a freedom of movement and a sense of well-being, an ease of social contact and an over-valuation of one's own personality. Up to a certain point, these are benefits not only to the individual but also to the social group.

These benefits lessen progressively as the concentration of alcohol in the blood passes the safety-mark of about 1 part in 1000. At concentrations of 4 to 5 parts to 1000, the individual will lose consciousness, and concentrations of 5 or 6 per 1000 may be fatal. Strictly speaking, the effect of alcohol depends on its concentration in the brain, since it is this organ which is chiefly susceptible. For various reasons, the concentration in the blood does not always run parallel to that in the brain. The concentration in the spinal fluid is a more accurate indication of the alcohol which has reached the brain. However, the alcohol concentration in the blood has been much more intensively studied than that in the spinal fluid, and is a fairly accurate index of intoxication. This whole question is of considerable legal importance; for example, it affords the possibility of a scientific determination as to whether an automobile driver, who has had an

accident, was under the influence of alcohol at the time.

Using the standard of intoxication of 1 to 1000, it has been estimated that slight intoxication will be produced by about one-quarter of a pint of whiskey, by three cocktails, by a quart of light wine, by two quarts of light beer. Beer of 3.2 strength is called non-intoxicating because it is considered impossible for anyone to drink enough of it in a short enough time to exceed the 1 to 1000 level in the blood, although some people can get drunk on it. To qualify as thoroughly intoxicated, most people would have to consume about a pint of liquor, ten to twelve cocktails, a quart of reinforced wine (vermouth, sherry). Concentrations of alcohol in the blood well below the 1 to 1000 level have sedative and euphoric effects; that is, they induce a feeling of relaxation and well-being.

There are several factors which influence the concentration of alcohol in the blood. One of the most important of these is the dilution of the alcoholic beverage. For this reason, beer and wine are less intoxicating than liquor; not only because they contain less alcohol per volume but also because the more diluted the drink the more slowly it is absorbed into the blood.

ALCOHOL is also absorbed more slowly if it is taken with food. A cocktail taken before dinner will pass into the blood-stream much more quickly and will produce a more marked but livelier effect than several cocktails taken after dinner. Various foods differ in their capacity to retard the absorption of alcohol; heavy cream is the most effective. Age is another factor. Very old people and, to a greater extent, children, are especially sensitive to alcohol. To illustrate, it has been reported that two teaspoonfuls of whisky proved fatal to an infant, and two wineglassfuls killed a boy seven years old. Even among adults there are well-known differences in tolerance, and on the same quantity of alcohol, some men will be under the table sooner than others. A man who drank two bottles of port wine in less than two hours, soon died from congestion of the brain. Another man who swallowed a bottle of gin on a bet, died within half an hour even though much of the alcohol was removed by the sto-

mach pump. In general, it is well known that habitual drinkers carry their liquor better than novices, men better than women. People who have suffered various kinds of brain damage are very sensitive to alcohol. Some of them are so sensitive that a single drink may cause marked intoxication. In epilepsy, in syphilis of the brain, in people who have had a stroke, or people who have had a fractured skull, there is often extreme sensitivity to alcohol. In addition, chronic alcoholics who have had definite attack of mental sickness from alcohol, will at times become so sensitive to alcohol that a few drinks will bring about a return of the symptoms of their former mental illness.

There are even some persons who can become intoxicated in a company of drinkers without actually drinking themselves. In other words, the individual's attitude and the anticipated effect are of considerable importance. Habit and tolerance, the individual make-up and experience, play their role here as in all other human reactions.

On the whole, death as an immediate effect of alcohol consumption is rather a rare occurrence, intoxication acting as a protective mechanism to prevent this. Drinking as a conscious or unconscious way of committing suicide is probably more common than we realize. Actually, it would be more accurate to call this a method of "partial suicide." It is one of the chronic forms of killing oneself. Where the need is less overwhelming and urgent, it can be satisfied by a more chronic and more slowly destructive expression than is found in the classical suicide attempt. In this connection, it is interesting to recall the remark of a well-known psychiatrist that no one tries to commit suicide if he doesn't want to kill someone else. In applying this somewhat excessively broad generalization to alcoholism as a chronic form of suicide, we need only think of the punishment inflicted on and the distress suffered by the families of chronic drunkards.

Alcohol differs from other drugs in the important respect that it is also a food. Alcohol has a fuel value of seven calories per cubic centimeter; that is, a quart of whiskey has the fuel value of a pound of bread. Alcohol may thus provide a part of an individual's calorie requirements. However, alcohol is a very imperfect food. It can serve only as a partial substitute for starches, sugars and fats. Very often, by dulling the appetite, alcohol causes

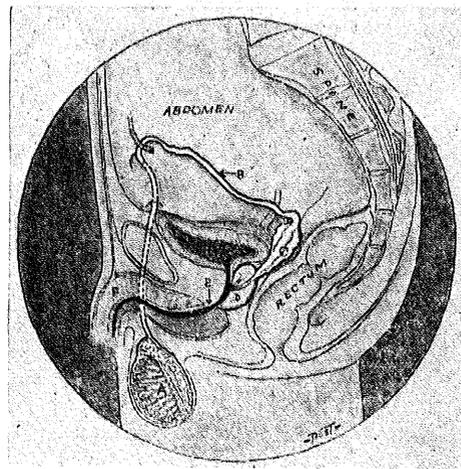
STERILITY IN MEN

THROUGHOUT the ages it has always been assumed that the childless marriage is the fault of the woman. All ancient literature is full of instances where wives were sent away in disgrace because they could not bear children for their husbands. So long as a man was potent, and could have intercourse, then his part was done. If no pregnancy resulted, there was something wrong with his wife. This assumption has even persisted into our time. Where a couple is desirous of having children and there is no pregnancy the wife is looked upon with mingled pity and scorn; she is a barren woman. With the advent, however, of the microscope and a better understanding of the physiology of reproduction, a new and very startling fact has appeared; a man may be fully potent, he may be able to have normal intercourse with the production of semen, and still, without himself knowing it, he may be completely unable to become a father. A still more startling fact is the astonishing frequency of this state of affairs; all the authorities who have had the opportunity to study thousands of cases of childless marriage agree that in at least one-third of the cases (some have found it even higher) the fault is the man's. And that fact can be determined in a minute by a glance at his semen through the microscope.

When one looks at normal semen under the

microscope he beholds an amazing sight. The field is alive with thousands of little rapidly moving fish-like objects (spermatazoa), with small oval heads and long active tails. They are swarming in all directions actively lashing their tails, colliding, climbing over each other and moving with tremendous speed. Every drop of semen contains hundreds of thousands of these spermatazoa. They are so tiny that five hundred of them laid end to end are barely an inch in length. Yet these are the progenitors of the generation, their oval heads (thousands of them would barely fill a pinhead) carrying the characteristics of the man who produced them and his forbears. When one of them comes in contact with a female ovum the result is a pregnancy. And unless a spermatazoa reaches an ovum there can be no pregnancy.

WHEN a doctor is making a study of a childless marriage, he obtains a sample of the man's semen, and looks at it under the microscope. He may find that spermatazoa are entirely absent, although to the naked eye the semen looks perfectly normal. Or he may find that instead of the thousands of spermatazoa there may be very few, and those may be sluggish or entirely dead. Where spermatazoa are absent, of course, there can be no fatherhood. Where they are few in number or inactive, the chances of fatherhood are very small because for the sperm to encounter the female ovum is an amazing feat. The semen is emptied into the vagina and from there the spermatazoa must make their way by their own efforts and against gravity into the neck of the womb, up the cervical canal, and along the entire length of the womb into the tube, a distance of perhaps 10,000 times their own length. The chances against a sperm completing this journey are overwhelming and that is why nature has provided about one hundred million of them in every ejaculation, to increase the chances that at least one will fertilize an ovum. Spermatazoa that are inactive, of course, cannot possibly reach the ovum, and where they are greatly reduced in number the chances are still smaller. The doctor then has to consider what may have brought about this absence of or damage to the sperm.



A—Testicle; B—Vas Deferens (spermatic duct); C—Seminal Vesicle; D—Prostate Gland; E—Urethra; F—Penis; G—Bladder.

These sperm are produced in the testicle, and from there travel to the exterior through a fine tube (vas deferens) that runs from the testicle up along the groin into the abdomen and finally opens at the base of the urinary canal. Inside the abdomen, near its termination, the tube widens out to form a sac (seminal vesicle) on one side in which these sperm are stored until they should be expelled at intercourse. There is one such tube on each side, each connected with the corresponding testicle. Near the end of each tube just before it empties into the urinary canal it is joined by ducts running from the prostate gland. These ducts supply the liquid portion of the semen.

There are rare cases in which a testicle is incapable of originally manufacturing sperm but we know that a generally run down and weakened condition will temporarily reduce the number of sperm produced. But the usual cause for the absence of sperm is that the tube leading from the testicle to the exterior has been closed off and bars their passage; and the usual cause for such a closing off is gonorrhoea. In the case of gonorrhoea, where the testicle has been swollen and begins to heal, the tube is caught in the scar and closed off and no sperm can get through. If this occurs in both testicles the man is completely sterile. His potency is in no way affected, and when at a later time he is told that his semen contains no sperm it comes to him as a surprise. Most patients who have had both testicles swollen in the course of gonorrhoea are sterile. Where mumps has affected both testicles the result may be the same. Tuberculosis of the testicles has the same effect. The effect of exposure to X-ray over a period of time is to destroy the cells in the testicles which produce the sperm and to render their victim sterile.

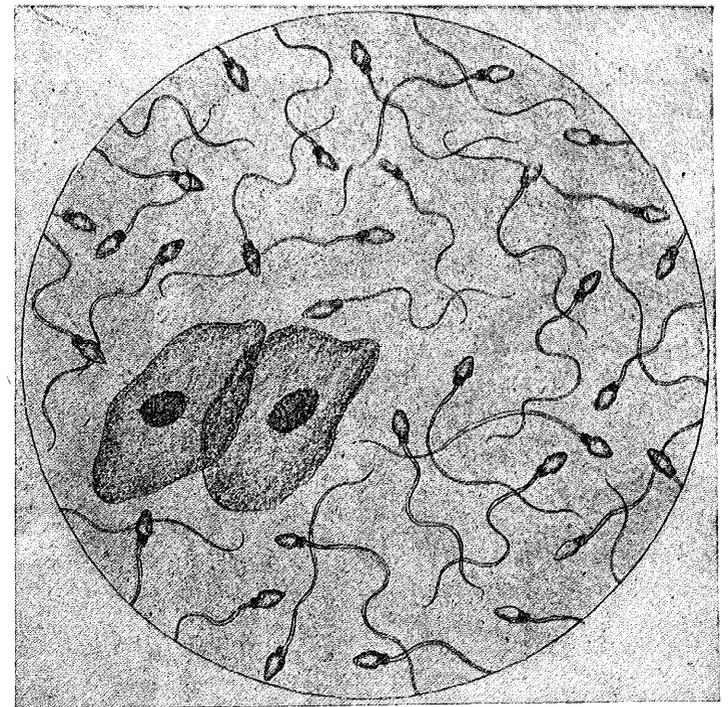
WE know also that even where gonorrhoea has not caused swelling of the testicle, it may still effect a man's fertility. If the prostate, which furnishes the fluid in which the sperm float, and the seminal vesicle

where the sperm are stored, are chronically inflamed (and in most cases of gonorrhoea they are), the pus that they contain may temporarily render the sperm inactive. This last condition usually yields very readily to treatment and the patient's fertility can be restored. Where gonorrhoea has blocked off the tube, operations have been done to circumvent the block almost always without success. In general, where sperm are absent, the outlook for restoring fertility is not good.

The terms sterility and impotence are often confused. Sterility is the inability to have children; it is a physical condition due to a disease of the sexual apparatus. It can be found in either men or women. Impotence is the inability of a man to perform sexual intercourse. It is usually due to mental and emotional rather than physical causes. It is a term applied exclusively to men. The corresponding mental and emotional difficulty in women is frigidity.

It would be wise for all young men who are planning to enter marriage to undergo the brief test to determine whether they are capable of becoming fathers.

The microscope has now removed from the woman in at least one-third of childless marriages the ancient stigma of barrenness.



This is how semen looks under the microscope. The fish-like objects are sperm. The two objects in the center are epithelial cells.

malnutrition by interfering with the proper food intake. The chronic drinker may also spend his food money for liquor.

It is still an open question whether alcohol is directly responsible for some of the diseases for which it is generally blamed. For example, in patients with so-called "alcoholic" polyneuritis (which leads to paralysis and wasting of the legs), it has been shown that not alcohol but a deficiency of Vitamin B in the diet, due to the alcoholic's poor food intake, is responsible for the disease. Of course, practically, it makes little difference if a disease is caused directly or indirectly by alcohol. In either case, excessive alcoholic indulgence creates the circumstances which are responsible for the disease.

WHAT effect does alcohol have upon the length of life? We have pointed out that the effect of alcohol depends on many factors, including the concentration of the beverage, the time-relation to meals, the adequacy of the rest of the diet, and so on. However, the general health of the drinker, as expressed in his life expectation, will depend both on the absolute amount of alcohol he gets into his system and on the type of drinking he does. In general we may talk of several types of drinkers: the moderate drinker, the heavy drinker, the chronic alcoholic, the spree drinker (or dipsomaniac). (The spree drinker and chronic alcoholic are psychiatric problems.)

According to the statistics of the life-insurance companies, those who drink occasionally to the point of intoxication or have a few protracted sprees yearly are distinctly shorter-lived than the average. The person who goes on long periodic sprees has a shorter life than the moderate chronic drinker, even though the latter consumes a larger total amount. In general, it can be said that total abstainers are longer-lived than non-abstainers. Some statistics have been offered to show that the mortality among the group of moderate or occasional drinkers is lower than among the total abstainers, but this view has been widely criticized and is not generally accepted. Moderate users of alcohol, who take it only occasionally and then in moderation, are probably as long-lived as the total abstainers. Those who drink moderately every day, let us say an average of two glasses of beer or one glass of whiskey daily, have a higher mortality than the average. Probably

the reason for this is that a certain percentage of these drinkers eventually overstep the bounds of moderation.

It seems that drinking in moderation will not injure the general health, but there are times when alcohol should be entirely avoided. We know that alcohol depresses the higher functions of the brain, especially the critical powers. Even a single drink will tend to reduce mental and physical efficiency, at the same time promoting the feeling of self-esteem. This is a dangerous combination. Because it makes them feel that they are doing better, men may be tempted to take a drink to carry them through a situation requiring a high degree of skill and efficiency. It has been shown experimentally that the drinking of small amounts of alcohol leads to poorer coordination in doing and thinking, to delayed and weakened muscular performance. In work of precision, errors are more frequent and physical efficiency is diminished. In testing the effects of alcohol on coordination and control, such complex skilled acts as marksmanship, typewriting and threading a needle were used. The control of speech and of eye-movements were studied with the help of special tests. All these tests were done with moderate amounts of alcohol, usually not more than the amount contained in one or two drinks of wine. And it was found that the various movements of the body were slowed up by alcohol, that they became more random and less coordinated in character, and therefore not so well adapted to the performance of skilled acts. A wise rule is never to take a drink during working hours.

Finally, we may consider what effect alcohol has on the human stock. It is a common belief that alcoholic parents breed degenerate and feeble-minded children. Although the effects on the individual may be devastating, it is improbable that the quality of the human stock has been at all injured by the use of alcohol, and the use of alcohol by the parents has nothing to do with the incidence of feeble-mindedness in the children. The children of alcoholic parents are not handicapped by hereditary taint, but their lives are inevitably distorted by the frictions and conflicts which embitter all family relationships in which alcoholics participate.

(Another article in this series on alcohol will appear in a future issue of HEALTH AND HYGIENE.)

Sunshine: Use and Abuse

How to protect yourself against over-exposure to the sun with a simple preparation. What happens in the skin when the sun's actinic rays come in contact with it.

TODAY there is a great cult of sun devotees and a popular desire to become deeply tanned. Its popularity is based chiefly on the healthy outdoor appearance that a deep suntan bestows. Most people do look better because the tan softens and tones down lines and wrinkles of the skin in addition to improving the color of dull or pale complexions.

Aside from improving one's looks there is a certain amount of benefit from suntan to the general health. In growing children there is undisputed proof that sunshine produces Vitamin D by its action on the skin. This vitamin is essential for the growth of bones; without it rickets develop and distort the development of the bones. Children who do not receive sufficient Vitamin D in the diet may obtain it through the action of sunshine. The specific effects of sunshine on the adult skin, outside of a general tonic value, are not known. The value of suntan, apart from toning up the skin, lies in the outdoor life accompanying the process. The exercise and fresh air so obtained cause a helpful stimulation of the entire body. If the diet is sufficient both in quantity and quality, that is, in the necessary proteins, carbohydrates, fats, minerals, and vitamins, the body can be maintained in good health without exposure to any great amount of sunshine. The best example of this is the general good health of the natives of arctic and sub-arctic regions, such as the Eskimos. They have practically no exposure to the sun during their long winter months. Their diet, however, contains the necessary food elements which they obtain from freshly killed or preserved animal meats and fish.

The writer does not mean to give the impression that suntan is a harmful or unnecessary thing. On the contrary, for city dwellers with sedentary jobs, and for workers and the unem-

ployed and their children, who suffer from lack of fresh air, proper exercise and adequate diet, getting tanned is of marked benefit to the health. Nor are the relaxation and pleasures of an outdoor existence to be denied the value due them. There is another reason for the desirability of a good tan, namely, that it acts as a protection against the harmful effects of sunlight. Those who work outdoors, and all who wish to take full advantage of their vacations or weekends to play out in the open, will find such protection necessary in order to prevent sunburn.

Having stated the desirability of a tanned skin, it is necessary to understand some fundamental facts concerning the effects of sunlight on the skin. The sun is a tremendous mass of molten matter which, because of its high temperature, emits rays of energy of various wave lengths. Some of these we recognize through our senses as light and heat. However, there are rays of shorter wave length than these which we cannot feel or see. These are the ultra-violet rays, so called because they lie in the spectrum beyond the violet part of visible light. When ultra-violet rays penetrate and react with chemical substances, chemical reactions take place. The ability of these rays to produce chemical changes depends upon their ability to penetrate, as well as upon complex factors of chemical structure. Only substances which can absorb the energy of the ultra-violet rays will undergo chemical changes. The rays are also called *actinic* rays. Dyed materials, such as cloth, absorb the rays and fade in color; brown hair will be bleached somewhat. The action on inert materials is slight, however. Living tissues react more readily and the changes are more marked and noticeable. For example, many germs are killed by bright sunshine if exposed long enough.

LET us follow the course of events after the human skin is exposed to the sun's rays. The uppermost living part of the skin is formed by a layer of elongated cells, the basal layer or *stratum germinativum*. These cells are constantly dividing to form new cells which are pushed upward in layers, flattening out progressively as they rise to the free surface of the skin. At the surface they are very flat, thin, dry, and devoid of life. They form the fine shreds which are always being shed from the skin. These layers of cells, under ordinary conditions, absorb the actinic rays of the sun and prevent the underlying tissues from being injured. When large amounts of rays shine on the skin for a long time, the upper layers cannot absorb all the rays and the tissues beneath are harmed so that the skin gets red, swollen and blistered. This is a burn, just as serious as one produced by fire. However, the skin has a protective mechanism consisting of the manufacture of a brownish pigment by the cells of the basal layer. This pigment is a complex chemical with the property of completely absorbing ultra-violet rays within certain limits. This mechanism is stimulated by small amounts of sunshine and can be carried to the point of protection in a few days. This is the process of acquiring a suntan.

We now know that sudden exposure of the untanned skin to large amounts of sunshine will produce a burn because there has not been sufficient time for the production of brownish pigments by the basal layer. It, therefore, becomes obvious that the correct way to develop a tan is to expose the skin gradually to increasing amounts of sunrays, starting with short periods of time. Let us consider a concrete example. A man or woman, not previously exposed, goes away on a vacation, wants to get tanned and play at various sports all day long. If this person immediately goes out bareskinned into the sunlight for several hours, he or she will develop a fine sunburn, blisters and all. Instead, exposure for fifteen to thirty minutes in the morning and about twice that length of time in the afternoon, covering up in between, will start off the process without producing a burn. The next day the time should be increased, until the brown color begins to follow and replace the faint redness that resulted from the previous short exposures. Such a schedule must of course vary with the complexion of the individual and his known sensitivity to sunshine.

Persons with dark complexions have some pigment in their skins and can stand more exposure at first. They will tan more rapidly, and develop a deeper color than will those with fairer skins. Those of light complexion must be more cautious and take several days longer to acquire their coat of tan. After the skin has turned brown, it may still burn and blister if there is too much exposure to intense sunshine. In such cases it is merely that the tan cannot absorb all the actinic rays and as a result the deeper tissues are penetrated and burned.

NUMEROUS oils and creams have been advocated to prevent sunburn and to permit the rapid acquisition of a suntan. It is no unusual sight to see men and women in the country, parks and on beaches smearing themselves with creams and oils of all consistencies, colors and smells and then lying in the sun to roast. Faith in the assumed virtues of these preparations has led to many a blistered skin and sleepless night. The great popularity of sun bathing has encouraged the sale of countless proprietary suntan preparations, based not on any intrinsic worth but dedicated to the task of separating the public from as much money as possible. A clear oil or cream, which is spread thinly over the skin and becomes liquid in the hot sunshine so that it rolls off, can offer very little protection, since it has slight power to absorb ultra-violet rays. Lotions and solutions, such as vinegar, have even less value since they do not adhere but dry rapidly.

The ideal preparation is one which would absorb all but a small part of the sun's ultra-violet rays. This would permit exposures of the untanned skin to the sun for long intervals of time without the danger of a burn. At the same time the small amount of rays absorbed would stimulate the basal layer of the skin to manufacture the brown pigments that make up the tan. There is today no such ideal ointment or oil. Any opaque mixture or one containing deeply colored substances capable of adhering to the skin when smeared on thickly enough will absorb the ultra-violet rays and prevent sunburn. No tan will develop if the skin is shielded completely in this way. With these facts in mind it is now easy to understand that to get a tan without being burned, requires gradual and progressive exposure and the use of a skin covering (protective salve or clothing) in the inter-

vals between exposures. It may also be necessary for some persons, even after they have become tanned, to apply some protective ointment over sensitive areas of the skin which are especially exposed in order to avoid blistering. Such spots are those over the nose, hair line of the forehead, cheekbones, shoulders, calves and any other part which gets direct exposure while standing.

It is important to be able to treat a simple sunburn in an intelligent manner. For the reddened or even the swollen and blistered stage of a burn, the application of plain cold water or cool boric acid solution is the most soothing and helpful. This should be applied sopping wet to the affected parts on sheets of clean gauze, large handkerchiefs, or small smooth towels. As often as the cloth gets dry or warm, immerse again in the cold water or solution and reapply. This should be continued constantly as long as the swelling and soreness last. Peeling will follow as the burn subsides. Do not peck at, scratch or tear scales or blisters when present. It is best to allow the blisters to dry without opening them since this minimizes the possibility of infection with pus-forming germs. If the blisters turn pussy, they should be opened under aseptic conditions and preferably by a physician.

There are many proprietary salves and lotions sold for treatment of sunburn, such as *Unguentine* and others. These are far less effective and soothing than cool water or boric acid solution and cost much more than their ingredients are worth. In addition, various skin anesthetics are used in ointment form to relieve the itching and burning of sunburn. While these are sometimes helpful when the burn is slight or localized to small areas, they are not without danger since they are capable of irritating the skin and causing further inflammation. Very severe burns, or those covering large areas, should be under the care of a physician since they are usually accompanied by toxemia (presence in the blood of poisons from the burned skin.)

The following is the formula of a recently described ointment for complete protection against the ultra-violet rays of the sun. It should be prepared by a competent druggist.

1. Salol—10 grams.
2. Dissolve this in the least possible amount of liquid petrolatum or albolene.
3. Then make up to 100 grams of ointment in anhydrous lanolin.

A FINAL word should be said about certain reactions to sunshine. There are some people who do not respond to ultra-violet rays with the production of pigment. They get red, blister and peel but never get tanned. For them, long exposure to sunshine is dangerous since they develop no protection and many sustain burns of serious nature. They must therefore avoid the sun in the summertime by covering up with clothes or using the ointment previously given in this article. The same is true for some red-heads and light-blondes who tan only slightly and after a long time of exposure.

Sunshine has a definite effect on freckles. Because freckles are localized concentrated groups of pigment producing cells and their pigment, one would expect them to be stimulated to action by actinic rays. That is exactly what happens and explains the well-known fact that freckles always get worse in the summertime. The freckles fade in the fall and winter just as suntan does. To prevent darkening of freckles, cover up or use the protective ointment before getting out in the sun.

There is a condition called *vitiligo*, in which for unknown reasons dead white spots appear on the skin. These are due to withdrawal of the pigment-producing cells or their loss of normal function. Sunshine can redden these spots but cannot tan them. The normal skin becomes tanned so that by contrast the colorless spots look more conspicuous. Since there is as yet no certain cure for this condition, treatment consists in disguising the lack of color by the use of a brownish stain. The most usual one is walnut juice, procurable from any druggist under the name *Extract of Juglans*. This is painted on to match the normal color as closely as possible.

A quite common result of exposure to bright sunlight is the outbreak of crops of small blisters in sensitive individuals. They occur briefly around the lips and look exactly like ordinary fever sores. Although not yet proved, it is quite likely that these are also due to a filtrable virus (a germ so small it can pass the fine pores of a porcelain filter) similar to or identical with that of ordinary fever sores. The sunshine probably injures the skin, thereby lowering its resistance to the virus. Those who are prone to this disturbance should avoid bright sunshine or use the protective ointment. This should also be done when the sores are present. They will clear up if not injured in any way.

WORKERS' HEALTH vs. STEEL DIVIDENDS

Facts about accidents and diseases in the steel mills of America

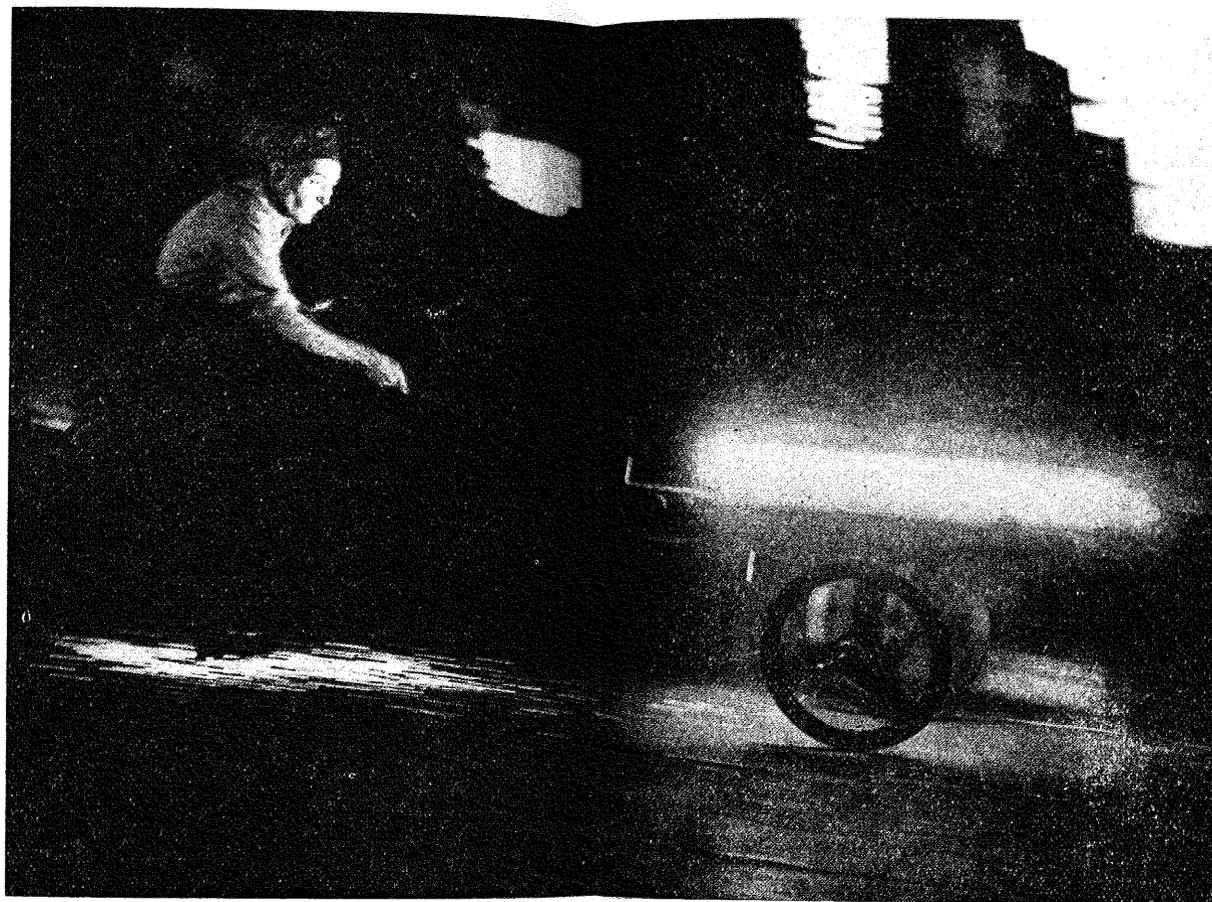
IN 375 newspapers throughout the United States, at the cost of a half-million dollars, the American Iron and Steel Institute recently expressed its deep concern for the welfare of America's steel workers. In full-page space, the steel barons proclaimed, "The steel industry will use its resources to the best of its ability to protect its employees and their families from intimidation, coercion and violence. . . ."

For decades, regardless of the representations of the employers, information has been seeping through to the public revealing that the steel mills are armed fortresses surrounded by barbed wire; that company thugs have been trained in the use of machine guns, tear gas, vomit gas and other instruments of industrial warfare; that the entire industry is ridden with a swarm of spies; that union organizers have been beaten, blacklisted and even murdered.

Who does not know of the "liberty" which the steel worker enjoys in the form of company unions, company dwellings, company stores, churches, schools, and company-appointed local governments and police forces? Who has not heard of the bloody Homestead strike and the massacre of steel workers by Pinkerton men; of the violence attending the Bethlehem strike in 1910; of the 1916 Youngstown strike in which three strikers were killed; of the army of thugs sent to the steel towns during the great steel strike of 1919?

One must pardon the steel workers if they are inclined to sneer at this latest offer of the steel barons to protect them from "violence." They cannot forget that the fomenters of violence have always been these same benevolent employers.

In the past, the steel industry has, in a simi-



Transporting a white-hot steel ingot to a roller mill

lar manner, publicized its concern for the health of the steel workers and has instituted numerous "safety" campaigns. What are the facts about the health of the steel workers and their working conditions?

In the September, 1935, issue of the *Monthly Labor Review*, published by the Bureau of Labor Statistics, a branch of the U. S. Department of Labor, there appears a survey of the

accidents and accident rates in the iron and steel industry covering the period from 1910 to 1932. This is the most complete survey of its kind to date. Its contents are shocking. Nothing could better confirm what every steel worker knows from his own daily experience about the appalling conditions in the industry. Lack of space makes it necessary that we limit ourselves here to the highlights of this report.

DURING the years 1910 and 1932, there were 6148 fatalities from accidents on the job; 22,623 workers were permanently disabled and about three-quarters of a million accidents produced temporary disability. Translating these figures, we find that if a force of 500 steel workers, working full time, were followed during the ten-year period from 1920 to 1930, approximately one-half of them would be injured or killed by accidents.

Accidents in steel are drastic. The figures show that for every thousand hours on the job, the average worker is laid up two and a half days because of accidental injuries. These figures do not include the innumerable minor injuries which occur daily and for which no time off is taken.

A few quotations from the book *Industrial Poisons in the United States*, by Dr. Alice Hamilton, foremost American authority on industrial diseases, will give some idea of the nature of injuries in steel and the causes of accidents:

"Extensive and disastrous accidents do still occur from the escape of carbon monoxide gas, every now and then, in American steel plants. The wholesale poisoning of some 55 men during the fall of 1919 in a plant of Pennsylvania, illustrates very strikingly the sudden deadly effects of this gas, and the lack of warning because of the absence of irritating qualities. For the details of this incident, I am indebted to Dr. Francis D. Patterson, at that time Medical Commissioner of the Pennsylvania Department of Labor and Industry.

"The men were engaged in relining a blast furnace, which for twenty-two days had been cut off from the gas mains while repairs were in progress, but water seals were used to prevent the gas which was passing through the

fans and other devices for cooling the atmosphere about the worker. The taking of salt tablets has been found to be of considerable aid in reducing the frequency of this ailment.

Pneumonia is the worst scourge of the steel worker. Typical steel towns such as Brad-dock, Pa., and East Youngstown, Ohio, have pneumonia rates more than three times as high as the rates for all cities in the registration area. Pittsburgh has one of the highest death rates from pneumonia among the large cities of America.

Hot jobs always carry an exceptional risk of pneumonia. The steel worker sweats profusely and frequently is chilled on leaving the plant. Cast house keepers and helpers in the blast furnace departments come down with pneumonia 13 times as often as the general run of workers in steel not subjected to excessive heat.

The experts of the U. S. Public Health Service, in surveying this problem, remarked that "men perspiring freely after a bout of heavy work in front of the open-hearth furnaces were observed changing clothes while standing in a direct draft; others went home without changing their clothes though they had become wet from perspiration." As Dr. Davis writes, "the responsibility for the excess pneumonia deaths in the steel industry rests squarely on the steel companies which have failed to provide change houses, shelters and hot and cold showers."

In spite of the direct connection between pneumonia and occupation, this disease is not compensable in any state; nor do we find any effort on the part of the steel companies to combat it. In fact, the companies have done little or nothing to combat industrial disease of any kind in the steel industry, except where

money could be saved for the company. Thus, a vice-president of a United States Steel Corporation subsidiary states: "Today, accident prevention is just as much a business proposition as production. . . . It is said that the U. S. Steel Corporation spent \$9,763,063 in safety work in ten years and showed an actual saving of \$14,609,920."

A notice to the American Rolling Mill Company foremen states "Every accident causes a loss of production."

Even *Fortune* magazine could not swallow United States Steel's highly-publicized figures on "welfare work." Only in the minds of steel barons could toilets, washbasins and company houses, for which rents were received, figure as "welfare work."

The steel workers are tired of hearing the voice of Eugene Grace of Bethlehem Steel chanting: "I do not have any thought that you desire any change in our present relationships. . . . My purpose is to assure you that we will assist in every way to continue the present proved method with our mutual problems."

Steel workers are angered by the constant re-iteration of the stated aims of the United States Steel Corporation, as contained in Gary's 25th Anniversary Bulletin: "The Steel Corporation is not an eleemosynary institution. All its activities for the good of the worker, apart from considerations of humanity, have been amply justified by plain business reasons—they paid eventually. The men who direct the policy of the corporation have never lost sight of the fact that the first object of any company is to make money for its stockholders." The steel workers are saying to the steel masters, "Thanks for nothing," and are turning eagerly to John L. Lewis and the Committee for Industrial Organization.

The steel workers know that with a strong union they can force the companies to fulfill their justifiable demands for adequate health safeguards. They are marching toward the day when the protection of life and limb will take precedence over dividends.

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 press release of a federal agency.

"Wonder-Cut Bread"

AN interesting point not mentioned on the Continental Baking Company's *Wonder-Cut Bread* broadcast is that the government has on three different occasions penalized the company for short weight. The loaves were often found below the weight stated on the label. Recently the company was fined \$658 (NJ 24715), an indication of the extent and seriousness of the company's violations inasmuch as such large fines are rarely imposed.

* * *

Skin Cream

MONTGOMERY Ward and Company agreed, under pressure from the Federal Trade Commission, to stop making a number of false claims concerning *Footlight Turtle Oil Cream*. In spite of the advertising claims to the contrary, there is no reason to believe that this stuff will "nourish the skin," "correct wrinkles," and "retain youthful complexion." (FTC, PR 1662.)

* * *

Tomato Paste

SEVERAL judgments against Libby, McNeill and Libby's food products were reported last month. One report (NJ 24982) notes that 20 cases of this company's tomato paste (Mattina Brand) were filthy and decomposed. R. Gerber and Co., was found guilty of falsely representing its tomato paste as being imported from Italy. According to NJ 24738, the tomato paste is a domestic product. This company also suffered the loss of 116 baskets of dried, red peppers which were condemned and destroyed by the government because of adulteration. (NJ 24881.)

Ether

MALLINCKRODT'S *Ether* is considered in medical circles to be among the best. In view of the government's judgments against it, we wonder what the other brands of ether must be like. NJ 24666 reports the destruction of a considerable quality found to be adulterated and unsafe. NJ 24548 reports the destruction of 190 cans on similar grounds.

* * *

Eyelash Fertilizer

ELIZABETH ARDEN'S *Venetian Eyelash Grower* is condemned as a fraud insofar as it claims to stimulate the eyelashes or encourage their growth (FTC, PR 01386).

* * *

Butter

A FEW months ago we reported a number of judgments against the butter of the largest packing concerns. Additional judgments have since been handed down. In each case the butter was filthy, decomposed and adulterated, or contained less than the legally required percentage of fat. Some companies were guilty of both these charges. According to the reports of these judgments, 122 boxes and 49 cases of the Armour Creameries were condemned. Borden's (various subsidiaries) had 13 cases condemned and was fined \$25 for both violations mentioned above. The report on Cudahy butter (NJ 24848) reads like a medieval witch's potion; this butter contained ants, mold, a fly's leg, hairs, feathers, and miscellaneous dirt. Swift and Co., was fined \$150. Swift and Co., Ltd., had 13 cases of decomposed butter condemned.

What Is Nervous Breakdown?

Mental illness has many causes

WHEN a person becomes mentally ill, particularly if he requires institutional care, his relatives anxiously ask, "Is he insane or is it just a nervous breakdown?" Married relatives of the sick person want to know, "Is it hereditary? Are my children likely to become affected?" Are my children the sick person wants to know "What caused it?" and above all, "Will he get better, and how long will it take?" In this article we will try to answer some of these questions.

The word *insanity* is a *legal*, not a medical term. It means that a person is mentally ill to such a degree that he requires care in a mental hospital. It says nothing of the type of illness, its cause, or its prognosis, that is, the probable outcome of the illness. It is just as though we had, for physical diseases, a word which meant "so sick that he must be cared for in a hospital." Such a description of a patient obviously would not tell us if he had pneumonia or diabetes or heart disease. It would not tell us if he will get better or worse or will die. It certainly would not tell us if the condition was hereditary or acquired. It would only tell us that a person has a fairly serious sickness. Even about the seriousness of the disease, it would not tell us a great deal. Whether or not a person needs to go to a hospital depends not only on the illness he has, but also on what kind of care he can get outside the hospital, what kind of hospital care is available to him, and other social rather than medical considerations. A steel magnate might go to a private hospital when he has a cold, while one of his workers would be "sick enough to go to a hospital" only when he could no longer stand on his feet. An unmarried worker without relatives would require hospital care a good deal sooner than a married worker whose wife could care for him. Of course, some conditions *need* hospital care regardless of social conditions, and regardless of whether hospital care is available, as for example those with acute appendicitis. And the same is true of mental illnesses. It should now be clear that when people say that "insanity is hereditary"

they are either misinformed, or, if they are physicians, they are irresponsible.

Besides this broad definition of insanity we have given, there is another that is applied to a person accused of having committed a crime. This definition states that such a person is insane if "at the time of committing the alleged criminal act, he was laboring under such a defect of reason as not to know the nature and quality of the act he was doing, or not to know the act was wrong." (New York State Penal Law 1120.)

This definition was originally framed when little was known about psychology and is based on old, discredited notions about people and morals. It has very little relation to known psychiatric facts about mentally sick persons. It furnishes the loophole for the appearance of those common spectacles where three famous psychiatrists swear, after getting a good fee, that some wealthy banker like Harriman was insane, while others, equally famous, swear that he was sane when he falsified his books.

IF we forget the legal term insanity and concentrate on the problem of mental illness, our original question, "What causes insanity?" now becomes "What conditions or diseases are associated with disturbances of behavior, of thinking and of feeling, and are of such seriousness that they are called a mental illness?" The answer to this question is not a simple one. Mental illness is associated with definite diseases of the brain, with diseases of the glands, with diseases of the various parts of the body, but *most often with no definite physical disease* that anyone has been able to discover. The American Psychiatric Association lists a great number of conditions under the heading Mental Disorders. The ones associated with known physical conditions will be briefly considered first. Many kinds of mental disease are due to, or associated with infection, that is, with some germ disease. These can be divided into those infections involving the brain directly and those involving other parts of the body. The most

important of the infections of the brain is syphilis. Of 100 people who acquire syphilis, about 10 per cent will develop some involvement of the brain and spinal cord. This will generally occur in those who do not get prompt and adequate treatment, though other factors are also involved. The most common type of syphilitic brain disease is *general paresis*. It accounts for about 10 per cent of all admissions to state hospitals. In recent years great strides have been made in the treatment of this disease, and with the use of artificially induced malaria, or other means of producing high fever, together with such drugs as bismuth and tryparsamide, most are helped and many are cured. Tryparsamide is a very valuable and often indispensable drug in the treatment, but because one company holds a patent on its manufacture, it is very expensive. As a result many state hospitals use it sparingly, and recently in New York State studies were made, one of whose main objectives was to discover how little one can use of this drug and still get by. In some hospitals arbitrary limitations are set up as to the number of injections of this drug a patient should receive.

Another common infection of the brain that at times is associated with mental sickness is sleeping sickness. Cure of this infection of the brain is not to be expected, but the accompanying mental sickness can be greatly helped by proper treatment, and the patients can be relieved of many of the distressing physical symptoms.

Acute infectious diseases such as pneumonia, influenza, typhoid fever, are at times associated with delirium, that is, with confusion, excitement and often with "seeing things" or visual hallucinations. The disturbed mental state may continue after the physical disease has subsided. The outlook is usually good in this type of case. Sometimes mental illness will come on during convalescence from infectious diseases, when the physical illness has left the person in a very exhausted state. Here again influenza, typhoid fever and pneumonia are important.

ONE very large class of mental diseases is due to intoxication or poisoning of the brain. The most important drug in this class of illnesses is alcohol. There are many types of mental diseases brought on by alcohol. Some are acute conditions like "D.T.s" or delirium tremens, in which the person sees and hears terri-

fying things and reacts with great fear, excitement and confusion. Delirium tremens lasts only a short time, from a few days to a couple of weeks. In another kind of alcoholic mental illness, known as acute hallucinosis, the patient hears, but does not see, terrifying things. He is not mixed up and his memory is good throughout the attack. He often imagines he hears voices calling him abusive names, particularly of an insulting, sexual nature. Frequently these imaginary voices accuse him of homosexuality. This illness usually lasts about a couple of months. In some of the more chronic forms of mental illness due to prolonged drinking over many years, there often is memory failure, loss of social sense, slovenliness and childishness.

Many other substances besides alcohol can poison the brain and cause mental disease. Among these are drugs like morphine, cocaine, and sometimes prolonged excessive use of drugs like *Bromo-Seltzer* (acetanolid). Other brain poisons are carbon-monoxide found in illuminating gas or automobile exhaust, and heavy metals, particularly lead.

Injuries to the head contribute an important group of mental disorders. This happens only if the injury is great enough to cause actual brain damage. Many cases of mental illness are attributed to head injuries when they have had nothing to do with it. Mothers often recall that when the patient was a child he fell on his head or was hit by another boy. Everyone has had these minor injuries to the head at some time or other. On the other hand, it is also true that very occasionally considerable brain damage can follow small head injuries. Following fractures of the skull people may become very irritable, subject to explosive outbursts of temper, they may develop convulsions like those seen in epilepsy. Often there develops a great sensitivity to alcohol.

A large number of conditions result in interference with the nutrition and circulation of the brain, directly or indirectly, and sometimes these physical changes will result in mental illness. Hardening of the arteries of the brain, a normal occurrence as people grow older, may become very pronounced and cause a mental illness characterized by a varying picture with memory impairment, irritability, and rapid changes in mood with quick laughter or tears.

As people grow old, certain parts of the brain wear out and are gradually replaced by other cells with which we cannot think. Like the

hardening of the arteries mentioned above, this is a normal process, occurring in everyone. It tends to result in mental enfeeblement, forgetfulness, childishness and a self-centering of interests. The person reminisces a great deal about the past and forgets recent occurrences. This is a normal picture of senility or dotage. When the process continues and becomes exaggerated, it is called a senile psychosis. At times peculiar false ideas and hallucinations develop. It is often difficult to decide if a person should be regarded merely as senile, or as having a senile psychosis. Often this is largely determined by social factors. If the old person is well to do and can be easily cared for at home, he is merely senile. If his children cannot care for him and he cannot get into a home for the aged, he may be sent to a state hospital.

Mental illness may be associated with diseases of the glands, particularly the thyroid. Overfunction of this gland always results in some nervousness and occasionally this may become very severe to the point of delirium. During the menopause, or change of life, some women become mentally ill. The number is of course extremely slight compared to the number of women who complete their menopause without marked trouble. Here a combination of glandular and emotional factors are prominent.

Pellegra, an important disease in the South, caused by inadequate diet resulting from miserable wages, may be associated with a serious mental illness, often consisting of a marked confusional state of delirium.

THUS far there were enumerated only those mental illnesses associated with some definite physical condition. The majority of cases of mental illness, however, are not associated with any known physical disease or condition. The precise causes are in most instances not known. Speaking very generally, it can be said that most of them are probably largely caused by

the total life experiences of the individual. An unsatisfactory babyhood and childhood results in the formation of an unstable personality. Difficulties in later life act on the now unstable individual and precipitate mental illness.

In addition to all the illnesses mentioned, there is the largest class of all, the ordinary nervousness, much of which comes under the classification of the neuroses. Many psychiatrists, among them Dr. Frankwood E. Williams, believe that these conditions should not be looked on as illnesses at all, but rather as a way of behaving, presenting merely an exaggeration, in certain respects, of ordinary behavior. They are illnesses, however, in the sense that they tend to incapacitate the individual to a greater or lesser degree. In our society some degree of nervousness is practically universal. This kind of difficulty will probably be largely eliminated by the proper reorganization of society. It will do this in two ways: by eliminating many of the unnecessary difficulties of adult life, it will permit even people with unstable personalities to get along without breaking under the strain of daily life; more fundamentally, it will tend to build stable rather than neurotic personalities.

Which of the conditions that have been mentioned come under the heading of "the nervous breakdown?" Anyone that you like. The term "nervous breakdown" has no exact meaning. Sometimes it is applied to "the neuroses." At other times it is used for any mental illness. It is sometimes applied only to mild mental troubles, sometimes to severe ones. It is a term of little value.

The purpose of this article has been to show how many different diseases, conditions, and ways of behaving, all come under the heading of mental illness. It is this great diversity which prevents specific answers to the general questions asked at the beginning of the article. Mental illness is no single entity, any more than physical illness. (Next month we will discuss "The Inheritance of Mental Illness.")

BUILD A HOME HEALTH ENCYCLOPEDIA

Back issues of Health and Hygiene (except April and May, 1935, and February, 1936) are available for your library. Order copies at the special rate of 3 for 25c; 6 for 50c. Over 200 invaluable, frank, bonest articles on almost every phase of health. Supply of back issues limited. Order now. Complete index of past articles through May, 1936, available in issues of July, 1936, and October, 1935.

COSMETIC PROBLEMS

Face Creams

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.

THE best way to cleanse your skin is to use soap and water. This is as true for the face as for other parts of the body. Many of you may think that such advice is nothing new. Yet it is a fact that many women never wash their faces with soap and water. They use cold creams or cleansing creams for this purpose and are amazed when told that soap is far superior. Women will tell you that it is common knowledge that nothing removes dirt from the face and cleans the pores better than a cream. If you inquire for the source of their information you either receive a blank look or are referred to some newspaper, magazine or radio statement by so-and-so, a well-known "authority."

The truth of the matter is that creams are infinitely inferior to soap and water as cleansing agents for the face, and what it is more, creams not only do not clean the pores but clog them.

In some skin diseases, such as acne (pimples), where there is an overproduction of oil in the skin, cold cream or any other cream will only make matters worse. There are many beauty parlors which overstep the bounds of their knowledge and abilities and treat acne. Not having any medical training, these people treat the skin as if it were entirely separate and unrelated to the other organs of the body. For instance, some of these people treat acne by massaging the face. To assist in this massaging a cream is used and this serves to add more grease to a skin which is already abnormally greasy.

CCOLD CREAM is a combination of spermacetti, white wax, almond oil and rose water. It is cooling, bland and usually not irritating. If you have an unusually dry skin, cold cream

will serve very well to protect against roughness and chapping. Soap should be used very sparingly on a really dry skin. It is surprising, however, to learn how many women, whose skins are perfectly normal, claim that they suffer from dry skins and must, therefore, use creams. It is evident that these women have allowed cosmetics advertisers to convince them that their normally lubricated skins are abnormally dry.

Cold cream possesses no miraculous powers. It will not bring you a school-girl complexion. Good food, exercise, fresh air, and other measures necessary for general good health are much more essential for a good complexion.

Another myth ascribed by some to cold creams is that they cause hair to grow on the face. If this were only true! All our bald-headed men would once again be happy.

The many special creams which are supposed to contain vitamins, or which act as skin foods, or as wrinkle eradicators, are absolutely worthless. We have pointed this out in previous issues of HEALTH and HYGIENE.

You must remember that the glowing testimonials accompanying many creams are paid for. Many celebrities will attach their names to anything if the price is attractive. This is also true for the so-called "scientists."

If your skin is dry and you want to protect it against roughness and chapping, buy some cold cream. It is not necessary to buy the cold creams manufactured by the well-known beauty emporiums. Any cold cream will do. The formula for cold cream is given by the U. S. Pharmacopeia and your druggist can prepare it for you at relatively little cost. However, there is such a great call for advertised products, that most druggists do not find it profitable to spend their time compounding a cream.

OUR DOCTORS ADVISE:

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

Prickly Heat

Pike, Ala.

DEAR DOCTORS:

My baby has very bad prickly heat. How can this skin eruption be treated?—O. A.

Answer—Prickly heat is an inflammation of the openings of the sweat glands and is caused by excessive sweating and retention of the sweat by tight clothes or too many clothes. It usually occurs in warm weather but may also happen in the winter time if the child is overdressed and its room hot and poorly ventilated. The warmth and sweat cause irritation and the consequent redness of the skin.

Prickly heat is best prevented by seeing to it that the baby is not too warmly dressed and that there is proper ventilation where the baby sleeps. Bathing the baby daily or twice daily is necessary. Follow the bath with an application of a powder such as zinc stearate. Sponging the baby's skin with diluted rubbing alcohol of good quality, four or five times a day, is of great help. Then apply the powder. Special care should be given to the folds of the body, such as the armpits, groin, buttock folds, and the folds around the neck. Alcohol sponges and plenty of powder should be used. The whole scheme for treating and preventing prickly heat is to remove irritating sweat and to keep the skin cool and dry.

Children of Deaf Parents

Jackson, Miss.

DEAR DOCTORS:

Can a married couple who are both deaf and dumb have normal children?—T. U.

Answer—This depends on the nature of the deafness in the couple. Did the deafness follow some disease like meningitis, mastoid, scarlet fever? If so, then it would in all probability be safe to have children.

On the other hand if the deafness in the couple came on without apparent cause in childhood, or if relatives of either parent suffered from such deafness, then there is serious danger that the conditions is "hereditary", that is, transmitted from parents to children. There are families, in which successive generations become deaf at about the same time for no apparent reason.

When a young child becomes deaf before it learns to speak, it is unable to hear people pronounce words, and therefore loses the most important means of learning to speak. That is why dumbness is so often associated with deafness.

Foods and Indigestion

Roanoke, Va.

DEAR DOCTORS:

I have been troubled for the past ten years (I am now 32) with indigestion. After eating certain foods such as cantaloup, watermelon, and cabbage, my stomach becomes bloated and I occasionally get sticky, colicky pains running across the abdomen. I also belch a lot after eating these foods and sometimes get heartburn. I hope you can prescribe a diet for me that will prevent these attacks. I have tried bicarbonate of soda and all sorts of powders but nothing helps.—F. K.

Answer—Dr. Walter C. Alvarez of the Mayo Clinic, who has devoted years to the study of disorders of the digestive system, recently published, with Dr. H. C. Hinshaw, in the *Journal of the American Medical Association* an article on indigestion which should be of interest to sufferers from the more mild digestive complaints such as gas, distention, belching, heartburn, nausea, diarrhea and pain. Alvarez used a novel but careful approach in his effort to discover exactly what may cause an individual's discomfort. Although not applicable to all cases his method has yielded a large number of successes, and fortunately it is a method which any intelligent person can apply to his own case.

Alvarez questioned closely hundreds of patients suffering from indigestion to determine just which foods caused the difficulties. He discovered that the worst offenders are the following foods (in order of frequency): onions (usually raw only); milk, cream and ice cream; apples (raw); cabbage (cooked); chocolate; radishes; tomatoes (usually raw); cucumbers; eggs; fats; rich foods; cantaloup; meat; strawberries; coffee; lettuce; dried beans; cauliflower; melons; pork; corn; pickles and sour foods; bananas; peanuts; oranges; "sweets"; spices; cheese; peppers, and so forth.

By carefully questioning oneself as to what one

eats before getting indigestion, one can often arrive at the cause of his trouble. The next step is to eliminate that food from the diet. If the real offender has been discovered the complaints will promptly disappear.

Unfortunately, however, it cannot always be done so simply. The guilty food may be very elusive or the sufferer may be sensitive to a number of foods. In such cases, it is necessary to prepare a diet consisting solely of those foods which experience has shown are least likely to give digestive troubles. Such a diet is as follows: lamb gelatin, and oysters and scallops if the sufferer knows that these last two do not trouble him, cane sugar, rice, rye, barley, tapioca, lima beans, string beans, beets, asparagus, potato, egg plant, turnips, parsnips, pumpkin, cooked pears, pineapple juice, tea. Starting with meals made from these foods as a basis, a new food is added every other day; and so on, one after another until all the common articles of diet are added. When an offending food is added, the digestive troubles reappear. In this manner the guilty ones are discovered. They can then be permanently eliminated from the diet.

As indicated above, there is no reason why an intelligent person cannot perform these experiments on himself. However, it is always best first to see a physician for a complete physical examination in order to be sure that some other condition is not at the root of the indigestion, for not all cases of indigestion are caused by sensitivity to food as Dr. Alvarez is careful to state. Therefore, the results of these inquiries will sometimes be fruitless, and in this case different types of examinations will be needed to find the cause.

Varicose Veins in Pregnancy

Lorain, Ohio

DEAR DOCTORS:

I am seven months pregnant with my second baby. In the last few weeks I have noticed a big black and blue mark on the big muscle of my right leg. My legs also get swollen with puffed up veins. What is the cause?—D. N.

Answer—Puffed up veins of the lower limbs are a very frequent and annoying complication of pregnancy. These are varicose veins which are usually found in people whose muscles are poor in tone because of the lack of exercise or in workers whose occupations require them to stand a good deal.

Strong muscles give support to the veins and help to squeeze the blood out of the veins and force it towards the heart. Associated with this poor muscle tone there is usually a congenital defect in the walls of the blood vessels, and because of these two defects, varicose veins result.

During pregnancy the enlarging womb and the growing baby produce pressure on the veins and

interfere with the return circulation of the blood from the lower limbs to the heart. Round garters which constrict the legs are also a factor in hindering circulation.

In pregnancy it is advisable to be conservative in the treatment of varicose veins. An "Ace" bandage may be obtained in any drug store. In the morning, before getting out of bed, the bandage is to be wound around the leg, from the foot upwards, like a puttee. This bandage will lend support to the muscles and veins and will prevent the blood vessels from becoming enlarged.

Round garters must be avoided. Only the side garters that come with a girdle or garter belt should be used to hold up the stockings.

After pregnancy some of these unsightly veins may disappear. Those that remain can be cured by injecting a special solution which collapses the vein and cures the varicocities. Injections should never be used while the patient is pregnant.

Acid in the Blood

Spokane, Wash.

DEAR DOCTORS:

Will you be good enough to explain what an acid condition is. This condition is concentrated around my face. There is an itching sensation accompanied by red blotches. I have been taking it for granted that it is due to too much acid in the system, and therefore followed a diet of orange and tomato juice, fresh vegetables and milk. I have also taken milk of magnesia. Please let me know if this condition can be a sign of anything but acid in the blood.—P. A.

Answer—You are laboring under a mistake. There is no disease of the skin which is caused by acid in the blood. Acid in the blood is a much over-worked idea and is an easy way of explaining ignorance of the causes of a given symptom of disease. When acid appears in the blood, the patient is very sick, and should the acid persist, death follows very soon.

It is part of the same false idea that leads one to believe that improper diet is the source of all illness. This is especially true of skin diseases, since there are only very few which are in any way connected with the diet. You are probably suffering with a form of seborrhoeic eczema which has no connection with dieting.

It is a wise policy to consult a competent physician when something is wrong with you, instead of attempting to treat yourself or take the advice of others equally untrained in medicine.

We advise against taking milk of magnesia and similar products for the purpose of correcting an acid condition. This is another idea which advertising of the high-pressure type has tried to saddle on a public already over-burdened by quack medical notions.

Boils

Bronx, N. Y.

DEAR DOCTORS:

For a year I have had boils first on my legs and then on my chin. Mine are not like other boil eruptions. The glands and lower part of my face swell. The doctor advises injections of anti-bodies. Is there a cure? What can I do when the boils come and how can they be prevented?—B. T.

Answer—Boils or furuncles are acute infections of the skin caused by germs called "staphylococci." These germs are practically always present on the normal skin, but it is only when the general resistance of the body is lowered that a series of boils occur. Boils frequently occur in crops all over the body. It is also possible for local irritations such as constant rubbing or chafing from tightly fitting apparel to be responsible for boils.

For immediate treatment, cold, wet applications (of boric acid) should be kept on continuously. If gotten before pus has formed, treatment with X-rays are of great help and may cause the boils to disappear without breaking down and discharging pus. Once pus has formed the boil must be cut and the pus drained out. Vaccines, whether made from germs contained in the pus of one of the boils itself, or made from stock cultures of staphylococci (grown in a laboratory from other boils), are sometimes of help in checking the outbreak of new boils. Building up the general resistance is often of the greatest aid. This means getting plenty of sleep (eight hours or more), eating a well-balanced diet containing milk, fresh fruits and vegetables and so forth, and resting and bathing once or twice a day.

How Often Sexual Intercourse?

Altoona, Pa.

DEAR DOCTORS:

How often is it normal to have sexual intercourse in married life? I should also like to know why my wife does not have an orgasm, although she says she enjoys the act.—R. C.

Answer—No rule can be set as to the amount of sexual intercourse that is normal or healthful. It is a highly individual matter depending on a number of factors. What would be infrequent for one person, would be quite too much for another healthy person. Experience alone will indicate what is healthful for any given person. A feeling of physical well-being and vigor should follow intercourse after a suitable rest period. If this is not so, then one may question whether the periods have not been too frequent. If it is so, then one need not be concerned as to the frequency.

The husband must always take into consideration his wife, and the wife must consider her husband. It is quite possible that the sexual appetite of one may be greater than the sexual appetite of the other, or, what would be healthful for one might not

be healthful for the other. When this is the case, then good-will experimentation will have to show what frequency is best for each under the circumstances.

As to why your wife does not experience orgasm, although she seems to enjoy intercourse, is hard to say. This is true of many women. The reason is usually psychological; a dislike, fear, disgust, or resentment of the feminine role in sexual intercourse, of which she may be very little or not at all aware. These attitudes are the result of the influence of society during her developmental years. Sex training in a capitalistic society is damaging both to boys and girls, but particularly to girls, and leads to the great amount of unhappy, often tragic, sexual maladjustment that exist in all capitalistic societies. For a detailed analysis of this problem we refer you to articles that have appeared in recent issues of HEALTH AND HYGIENE.

Vomiting in Infants

Lincoln, Neb.

DEAR DOCTORS:

Why does my infant almost always vomit after I feed him? He seems to be well physically. I will greatly appreciate your advice?—W. M.

Answer—Vomiting in a young infant may be due to one of several conditions. If the child vomits very forcefully through nose and mouth, and does this almost after every meal, and, in addition, has no bowel movement or very little, then there may be an obstruction in the bowels. This requires the attention of a physician. In most cases an operation is not necessary.

However, most cases of vomiting, spitting up of food, or hiccoughs, are due to improper feeding of the infant. They are either overfed, or fed lying down. The infant swallows a tremendous amount of air in proportion to the size of the stomach. This air is mixed with the swallowed milk. The bubbles of air rise to the top and on being expelled, carry along with them milk and its curds.

It is for this reason that every infant must be held in the proper position during the breast or bottle-feeding. Hold your infant on your lap with your legs crossed, so that he is about halfway between the vertical and horizontal positions. After the infant has been fed for twenty minutes (and not much longer) hold him up in the erect position, against your shoulders, for about five to ten minutes. Pat him gently on the back. Under no circumstances should you feed him lying down.

It is advisable to add solid food as soon as possible to babies' diet, particularly those who vomit. We, therefore, advise you to feed the baby cooked farina, two or three times a day, beginning with two teaspoonfuls and gradually increasing the amounts until the baby gets two tablespoonfuls two or three times a day.

Bed Wetting

DEAR DOCTORS:

Manchester, N. H.

My young daughter wets the bed every time she sleeps. This seems to run in my family. My brother's small girl does the same thing. What advice can you offer?—R. Q.

Answer—Wetting the bed can be caused by a physical condition in the organs themselves, such as the bladder. The sexual organs should be examined by a gynecologist to discover whether anything is wrong, and whether there is anything abnormal in this region. If nothing is found wrong physically, then the bed wetting may be caused by either poor training or nervousness, or both.

By poor training we mean that the child was not made to go regularly to the toilet when it was young, that care was not taken to give no water or other fluids just before bedtime, that is was severely scolded and frightened if it wet itself, and so forth. If you scold a child and beat it when it wets itself, that child can become very much upset and either stop wetting the bed and become nervous, or continue to wet the bed in defiance of its parents.

Another thing that may cause bed wetting is an over-severe attitude towards masturbation. Most children masturbate at an early age. They are continually playing with their bodies. This should not be strictly stopped; it will do no harm. The harm can be done by parents who are too anxious to prevent the child from masturbating. Such parents undoubtedly think that this child will get all sorts of physical and mental illnesses if it continues this practice. This is not true. It is much more likely to develop some sort of nervousness if the parents have this mistaken attitude towards the child. If a child's masturbation is severely repressed and it is terribly frightened about its masturbation, the feeling that it has about it may come out in the form of bed wetting.

If you will be frank with yourself, you will realize that urination is always accompanied by pleasure, as any physiological act is, such as eating, for example. If you call the child's attention very sharply to a pleasure such as masturbation, you may make the pleasure stronger. And if the child is too frightened to masturbate, it will do something similar in order to obtain pleasure. There are other causes of bed wetting, but these are common ones.

We do not know whether a child psychiatrist is available in your community, but you should certainly do your best to take your daughter to one if she is found to be physically well. In the meantime you can attempt to train her to overcome this habit in the following way, bearing in mind that she is not to be scolded or frightened. Tell her to go to the toilet to urinate every two hours during the day, whether she feels the urge or not; do not give her any fluids to drink after four o'clock in

the afternoon; gradually, if she improves, you can make this hour later and lengthen the two-hour interval to three; you must get her up at night every four hours and be sure she is fully awake before she urinates; this interval can also be lengthened as you progress in the treatment.

First-Aid Kit

Baltimore, Md.

DEAR DOCTORS:

A group of boys and girls from my neighborhood are planning to spend a week hiking through the country. We are trying to make careful preparations. What do you think should be included in a good first-aid kit?

Answer—The kit should contain:

1. Tincture of iodine.
2. Hydrogen peroxide—useful for cleansing a wound and as antiseptic for minor scratches.
3. Alcohol.
4. Absorbent cotton, bandage and adhesive tape, wood splints and sterile dressings.
5. Amertan ointment for burns.
6. Sodium bicarbonate—for distress in the stomach.
7. Boric acid—used as an eye wash, and as wet dressing to inflammation of the skin.
8. Aromatic Spirits of Ammonia—for fainting.
9. Tourniquet (rubber tube of one-quarter inch in diameter) for binding part of extremities in cases of marked bleeding.
10. Calamine Lotion containing 1 percent phenol—for hives or any other itching condition of the skin.
11. Compound rhubarb pills—for mild constipation.
12. We also suggest that you get a snake-bite outfit.

Nail Biting

Jefferson, Wis.

DEAR DOCTORS:

My eighteen-year-old nervous son is always biting his nails. His finger tips look as though they were gnawed. What would you recommend to break the habit?—P. A.

Answer—A fundamental cure would involve removing the causes of nervousness. More superficial methods are to keep the nails cut short, and to apply bitter substances to the finger tips. A good substance for this purpose is Fluid Extract of Gentian which is applied to the finger tips and allowed to dry. If you can't afford to buy an ounce of this, a cheap substitute is epsom salts. Chewing gum is sometimes an aid since it affords a similar release of tension to that furnished by nail biting. Insist that your son participate in sports or other activities which will absorb his energies and provide a better release for his tenseness.

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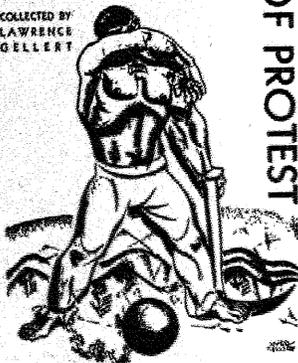
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