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HEALTH AND HYGIENE

**AUGUST
1935**



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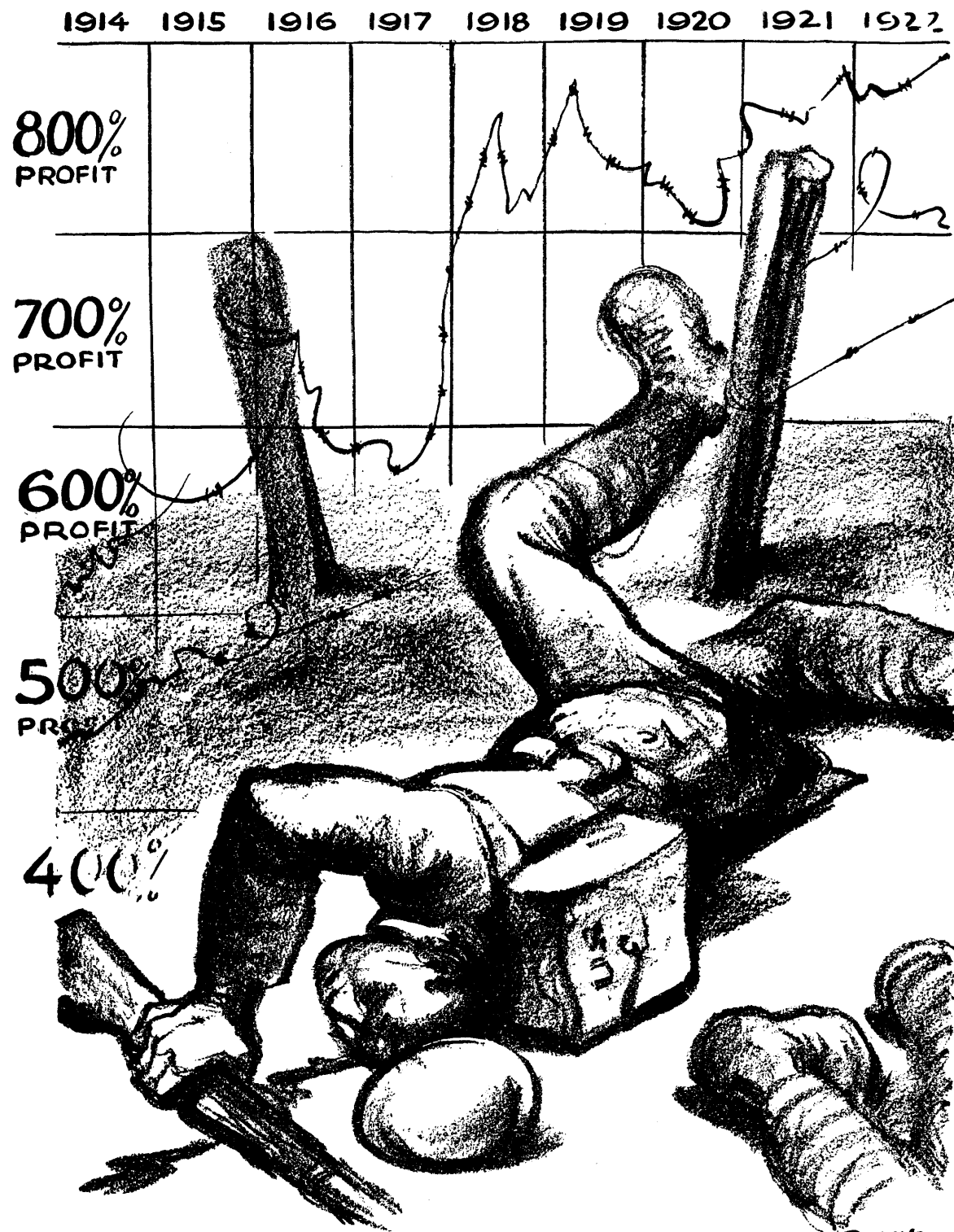
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Jacob Burck's drawings in this issue are from his book "Hunger and Revolt"

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FRANK LEONARD, Editor.



By Jacob Burck

AUGUST, 1935

WAR and HEALTH

BY
JOHN
HOWARTH

- Does war kill civilians?
- Does war kill women and children too?

It is not enough to know that war kills soldiers. Professional patriots say there is "glory" in death. But what of the millions who die far from the front, the women and children, the sufferers from war-spread pestilence? The author of this article, a noted journalist, has done deep research to provide the answer to readers of HEALTH AND HYGIENE.

"MODERN WAR is a death grapple between peoples and economic systems rather than conflict of arms alone. . . . Modern war requires that the full power of the nation be exerted in the shortest possible time, not only to the violent beating down of the enemy by any destructive material force we can invent or use, *but also by every process of slow and often insidious economic strangulation and political isolation that we can devise and administer.*" (Emphasis mine.)

Such is the opinion, not of a general or admiral, but of that smooth, sly American financial buccaneer, Bernard M. Baruch, in his testimony before the War Policies Commission in March, 1931. Mr. Baruch, who was chairman of the War Industries Board under the "peace" President, Woodrow Wilson, and who has recently been clamoring noisily for the "abolition" of war-profiteering—Mr. Baruch has forgotten one thing about "modern war." He has conveniently forgotten that war kills. He has forgotten that:

"War sows death not only among the com-
HEALTH and HYGIENE

batants but to a formidable degree also among civilians; it kills not only men but also women, not only young adults but also children and old people, not only persons in health but also sick. It kills today more than ever, not only on the battlefields but also across oceans, not only in the belligerent countries but also in the neutral countries having relations with the countries at war. Modern warfare is the affair, therefore, not of the belligerents alone but of humanity as a whole."

The above is quoted from a study of the effects of war upon social health by a Swiss statistician, Professor L. Hersch. In this article I am going to present some of the facts bearing on this subject, so that workers may understand a little more clearly that, whether they belong to the "victor," the "vanquished," or even "neutral" countries, the sufferings of untold millions who never even carry a gun or see a trench begin from the declaration of war—and are in full force long after the invariably shameful "peace."

Fifteen million human beings killed by war-borne influenza—and today they are telling us to be ready for "bacteriological warfare"!

Civilians Die Too

DIRECT military casualties of all belligerents in the first imperialist World War (1914-1918) were in excess of 13 million killed and close to 22 million wounded. Indirect casualties affecting civilians behind the lines and in non-combatant countries have been estimated at well over 28 million killed; nearly three times the deaths caused on the battlefields.

I want to emphasize this fact: that during and immediately subsequent to a conflict which has been described in an official United States government report as "undoubtedly the bloodiest which has ever been fought," the number of non-combatants and civilians killed was approximately equal to the combined population of the states of New York, Pennsylvania and Illinois. If we take the grand total—both military and civilian—we have (quoting Prof Hersch):

"Nearly 42 millions. A population exceeding that of France or Italy was wiped out. In Europe itself the war carried off a population of about 25 millions, exceeding that of Sweden, Denmark, Holland and Switzerland combined. . . . In the rest of Europe [outside England and Germany] the increase in mortality in the World War exceeded the number of soldiers who perished. Taking Europe as a whole, the war made nearly as many victims among civilians as among the military. As for the number of deaths caused by the war in the world, the number of civilians indirectly carried off by it was even, on this occasion again, more than double that of those of the combatants who fell before the enemy."

That is the kind of "democracy" for which we fought twenty years ago: a fiend's democracy of horror, disease, suffering, degeneration and death. The price we paid then, and are still paying, will be but child's play compared with what will be demanded of us IF (and the size of that IF is strictly up to the working people of the world) the doomed but still powerful imperialist governments succeed in launching another World War.

Plague and "Flu"

FOREMOST among the non-military casualties of war are epidemics. "Modern war" is not alone in the aid which it has received from this deadly ally. Dr. Hans Zinsser, a wealthy but very competent American bacteriologist who has made typhus fever his specialty, has given us a few figures from past military campaigns. For example: during the civil wars of Granada in Spain, in the fifteenth century, out of a total of 20,000 missing after one campaign, 17,000 were known to have died of plague. In 1528, at the siege of Naples, 21,000 of 25,000 men were destroyed by pestilence. The Spanish conquest of South America wiped out hundreds of thousands of natives by disease and epidemics. In the one year of 1628, during the Thirty Years' War, typhus fever carried off 60,000 people in the city of Lyons alone. In the Napoleonic campaigns, a typhus wave swept over Ireland, affecting 700,000 people (out of 6,000,000) in the three years 1816-1819.

In the American Civil War, the Northern armies lost 44,238 in battle—but another 49,205 died of wounds and nearly 200,000 of disease. The war of 1866 in Austria resulted in military losses of 53,000—and 200,000 more from a cholera epidemic. German losses in the Franco-Prussian War of 1870-71 were 41,000 from military battles; and 270,000 from smallpox and other diseases. French losses in the same war were 100,000 in "the line of duty," and 600,000 excess deaths from war-borne causes.

The World War showed what death could really do toward the "saving" of civilization. Consider the terrible influenza epidemic which swept the entire globe in the space of a few months. Beginning in the most backward and least sanitary countries we find that in British India by the end of 1918 seven millions were killed by influenza, and another million and a half in the native states. In Asia as a whole, ten million lives are estimated to have been claimed by this plague, of whom Japan had 250,000, Persia 200,000, and the Philippines 85,000. In Europe, the greatest mortality from this cause is thought to have been that of Italy, with 430,-

000 victims. Germany contributed another 400,000, Spain about 150,000, and the United Kingdom 200,000.

For the United States, government figures concede a total of nearly 400,000 cases of influenza and pneumonia among troops in this country, 3,000 miles from the seat of conflict. Total deaths are estimated at about 600,000. There were possibly 400,000 influenza deaths in Mexico, and about 125,000 in Brazil. Egypt contributed another 150,000, and the South African Union 140,000.

Typhus and "T.B."

INFLUENZA was the epidemic of the World War, but by no means the only one. Take a look at the Balkans, always one of the pest-holes of Europe. In November, 1914, the dreaded typhus showed its head in Serbia. Sixty thousand to seventy thousand Austrian prisoners set the infection on its way. Within a period of six months, not only had half of these prisoners died, but another 150,000 were killed by the microscopic louse-parasite *Rickettsia Prowazeki*. The mortality from typhus cases was so high (from 60 to 70 per cent at the peak) that for over six months the Central Powers were held at bay, forced to maintain the "cordon sanitaire" (sanitary barrier) under penalty of having their own forces decimated.

Curiously enough, typhus affected chiefly the Eastern Front (its absence from the Western sectors has never been satisfactorily explained) and notably the Russian front. Typhus cases in Russia were about 100,000 in the first year, according to possibly understated official figures. From 1917 to 1921 "there are no words," states Dr. Zinsser, "to record the dreadful sufferings of the Russian people" from this cause alone. A careful estimate by the bacteriologist Tarasewitch gives the total number of typhus cases throughout this period in the territories now controlled by the Soviet Union as twenty-five million: of this total, probably three million died. Similar records can be duplicated for all the Baltic states, for the Near East, and for Poland—where, during and for some years subsequent to the war, the ravages of epidemics were inconceivably violent.

Imperialists make war by sending their working people out to kill one another. Imperialist war can be halted by the working people.

What could be said of numerous other diseases which helped in the foul work of war? Typhoid fever, recurrent fever, cholera, smallpox, dysentery, malaria, scarlatina, exanthematic typhus—and dozens of fatal ailments resulting from wounds, poor hospitalization, exposure, famine, terror, destitution, added to the toll of death. Plagues raged through India and the East Indies. Twenty-five percent of the population of Papeete, capital of far-away Tahiti, was carried off by plague. Cholera stalked the Asiatic continent, and death rates rose even from ordinary peace-time maladies. It was as though nature herself had withdrawn protection from a species whose members had been incited (under the lash of an increasingly vindictive world-imperialism) to destroy one another.

There was also tuberculosis. It is known that, in the period from 1913 to 1918, mortality from tuberculosis increased in the countries named by the following percentages: France (uninvaded parts), 10 per cent; England and Denmark, 25 per cent; Spain, 33 percent; Czechoslovakia, 34 per cent; Italy, 44 percent; Holland, 50 per cent; Germany and Austria (blockaded countries), 61 and 67 percent respectively. In German cities of over 15,000 population, tuberculosis mortality was doubled. Total deaths from this cause in Germany alone were 160,000 in excess of the pre-war mortality. Of this excess, 140,000 were civilians.

For the United States, according to the statistical summary of the war prepared by Leonard Ayres, pneumonia was the greatest single cause of death, carrying off more than 40,000 people, of whom 25,000 were in the cantonments scattered throughout the country. Incidentally, of the total deaths in the American forces 50 percent was from disease, over half of which was in the home forces of the A.E.F.

What of "Neutrals"?

IT WOULD be a great mistake to suppose—as many of us probably still do—that the effects of war are felt only by the belligerents. "Neutrality" is merely a political term to describe those countries which do not actually send their

forces into the field: in virtually every other respect, they are as much the victims of war as the combatants—and this quite irrespective of geographic location. On this subject Professor Hersch can supply us with very convincing evidence.

Analyzing the death rates of various neutral countries during war-time, Hersch points out that an excess of this rate occurs almost invariably. Thus, in the war year of 1866, there were 11,000 excess deaths in Holland and 29,000 in Belgium. The Franco-Prussian War of 1870-71 resulted in surplus deaths to the number of 47,000 in Holland, 55,000 in Belgium, and 23,000 in Switzerland—the latter not only neutral but at a considerable distance from the seat of the war. Four times, the total annual deaths in Holland exceeded 100,000—and each time a war was in progress outside her territory. Maximum-death years for Belgium and Switzerland have also checked with war years.

But the World War, in this respect also, marked a record. Taking only six of the neutral countries, Professor Hersch arrives at the following figures of *surplus deaths* occurring during the war years. Notice particularly the numbers contributed by Scandinavian countries, and the huge surplus in Spain, which had the Pyrenees Mountains between her and the battlefields:

Country	Surplus Deaths
Norway	23,290
Sweden	49,198
Denmark	23,276
Holland	85,771
Switzerland	31,725
Spain	370,969

A total of nearly 600,000 victims claimed, in Europe alone, from countries whose only "guilt" was that they stayed "out" of the war! As for the more remote countries, including colonies of the belligerents, we have already seen what epidemics and disease did to them.

War and the Home

WAR HAS very drastic effects also upon the birth-rate, upon marriage and family relations and upon the general physical characteristics of the population. The World War left us

"WAR—WHAT FOR?" an editorial, giving the Medical Advisory Board's opinion on the subject, is printed on Page 21.

a heritage of some 5,000,000 widows and 9,000,000 fatherless children, most of whom were compelled to make the most of a "new" life under conditions which encouraged every form of physical degeneration and (through a complete disruption of normal material advantages) led to the most appalling collapse of morale, of discipline and of mental balance. The entire fabric of social life was torn to pieces by the requirements of the gigantic war-machine, which deprived the civil population not only of its physical needs—adequate food, housing, clothing—but also of its sense of security and of a complex system of social and ethical "values" built up on the foundations of an illusory "peace."

And the next imperialist war? Let General Emil Ludendorff tell us what we may expect—unless the working class makes effective, on an international scale, its inflexible resistance to any and every war conducted for the perpetuation of fascism and imperialism:

"Aerial and naval warfare will begin immediately in the night of the first day of mobilization. . . . Military operations will be begun in Europe with an elemental fury in the first moment. . . . Everywhere, and from the first instant, fighting of unprecedented barbarity will be begun on land, in the air and on the sea. . . . All agreements concerning warfare, the prohibition against dropping gas bombs from airplanes . . . or restrictions concerning the use of submarines, will be ignored. In accordance with the identical desire of the Powers war will have to fulfill its function of destroying countless human lives and relentlessly breaking the will of the European nations, so that they may at last be completely at the mercy of the victors. . . ."

In full agreement with Ludendorff, a Swedish military expert adds, "At whatever moment and in whatever circumstances the next war breaks out in Europe [or elsewhere], it will be more frightful of its kind than any previous war."

War kills . . . and kills. . . . Nothing can kill war but the resistless, sleepless, disciplined opposition of the masses—everywhere. *There is no other road!*

War Industry Takes Its Toll



By Dr. Herbert Grew

WHEN a terrific explosion destroyed one of the largest German munition works some months ago, maiming and killing hundreds of men and women, the world was once again stunned into a realization of the dreadful hazards to which munition workers are exposed. What the reports of this explosion did not mention, however, is a far greater, if less spectacular danger, which exists day in and day out under normal working conditions in munitions factories; namely, *poisoning*.

Poisoning accounts for at least ten times as many deaths among munition workers as deaths caused by violent, accidental explosions. The combination of these two deadly threats, poisoning and explosion, places the munition industry up among the top in the list of occupations dangerous to the worker. With the ever-increasing speed-up of war preparations of the past few years, and with the notorious callousness of the employers with regard to the lack of protection

for workers in munition factories, one can expect only a tremendous increase in the incidence of poisoning among them.

It is at present impossible to get accurate statistics concerning poisoning of munition workers because of the secrecy which surrounds the manufacture of munitions. Naturally, too, since governments are the chief customers in the munition industry, even those measures of protection which governments can sometimes be induced to enforce in other industries are waived aside in this industry. Most of the knowledge regarding the dangers existing in the munition industry was gathered from the experience of the World War. Since then, these dangers have undoubtedly multiplied a thousandfold with the introduction of new and deadlier explosives.

In the manufacture of the various kinds of munitions—among which are explosives, guns, heavy and light artillery, tanks, battleships, airplanes, shells, poison gas, bullets, etc.—innum-

able products of the mines, steel mills, textile mills, and chemical plants are utilized. Each of these industries has its own occupational hazards. We are concerned here, however, solely with the hazards which are present in the manufacture of explosives.

In 1916, Dr. Alice Hamilton, authority on industrial diseases and author of a number of books on this subject, was appointed by the United States Bureau of Labor Statistics to make a study of working conditions in the munition factories of the country. She visited forty-one plants employing 30,000 workers.

Dr. Hamilton found it impossible to get accurate figures concerning the poisoning of workers, since superintendents and company physicians were reluctant to "put the employers in a bad light." She found that physicians did not keep records of cases of poisoning. Some company physicians reported death due to pneumonia when fatal poisoning did occur.

She found 2,500 cases of poisoning, with fifty-three deaths in twenty-eight of the forty-one plants visited. But these figures, Dr. Hamilton added, underestimated by far the true incidence of poisoning in these factories. It was noted fur-

ther that there was a great turnover of labor, since the workers could not endure the deadly fumes, and soon learned to fear them. Dr. Hamilton wrote that:

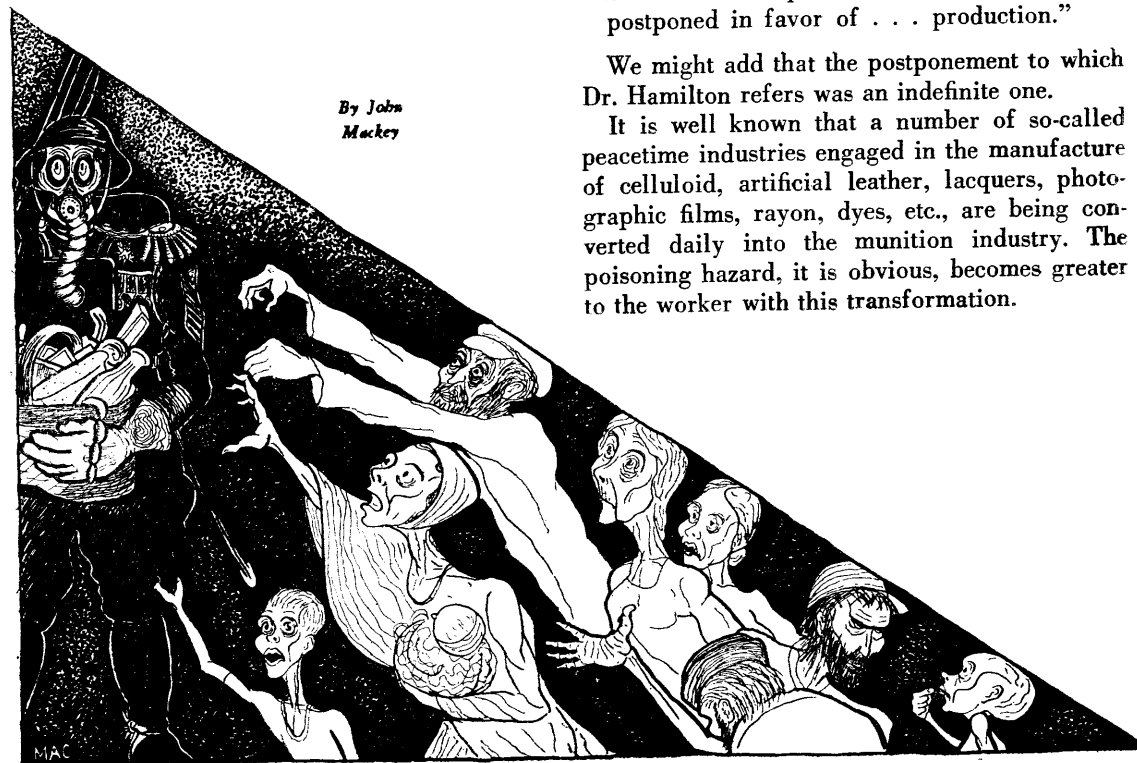
"Soon after the beginning of the war, many picric acid [explosive] works were started in abandoned factories or hastily-constructed plants, and the production was rushed in a most reckless fashion in order to fill war contracts. The worst conditions I saw anywhere were in picric acid works, not only in small plants but also in large establishments employing some thousands of men. . . . Unfortunately, it is in just these recklessly managed plants that medical care of the men is poorest, and provision for personal cleanliness most insufficient."

In another article, Dr. Hamilton reported:

"When the new plants sprang up after the war began they were, many of them, experimental in every sense of the word. Speed was the essential consideration—to fill the contract within a specified time. Haste has been the chief evil in the industry since the outbreak of the war. . . . Naturally, everything that was needed for the protection of the worker was postponed in favor of . . . production."

We might add that the postponement to which Dr. Hamilton refers was an indefinite one.

It is well known that a number of so-called peacetime industries engaged in the manufacture of celluloid, artificial leather, lacquers, photographic films, rayon, dyes, etc., are being converted daily into the munition industry. The poisoning hazard, it is obvious, becomes greater to the worker with this transformation.



By John Mackey

AUGUST, 1935

Deadly Gases

THE GREATEST danger present in munition manufacturing is the escape of deadly gas fumes during the nitration process. Purified cotton is mixed with acid, and is digested with the production of the explosive known as nitro-cellulose. It is washed; during this stage of the process, the poisonous fumes are given off. If a few drops of water find their way into the vat, the lid of the vat may be violently blown off and the acid splashed about. The whole room becomes filled with a fine spray with resulting fume poisoning and skin burns.

"Eight times during a visit to one large munition works [wrote Dr. Hamilton], I saw the angry orange-yellow fumes come pouring out, the workmen fleeing before them, and the general suspension of work until the air had had time to clear. The workmen become accustomed to the fumes in great measure, and I have been choked and blinded and speechless in an atmosphere which seemed to cause them no discomfort. There is, however, no immunity to nitrogenous fumes. Old hands (anyone who has worked as long as eight months in the explosive industry is an old hand) may succumb as quickly as new ones to an unusually severe exposure."

The symptoms of poisoning vary in accordance with the seriousness of the poisoning. In light cases, the worker chokes from the irritation of the inhaled fumes, which cause asthmatic-like seizures. Cramp-like pains in the abdomen may also occur.

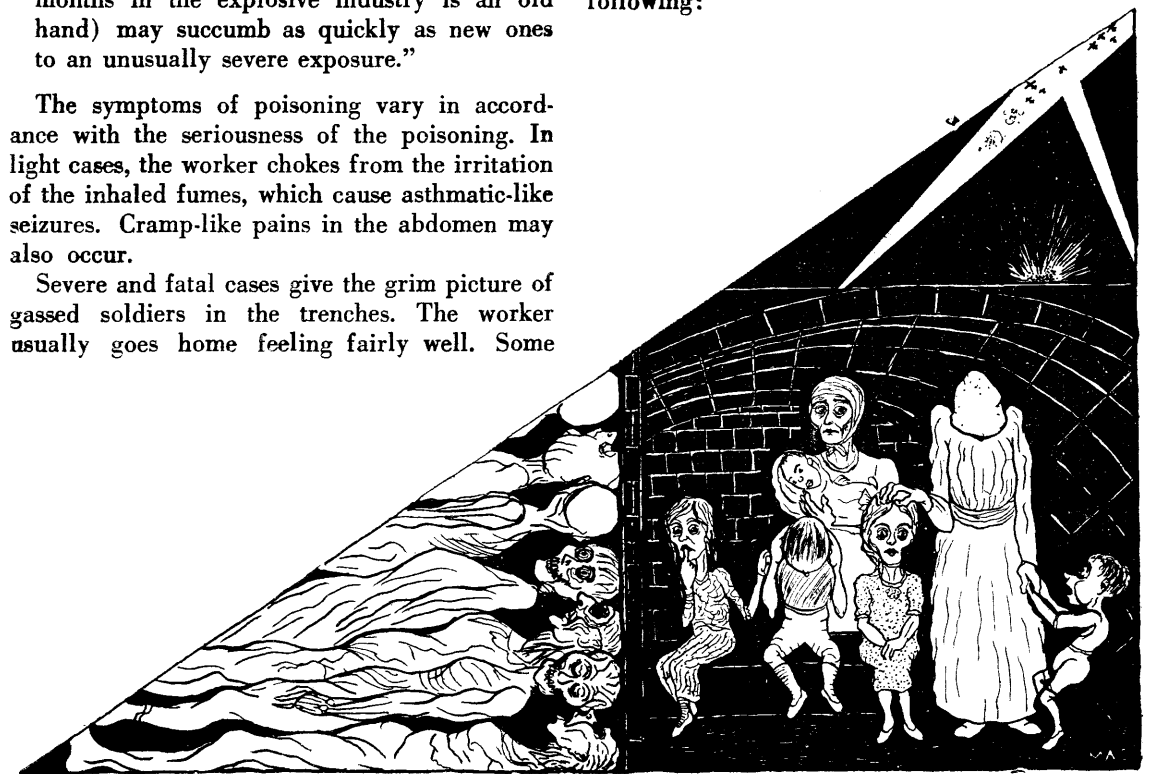
Severe and fatal cases give the grim picture of gassed soldiers in the trenches. The worker usually goes home feeling fairly well. Some

hours later, he experiences marked shortness of breath, pains in the abdomen, followed by gasping for air. The lungs fill up with fluid and the worker finally chokes to death. Less violent poisoning often passes off for pneumonia.

Death may be even more rapid when the nerve centers are hit. A worker applied for work during the heat of the summer in a picric acid plant where the fumes were unusually bad, and very little attention was paid to the safety of the men. He went on the night shift. At four in the morning he was lying unconscious in the yard. An ambulance was sent for, but he died before the hospital was reached.

Another instance of a worker who, like the one above, died on his first shift at work occurred in a cotton nitration plant on a very hot night. He had worked about four hours when he went away saying that the fumes were too much for him. He immediately became unconscious, and died in about half an hour.

Irritation of the throat, with actual choking to death, is also occasionally encountered. The workers lose their front teeth very soon after exposure to the poisonous fumes. Of one plant which Dr. Hamilton observed, she wrote the following:



HEALTH and HYGIENE

"The wire screening in the windows of the company hospital soon rots away; the men wear pure wool shirts because cotton will not last at all, but even the thread in the seams of the shirts rots away and the garment falls apart. It seems incredible that acids strong enough to attack metal and enamel should be without any effect on the mucous lining of the respiratory tract [lungs and bronchial tubes]."

Benzol poisoning, described in great detail in the article "Death Comes to the Chemical Trades" (HEALTH AND HYGIENE, May, 1935) is also frequently encountered. Death may occur within five minutes after inhaling the benzol fumes.

Women and Youth

THE CHEMICAL TNT (scientifically known as *trinitrotoluene*), an explosive known only since the last war, causes fatal poisoning during the processes of melting, pouring and pressing the explosive charges into the shells. Women and young workers are particularly susceptible to poisoning by TNT, and are known to have succumbed in as short a period as five weeks after the first exposure. The poisoning affects the internal organs, particularly the liver, the destruction of which leads to jaundice (yellow stain), coma and death.

Colonel Herbert A. Bruce, Canadian surgeon in the English army during the World War, stated the following at the annual meeting of the American Medical Association at Chicago in June, 1918:

"During the first few months of the war, not less than 200,000 women were engaged in war industry; today, there are 1,000,000 women so engaged. Of the 4,000,000 workers, the women constitute one-fourth and their number is daily increasing, and not less than the men are the girls and women soldiers heroines. The girls handle the deadly TNT, and the still more deadly Fulminate of Mercury, with a steadiness of hand and a smoothness of movement that has demonstrated in every instance their superiority in this regard to men.

"All grades of society are occupied and every branch of industrial life are all linked together in England's need. Social distinctions have been leveled in the democracy of overalls and caps. A woman worker whose husband

had died at the front took a day off and then returned to her work. In the evening, the superintendent of the factory found this inscription chalked on one of the lathes: 'Done fourteen today; beat that if you can, you devils.' Such is the spirit of the woman."

Colonel Bruce's perverted aesthetic sense, which had been so aroused by the sight of women munition workers handling deadly poisons with such skill and gracefulness, would no doubt lead him to compare the shell-shattered fragments of a soldier blown to bits to the flight of birds. Colonel Bruce did not finish the story of the woman, whose husband was killed at the front. It is not impossible that this unfortunate woman worker, the object of the Colonel's pseudo-admiration, returned to her wretched cubby hole, after a twelve-hour shift at the munition factory, to die from the effects of the poison so "gracefully" handled.

Colonel Bruce's "democracy of overalls and caps," so far as we know, did not extend to the wives and daughters of the Hon. Sir Herbert Lawrence, G. C. B., chairman of the board of Vickers-Armstrong, Ltd., largest English manufacturers of munitions, nor to the wives and daughters of the Krupps, the Schneiders, the de Wendels, the du Ponts, and other cannon merchants.

Other poisons attack the munition worker. Anilin oil, which is extensively used, causes severe skin burns which may end fatally. Fulminate of Mercury, which is widely used for the detonator caps because of its extremely explosive character, may also cause serious poisoning with skin rashes and degeneration of the kidneys. Ether is commonly used to dissolve solid material in many manufacturing processes in the munitions plants. Workers are often put into state of unconsciousness from which they occasionally do not emerge. The constant inhalation of the ether fumes causes a loss of weight and appetite because of the continual taste of ether in the mouth.

Prevention Possible

ALL THE various poisonings discussed above have one feature in common. This feature is their preventability.

The primary aim in prevention consists of keeping the air in the plant free of all poisons. This may be achieved simply by preventing the formation and escape of the gases, fumes and

dust. Wherever this is not totally efficient, these poisonous products should be removed by means of exhausts. Abundant ventilation must keep fresh supplies of air entering the enclosed spaces, as well as remove the stale air. In certain processes, filter masks and absorbent gas masks may have to be supplied to the workers.

Work must be done in short shifts of not more than four hours, instead of the 12-14 hour shifts which were the rule during the last war. Scrupulous cleanliness of the benches, apparatus, etc. must be maintained by the employer. Washable working clothes must be supplied and laundered for the workers. Adequate washing facilities and a clean lunch room should be maintained. Workers exposed to poisons which enter through the skin should have shower baths provided with hot water, soap and towels.

Every worker should be thoroughly examined medically. If found deficient in any health aspect, he should be placed at work which is not in any way hazardous to his health. Young workers under the age of 25 should not be employed in any process where poisons are present as a danger. During the last war it was shown that young people were particularly susceptible to severe types of poisoning, especially in the plants manufacturing TNT and *tetrachlorethane*.

Women should be wary of work under the conditions existent in munitions plants, since it was clearly demonstrated that they are definitely more susceptible to poisoning. The death toll among women munition workers in Germany during the last war was much higher than that of the men workers despite the fact that the men

workers were for the most part medically unfit for military service at the front.

Workers must be under constant observation, and should be shifted promptly to less dangerous work at the first sign of poisoning.

Physicians must instruct workers in regard to the danger that they are facing, the ways in which to avoid them, and the symptoms of poisoning which should be reported promptly if they appear.

The longer the hours of work, the greater the daily dose of the poison—and the shorter the period for elimination of the previous dose before another dose of poison is absorbed.

Excessive muscular work with the attendant deep breathing increases the intake of the poison in the atmosphere. Heat and humidity increase the absorption of the poisons entering into the skin, and poisoning is much more common and of greater severity in hot weather.

We have knowledge of what these poisons are. We know the havoc that is wrought upon the munition worker by these poisons. Finally we have the mechanical equipment at hand to prevent the poisoning. But, because of the workings of a society in which human life means nothing and profits mean everything, these poisonings must for the present go on. But not for long. Recently munition workers in fascist Germany struck and won their demands for better and safer working conditions. Soon their unity with other workers in other lands will build a society in which munitions, poisons, cannon merchants and all other products of a decaying society will be wiped off the face of the earth.



ANEMIA TYPES

Third Article of a Series on Blood

THERE ARE various types of anemia. We have pointed out in previous discussion of this subject that, merely to say "anemia is lack of blood" means little. We must speak precisely, and we must know what part of the blood is lacking.

Two types of anemia are *nutritional*, in which diet is the cause; and *aplastic, or myelopathic*, in which the bone marrow (the "factory of red blood cells") is diseased.

A third type of anemia comes from birth, and may be laid directly to a fault in the "factory." In this case, the bone marrow lacks from birth the ability to produce the proper kind of red blood cells. This form of anemia runs in families; luckily, it is quite rare. This *congenital* anemia may be classified as follows:

Congenital hemolytic anemia: In these cases, the bone marrow of certain families produces red blood cells which are abnormally small, and are unable to do the work of carrying oxygen properly.

Sickle-cell anemia: This is a disease which occurs almost exclusively in Negroes. Here, the red blood cells of whole families are of a quality which shrivel up very easily, and have a sickle-like shape instead of the normal saucer-like shape.

Cooley's anemia: This is a form of the disease which occurs in Italian children who come from Palermo, or in the children of parents coming from this area of Italy. In these cases, the bone marrow can produce red cells—but they are of an inferior quality.

In all of the congenital anemias, the activity of the bone marrow cannot be changed. It behaves in its abnormal fashion because of obscure hereditary factors, with which we are not acquainted at present. The only treatment is to remove the spleen surgically, since we know that the spleen destroys the old cells. The removal of the spleen simply allows the red cells already produced to live a little longer. It does

not improve the quality of the red cells which the body has. But it does allow the cells—even though they be of poor quality—to live, and thus prolongs the life of the patient.

Pernicious Anemia

NO DISCUSSION of anemias which are caused by disease of the bone marrow is complete without mention of *pernicious* anemia. This is common in elderly people.

It used to be the rule that pernicious anemia "is a disease which always kills the patient." This is not true any longer, however, thanks to the work of a group of American physicians who found it to be a deficiency disease which can be controlled so that patients do not have to die from it.

These men received the Nobel Prize for medicine last year for this great discovery. They found that liver controls this disease. We know that, in the stomachs of normal people, we find hydrochloric acid. With this acid is also found a chemical substance called "intrinsic factor." Just what this substance is has not yet been discovered. But it is known now that the reason behind pernicious anemia is the lack of "intrinsic factor" in the stomach juice. This lack, in turn, prevents the formation of liver extract, which is needed by the bone marrow in its work of maturing red blood cells. Therefore, the treatment consists in giving regulated doses of liver extract or liver, and the blood almost immediately becomes normal.

That pernicious anemia is a deficiency disease, is one of the most remarkable medical discoveries in recent years. The present-day treatment has saved the lives of a few hundred thousand people in the United States alone.

Other Types

A FOURTH group of anemias is that caused by destruction of mature red blood cells in the course of infectious diseases. Here, the red cell building materials (iron, protein and

porphyrin) are all present; the "factory" (bone marrow) is in good working order; and the products (red blood cells) are good. Still, the patient gets anemia. This is because the red cells, though fully developed, are destroyed by poisonous agents either very rapidly or in very great numbers.

The average life of a red cell is about one month. If great numbers of these cells are destroyed in a few days to one week, the "factory" just cannot keep up with the demand. The cell-count drops, and anemia develops.

This group is called the *hemolytic* anemias (from "hemo"—blood, and "lyt"—destroys); literally this means: Anemias due to "blood destroying" agents. These anemias develop in either severe or in prolonged infectious fevers; notably in malaria, rheumatic fever, tuberculosis and syphilis.

In these cases, the chief treatment is directed toward curing the condition causing the destruction of the red cells. But liver and iron is also given to help the bone marrow fight the anemia. Once the underlying disease is cured, the red cell destruction ceases, and the cell-count is restored to normal.

Finally, anemia also results when large amounts of blood fluid is lost from blood vessels (arteries and veins) which are injured or diseased. If a person is shot or sustains a broken limb (a fracture), and an artery is torn, blood may escape in sufficient quantity to produce anemia. Here the anemia is due to a hemorrhage.

In the disease known as hemorrhoids or "piles" (enlarged veins of the rectum), chronic bleeding may, and frequently does, occur, causing anemia. Also, frequent nose-bleeds, and prolonged or increased menstruation, may cause anemia. The treatment in these cases varies with the particular cause. Torn vessels are tied with

sutures (surgical thread); bleeding piles require removal by surgical operation. Prolonged nasal or menstrual bleeding should be carefully investigated by doctors. In all cases where there has been a considerable loss of blood, transfusion is needed.

Transfusions

BY BLOOD transfusion we mean the carrying over of blood from the vein of one person to the vein of a second person. The person from whom the blood is taken is called the donor (the giver); the person to whom the blood is given is called the recipient (the receiver).

Before a blood transfusion can be given, the donor and the recipient must have certain blood tests done. These tests are called *typing*, because the purpose of these tests is to find out what blood *type* the donor and recipient have.

Scientists have found that all the peoples of this earth belong to four different blood types. One of these types can give blood to anybody; the other types can give blood to only certain other types. By doing these tests, we make blood transfusions perfectly safe.

Before these tests were discovered, blood transfusion was very dangerous. Some of them would be perfectly harmless; but others would cause the sudden death of the recipient. Since we have discovered typing (this discovery was made by Karl Landsbeiner, a Nobel Prize winner) this danger is gone.

Blood transfusion is done for a variety of reasons. If the patient suffers a shock from loss of blood, this is the best treatment we have. In various bacterial poisonings of the body, transfusions are very effective. Severe anemias are treated with blood transfusions.

The donor (as long as he or she is a normal, healthy individual) can safely give blood for a blood transfusion once every month or every six weeks without any fear of hurting himself.

BABIES Should Acquire Habits



There are good habits as well as undesirable habits. It takes patience on the part of parents to train their children to do habitually what is best. The child specialist who writes the article below tells about the feeding habits which should be acquired by children.

HABITS are formed from the first day of life. It is important to make the habits good ones. The training must be begun early and must be systematic. Indulgence, which often develops thoughtlessly as the result of affection, leads to bad habits. One sure way of spoiling a child is to give him everything he cries for. The worst offenders are the grandparents, especially the grandmother who, because of her past experience, believes that she knows everything about the baby's care.

The most difficult period is usually during the first three or four months. It is during this time that the baby is more apt to be hungry; to have attacks of colic; and to have disorders such as vomiting, constipation or looseness of bowels. The best guides, indicating a satisfactory state, are the baby's weight (a healthy baby should gain from four to ten ounces weekly), the character of the bowel movement (which should be soft and pasty, numbering three or four a day, and containing no mucus or blood), and his general behavior.

Regularity in feeding is essential. The baby should be fed at the specified times, even if he must be awakened at feeding time. In due time the baby acquires regular feeding habits. In general, not more than 30 minutes should be consumed at a single feeding.

All babies should be breast-fed at least for three or four months, if the mother has sufficient milk and if her physical condition warrants it.

The baby gets all of the milk in about ten minutes. If he is allowed to nurse over fifteen or twenty minutes, he falls into bad habits. When the breast-milk supply is scanty, the infant should be fed at the breast no more than five to ten minutes, and the nursing should be supplemented by a bottle feeding.

If a baby is weaned (not breast-fed), the milk formula must not be too weak. The proportions of milk to water should be two parts of milk to one part of water, or, better still, three parts of milk to one part of water, reinforced with sufficient amounts of the standard preparations of sugars such as Karo syrup (Blue Label), Dextro Maltose, milk sugar, or cane sugar (ordinary sugar), about three tablespoonsful to 21 ounces, or four tablespoonsful to 30 ounces. The milk should be boiled for three minutes and then warm water, previously boiled, should be added to the desired volume. After the milk preparation is completed, pour the feeding equally into as many clean bottles as needed. Stop each bottle with a cork or a rubber cap. Cool the bottles rapidly in running water, and keep them on ice until needed. Just before using, warm the bottle

to body temperature and keep it warm during the feeding.

Breast feeding or bottle feeding should be given by holding the baby in a semi-reclining position. This is accomplished by placing the baby in the lap and arms of the mother who is sitting comfortably with her legs crossed. After the feeding, hold the baby up against the shoulder and pat him gently between the shoulder blades. Keep the child in this position for five minutes, in order to have him expel swallowed air. A sound need not necessarily be heard.

Number of Feedings

BETWEEN one and two months, an infant requires seven feedings of three to five ounces of the milk at each meal. The hours should be 6 a.m., 9 a.m., 12 noon, 3 p.m., 6 p.m., 10 p.m., and 2 a.m.

Between two and four months, the baby is placed on a four-hour schedule, receiving five to six feedings of six ounces of milk each time. The feeding hours should be 6 a.m., 10 a.m., 2 p.m., 6 p.m., 10 p.m., and 2 a.m. If the baby can do without the last feeding, it may be omitted.

After four months, the baby should receive five feedings a day—at 6 a.m., 10 a.m., 2 p.m., 6 p.m., and the last feeding may be given between 10-12 midnight. This last feeding may be omitted after six months. The amount of milk given after four months may vary from six to eight ounces at each meal.

If a baby takes enough milk, it is not necessary to have him take water. However if he cries between feedings, or is thirsty, give him from a half ounce to two ounces of slightly sweetened warm water between feedings.

At four to six weeks, orange juice and a good preparation of cod liver oil must be given. Both are added slowly until the baby takes one to two ounces of orange juice and about three teaspoonsful of oil. It must be administered in a "matter-of-fact manner as a food rather than as a medicine." The younger the child, the more likely are we to have no trouble in giving the

oil. If the oil is given at a regular time, say 10 a.m., a habit is fixed and the infant will learn to expect it at a definite time. The oil and the spoon should be kept cold, for this will make the oil almost tasteless.

Adding to Diet

AS SOON as possible, beginning at two to three months, additions to the diet should be made, beginning with cooked cereals and gradually adding at monthly intervals one or two different types of food, such as cooked vegetables, cooked fruit, egg yolk, desserts, meat, fish, butter, etc. By six months, the child should have a well-balanced diet. The additions of new foods should be made slowly and in small amounts, and should be increased as the child's liking for the food develops. Only one new food should be introduced at any meal; when serving it, say nothing and expect the child to eat it. Serve the new food at the beginning of the meal, when the child is hungry. Do not replace a refused food by one that he likes better.

The atmosphere at the table must be calm. The mother must show no concern or anxiety over the child's behavior at the table. Do not discuss food, and avoid mention of likes and dislikes of food. Insist that the child take no more than thirty minutes to eat his entire meal. Do not allow him to dally over his meal. If he has not finished his food in the allotted time, remove the food and do not feed him until the next regular meal. Do not scold, argue or cajole your child into eating. Feedings between meals must be given only if they do not interfere with the appetite at meal time.

By starting good habits in infancy, and continuing them throughout childhood, one avoids the establishment of bad feeding practices. The parents are responsible for the child's acquisition of food habits. The parents must proceed in a definite and consistent manner. However, while being firm in seeing that the child obeys them, they must be reasonable and allow for certain personal tastes of the child—provided such likes and dislikes are within reason.

CANCER CAN BE CONTROLLED

CANCER has come to be joined to a feeling of such utter hopelessness and dread, that, in almost every case, most of us tend to throw up our hands in a gesture of despair—as if nothing could be done. However, we should not throw up our hands; it is better that we learn something about the disease we fear.

To begin with, Cancer is *not one* disease. It is a word applied in common to a large number of separate diseases with varying outlooks and even varying methods of treatment—just as tonsillitis, scarlet fever and the plague are all infections, yet they differ greatly in their seriousness. A cancer of the stomach is a serious condition; and so, for that matter, is a cancer of the skin; but, in skin cancer, much more can be done than in cancer of the stomach.

What is it then, that cancers have in common? Generally speaking, a cancer is a new growth. It is a condition in which certain cells of the body tissues, which previously were normal, acquire the power of growing at a faster rate than the surrounding tissues. These tissues grow not only faster, but in a disordered fashion. Growing so fast, they replace the normal tissues and interfere with the functions of these—much like rank weeds in a garden.

You must bear in mind that, in all of us, the body is growing constantly; that the old tissues and parts wear out, and become replaced by newer tissues formed on the spot through a multiplication of the cells which make up the tissues. As new cells form, old ones die. This happens even in tissues that we are accustomed to consider as unchangeable, like the bones and muscles.

The cancer arises from these formerly normal cells which, under certain conditions, cannot be controlled any longer in their slow rate of growth—and they begin to grow at faster

speeds. It is as if a brake of some kind had been destroyed.

From what we have just said you will perceive that cancer is not a parasite or vampire on the human body; it is a condition which arises from the nature of the body, its structure, development, and constant growth. The more we learn about these ultimate mysteries which comprise the subject of the science of Biology, the more we will learn about cancer.

A cancer may arise in every portion of the body, and from every tissue such as muscle, skin, the lining membranes of the stomach and intestines, the nerves, bones, etc. Some cancers will grow much more rapidly than others.

In the early stages, the growth may remain small or confined to the area of its origin—since its growth is in competition with the more normal tissues that surround it, and these tend to restrict it. This stage is known as the *stage of localization*. If the growth can be discovered at this time, the chances for survival are good, since treatment can be effective.

If need be, the growth can be cut out by the surgical knife, or destroyed just as completely by radium (or the x-ray) where we have a growth that is sensitive to these agents of destruction. The statements made here are true, generally speaking, but there are exceptions. One of these is cancer of the lung which *mostly* does not respond to x-ray (or radium), because its location—deep in the chest, next to the large vessels of heart and lungs—makes extensive removal very difficult. Yet, even here, successful operation has been performed. Another example is seen in the operations on the brain that we read about today, which formerly were all hopeless. Sometimes a combination of the knife and of x-ray is the answer for a particular case.

— But Not by Doctors Alone

There are many misconceptions about cancer which the physician dispels in this article. One of his encouraging points is that cancer is not a disease that people inherit. Another is that a "decent regime of living" is necessary for the control of cancer. Such a regime is not within the province of the medical profession alone. Society as a whole must alter conditions that lead to disease.

Gloomier Cases

ALTHOUGH the growth may remain confined to one area, it may have been neglected or undiscovered so long, or it may grow so fast that it will spread into the neighboring tissues to an extent that surgery cannot overcome. The injured tissues may become infected and further complicate matters. Yet, even in this stage, some good results have at times been effected, especially with the help of x-ray.

Finally some cancers, in their later stages, may not remain at the spot where they arose but may appear in several locations. This happens because the cells of certain cancers can grow into surrounding blood and lymph vessels and are then transplanted elsewhere in the body. This condition of distant growth is known as *metastasis*, and is what is meant when we say "the cancer has spread through the body."

Treatment at this stage is much like putting out a fire with the flames appearing at doors, windows, roof, etc. This is the fatal stage of the disease. Yet, even here, gloomy as is the outlook, there exists a series of cancerous diseases of the lymphatic system which may go along for years, aided by proper x-ray treatment, even though several areas of the body are involved.

The deep fear of cancer that many people carry through life is often reinforced by the fact that some member of the family or some forbear has died of the disease. The implication is that it is inherited. Let us say right now that there exists no convincing proof that this is true of man. Such experiments as have been done prove the point only for certain laboratory animals under special circumstances. The application to humans is dubious. What has been indicated by these experiments in cancer is that a greater susceptibility exists in some for acquiring cancer.

HEALTH and HYGIENE

Proof Incomplete

NO COMPLETE and final proof as to the cause of cancer exists. All the evidence we have cited indicates in fact that there is no single cause, but a combination of causes or factors. First off, no evidence that it is a disease caused by germs has ever been sustained. Its behavior, in fact, is unlike that of the germ diseases. More important is this. Careful study reveals that cancer is a series of diseases arising in different organs and tissues, and its occurrence is promoted by conditions in these organs. As simple examples, cancer of the male organ never occurs in those who have been circumcised early in life. Cancer of the mouth is often associated with badly neglected teeth. Cancer of the cervix is uncommon in Jewish women.

The reasons for these interesting findings cannot be stated in detail, but certain facts stand out. Apparently, before cancer appears in any location, there is a period during which the tissues undergo constant irritation and destruction by various injurious agents. The result is in the nature of a chronic inflammation or ulcer which may give rise later to a cancer if the conditions that cause it are not corrected. This irritation may extend over many years, which may be why cancer tends to be a disease of later life.

Let us go a little further into this. In cancer of the mouth it has been found that certain irritation areas, known to physicians under the name *leukoplakia*, often precede the cancer over a period of years. These spots (which *may*, but not always *do*, go on to cancer), are present in cases with poor mouth hygiene (badly decayed teeth, teeth out of line, pyorrhea, etc.). An additional factor may be incessant smoking of an irritating type—like incessant pipe smoking. Then, too, certain diseases prove an additional

factor—a disease like syphilis. Obviously, good mouth hygiene—and, more important, the creation of conditions where the practice of proper oral hygiene is possible for all—should result in a real reduction in this type of cancer.

Cancer of Breast

THE MOST common type of cancer in women is cancer of the breast. This occurs most frequently in women who have produced milk. It is common to obtain in many cases a history of interference with the proper flow of the milk after childbirth, whether due to indrawn nipples, too early weaning of the child, or complete neglect to breast-feed the child even though the breasts were filled with milk. This retained milk may clog up the ducts of the breast, and produce an inflammation here (called *mastitis*), which may be the forerunner of later cancer.

Where real inability to nurse exists, it is well to use a breast-pump to draw off the excess milk. Cracked or inflamed nipples require attention.

Any abnormality of the breasts in women requires attention. It may be that a woman notices a lump. She should get into the habit of occasionally examining her breasts. She may note some indrawing or dimpling of the skin here, or a discharge from the nipple; or only pain shooting around this region. All this doesn't always, or usually, spell cancer—but it may. A woman seeing these symptoms should see her doctor, or go to a good clinic for careful examination and reassurance. If periodic examination is advised, she must cooperate.

In men, the commonest cancer is that of the stomach—one-third of all cancers is of the stomach. The outlook is not as good here as for the breast in women, because the stomach is an internal organ where examination must be by x-ray; too frequently the examination is not done early enough.

The point to remember is that stomach symptoms (indigestion, nausea, loss of appetite, pain in the stomach region, vomiting, loss of weight) coming on in a person of middle age or older, especially demand x-ray study. All efforts must be made to obtain this study. An early diagnosis may mean a successful operation and a life saved.

We realize today that certain food habits may predispose to cancer, especially if continued over years. Such habits include bolting hot food, excessive use of tea and coffee, improper use of tobacco. Such habits as swallowing the tobacco juice, common among tobacco chewers and in-

terate pipe and cigar smokers, may cause trouble.

Cancer of the cervix (neck of the womb) is worthy of mention. The factor of chronic irritation is seen here because of the association of this type of cancer with a chronic inflammation of the neck of the womb. This inflammation results from a tearing of the womb in childbirth which has not been properly repaired then or later; from untreated infections of this part; or from using strong irritating douches for whatever reason—douches of lysol for example. Chronic discharge in women, or bleeding outside the regular routine, always demand attention. The use of radium for this type of cancer has resulted in a far better outlook than in the pre-radium days.

A PROMINENT doctor recently suggested that medical schools should have courses in diagnosis and treatment of cervical disease. He suggested also a vigorous campaign among women concerning the right kind of douches. How this is to be done, when Listerine can buy radio broadcasts by the hour while even constipation cannot be mentioned over the air, as being too "suggestive," the doctor does not say. As for syphilis or vaginal conditions, the theory appears to be that it is even better to have them than to talk about them.

In the last two years, cancers in animals have been produced by applying to the skin certain special dyes called *Benz Anthracene* series. This is an example which proves the original statement that cancer is not so much an inherited tendency, but much more likely the effect of long standing irritation to an organ or part which gives symptoms of irritation frequently before the cancer appears.

Even industrial hazards may create cancer. It has been known for long that workers in certain aniline dye factories had a high rate of a certain type of bladder cancer. The work we mentioned in the previous experiment offers the explanation for this.

What all this proves is that even so dread a disease as cancer can be controlled. Given the means for a decent regime of living—which includes hygienic conditions of work, fresh air, a well balanced diet, good dental care available to all, complete obstetrical and gynecologic care and education for women, and first class medical diagnosis possible for all patients—given this, plus effective education on living conditions, and there is no doubt that cancer would be another disease that we would control.

WAR—WHAT FOR?

An Editorial

The March of Death

IN AUGUST of the year 1914, armies started a march which continues to this day. It is a march which destroys everything it meets in its path. And in its wake follows more destruction—death and pestilence, plague and epidemic, suffering and starvation, homelessness and the heart-ache of millions who know that their young were born for one purpose: that they may die fighting others who are as innocent of evil purpose as they are themselves.

It does not matter whose army is first to cross people of the world, August has been marked in red letters as the month when these working people—in every case the victims of WAR—give voice to their opposition to war fomented by world imperialists for profit.

It is for that reason that HEALTH AND HYGIENE, a magazine addressing itself to the working people, observes August as anti-war month by issuing a special number concerned with the effects of war upon workers' health.

Imperialists and War

WAR KILLS more than soldiers. It kills also still greater numbers of non-combatants. In this issue, articles cite figures showing that the battle rages far away from the trenches and in places remote from "No Man's Land." In fact, when imperialist war sweeps the world, every factory and every home, every street in every city, town and village, every locality in every land—whether the land belongs to a nation that is "victor," "vanquished" or "neutral"—is affected.

We speak here of *imperialist* war. We use that word because there is another kind of war. Substitute for the word "imperialist" the word *offensive*, and you will be correct in every instance. *Every imperialist war is a war of offense.*

It does not matter whose army is first to cross the border of another country. The decisive factor in determining whether a war is offensive or defensive is not based on clocking the march. Rather is it based on the question of imperialism.

Whose Fight and Sacrifice?

IF A COUNTRY is imperialistic, then the fact that its army fired only after first blood had been drawn by the "enemy" is of little importance. Both offender and defender are interested in only one purpose: private profit for private individuals who know no country, who recognize no boundary line, who care for nothing except the profit that they gain while "their" working people give up life and blood and health.

If HEALTH AND HYGIENE can convey to its readers this one lesson, the purpose of this anti-war number will have been accomplished. Read the lesson that imperialist war has taught us. Read of the destruction and devastation that imperialist war entails. And when next the drums beat and the flags fly and the bugles blow, ask yourself: Whose war is this? Whom am I told to fight? Whom am I told to fight for?

Fight—but Against War

THE ANSWER can be only one. The working people are told by imperialists to fight their own brothers, to fight other working men (and women and children too—as our articles show) that the imperialist masters might profit.

Having phrased the answer, the working people of the world will then follow through and say to the imperialists:

If fight we must, we shall fight for our own interests, and not for yours. We shall unite with our brothers and sisters in all lands for the purpose of fighting our common fight—for the liberation of the working class of the world from imperialism and from domination by profit makers. Only one country in the world, the Soviet Union, is not imperialistic. That, then, is the only country that can fight a war that is truly defensive. All other war is offensive from the very nature of its origin in imperialist desire for private profit. We shall defend the country fighting a defensive war. And to the imperialists we shall say: **WE WILL FIGHT—against your war but not for it.**



BEHIND THE LINES War Sows Death

WAR TAKES its millions of lives in a great number of ways. In addition to those who are killed or wounded in battle, there are the many millions killed by diseases, plagues and epidemics that sweep behind the lines of combat. There are the many others who are killed or injured in the war industries. And there are those who are killed or whose health is permanently affected, through malnutrition.

No healthy race can be expected from children whose growth is checked by undernourishment. At a conference held in Washington in 1933, under auspices of the government, child specialists and social service workers warned against the ultimate effects upon the health of the people who are suffering from malnutrition because of the depression. One significant figure from England served as a warning of the effects of undernourishment on children.

When England started recently recruiting soldiers from among those boys who were born during the World War, or who were very young during the war, it was found that boys of that generation were on the average not as tall, nor proportionately as heavy in weight, as were youths of other generations. England needed 30,000 soldiers from that generation of "war babies." Imperialist England, in order to raise her army, had to reduce her standards. Boys as short as five feet three inches, and weighing as little as 113 pounds, were accepted for Great Britain's royal army!

The scientists who revealed that proof of the effects of undernourishment were concerned with the present depression. Here we are concerned with war, and not with the depression. We are concerned, primarily, with the lives which war steals—secretly, sneak-thief like—by undermining the health and vigor of vast numbers of people, old and young alike, through inadequate nourishment.

It has been estimated conservatively that nine million children were left fatherless by the World War. But, in addition, millions of other children are going through life today robbed not only of parentage but also of the health that should have been rightfully theirs.

Poor Food for the Poor

THERE is gruesome irony in the fact that, prior to the war, relatively little was known concerning the results of undernutrition in man. Owing to the limitation of food material, the problem of undernutrition became a pressing one, and physicians and physiologists had the ghastly opportunity of making mass experimental studies of the effects of undernutrition, not on mice or guinea pigs, as heretofore, but on human beings. It was very soon discovered that undernutrition is accompanied by increased susceptibility to diseases, such as tuberculosis and acute infections, and that convalescence from these diseases is prolonged and more difficult for those who are undernourished.

AUGUST, 1935

Lack of Vitamins

The average daily ration of an adult should contain from 3,000 to 5,000 calories, depending on the amount of work done. An important element in a healthy diet is the protein food, such as meat, cheese, fish, eggs, and milk. An average of 60 to 100 grams of protein is required daily by every human being. In Germany, in the winter of 1916-17, the official ration contained 1,344 calories and 31 grams of protein. Extensive use was made of soups and of foods with a high coarse residue.

Two scientists who studied the food of the Berlin poor found that eight out of nine persons were receiving only 1,300 to 1,800 calories daily, while the remaining one received 870 to 1,228 calories daily. Most of the patients in a Berlin hospital received less than 2,000 calories. These patients, with one exception, were all greatly emaciated. By the end of the war, practically half of the Belgian and French populations of nearly 16 million people in the devastated areas lived entirely on a ration which never exceeded 2,000 calories, according to the American Relief Commission.

Substitutes for various foods were to be seen everywhere during the war, but no one can now claim that even one of these substitutes was really satisfactory. Grains were used in sausages as meat substitutes. A meat substitute was even made from blood for a short time. One of the milk substitutes was a real atrocity. The claim was that it made "coffee white and sweet." It was composed of 98 percent chalk, and 2 percent sugar, with a trace of vanilla. One German physician, writing exhaustively on this subject, expressed the hope that no one will ever hear again of a single substitute out of the whole collection.

THE ALLIED powers were also threatened by food shortage, and the health of the population was affected almost as profoundly as that of the Central powers. Deficiency diseases due to lack of essential vitamins in the diet were observed in the armies and civilian populations of all the warring countries.

Epidemics occurred especially among the troops and among populations of colonial countries. A severe epidemic of scurvy occurred in Mesopotamia among the Indian troops. Beriberi, due to lack of vitamin B, occurred among the British troops, as a result of insufficient quantities of fresh foods. These diseases were prevalent among the civilian populations as well, but the exact number cannot be estimated.

Diseases of the eyes resulting in complete or partial blindness, due to vitamin A deficiency, occurred among large numbers of civilians in Central Europe, in the colonies, and in Russia.

"Famine edema," or swelling, was a problem of special concern to the civilian population. How many hundreds of thousands were affected will never be known, but that it was widely prevalent is obvious from the numerous observations that appeared in the medical literature of the war and after. Besides being markedly emaciated, the sufferers experienced severe cramps in the limbs, and the feet and abdomen became swollen with fluid. The essential cause was a lack of sufficient proteins and vitamins in the diet in the form of milk, eggs, or meat.

The overwhelming majority of the population of Europe and the colonies was living on diets low in calories, low in protein and fat, and high in the coarser vegetables. In Denmark, which



HEALTH and HYGIENE

also suffered from food shortage, the use of bran as a food became widespread. Bran has only a very slight nutritive value, but it can fill the stomach and ease hunger pains; its widespread use was advocated by government authorities.

Children and Adults

RICKETS struck down and crippled countless numbers of children. "Hunger osteomalacia" is a deficiency disease resembling rickets and occurring in adults. This disease was noted particularly in the civilian population.

The anatomic museums of the medical schools of Europe contain many finely mounted skeletons showing the destruction of the bones resulting from inadequate nutrition. Bones would become so fragile that limbs would snap in two or

more places. A slight twist or awkward movement would be enough to cause a fracture.

These are some of the direct consequences of the war. Disease and malnutrition did not cease with the end of the war. A severe depression followed, reaching its climax in the years of inflation. Professor Von Tyszka, a medical authority, made a thorough survey of undernutrition after the war. He found that the diet of the people was essentially the same as in the days of strictest rationing during the war. The blockade was lifted, food was more plentiful, but in Germany and other European countries, the rise in prices and the fall of the currency value made essential foods still inaccessible.

War does not only kill. It also sows death, sickness, disease for future generations by undernourishing millions of people, old and young.

DIABETICS Can Live Normally

ARE YOU being treated for diabetes? Once, twice, perhaps three times a day you inject insulin into yourself; you limit your diet, watch your carbohydrates, eat sparingly of proteins, test your urine for sugar. Do you know why?

Of all diseases, diabetes requires the most intelligent cooperation on the part of the patient. It cannot be cured. But most of its complications can be avoided, and the patient can lead a normal life—if only he knows what he is doing.

Doctors do not need to explain the idea behind the treatment to their private patients. These people can afford frequent visits, and careful supervision. It is much more necessary in the case of the worker. He must rely largely upon himself to keep the disease under control. He cannot afford to visit the dispensary too often, especially if he is so fortunate as to have a job. Yet it is in the dispensary, where it is most important, that the doctor does not have the time to sit down with the patient whose condition he has just diagnosed as diabetes, and ex-

plain to him what it is all about, and how he must adjust his life to the newly discovered complication.

What is diabetes? It is a disease in which the body is unable to utilize "sugar" to the fullest extent. The "sugar" is glucose. It comes from the carbohydrates (bread, cereals, grains, potatoes, bananas, etc.) and to a lesser extent from proteins (meats, vegetables, etc.).

In order to use up the glucose the body must have insulin. Insulin is one of the numerous hormones that are manufactured by certain glands of the body. The pancreas, the organ that lies in the upper part of the abdomen, has two functions. It manufactures *enzymes* which pass into the small intestines and help in the digestion of food. It also manufactures the hormone insulin, which passes directly into the blood stream. Unless insulin is present in the blood stream and tissues, the sugar which is derived from the foods in the process of digestion cannot be used or "burned" to provide energy for

the body. Every normal individual has a pancreas which can manufacture adequate supplies of insulin.

In 1922, the modern treatment of diabetes was begun when insulin was prepared from the pancreas of calves and sheep. It was produced in a pure form, which could be effective in controlling diabetes by injecting it under the skin. If it is taken by mouth it will be destroyed by the stomach juices, and will, therefore, have no value at all.

In the diabetic, an adequate supply of insulin is not furnished by the pancreas for some unknown reason. The inability to burn or to store glucose results in a more or less definite train of symptoms. It must be remembered that the amount of insulin lacking, especially early in the disease, may be, and usually is, small. The early symptoms of diabetics may be slight and elusive.

Some of the early symptoms of diabetes are as follows: The patient urinates often, and there is an itching about the genitals, especially in women; the patient drinks a great deal of water, yet is often very thirsty; the patient is often hungry, but is losing weight although he is eating more than usual.

The reasons for these signs of diabetes are simple, once they are understood. The patient urinates often because there is too much glucose in the blood, and it must be put out of the body in some way—so it leaves the body through the urine. The itching about the genitals is caused directly by a *fungus* (a parasite, similar to the one that causes "athlete's" foot). That *fungus* is attracted by the large amount of glucose which is about the genitals as the glucose is being drained from the body by urination.

When the patient urinates often, he gives out large quantities of water from his body. Since the amount of water he is putting out of his body is more than usual, the amount he must take into the body is also more than usual. That is the reason the patient gets thirsty often in diabetes. The reason the patient is hungry, and yet loses weight, is that food is being wasted in his body. The patient may eat more, but he continues to lose weight, he becomes weak, and gets tired easily.

These are the principal symptoms. Any one may not be noticeable in the mild case. In the severe case they may all be marked. And as the disorder becomes more severe, there may appear a complication that causes other symptoms. If the body cannot burn glucose, it cannot com-

pletely burn fat. The partially broken-down fatty acids accumulate in the body, and cause acidosis; and later—coma. In acidosis, the face becomes flushed; there is nausea, vomiting and, sometimes, abdominal pain; the patient breathes too quickly and too deeply, and he becomes extremely drowsy.

Why Insulin?

TREATMENT consists fundamentally in supplying the missing product to the body—insulin. Giving the patient extra sugar for the sugar lost in the urine is not only useless, but would make the symptoms worse. Before insulin was used, patients were treated by starvation. Starvation limited the amount of excess sugar. Now that we know how to extract insulin from the pancreas of animals, starvation treatment is used only in a few clinics, and even in those for only a few weeks.

Insulin injected under the skin will enable glucose to be burned by the body, but its use must be carefully regulated. An overdose of insulin is not without danger. The symptoms of overdose with insulin (insulin shock) vary. There may be sudden weakness, sweating, mental confusion, trembling, restfulness, and many others. Insulin shock may be relieved by carbohydrate—a lump of sugar, a glass of orange juice, or chocolate. These are forms of sugar which are usually handy for relief of insulin shock.

The best results in the treatment of diabetes are obtained when symptoms of both diabetes and insulin shock are avoided. Usually the doctor tries to determine the amount of carbohydrate the patient is able to use, without spilling sugar in his urine.

In a mild case, the doctor tries to figure out how much carbohydrate the patient can use without insulin. In most cases, he figures the amount that can be used with insulin. The doctor knows that about half of the protein eaten by the patient is used by the body as sugar. So he adds that amount of sugar to the sugar that the patient would get from the carbohydrates he would take in his food. The remainder of the food to make up the calories that the patient needs is then added through fat. If this amount of fat is too large for the taste of the patient, then the insulin dose must be made higher.

So far things are rather simple. After the diet and the insulin dose have been adjusted, the patient tests his urine and should find that he now

puts out little or no sugar. If the patient is cooperative, there is generally no difficulty. He must learn to test his urine at regular intervals. He must calculate his diet so that, with or without the help of insulin, he gets amounts of carbohydrate, fat and protein that his body can take care of. And he must learn to stick to his diet without too much inconvenience to himself and to those around him. Besides this, it is very important that he learn to inject his insulin with sterile precautions so that he does not get infections.

Infection Danger

THERE ARE times when greater experience, and still better understanding of the disease, are needed. Any infection may make it more difficult for the body to tolerate glucose. For some unknown reason, either less insulin is secreted by the body, or the same amount is not so effective in the presence of infection as it is normally. The infection itself may be insignificant. "Athlete's foot" is mild enough in itself, but often it causes hardship to the diabetic. Obviously it becomes much more important for the diabetic to avoid infection than for the normal person.

Slight injuries must be treated with respect—to prevent infection. Slight infections—a sore throat, or a boil—must receive the attention given to a major illness by other people. Testing the urine regularly will enable the diabetic to learn when the body's tolerance for glucose is being disturbed. If, in the presence of an infection, sugar appears in the urine, a physician should be consulted—for the insulin dose will probably have to be raised. Cutting down on the carbohydrate at this point may not help. There is already a storehouse of carbohydrate in the body which can be used, and anyway there are fats which must be burned "in the flame of carbohydrates." Even if the patient is not eating, there is stored food in the body. If the patient has fever, he is using up food more rapidly than usual.

Insulin may be cut down if the patient is inactive, eating little and has no fever. Usually, however, the dose will have to be kept the same, or increased, as time goes on. This is a point which cannot be too strongly emphasized. Insulin is necessary for the burning of glucose. It does not matter whether glucose is obtained directly from the food, or from stored-up supplies in the body. The living body needs food.

The diabetic must have insulin in order to use food in the normal manner. Even the diabetic who has no infection must comply with this law. Skipping a meal does not permit one to skip his insulin. The dose may be lowered, but some insulin must be used.

While infection makes diabetes worse, it is also true that diabetes makes infections more severe. Uncontrolled diabetes leaves the patient easily liable to infection. Perhaps it is the piling up of glucose in the blood; in part it is due to the wasting of the body, which is not being properly nourished. At any rate, it is a clinical fact. Anyone who is subject to slight infections, to colds, to boils (especially to infections of the skin) should have his urine examined for sugar. In some cases, if boils come back often, it is an early symptom of diabetes.

Diet Regulation

SINCE THE regulation of the diet is so important to the treatment of diabetes, it is important for the diabetic to know the composition of the various foodstuffs. Tables are available at most clinics, giving the percentage composition of proteins, fat and carbohydrate in common foodstuffs. For the person with a small or almost no income, the problem becomes much more difficult. He must not only watch the proportion of carbohydrate in his food, but he must also watch the cost. In addition, insulin is expensive. For a mild diabetic, the minimum cost is about \$5 per month. But disease is no respecter of class. The small wage earner or the unemployed must indeed be intelligent to keep his diabetes under control. Too often must he resort to the old starvation method.

For those diabetic patients who can afford it, it is a simple matter to follow the special diets which have been calculated not to exceed their sugar tolerance. In our economic system, however, it is more often an additional and often impossible burden.

The housewife who has so many daily tasks which cannot be avoided in the care of a family, finds little time in which to prepare a separate meal for the diabetic member. Not only must the meal be cooked—it must be calculated; it should consist of varied and palatable dishes; it must be weighed (if only approximately); and it must, in the first place, be bought. It is very pleasant to picture the devoted wife lovingly preparing this diet for her fond husband or

child. But in reality the situation is usually very different.

A word about insulin injection and the substitutes for insulin. Since, as has been emphasized, it is so very important for the diabetic to avoid infection, it becomes just as important for him to be careful about the injection of insulin. He may not be slipshod. The syringe and needle must be thoroughly boiled; the skin thoroughly cleaned. No matter how annoying or how much time this may take, it must be remembered that there is, as yet, no substitute for insulin than can be taken by the mouth. Many are advertised. It is true that some of

them may lessen the amount of sugar in the urine. But none of these remedies is harmless. They do not increase the ability of the body to burn glucose as insulin does. There is, as yet, no substitute for insulin.

As for substitutes for sugars which require insulin, these have gone out of fashion. Like the Jerusalem artichoke, most of them did not require insulin because they were never absorbed from the intestinal tract but passed through. The sugar did not pile up in the blood because it never got as far as the blood. For the present we must rely on controlled diet, and the injection of insulin, for the regulation of diabetes.

Health and Hygiene BOOK SHELF

DIABETIC MANUAL FOR PATIENTS, by HENRY J. JOSLIN, M.D., C. V. Mosby Co., 2nd Edition, 1934. \$2.

IN NO DISEASE is it so important as in diabetes that the patient understand his illness and be completely at home with it. The diabetic worker usually cannot, and should not if he could, run to the doctor constantly for advice and attention. The reasons for this are many. The diabetic must understand clearly that it is possible for him to lead a normal life. He should lead such a life, participating in all daily activities.

In order to do this, he must know the function of food stuffs and the composition of the various foods available at home and in restaurants. He must know how to choose foods and how to vary them while still maintaining his proper quota of carbohydrates and calories. He must understand how to test his urine for sugar, what its significance is and what to do about it. He must know the dangers that diabetics are liable to—infections, insulin reactions, acidosis, coma, etc.; the detailed cleanliness and care needed to avoid them; how to recognize them early, should they appear, and what immediate measures are necessary.

He should be familiar with the function and use of insulin, with the encouraging facts of the modern history of diabetes.

In the task of presenting this knowledge to the diabetic, Dr. John's book has succeeded. Its tone is perhaps a little less warm and familiar than Dr. Joslin's diabetic manual; however, these two are the best of the manuals available. All diabetics should, if possible, read one or the other. (In these books will be found details of care which, for lack of space, could not be presented in the short article on diabetes which appears in this issue of HEALTH AND HYGIENE.)

There are two recommendations which we can make to improve future editions of this book. First, since the people of the United States have diverse eating habits according to their land of origin, special diabetic menus should be presented for various nationalities—Italian, Hungarian, Jewish, etc. Second, the book should contain a discussion of the higher price of the diabetic's diet and the cost of insulin, with whatever few recommendations can be made for reducing this cost without endangering health, and a discussion of the relation of relief organizations to diabetics on unemployment relief.

FOOD FOR THE DIABETIC, by MARY PASCOE HUDDLESON, Macmillan. \$1.50.

THIS booklet is a dietitian's contribution toward helping the diabetic take care of himself. We have emphasized in this magazine that, with the aid of insulin, the diet of the diabetic should be such that without unreasonable difficulty, without going hungry and without passing up too many things, he should be able to eat out at a friend's home or at restaurants.

Special recipes should not be encouraged. However, for those who are able to eat most of their meals at home, or who feel that they must have non-starchy dishes resembling the starchy ones they used to eat, this book will give many excellent recipes.

The book also contains valuable directions for measuring various foods and for estimating their contents. It is not to be considered a substitute for the complete Diabetic Manuals, such as those by Dr. Joslin and Dr. John. But for one who wishes to acquaint himself with those details of preparing diabetic diets which only a dietitian could give, it will be a welcome adjunct.

What is Acute Appendicitis?

ACUTE APPENDICITIS is a very serious disease that causes a great number of unnecessary deaths each year. In spite of our increasing skill as doctors and surgeons, the fatalities continue unabated. From 1920 to 1930, concentrated attention by the various public agencies and the physicians has resulted in a remarkable decrease in deaths from such contagious diseases as scarlet fever, diphtheria, etc. During this period, however, the deaths from acute appendicitis have increased.

Twenty thousand people die yearly in the United States from acute appendicitis. In New York City alone, for each of the past three years, appendicitis deaths have averaged about 1,100. If we could properly apply and distribute our medical knowledge and skill, and at the same time eliminate improper home practices, deaths from acute appendicitis could be reduced by a considerable number.

There are three kinds of appendicitis—acute, sub-acute, and chronic. In this discussion, we shall limit ourselves to the type that requires an immediate surgical operation, namely, acute appendicitis.

The appendix is a worm-shaped tube, a few inches long, connected at one end with the beginning of the large bowel. With rare exceptions, it is situated in the lower right side of the abdomen, a few inches below and to the right of the navel.

The appendix is not a necessary part of the body. Indeed, it would be better if we were all born without it. The cavity of the appendix is directly connected with the cavity of the rest of the intestines. Because of this communication, there is normally a constant flow back and forth of intestinal contents. In this material, there are always bacteria or germs. In most cases of acute appendicitis, these bacteria are caught within the appendix, and then become active and dangerous.

The process is really the result of two condi-

tions—obstruction and infection. The obstruction may be due to a kinking, or to the presence of a piece of hard stool. These two conditions cause ballooning of the appendix. Such an appendix is liable to burst (rupture), and then the infection can spread to the whole abdominal space. Such ruptures are more frequent in children, and therefore these patients need even more prompt treatment. It is this spreading of the infection—known as general peritonitis—that causes the deaths and the prolonged hospital stay in those severely sick patients who may be lucky enough to recover. As long as the infection remains within the appendix, immediate surgery can promise a great percentage of cures.

In some cases of acute appendicitis, the infection reaches the appendix through the blood. The starting point of the infection may be in the throat, ear or even in the lungs. These types of cases are in the minority, and usually affect younger people.

Proper Treatment

PROMPT AND skillful attention is absolutely necessary. Neglect and delay mean danger. There should be very few deaths from acute appendicitis, for it is a disease that is well understood. Its signs and symptoms, the manner in which the disease progresses, and the treatment, are medically definite. *Proper treatment is early removal.* Surgeons are never sorry when operating upon an early case, for it is often tragic to find that they are operating too late.

In neglected cases, the treatment is unfortunately not so efficient because then we are faced with an infection that has spread through the abdomen—unless an abscess has luckily formed. An abscess is nature's way of limiting the spread of the infection, and can be more easily treated than a general peritonitis—but still not as surely as a simple acute appendicitis.

We may truthfully state that early recognition and prompt skillful treatment lessen tremen-

dously the dangers of the disease. This means closer cooperation between the patient and the relatives and the doctor. In the first place, every one should know certain facts about acute appendicitis—what to do and what not to do. In the second place, good medical attention and adequate hospital facilities should be at the disposal of every person at all times. Before discussing these two phases of the problem in any detail, it would be advisable to describe the usual symptoms of acute appendicitis.

Usual Symptoms

THE FIRST warning is pain which is often sudden, and may or may not be severe. It is often considered an ordinary belly-ache; it is cramp-like, and is usually felt first in the pit of the stomach or throughout the belly. After a while, the pain concentrates mostly in the lower right side, and then becomes a steady ache. Sometimes the pain starts and stays in the lower right side. This pain lasts on and off for hours, and therefore any pain persisting for at least four to five hours is a very good reason for calling a doctor.

In cases of children and younger patients, we must be very careful, as it is difficult to localize the pain or get any idea of what kind of pain is present. A sudden stopping of pain that has lasted for hours is a bad sign. It may mean that the appendix has ruptured, and then we have a serious condition.

With the pain there is often nausea; and, less often, vomiting. These two symptoms may be missing, and we must not place too much reliance upon them. The vomiting may be slight, or may last for as long as twenty-four hours.

Fever is always present, even in the mild attacks, and is very important. In children, the temperature may be as high as 102 to 103 degrees, and there may be a chill. In older patients, the temperature is usually lower. Any temperature is of significance in a child or an adult who has abdominal pain. The tongue is usually dry and coated. These patients are often constipated; though children are more apt to have diarrhea.

On examination by a doctor, two conditions are of importance—tenderness and stiffness of the belly muscle, which is known as rigidity. When pressing upon the abdomen, the doctor can feel the muscle tighten, and at the same time the patient complains of pain. The pain brought out by this examination is called tenderness.

There are all degrees of rigidity and tender-

ness, and sometimes these signs are hard to detect, particularly in children. In infants we would not be able to judge tenderness, and it is also difficult to recognize rigidity, as the baby is crying and squirming about. This muscle stiffness is very important. No matter how slight, it is always of great value as a definite sign.

There are a few other signs which can be judged only by a trained individual. One is the blood-count. When a drop of blood is taken, usually from the tip of the finger, and properly prepared, the various blood corpuscles or cells can be counted. In appendicitis, we always find that a certain type of cell is increased in number. These are known as white blood cells. Every case of definite or suspected appendicitis should have a blood-count. In suspicious cases, the increase of the white blood cells may decide the diagnosis.

No Laxative

AFAMOUS surgeon once said: "There would be no percentage of deaths from appendicitis if every case commencing with acute pain and developing tenderness and rigidity of the abdomen and quickening of the pulse were operated upon within twelve hours." This implies a duty upon the parents and others who are tending the patient, and upon the doctors.

The most dangerous thing that can be done is to give these patients a cathartic. Never give any such drug for abdominal pain or cramps. This statement cannot be emphasized too much, nor repeated too often. The delay in calling a doctor, and the giving of a laxative, account for about 90 per cent of the deaths. If a cathartic is given, the chances of recovery are one in seven. These drugs tend to increase the possibility of spreading the infection.

Most of the extremely ill patients with appendicitis whom we see in the hospital are those who have taken some sort of cathartic. There are thousands of advertisements of laxatives and other drugs for dyspepsia and stomach pain. But remember, what you may think is dyspepsia may be the beginning of an attack of acute appendicitis. The advertisers do not warn us of the dangers of these drugs under certain conditions. They are only interested in selling as large an amount of their product as possible. Their only concern is to earn greater and greater profits. And so we see and hear many such advertisements without a word of caution.

The situation is so dangerous that the insurance companies were also forced to do some advertising. They have conducted campaigns, telling about the dangers of such drugs in the presence of cramps. No doubt the numerous death claims they paid made them realize the necessity of spreading this information. But in this case their advice is correct. We emphasize: "Don't take a laxative; send for a doctor."

From what has been stated, we can realize the extreme importance of calling a doctor early. Always keep in mind that cramps or abdominal pain lasting over four to five hours is not an ordinary belly-ache. In these cases, never hesitate to summon a physician, and especially if there is fever. An early diagnosis and an early operation combine to make acute appendicitis a comparatively simple affair. Do not blame the condition upon food or something that the patient may have eaten. To wait is to play with death!

Time Is Precious

DURING the first hours of acute appendicitis, the physician cannot always make a positive

diagnosis. Repeated examinations are often necessary and the doctor should return within a few hours. At this time, there may be a slight increase in the signs, and this may be all that is needed to determine the condition.

In these days of great economic stress and mass unemployment, people do not get adequate medical attention. They haven't the money to pay for these repeated examinations, and hesitate to call the doctor. The doctor, on the other hand, is rushed. Scrambling about to earn a poor living, and knowing that people are in poor circumstances, the doctor sometimes is reluctant to force his services. Doctors these days make too few house calls. They have been forced into the habit of saying: "Call me in the morning,—let me know how the patient is." In our poorly adjusted system, what usually happens is that instead of the patient being examined at least twice within the first few hours of his illness, he is not seen again until the next day. And precious time is lost. Time in the early stages of appendicitis is precious. A prompt operation is a safe operation and a life-saving measure.

(Continued on Page 32)

Health Advice by the M. A. B.

Detroit
TO THE MEDICAL ADVISORY BOARD:—I read your recent copy of HEALTH AND HYGIENE and found my trouble under the heading of "Slow Death in the Dusty Trades"—scarred lungs.

The wonderful way in which you describe the condition of scarred lungs has convinced me more than ever that that is the trouble with my lungs. I worked for a good many years in various mines. An x-ray taken of my lungs showed that your statement was correct.

I am unable to do any kind of physical work. It is hard for me to walk outdoors on account of shortage of breath. My resistance is very low, therefore I am susceptible to colds. These colds result in a form of grippe which, of course, aggravates my condition. Shall I take any medicine to build up my resistance; if so, what? Am wheezing very much.

I know that the climate in Detroit isn't very good for me; therefore I am seriously thinking of changing climate next fall. My intention is to go to Southern Arizona or California. Where would you suggest I go? When I reach my destination, would you kindly prescribe a diet and, if you think necessary, send me a prescription for medicine? If I take alcoholic drinks occasionally, will that harm me much?

L. T.

L.T.—From your description, it is probable that you have a mild type of "scarred lungs" or silicosis.

A change to a dry climate would be of benefit to you, since such a climate will cut down considerably the number of colds you get. Of the two places you mention, we would suggest Arizona. You are in no need of medicine at the present time. But when you reach Arizona

in the fall, you should visit a physician privately or at a clinic. A full diet of meat, vegetables, fruit, etc., is best. Small amounts of alcohol will not harm. Try to keep from climbing stairs or walking great distances. We might add that the altitude of the place you choose to live should not be too high, less than 1,000 feet.

Cleveland

TO THE MEDICAL ADVISORY BOARDS—I am 48 years old, had trouble with my breathing organs all my life; my weight at age of 32 was 135 pounds; from 35 to the present time my weight has been 165 pounds.

In 1933 I practically starved all year and my weight came down to 135 pounds. Then I had a chance to get a job, but they claimed I had a rupture which I didn't feel or see. I went to a poor hospital and they "fixed me up." I got a job, and my weight rose to normal. I was eating again, but recently I felt slight burning at 9 A.M. I went to the shop doctor, who said that I

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NEW THEATRE

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had a hernia on the left side. I got scared and thought they should fix me and he jumped on me and he said the employer is not responsible. He said I should wear a truss.

I am on the same job yet. I do lots of walking and stooping, bending and lifting floor parts, which are about 35 pounds in weight, at the rate of two a minute.

I want to know how to get out of this trouble. Which is the safest way? I am getting older, and if I am not well they won't give me a job any more. I feel well otherwise, except that I get colds twice a year which last from four to six weeks. My colds are accompanied by coughing.

F. H.

F. H.—Your letter brings up a great many interesting problems. You are suffering from a recurrence of an inguinal hernia on the left side. But notice how quickly the company doctor said that your work did not cause this condition. It is quite likely that the heavy work which you do caused a return of the hernia. If you attempted to prove this, you would find all the usual forces aligned against you, besides your loss of the job eventually.

The best treatment would be an operation. As before, you are forced to go to a charity hospital and hope that somehow a competent surgeon will perform the operation. In the meantime your job will be taken by someone else and your income will have stopped. This is but one of the many examples of how essential is the fight for the Lundeen Bill for Unemployment Insurance,

and the Dunn Bill for Health Insurance.

At present a well-fitting truss may enable you to carry on your work with some degree of safety, though we doubt it. Since you are 48 years of age, it is best to have the hernia corrected soon, inasmuch as the tissues have a better chance of healing at this time.

As for your frequent colds, we advise a thorough physical examination. This may be obtained at any of the good clinics in your city.

Rochester, N. Y.

TO THE MEDICAL ADVISORY BOARD:—I am 50 years of age and I'm not feeling well physically. My trouble is that I get a pain on the right part of my spine, that is on the small of my back. The pain starts there and travels down to my legs like a nervous shock. When I'm sitting it does not pain me much, that is until it rests up.

I'm in the grocery business, and most of the time am on my feet. Especially in the morning, when I'm up about a half hour, the pain starts from the upper right part of the small of my back. It's a little lower than my back, to be exact, and goes down to my right shin; that's where it hurts me most. It feels like I'm being given blows there. When there's a draft, I seem to suffer more. It seems like a cold in the bones. My doctor told me it is sciatica.

I weigh 182 pounds. Before this I used to weigh 195. The doctor says that I always had low blood pressure and that I should eat more vegetables. I guess that's why I've lost weight.

When I first got this, in the winter, I couldn't stand on my feet two hours. I had to go to bed. Then the doctor gave me some injections which have helped me to work around the store. When I walk around for my work, I feel much better, but the moment I stay on one spot I can't stand it. I get pains. Walking around helps me.

S. P.

S. P.—You are suffering from what is commonly called sciatica. This is a condition characterized by pain along the course of the sciatic nerve, which goes from the lower back down along the back of the thigh to the leg.

Sciatic neuralgia, which is the correct term, is always the result of an irritation to this nerve from some adjacent diseased structure. It is imperative therefore to discover whether you are not suffering from:

Arthritis of the lower spine or abnormal curvature at this region; enlargement or disease of the prostate gland; inflammation of the muscles of the back or thigh; diseased tonsils, teeth or sinuses which, by feeding germs into the body, have caused inflammation in and about the sciatic nerve; arthritis of the hip joint.

There may be other causes, but the above are the most important. A great deal of patience on the part of the sufferer, and expertness on the part of the physician, may be required to discover the cause and the correct treatment for this condition. We suggest that you put yourself in the hands of an orthopedic surgeon. Any of the larger hospital clinics have such men attached to the staff.

Acute Appendicitis

(Continued from Page 30)

Adequate medical care and attention are of vital importance to the health of the community. In cases of appendicitis, this means not only frequent house calls, but also abundant and easily obtainable hospital facilities.

Surgeons see more of these cases than medical men, and their greater experience may help in establishing an earlier diagnosis. Better hospital resources must be at hand so that these patients can be more scientifically observed, with blood-counts, urine examinations and x-rays, if neces-

sary. All such measures would result in earlier diagnosis, prompt operation and a tremendous reduction in deaths.

Do not fear operation for acute appendicitis. Operation is the only treatment. When your doctor advises an operation in a case of appendicitis, do not argue—do not wait. See that the patient is sent immediately to a reputable hospital where competent surgeons and good surgical facilities can be had. Drugs and delays are dangerous.

AUGUST, 1935

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Addressing the Readers

This is the fifth issue of HEALTH AND HYGIENE. From its very inception, the magazine of the Medical Advisory Board has tried to improve in appearance as well as in content.

There is a new cover design on the magazine this month. Do you like it? If you do not, what kind of a cover do you think the magazine ought to have?

The magazine publishes three articles on war this month. More could have been used on this tremendously important subject. But the Board felt it could not leave out many of the other articles of a more general nature. Do you think the issue is well balanced in content? Would you like to see more material in it of a nature that touches the economic and social aspects of health?

Of course, the Medical Advisory Board, consisting of fifty-two physicians and dentists—many of them specialists in their field—has a definite policy for its magazine. That policy, of addressing itself through the magazine primarily to the working people of America, was announced in the first issue. The Board would like to hear from its readers. Do they feel the magazine is carrying out the intention of its founders? Do they think there ought to be improvements? What changes would you like to see in this magazine?

HEALTH AND HYGIENE, in its short existence, believes it has built up a following. It would like to hear from its readers on all problems that concern their health and well-being. Feel free to write. Answers will be sent privately to individuals when such requests are made. Always sign your name and address. We will not use your name if you prefer to remain anonymous.

Do not fail to get the September issue of HEALTH AND HYGIENE. It will be *still* better.

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