

ing in the abdomen, nausea, vomiting and diarrhea.

The characteristic symptoms of botulism, however, are those showing disturbance of the central nervous system. Among these are double vision, drooping of the upper eyelids from paralysis and dilated pupils. Soon the patient will have trouble in swallowing and talking. There is usually no fever. Even though

the patient may be unable to talk, his mind usually is clear up to a short time before he dies and he can often write his wishes or needs.

Death usually comes from failure of the breathing apparatus and usually occurs within three to six days after eating the poisoned food. Some patients do recover.

Science News Letter, December 25, 1943

MEDICINE

Penicillin Helps Wounds

Reports from Army hospitals show 164 out of 209 patients improved. Mold chemical fails to have beneficial effects against malaria.

► RESULTS of penicillin treatment of infected wounds in U. S. Army hospitals in the United States where the potent germ-killer from mold has been used since April 1, 1943, are summarized in a report by Major Champ Lyons, M.C., A.U.S. (*Journal, American Medical Association, Dec. 18*)

Of 209 patients treated, 164 improved, 13 died and in 32 the treatment had no effect.

Hope that penicillin might prove a potent weapon against malaria is not borne out by the report. The mold chemical failed in four cases of malaria due to *Plasmodium vivax*, and two other patients developed recurrent malaria under treatment.

Penicillin can produce "dramatically successful" results in treating septic gunshot fractures but, Major Lyons emphasized, its position is supplemental in the overall surgical program. To get these dramatically successful results, the surgeon must combine penicillin with effective blood transfusions and conservative surgical procedures according to the condition of each patient.

Important advantage of penicillin is that it helps fight anemia in chronically infected battle casualties. Part of this seems to be due to the increased appetite the patient develops while under penicillin treatment, enabling him to eat more blood-building food, and part to the fact that penicillin controls the infection.

This regeneration of hemoglobin, the blood's red coloring matter, proceeds too slowly under penicillin treatment alone, however, in view of the need to economize on penicillin and to reduce the time the patient must spend in the hospital. Consequently blood transfusions must be resorted to. Whole blood is best for this and the quantities needed for each patient are estimated at from one and one-half to three quarts.

The results reported by Major Lyons cover experiences with penicillin in 11 Army hospitals where every detail of the treatment was studied with great care so that as much as possible might be learned about the drug, effective doses, conditions that would be helped and those that would not, and the like.

Science News Letter, December 25, 1943

PUBLIC HEALTH

Weather Won't Check Flu

► THE POPULAR notion that the present cold weather over most of the country will check the influenza epidemic might well be called "wishful thinking," for there does not seem to be any scientific evidence to support it. Nor is there any reason to suppose that milder weather will affect the course of the epidemic.

During the 1918 pandemic, influenza

was prevalent at about the same time in such widely separated regions as the United States, Brazil, India, South Africa and New Zealand. This "is sufficient to prove a high degree of independence of the weather," wrote the late Edwin O. Jordan, University of Chicago professor who made an exhaustive study of the 1918 pandemic.

Fine autumn weather prevailed in

many of the Army camps in September and October, 1918, during the very days when the number of influenza cases was shooting rapidly toward the peak, he pointed out.

While weather conditions seem to have little if any effect on influenza itself, they may influence liability to and gravity of complications caused by germs that invade in the wake of the influenza virus, this same authority stated.

Further evidence of how little the weather affects influenza is seen in mortality figures he cited. These showed

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that during a period when some cities and towns were almost overwhelmed by the epidemic, with high death rates, other communities no more than 20 miles away had few cases and needed no help.

Cold or wet weather that keeps peo-

ple at home might lessen their chances of catching influenza from outside sources but might, another authority points out, increase the chances of the disease sweeping through the family if one member were attacked.

Science News Letter, December 25, 1943

PUBLIC HEALTH

What To Do for Flu

Six important things everyone should know about influenza include the fact that it is caused by a virus, that patients should stay in bed.

► IF an influenza outbreak occurs in your community, here are some things you need to know about the disease:

1. It is caused by the kind of ultra-microscopic germ called a virus. Viruses, with about one exception, are not susceptible to attack by any of the sulfa drugs, though your doctor may give you a sulfa drug to take care of any other germs that follow the influenza virus invasion of your body. Efforts to develop a vaccine against the influenza virus have not yet proved completely successful.

2. The viruses of influenza (there are two known and one or more unknown influenza viruses) are spread on the nose and throat discharges and breath droplets from the influenza patients. If you keep out of crowds, you are less likely to pick up the virus from influenza patients who are still up and about instead of being home in bed.

3. Influenza in the past has very often been followed by pneumonia. It is important, therefore, to call a doctor, especially if you have a severe attack of influenza, so that treatment will be started promptly for the pneumonia if that is developing.

4. Influenza patients should stay in bed. Usually they feel too sick to want to be up, but it is not good sense to "keep going till you drop." By staying in bed you avoid drafts, pneumonia and other germs to which you are easy prey during an influenza attack; you conserve strength for fighting the influenza virus, and you avoid giving the disease to others. This last is a patriotic duty in wartime.

5. Your doctor will advise you about drinking plenty of water or other fluids, about diet, and will prescribe whatever medicines he thinks advisable to make you more comfortable. It is better not

to take any remedies except the ones your doctor orders.

6. Stay in bed as long as your doctor says you should, even though you feel perfectly well. The general rule is a full 24 hours in bed after the temperature is normal, if not longer.

Science News Letter, December 25, 1943

PUBLIC HEALTH

Mortality from Influenza 50% Above Last Year

► REPORTED cases of influenza rose throughout the nation during the week ending Dec. 11 to a total of 23,724, the U. S. Public Health Service announced. Previous week's total was 4,487, and the

five-year median for the same week in December is 2,742.

Seeking further information on the course of the epidemic, the Public Health Service has asked 40 large cities of the nation, with populations totalling about 27,000,000, to report weekly deaths from influenza and pneumonia combined. Replies from about half the cities received so far indicate that the influenza-pneumonia mortality is about 50% higher than for last year and about twice as high as the three-year average.

Most of the reports stated that the disease was of a mild type. From Detroit came a report of 10% to 15% absenteeism due to influenza. The health officer of Wilmington, Del., estimated about 6% of the population affected. Baltimore reported a city wide infection.

States reporting the largest number of cases were: Kentucky, 5,416; North Dakota, 4,331; Texas, 2,921; Iowa, 2,337; and Virginia, 1,649. No other states reported more than 1,000 cases for the week.

Science News Letter, December 25, 1943

Special color charts have been devised that enable the farmer to tell whether his *alfalfa* is healthy or not, and to diagnose the disease or insect pest that may be troubling it.

The high *explosives*, TNT, picric acid and tetryl, are made in whole or in part from bituminous coal.



EXPERIMENTAL ROLLING—An operator at the hot mill of the research laboratories of the Aluminum Company of America is shown rolling a test ingot of aluminum. The company is celebrating this month the twenty-fifth anniversary of the founding of the research laboratories.