PUBLIC HEALTH

Plague Epidemic Is Possible For U. S. Under War Stress

American Medical Association Warns of Consequences Without Careful Integration of Plague Control Work

A WARNING that the United States may have a plague epidemic to combat is issued by the American Medical Association through an editorial in its journal. (Aug. 2)

While typhus is being held in check only with the greatest difficulty in Europe and may have reached epidemic proportions in Poland and the Balkans, the AMA pronouncement declares that "no doubt plague, as far as this country is concerned, is a problem of greater potentiality."

Plague is present on the Pacific coast, not as human cases, but in fleas of rats, ground squirrels, and marmots. From these sources it is feared that the dread disease can spread to cause an epidemic in humans when conditions are suitable.

Long-continued and careful plague control, involving ratproofing of buildings, trapping, poisoning and examinations of dead rodents, must be practiced in any area in which plague has appeared.

The consequences may be tragic, the AMA warns, if there is not a careful integration of the plague control activities of cities, counties, states and the federal government, with the use of trained personnel and adequate funds.

The four horsemen of the apocalypse, war, hunger, disease and death, travel with the increased speed of mechanized transportation, it is pointed out. Sudden and widespread outbreaks of disease arising from hidden infections are more likely than ever. The insulation of this country from the disease consequences of war will prove a colossal task and will require the most careful planning and effort.

Science News Letter, August 9, 1941

PUBLIC HEALTH

Health Service Sends Experts To Scene of Sleeping Sickness

AN EXPERT on epidemics, Dr. James P. Leake, has been sent to North Dakota by the U. S. Public Health Service to watch developments in the outbreak of sleeping sickness (encephalitis) there.

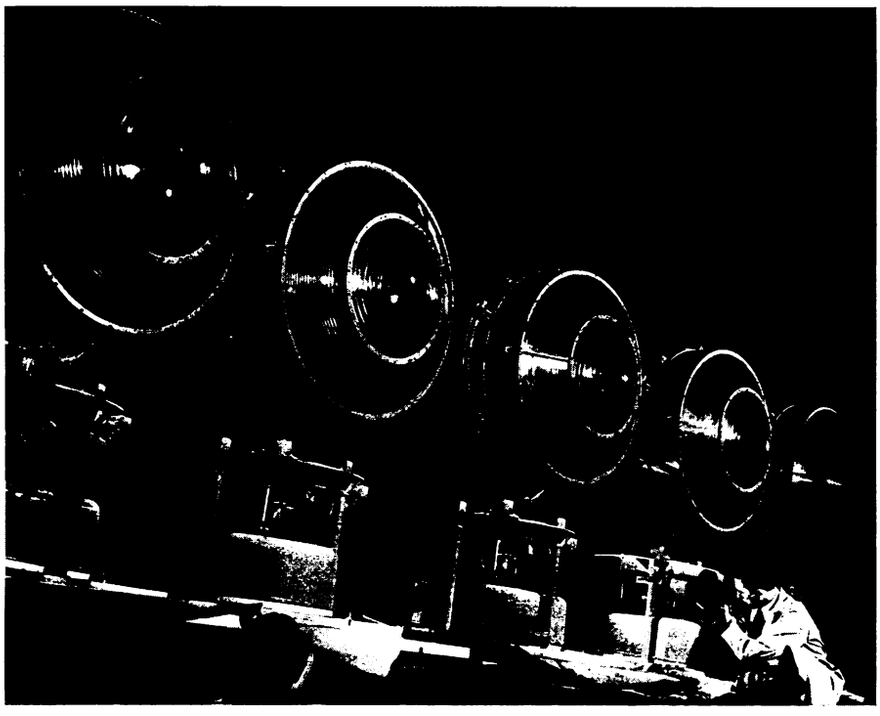
A sharp increase in the number of cases to 65 for the week ending July 26 was reported to the Health Service. This is more than double the number reported for the previous week—31.

W. L. Jellison, an entomologist, was also sent to North Dakota from the Hamilton, Mont., laboratory of the U. S. Public Health Service, to investigate reports of an increase in the number of mosquitoes at the scene of the sleeping sickness outbreak. It is not known that mosquitoes have anything to do with the spreading of sleeping sickness, but since the carrier of the disease is still unidentified, the possibility will be thoroughly explored.

The number of cases of infantile paralysis in the United States is also climbing, reports received in Washington indicate. The total number of cases for the week ending July 26 was 302 as compared with 246 for the previous week and 187 for the week before that.

Nearly half (45%) of the infantile paralysis cases were reported from two states, Alabama and Georgia. In Georgia, however, there was a slight decrease to 79 cases from 91 the previous week. In Alabama, the number increased from 46 to 58.

Although 71% of all the infantile paralysis cases were in the South Atlantic and East-South-Central part of the United States there was some increase in the northern states and four cases were reported in New England where in previous weeks there was none.



AIRWAY "LIGHT BUOYS"

These 36-inch, double end rotating beacons, coming off the production line at the Cleveland, Ohio, Lighting Division of the Westinghouse Electric and Manufacturing Company, are to guide night-flying pilots. Each beacon throws a 1,800,000-candle power beam in two directions simultaneously that can be seen, on clear nights, for 20 miles.

This fact, coupled with word received from the Canadian Province of Manitoba that 101 cases of infantile paralysis and two deaths have been reported there between July 1 and July 25, may indicate that the outbreak is no longer confined to the South.

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PUBLIC HEALTH

Pollen Counts Help Hayfever Sufferers

By H. ALLEN MOYER, M.D.
Michigan Commissioner of Health

FOR the benefit of hay fever sufferers, the Michigan Department of Health during the summer of 1940 made what is probably the first state-wide survey of pollen in the upper air.

For the collection of pollen, 50 stations were selected throughout the state covering the shore lines and also representative inland areas of both the Upper and Lower Peninsulas. Some of the stations were in agricultural areas where it was expected that pollen counts would be high while others were in regions where hay fever patients have been accustomed to find relief.

The pollen was collected on glass slides which had been given a thin film of white vaseline. The slide was exposed for a period of 24 hours, at a distance of 25 or more feet above the ground and protected by a small shelter. The exposed slides were sent to the Michigan Department of Health Laboratories at Lansing where the various kinds of pollen were identified and the pollen counts were made.

The total kinds and numbers of pollen grains were determined on one square centimeter of slide area. By applying a conversion factor (a different factor for each size of pollen grain) to the number of pollens on this area the count was expressed as pollen grains per cubic yard of air for each 24-hour period.

Usually not more than four or five kinds of pollen were found on any one slide and as a rule only two or three kinds were present in significant quantities. Up to August 15, the chief pollens were grasses and plantain. After August 15 ragweed pollen was most abundant, accounting for 95 to 98 per cent of the total pollen.

The Department of Health warns interested hay fever victims that the findings of the pollen survey are for only one year and are therefore not conclusive. A second count will be made in 1941.

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NUTRITION

Bad Tempers, Inefficiency, Traced to Lack of Vitamin B_1

Eleven Women on Sort of Diet Thousands of Americans Eat Regularly Develop Very Serious Symptoms

SHORT TEMPERS, inefficiency, headaches, backaches, and stomach distress after meals are what come from eating regularly over a long period a diet that is just a little short in the morale vitamin, B_1, diet studies at the Mayo Clinic show.

Eleven women, chosen for their previous record of good health, lack of "nerves," willingness and ability to cooperate, were the human guinea pigs for this study just reported by Dr. Ray D. Williams and Dr. H. L. Mason.

In contrast to previous studies in which human subjects developed typical neurasthenia on diets with a very low vitamin B_1 ration, these women were given the sort of diet thousands of American families regularly eat. It consisted of white bread, corn flakes, polished rice, sugar, skimmed milk, beef, cheese, egg white, butter, vegetable fat, cocoa, gelatine, canned fruits, canned vegetables and coffee. It was a little but not markedly low in its content of vitamin B_1.

After three months, one of the women developed such disturbing symptoms that she had to be taken off the diet and given doses of the vitamin. The others continued with the diet for from about four to six and one-half months. Besides low blood pressure, capricious appetites, anemia and signs of disturbed heart action, these women, after several weeks on the diet, showed the following changes in behavior:

"The subjects became depressed, irritable, quarrelsome and fearful. They became inefficient in their work because of generalized weakness, were inattentive to details of their tasks, were confused in thought, uncertain of memory and lacked manual dexterity. These abnormalities progressed to a degree which disabled six subjects in the performance of work to which they long had been accustomed."

"Headache, backache, dysmenorrhea, soreness of muscles, gastric distress after meals, sleeplessness, tenseness, paresthesia, (burning or prickling feelings), intolerance to noise and increased sensitivity to painful stimuli were frequent complaints, although these signs and symptoms were entirely of a subjective nature. The significance of these evidences of abnormalities was increased, however, because of the careful selection of subjects, their continuous cooperation and ability to work before the period of restriction of thiamin (vitamin B_1) and their subsequent normal behavior when, without other change in environment or diet, the allowance of thiamin was increased."

The amount of Vitamin B_1 a normal person needs, the doctors conclude, must be determined "in terms of the speed at which he wishes to live, the activities he wishes to pursue," and also according to individual personal differences. The optimal intake is not less than 0.5 mg and not more than 1.0 mg per 1,000 calories of an ordinary diet.

The amount of this vitamin which after next Jan. 1 will be required by law in the new enriched bread has been set at not less than 1.66 mg and not more than 2.5 mg per pound loaf of bread.

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MEDICINE

Mobile Laboratory Fights Infantile Paralysis

NEWEST weapon that will be speeding across country to fight infantile paralysis outbreaks this summer along with "iron lungs," splints and the like, is the laboratory on wheels of the University of Michigan School of Public Health.

It will go to communities having no laboratory facilities, where infantile paralysis outbreaks frequently occur, and will be used to collect specimens needed in the search for a means of preventing or curing the crippling malady, Basil O'Connor, president of the National Foundation for Infantile Paralysis, said in announcing the grant which makes possible the operation of the laboratory.

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Soy flour is gaining use in making doughnuts and ice cream cones.