

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

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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 B₁

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, B₁, 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 B₁ 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 B₁.

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 B₁) and their subsequent normal behavior when, without other change in environment or diet, the allowance of thiamin was increased."

The amount of Vitamin B₁ 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.