

PUBLIC HEALTH

Mental Illness Cause

Veterinarian discovers that many cases of mental disease where cause was considered obscure may be result of long-previous contact with nerve-loving virus.

► A NEW field of research in human mental disease is opening as a result of findings by a veterinarian, Dr. J. S. Fulton of the University of Saskatchewan, Canada, the American Veterinary Medical Association was told at its meeting in Seattle.

Workers in this new field will be searching for nerve-loving viruses that may have unsuspectingly twisted human minds and emotions.

Clue to this possible new basis for many cases of mental disease of obscure cause came from studies of western equine encephalomyelitis, or so-called horse sleeping sickness.

Soon after the first outbreak of this virus-caused disease occurred among horses in Saskatchewan, back in 1935, a number of humans contracted a disease of the central nervous system that was at first thought to be non-paralytic poliomyelitis, Dr. Fulton said.

As the years rolled by, more cases of this sickness developed in humans even when there was no polio. Then Dr. Fulton and associates succeeded in finding the horse disease virus in the blood of one human patient and the brain of another. For over a decade, humans and horses continued to be attacked by the virus.

The link with mental sickness came when Dr. Fulton and associates were asked by physicians to make tests for the virus on blood from a child suspected of having a brain tumor. The test proved positive and, checking back over the records, Dr. Fulton found the child was one of those who had the horse sleeping sickness some years before.

Then a check was made to see whether any of the other children and grown-ups who had been attacked by the horse disease virus, called W.E.E. for short, had later developed mental changes. A good many, it was found, had and some had been sent to mental hospitals.

Because some cases of W.E.E. are so mild they might be confused with less serious illnesses, the mental changes coming later, Dr. Fulton and associates thought it would be worth while to test patients in Saskatchewan's mental hospitals. This was done and of 2,305 tested, 35 were found to have had W.E.E. previously. And all patients who had been in mental hospitals before the horse sleeping sickness appeared in Saskatchewan gave negative tests for the virus.

Since these findings, doctors at one of the mental hospitals have been classifying the patients on the basis of their having had or not having had W.E.E. virus infection. The work is still going on, but al-

ready it shows that the majority who had been attacked by the virus suffer from a mental disorder that has kept the doctors wondering about the cause.

These doctors on the mental hospital staff, Dr. Fulton reported, believe that tests for nerve-loving viruses should be made in all cases where the cause of mental change is obscure.

Science News Letter, September 4, 1954

MEDICINE

More Identical Twins Needed for MS Study

► THANKS TO cooperation of hundreds of newspaper and magazine editors, the National Multiple Sclerosis Society has now located some 35 pairs of identical twins in 19 states who are afflicted with MS, or multiple sclerosis. (See SNL, July 17, p. 41.)

The twins will take part in a study designed to show whether or not there are hereditary or environmental causes of the disease. Ideal twins for the study would be those pairs of identical twins of which one has the disease and the other has not.

Since identical twins develop from the same egg cell, or ovum, the hereditary background would be identical. Differences in environmental factors would then be searched for possible causes of the disease in the one twin and not the other.

While the first 35 pairs of twins are being processed to make sure they are identical and that one or both has MS, the society is continuing its appeal for more MS twins.

Science News Letter, September 4, 1954

PLANT PATHOLOGY

Asparagus Rescued From Fungus Wilt Disease

► ASPARAGUS MAY be rescued from a widespread wilt disease through the discovery of resistant seedlings reported to the American Phytopathological Society meeting in Estes Park, Colo., by R. G. Grogan and Kenneth Kimble of the University of California.

Asparagus fields seem to "run out" after reaching top production. This is due to a fungus disease, Fusarium wilt. Out of thousands of seedlings examined, 23 have been found to withstand inoculation with the disease. These will be used to develop a new resistant strain.

Chemical treatment of the seed with lignan also controls the disease.

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GIANT KLYSTRON—First photo of the 4,000,000-watt klystron designed to power an advanced Air Force radar. The eight-foot giant, prototype for a series of the military's most powerful microwave tubes, is shown undergoing installation in a high-power radar transmitter room at Griffiss Air Force Base, N. Y.

ELECTRONICS

Giant Tube Now Ready for Radar Use

► DEVELOPMENT OF a giant electronic tube that paves the way for super-radars reaching far beyond present limits has been announced by the U. S. Air Force.

Known as a megawatt klystron, the tube is eight feet tall. It is the first to produce millions of watts of precisely controlled radar power for military systems as yet undisclosed.

In secret tests more than five years ago, the super-power klystron, driven by 140,000 volts, broke the "electron-barrier" that once limited the performance of radars essential to military weapons of the future.

Experimental proof of a new "electron-packing" technique came from basic klystron research of the Sperry Gyroscope Company, Lake Success, N. Y.

Military value of this discovery imposed immediate security wraps, ahead of later developments for television and other commercial uses, medical research and nuclear study.

Science News Letter, September 4, 1954