

MEDICINE

Drag-Net on Childhood Foe Being Drawn in Closer

Physicians and Medical Scientists in Texas, California, Michigan, Canada, Chicago, Cleveland Battling Polio

A DRAG-NET has been spread right across the nation to catch that crippling, maiming and killing foe of children, infantile paralysis. The men who have spread the net are doctors and medical scientists working in laboratories and hospitals in Texas, California, Michigan, Canada, Chicago, Cleveland and other research centers. They have not yet outwitted the criminal but they are drawing the net closer, reports to the National Foundation for Infantile Paralysis in New York show.

Following the trail into the body of the virus that causes the disease, some of these scientists have swung away from the nose route and are apparently picking up a trail that leads into the body through the mouth. On this trail, Dr. John A. Toomey, of the Western Reserve University School of Medicine, has found a clue that may lead to solution of the mystery of why some persons get the disease while others do not. The reason, Dr. Toomey believes, has something to do with germs of an entirely different kind, the typhoid fever, paratyphoid fever and colon bacilli, which are germs of the intestinal tract.

These germs produce a toxin or poison which apparently increases the virulence of the infantile paralysis germ or virus. When the poison and the virus have been mixed together, the virus causes infantile paralysis in the cotton rat which ordinarily does not get infantile paralysis. Before Dr. Toomey's report, only one strain of infantile paralysis virus was found to attack these animals and make them sick, although many different strains make monkeys and humans sick with the disease. Dr. Toomey, however, has found that mixing the virus with the colon-typhoid-paratyphoid germs' poison gives to more than one infantile paralysis virus strain the power of producing the disease in cotton rats.

Clues to why some children can resist infantile paralysis, or have immunity to it, while others do not, have been sought on another trail by Dr. John F. Kessel, at the University of Southern California. Vaccination against the disease in the ordinary way of vaccinating is not likely

to protect children from the disease, Dr. Kessel believes. He bases his views partly on the fact that both monkeys and humans can and do get second attacks of the disease. This seems to mean that resistance to this disease does not depend on the body being able to build up infantile-paralysis-fighting antibodies when the virus attacks, as it can build such antibodies for protection against attacks of other disease germs.

Protection against the disease is, therefore, not likely to be achieved by vaccinating with small doses of killed or weakened infantile paralysis virus. But the grandpa of all vaccines for protecting against disease, smallpox vaccine, was not made from smallpox virus, Dr. Kessel pointed out. It was made from the

virus of another, very similar disease, cowpox. Protection against infantile paralysis might be possible, he suggested, if scientists could find a virus closely similar to the infantile paralysis virus, but unlike it in being harmless to humans. Viruses that cause sickness in mice by attacking their brains and central nervous systems, as the infantile paralysis virus does, have been studied, but none so far found has the power to confer immunity or resistance to the infantile paralysis virus.

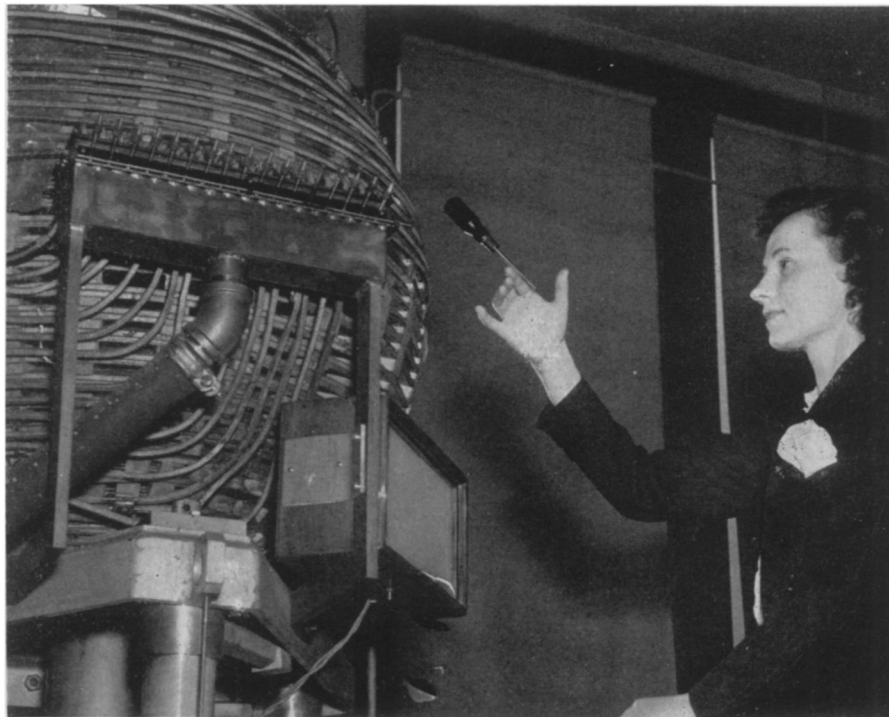
The next step which scientists are hoping to take is the discovery of this innocuous virus. At present, this detective story of medicine is like a serial story, "to be continued."

Science News Letter, November 16, 1940

New Kind of Protection

ENCOURAGING results in efforts to create a new kind of protection against infantile paralysis were reported by Dr. Harold K. Faber and associates of Stanford University School of Medicine at the meeting of the National Foundation for Infantile Paralysis in New York.

The new kind of vaccination is aimed at protecting the central nervous system



DEFIES LAW OF GRAVITY

This ordinary screwdriver is held in space on the fingertip of a visitor to the Westinghouse laboratories by magnetic lines of force from the ball-shaped mass spectrometer. This sorting machine for molecules and their constituent atoms divides them according to mass as they travel at some 16,000 miles a minute.

Science News Letter, November 16, 1940