MEDICINE

# Hint Polio Vaccine Ready

**Vaccine is apparently available for mass testing of perhaps as many as 25,000 small children against infantile paralysis during the coming year.**

➤ BY THE end of next year hundreds, maybe even as many as 25,000, small children and their anxious parents and doctors will know that they have long-time protection against all three infantile paralysis viruses—if plans strongly hinted at are carried out.

A vaccine to do the job apparently is ready. This much seems clear from statements of Dr. Harry M. Weaver, director of research of the National Foundation for Infantile Paralysis, at a meeting of the Foundation board of trustees in New York.

If the Foundation decides the time has come to make field trials, the vaccinating will either be started within the next few months or not until fall. The reason for vaccinating either now or not until fall is to do the job before or after the big summer polio season when chance exposure to the virus would confuse the results.

That the vaccinating may be done this spring is suggested by Dr. Weaver's statement that the kind of progress made within the past several months is the kind "one is accustomed to see prior to the taking of an important forward step."

Dr. Weaver said he could not "with complete assurance" announce that field tests with a vaccine would be undertaken in 1953.

If the pattern of the Foundation-supported field trials of blood's gamma globulin is followed, some hundreds or maybe even as many as 50,000 children will get "shots." Half of them will get vaccine "shots." The other half will get a harmless substance that looks enough like the vaccine to fool everyone except a few persons in the know.

Starting six weeks after the vaccinations and continuing once a month for six months, blood from all the children probably will be taken for testing. The level of polio-fighting antibodies in the blood would be compared with that in the children's blood before the vaccinating and with that of the controls who got "shots" of vaccine substitute.

Depending partly on the results of this sort of trial, children in 1954 might all get anti-polio vaccination.

Dr. Weaver did not give any details of how the field trials would be conducted or where. They might be made on children in institutions who could be kept from contact with the polio virus during the summer epidemic season. Or the vaccinating might be done in the fall with idea of raising the antibody level to the desired point before the 1954 polio season.

The vaccine to be used would be made from polio virus treated with certain chemicals, such as formalin, to make it incapable of damaging nerve cells but still able to call up antibodies. It would probably be given with certain oils to potentiate it and thus overcome the disadvantages of chemical treatment.

Successful vaccination of six children with a chemically treated virus was reported last fall by Dr. Howard A. Howe of Johns Hopkins University. The vaccine Dr. Howe used was made from viruses taken from brain and nervous tissue. (See SNL, Nov. 1, 1952, p. 282.)

Now, however, it is possible to grow polio viruses outside the body on non-nervous tissue. Specifically, they can be grown on monkey testicular tissue in the test tube. The viruses grown this way are considered safer to use than nervous tissue virus. Also virus grown this way can be produced in larger quantities, such as would be needed if the virus can be made into a safe and effective vaccine.

Important unanswered question about polio vaccine, however made, is how long it will protect against the disease.

For the coming polio season, best hope for protection may yet depend on blood's gamma globulin, shown in field trials last summer to be effective. But this material is in very short supply. There is not nearly enough for all American children. Who will get it this coming season has yet to be determined.

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METEOROLOGY

## Track Jet Streams By Cloud Formations

➤ JET STREAMS, the 200 to 300 mile-an-hour wind currents high in the atmosphere that affect our weather, can be tracked by observation of cloud formations from the ground, according to Dr. Vincent J. Schaefer of General Electric Company.

In a report to the annual meeting of the American Meteorological Society in New York, he said that four "specific and rather spectacular cloud types" are visual keys to the whereabouts of this high-speed stream.

The fast-moving wind currents have been known to double the speed of high-flying planes, but since there are no charts to show their position, finding the jet streams is a hit-or-miss proposition.

The four basic cloud formations indicating jet streams as listed by Dr. Schaefer are:

Cirrus streamers, white feathery wisps with tufted trails, seen moving at high speeds and high altitudes.

High cirrocumulus—small, white, rounded clouds in patches often scattered at ran-

*BILLOWING ALTOCUMULUS—One of the four types of cloud formations that give strong evidence that jet streams are racing by high overhead. Main axis of these swift wind streams might be charted from such cloud clues.*