

PUBLIC HEALTH

Big Trial on Polio

Mass test of serum may rob infantile paralysis of its punch. Doctors hope that gamma globulin shots will protect children from disease.

► **THERE MAY** be cause for jubilation in thousands of homes in Houston and surrounding Harris County, Tex., scene of the worst infantile paralysis outbreak that region has ever had and a "hot spot" for polio for the nation.

Reason for potential joy in those homes is that several thousand children aged one to six years inclusive have gotten the "shot" of blood gamma globulin which polio fighters believe and hope will give temporary protection against the disease. Other thousands of children of the same age also got "shots," but their shots were made of a gelatin blood substitute. And no one knows who got which.

If gamma globulin works as expected and if the youngsters received it before the polio virus had gotten into their bodies and to their brains and spinal cords, they will escape the disease this summer. Those are two big If's, however, and no one will know until at least the end of September whether or not the gamma globulin protected the children.

Those who got the gamma globulin are the first of some 75,000 children the National Foundation for Infantile Paralysis hopes to have entered in this year's trials of gamma globulin's protective value. The trials are a continuation of small scale trials made last summer at Provo, Utah.

Both those trials and the ones this year are under the direction of Dr. William McD. Hammon of the University of Pittsburgh, under a grant from the National Foundation. The gamma globulin was furnished by the American National Red Cross.

Results of the Provo trials were inconclusive, largely, scientists think, because the inoculations were given too late, after the epidemic was too far along. And the number of children in the trials was too small.

In the trials this year the inoculations were given to some 35,000 one- to six-year-olds in Harris County. This age group has been selected because 50% of the cases in Harris County so far are among children of this age.

Harris County Medical Society physicians and a team of 25 medical specialists from the National Foundation, plus local nurses, manned eight clinics. About 4,000 children were given the inoculations each day. They were taken first come, first served.

Only the master statistician knows which child got the gamma globulin and which got the identical appearing harmless substitute. On each child's record sheet with his or her name goes the serial number of the vial from which he was inoculated.

Each case of polio developing in a one- to six-year-old child is now being watched to see whether or not he had had one of the inoculations. But it will be at least the end of September before the master statistician has checked all the records and determined how many if any of the children getting the gamma globulin escaped infantile paralysis.

If the shots work as hoped for, their protective effect starts at once and lasts for about three to six weeks. Since the polio epidemic in Harris County and Houston was on the upswing when the trials started, it is hoped that by mid-July, or shortly thereafter, it will have died off.

Gamma globulin is a fraction of blood plasma, already in use for protecting against measles. It contains antibodies for fighting disease germs. Presence of these antibodies in blood depends on the person having been exposed to the germs. While probably not every one has developed antibodies to infantile paralysis, pooled plasma from blood banks of blood from many persons does contain such antibodies. Another source of such antibodies is the globulin fraction from placental blood.

Gamma globulin protection is not lasting. For lasting protection, a person must develop antibodies in his own blood. Such

protection might be given by vaccination against polio, if a safe vaccine could be developed. One such vaccine is under study now, but is not ready for large scale trials this summer.

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AERONAUTICS

Fast-Climbing Jet Armed With Rockets

► **ENEMY BOMBERS** attempting to invade the United States have a formidable obstacle with the new Lockheed F-94C Starfire from which wraps have now been removed.

It is an all-weather jet interceptor, said to be one of the world's fastest-climbing jet planes in ascending to bomber invasion lanes at a 45,000-foot altitude, and it is armed with 24 air-to-air rockets instead of with guns.

Radar and specialized "brain-like" instruments enable the Starfire to spot an enemy miles away, lock onto the target, track, close, aim and open fire all by itself.

Main duties of the pilot and radar operator are to take the plane off the ground, maneuver to the general target area guided by ground radar, switch on the electronic controls at the proper time, monitor operation of the piloting and rocket-control apparatus during the attack, then land.

This Starfire is an evolution of the Shooting Star, America's first mass-produced jet airplane. It carries 1,200 pounds of electronic equipment, compared with 168 pounds in earlier planes.

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THE SUREFIRE STARFIRE—The all-rocket-armed F-94C pictured above is now being delivered to the U. S. Air Force by Lockheed Aircraft Corporation. Loaded with radar and electronic equipment, the jet interceptor can shoot down invaders with its 24 rockets without its crew ever seeing the enemy.