

MEDICINE

Gamma Globulin for Polio

Blood factor also used against measles believed useful in warding off infantile paralysis attacks. Trial on every other child in a community needed for test.

➤ **NEEDED** for polio fighting next summer: A community of brave, intelligent parents. They must be brave enough and smart enough to let their children be the guinea pigs in trial of a safe but not sure method of warding off the disease.

The method would be injections of material from blood, called gamma globulin. Many children now get gamma globulin to ward off or make less severe an attack of measles. The gamma globulin fraction of blood plasma contains substances called antibodies that give resistance to disease. They get into the blood as the result of infection with the disease germs.

Laboratory studies have gone far enough now to show that gamma globulin might be useful in warding off poliomyelitis attacks, Dr. William McD. Hammon of the University of Pittsburgh believes. He gives his reasons in a report to fellow physicians in the medical journal, *PEDIATRICS* (Nov.).

But in order to be sure the gamma globulin will protect children from polio there must be a careful trial of it. This is where the brave parents come in. Because in the trial, the material should be given

to every other child in a community. Some will have to miss the chance of getting polio protection. No one but the scientist in charge will know which child gets the gamma globulin and which gets some harmless, inactive material. At the end of the polio season, a tally will be made to see whether there were more cases of infantile paralysis among the children who did not get the gamma globulin.

Unless the trial is made in this way, Dr. Hammon emphasized, no one will ever know whether gamma globulin can protect children against polio. This is because in every epidemic some children get sick and others escape the disease. If every child is given gamma globulin, no one will know whether those who stayed well would have stayed well without the globulin.

So far as Dr. Hammon knows, no plans for this kind of controlled trial of gamma globulin against polio next summer have yet been made. He hopes such a trial can be made.

Even if gamma globulin does get a trial and proves effective in warding off polio, it is not a perfect solution to the problem. For one thing, it gives what doctors call

passive immunity. This is not lasting. Probably it only lasts four to six weeks, while the polio season runs for several months. Consequently children would have to get shots of gamma globulin several times through the season. The proper dosage has not yet been determined.

Best hope for an effective way of dealing with polio, in Dr. Hammon's opinion, is the development of a drug to stop the disease. He does not think active vaccination against it, such as vaccination against smallpox or shots against diphtheria, will be the answer.

So far, no effective anti-polio drug has been discovered. But the prospect is encouraging, because some drugs have been developed which are effective against some other viruses. Some day, Dr. Hammon thinks, one will be discovered which will check the polio virus.

Science News Letter, December 30, 1950

MATHEMATICS

Number 1951 Is Mathematical Curiosity

➤ **THE YEAR 1951** is just a few days away. Irrespective of what it may have in store for us and for the world, the number itself is peculiar from a mathematical point of view.

First of all, 1951 is a prime number. No matter how hard you try, the only numbers you can find that divide into it evenly are itself and unity. Secondly, it is a twin prime, since 1949 was also a prime number. The numbers 11 and 13, 17 and 19 are also twin primes, but twin primes among the higher numbers are quite rare.

We shall not again have another such pair of twin primes in our dates until the end of the century, points out Prof. Oystein Ore of Yale University. The next twin primes are 1997 and 1999, to be exact.

Science News Letter, December 30, 1950

ARCHAEOLOGY

Flint Store Believed Money of Ancient Indian

➤ **FLINT PIECES** that may have been part of the wealth of a prehistoric Indian are now at the University of Illinois.

The pieces range from raw blocks to expertly fashioned big spear points. Prof. John C. McGregor, University of Illinois archaeologist, believes the spearheads are much too finely-made to have been used for hunting or war. Most likely they were a medium of exchange, he has concluded.

The cache was uncovered in Calhoun county between the Mississippi and Illinois Rivers, northwest of St. Louis. In this area are many remains of the prehistoric Hopewell or mound-builder Indians. Radio-carbon dating set the time of their culture at 200 to 600 B.C.

Science News Letter, December 30, 1950



BURIED TREASURE—These flint pieces, recently dug up, may have been "money" laid away by some prehistoric Hopewell Indian some 2,400 years ago. They are much too finely worked to have been made for hunting or war.