

MEDICINE

Polio Vaccine Next Year

Plan to give hundreds of thousands of children vaccinations against polio starting next year. The vaccine is capable of stimulating the production of antibodies against polio.

► NEXT MARCH will probably see the start of the world's biggest trial of vaccination against infantile paralysis, or polio, short for poliomyelitis. This will be vaccination to prevent the disease, not gamma globulin treatment to ward off paralysis.

At that time hundreds of thousands of children will be getting "shots." Half of them may get "shots" of a new vaccine made to protect against all three known types of polio virus. The other half may get "shots" of some other, harmless material. It may be a salt solution, or it may be a vaccine of the kind many children get anyway, such as the "shots" against diphtheria, tetanus and whooping cough.

Only a few persons will know which children got which. When the 1954 polio season has come and gone, scientists will count noses to see how many in each group got polio.

This, roughly, is what can be expected on the basis of information now available.

"Definitive" planning is now being done for large scale testing of a polio vaccine to see whether it protects children exposed to the disease under natural conditions, that is, during an epidemic, Basil O'Connor, president of the National Foundation for Infantile Paralysis, announced in New York.

At the same time Dr. Jonas E. Salk of the University of Pittsburgh reported to the American Academy of Pediatrics in Miami, Fla., that he has now vaccinated a total of 637 children and grown-ups.

The vaccine, he declared, is completely safe and capable of stimulating the production of antibodies against polio. These antibodies appeared in the blood within a few weeks and were still there three to four months later. In some of a group vaccinated earlier, antibodies against polio persisted for seven months.

Appearance of antibodies shows immunity to the disease.

Dr. Salk gave several different kinds of vaccines to the group. All were made from all three types of polio virus grown on monkey kidney tissue. This tissue, he finds, gives the greatest virus production. The virus is then chemically killed by formalin and mixed with either water or water and mineral oil. Some got one "shot" of vaccine and some got two or three doses at weekly intervals. Those vaccinated ranged in age from three years to over 21. They were "volunteers" and were residents of Allegheny County, most of them living in Pittsburgh suburbs.

This test of the vaccines was made between March and May, 1953. When the first polio case was reported in the county,

in May, Dr. Salk stopped the trial. This was so any antibody rise could be held due to the vaccine and not to exposure to the disease.

Mr. O'Connor did not give any details of the plans for next year's large trial of the vaccine, but he did say the vaccinating would be done early in the year and in a non-epidemic period. This, with Dr. Salk's report, makes March seem the likely month, though February might be chosen.

Production of large quantities of virus for the trial is already under way and National Foundation authorities do not expect any shortage in this material from which the vaccine will be made.

Science News Letter, October 24, 1953

MEDICINE

Vaccine Trial Changes Policy on Polio Funds

► PLANS FOR large scale trial of a new polio-preventing vaccine are changing the money spending policy of the National Foundation for Infantile Paralysis.

Next year one-third of the money raised through the March of Dimes in January

will be forwarded to national headquarters to finance the new prevention program and to buy gamma globulin for temporary paralysis-preventing work.

The remainder of the March of Dimes funds will be divided 50-50 between the national headquarters and local chapters.

In the past, all the March of Dimes money was divided 50-50 between headquarters and chapters. The chapter funds are used for local epidemic aid or to supplement national epidemic aid, while the funds going to headquarters are used for research, professional education and emergency aid to chapters.

The new prevention program is expected to cost \$26,500,000, which means that about \$75,000,000 will be needed for 1954.

Science News Letter, October 24, 1953

METALLURGY

X-Ray Device Used To Study Metal

► THE CAUSE of brittleness in steel and other metals at low temperatures is being explored by Dr. Daniel Rosenthal and Murray Kaufman of the University of California at Los Angeles.

They have developed a special low temperature X-ray diffraction apparatus to study the crystalline process by which some metals become brittle at low temperatures.

A super freeze is maintained by circulating liquid nitrogen through a tubular specimen which is being rotated under a load. X-ray pictures of the deformation of the specimen are recorded by a special camera attached to the apparatus.

Science News Letter, October 24, 1953



PROTECTIVE DEVICE—The "beard" on these bearded lizards is actually a bluff for the sake of defense. The desired effect is obtained by expanding the skin covering the throat. These bearded lizards reside in the National Zoological Park in Washington.