

More Vaccines Promised

by Faye Marley

THE DECLINE of poliomyelitis among more than 350 million people of the world was cited at a meeting in Washington by speakers from many nations as offering a promise of vaccines that will soon be used against other diseases considered hopeless or untreatable until recently.

Vaccines against some of the many viruses causing the common cold, as well as those causing rubella, mumps and other diseases are on the way.

Although both Drs. Jonas Salk and Albert B. Sabin have taken part in polio vaccine campaigns, SCIENCE SERVICE learned in an interview with a husband and wife team from the Institute of Poliomyelitis and Virus Encephalitis, Moscow, that more than 160 million persons in the USSR and 30 other countries have been immunized with strains from the Sabin oral live vaccine introduced in Russia only six years ago.

Dr. Mikhail P. Chumakov and his wife, Dr. Marina K. Voroshilova who served as translator in the interview, pointed out that their institute produces vaccine for distribution not only within the USSR but to Nigeria, Uganda, Greece, India and other countries trading with the USSR.

Nevertheless, although paralytic polio has been largely conquered in the countries where vaccines have been given, these are mainly in areas of temperate climate and good health services.

Much remains to be done in the underdeveloped countries and among people who do not avail themselves to the vaccines. The tropical countries especially present a problem, where polio cases have been increased from about 1,500 a year during the previous 10 years to 7,000 or more a year in the mid-nineteen-sixties.

Dr. Sabin and Dr. Chumakov were among the speakers at the International Conference on Vaccines Against Viral and Rickettsial Diseases of Man. Rickettsial diseases—typhus, Q fever, Psitticosis, and the like—are caused by

bacteria-like organisms—parasites carried by ticks, lice and other living creatures.

The week-long meetings, sponsored by the Pan American Health Organization and the World Health Organization were introduced by Dr. Abraham Horwitz, director, who said that although the vaccines being studied today are complex, the problems are not insoluble.

The conference is a continuation of discussions started a few years ago under the same sponsorship on live polio-virus vaccines.

Dr. Sabin estimated that in the past six years more than 350 million people have received oral poliovirus vaccine in most of the countries of Europe and North America, and many countries or regions in South America, Africa, Asia and Oceania.

Czechoslovakia, with a population of about 14 million, has been most outstanding in vaccination coverage. From 1960 to the present time there has not been a single confirmed case of paralytic polio of local origin, Dr. Sabin said, due to the vaccination since 1961 of new generations of children who were vaccinated each spring and re-vaccinated the following year.

Spain and Italy, with larger and more diverse population groups and climates, show examples of the rapid effect of different kinds of mass campaigns with oral vaccine but without elimination of some centers of the naturally occurring polioviruses, Dr. Sabin explained.

Japan is an example of a large country with highly developed health services in which governmentally directed mass use of oral vaccine during the past five years has almost completely eliminated the disease.

In the United States, paralytic polio has been reduced from a disease numbered in thousands of cases annually to a mere 61 in 1965.

RUBELLA

Vaccine Still in Future

ROUTINE vaccination of girls against the infant-crippling German measles still appears to be five years off. But it is controversy in the scientific community over methods that seems to present the block. Dr. Albert B. Sabin believes the delay is unnecessary.

Parallel attempts to develop a safe vaccine—one employing the much-publicized African green monkey kidney as a culture medium to grow the virus, and one employing a duck egg embryo—were reported here at the International Conference on Vaccines against Viral and Rickettsial Diseases of Man.

At the conference, Dr. Saul Krugman of the department of pediatrics, New York University School of Medicine, predicted that the "licensed product for vaccination against rubella" will not be available before 1971. He said the "timetable has been remarkably similar to past experience with measles vaccine." It took four years—from 1954 to 1958—to weaken the live measles virus after its cultivation in tissue culture. Rubella virus, which was cultivated in 1962, was successfully attenuated in 1966, also four

years later. Since ordinary measles vaccine took a total of five years to license for public use, Dr. Krugman has based his prediction on that length of time.

But it is coming, if competition among pharmaceutical companies is an index. Division of Biologics Standards of the National Institutes of Health has made its kidney-grown virus strain available to anyone who wants to work on it. So far more than eight companies have accepted the offer. The vaccine will not be patented.

Independently, Dr. Maurice R. Hilleman and his collaborators have developed a live rubella virus vaccine at the Merck Institute for Therapeutic Research, West Point, Pa., using a duck embryo "culture medium."

The target is future infants.

A safe home for the growing baby is of the greatest importance, Dr. Hilleman explained. The purpose of the vaccine, he said, is less to protect the person being vaccinated than to assure a safe environment for a future fetus.

Long-lasting immunity of lifelong durability, hopefully, and absence of communicability are, therefore, important.

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