

## MEDICINE

# USSR Uses Sabin Vaccine

THE SABIN live polio virus vaccine, developed in the United States but not yet licensed here, is "completely harmless" and extremely effective, Russian scientists have found. They have already immunized millions of children in the USSR with the live vaccine.

The Salk inactivated vaccine, licensed in the United States, was called a "wasteful preparation."

The Russian scientists spoke at the Second International Conference on Live Poliovirus Vaccines in Washington, D. C. They said:

"Nowadays large-scale production of the complex, expensive and insufficiently effective Salk vaccine, which involves additional scarring of children because of the repeated injections required, is quite unnecessary." The Russians said the Salk vaccine can be replaced by "a more effective, completely harmless live vaccine for oral administration."

The scientists said they had been particularly careful to study the possibility that the attenuated Sabin strains might turn into dangerous virus forms.

They found the live vaccine to be "com-

pletely harmless." There is "no threat of the vaccine strains' reversion to a more virulent state."

They advised that the live vaccine be made compulsory, as in the case of smallpox and diphtheria in many areas. Only this method, they said, will enable a country to gradually eliminate the polio viruses themselves and suppress their circulation.

(The live vaccine not only immunizes, it interrupts the life cycle of the polio virus and thus could destroy the viruses themselves in areas where masses of people are vaccinated.)

They suggested three oral doses of vaccine administered four to six weeks apart.

The vaccine primarily used in the Russian tests has been that developed by Dr. Albert B. Sabin of Cincinnati, Ohio.

The Russian scientists reporting were from the USSR Academy of Medical Sciences in Leningrad. The scientists are A. A. Smorodintsev, A. I. Drobyshevskaya, N. P. Bulychev, O. M. Chalkina, G. M. Groisman, V. I. Ilyenko, R. A. Kantorovich, L. M. Kurnosova, K. G. Vasilyev, V. I. Votyakov and G. P. Zhilova.

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# Polio Vaccine Delay

THE U. S. Public Health Service is being urged by Dr. Albert B. Sabin, of Cincinnati, Ohio, to license his live poliovirus vaccine at once. Several drug companies are ready to apply for licensure but await specific requirements from PHS. His vaccine has been safely used by millions, chiefly in other countries.

In an exclusive interview, Dr. Sabin told SCIENCE SERVICE the PHS must face the issue of whether it will be satisfied with the indefinite results of the Salk polio vaccine or use the live, orally administered form that he believes will completely eradicate polio in this country.

These were questions answered by Dr. Sabin:

Q. What is keeping the U. S. Public Health Service from licensing your vaccine?

A. Caution that is unnecessary on the basis of tests already made. Other countries do not have the problems we have here of competing methods.

Q. Do you have any encouragement from the PHS that licensing can take place soon?

A. I had a letter recently from the Surgeon General's office saying "with all the information we have we should be able to receive applications for licensure this fall."

Q. What drug companies are ready to apply?

A. A number of companies, including Wyeth of Philadelphia and Pitman-Moore of Indianapolis, have spent a great deal of money in preparing my vaccine but they are at a standstill until the PHS is specific in its requirements. I have just returned

from London where the International Pfizer Company and others have received specific requirements from Britain's Medical Research Council and Ministry of Health, but even they await the decision of the United States because the requirements should coincide if sales are to be international.

Q. Do you believe that drug companies' competition is holding back the use of the oral vaccine?

A. No. I do not believe they are afraid of the inevitable economic loss if Salk vaccine goes off the market. It is true that fewer companies will be needed to produce this comparatively simple vaccine—100 doses can be prepared compared to one Salk shot. One plant in Russia can produce enough for her population. One American company could make enough for our country at low cost.

Q. Is not the Public Health Service justified in its caution in awaiting further tests?

A. No further tests are necessary to throw light on the safety of the Sabin vaccine. In my paper at the International Conference on Live Poliovirus Vaccines I show that even in the subtropical conditions where economic underdevelopment poses health hazards of other virus infections, we can stop the spread of polio. We could not prove this at the meeting last year.

Q. As an American born in Russia, how do you feel about the fact that Russia has forged ahead in the use of your vaccine?

A. I am highly gratified. This has nothing to do with Russia's political organization but is due to the leadership of one public-spirited man, Prof. Mikhail P. Chum-

akov, director of the Institute for Polio-myelitis Research of the USSR Academy of Medical Sciences. I have been in Russia four times in recent years and I found the same indecisive way that we have in dealing with the polio question until Dr. Chumakov got the support of his ministers of health.

Q. Can you name any examples of leaders in promoting the use of live polio virus vaccine in this country?

A. Dr. Herman E. Hilleboe, New York State Commissioner of Health, is one. The Department of Health in Cincinnati is another.

Q. What has been done in Cincinnati?

A. Since April we have given 185,000 pre-school and school children the Sabin vaccine safely. Physicians gave their time to feed vaccine to 50,000 pre-school children in one week. The rest were given vaccine in clinics, beginning with the first and most dangerous of the three strains. Eighty-five percent of the epidemics are caused by this strain. Second and third doses will be given later.

Q. Do you approve of the one-shot dose of vaccine (trivalent) containing all three strains?

A. The Cox and Koprowski virus vaccines have not had the extensive tests that mine have had, and they should not be recommended because of weakness found.

Q. If licensing of your vaccine is done in the United States, should it be under the direction of boards of health as smallpox vaccination now is?

A. Yes, I would recommend the Cincinnati system, giving live polio virus vaccine at two-month intervals beginning in December, with strain I, III and II given rather than the one-shot (trivalent) dose.

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## Safety Proof Needed

THE U. S. Public Health Service will not license live poliovirus vaccine until its safety has been further demonstrated. Dr. Roderick Murray, chief of the Division of Biologics Standards, National Institutes of Health, is head of a committee appointed by Dr. Leroy E. Burney, which will study the reports submitted at the Second International Conference on Live Poliovirus Vaccines held at Georgetown University, Washington, D. C.

If the committee finds that sufficient tests have been made to prove its safety for communities as well as individuals inoculated with the vaccine by mouth, it will recommend that PHS go ahead with licensure.

Dr. David E. Price, assistant Surgeon General of PHS and head of the U. S. delegation to the International Conference on Live Poliovirus Vaccines in Moscow last May, said at that time that Russian results were promising but that there were still unanswered questions that Soviet data did not provide.

The caution of the PHS in licensing stems from trouble with the Salk vaccine five years ago. Dr. William J. Zukel, assistant to Dr. Burney, said the outlook was promising for the live vaccine.

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