July 26, 1963

Albert B. Sabin, M.D.
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Cincinnati, Ohio

Dear Dr. Sabin:

I hope that we may count on your help again in reviewing and criticizing the enclosed draft of "A New Oral, Live-Virus Polio Vaccine," for The Medical Letter. We will be grateful for your criticisms and suggestions.

Sincerely yours,

Harold Aaron, M.D.

HA: mm
Enclosure
A NEW ORAL, LIVE-VIRUS POLIO VACCINE

With the recent marketing of a trivalent oral polio vaccine (Orimune - Lederle), the three types of live polio viruses are now available in one vial, and only two doses are required in contrast to the three separate oral doses of the Sabin monovalent live vaccines and the four parenteral doses of the killed trivalent Salk vaccine. According to a news release by the Surgeon General of the U. S. Public Health Service on June 26, 1963, "The main advantage of a trivalent live polio virus vaccine is that there is no need to keep track of the separate types of vaccines administered — a potentially confusing situation for health authorities and vaccinees alike."

A single dose of the trivalent vaccine cannot be counted upon to produce adequate immunity to all three types. Two doses, two months apart, however, will produce protective antibodies against all three types, in at least 90 per cent of those immunized. Precisely how the protection afforded by the new vaccine compares with that afforded by separate doses of the three Sabin vaccines or four doses of the Salk vaccine is not yet known.

Until the Poliomyelitis Vaccine Advisory Committee of the U. S. Public Health Service makes formal recommendations for the use of the different vaccines now available, either the separate monovalent Sabin vaccines or the Salk vaccine should be used as the primary means of polio immunization.

The trivalent oral vaccine may be given as a "clean up" booster dose to infants who had some months previously received full immunizing doses of either Salk or Sabin vaccines, or to older children and adults where there is uncertainty as to the adequacy of previous doses or dosage schedules.
Because of "interference" by enteric viruses prevalent in the summer and fall months in infants and children, oral vaccines/most likely to be effective when given in the winter and spring months. In tropical countries, where naturally occurring enteroviruses are found throughout the year, community use of a trivalent vaccine may suppress the interfering wild polio viruses more effectively than sequential feeding of one type at a time. In an epidemic, in which the type of virus has been identified, the appropriate monovalent Sabin vaccine should of course be employed; where more than one polio virus is responsible, or where the type has not been identified, the trivalent vaccine may be useful.

For persons who have already received the full series of four doses of Salk vaccine or three of the monovalent Sabin vaccine, a single booster dose of the new trivalent vaccine may be useful before travel to the tropics or other areas where polio viruses are heavily endemic.

Unlike the Salk vaccine, both the Sabin and the trivalent live-virus vaccine should be stored at temperatures below 32°F. from the time they are manufactured until they are used. Storage in a refrigerator (except in the freezing compartment) is satisfactory for only a week or less. When ordering the Orimune vaccine from a drug store or surgical supply house, it is essential for the physician to know that it has been kept in a freezer or in the freezer compartment of a refrigerator (a drug store ice cream freezer can be used). If there is any uncertainty, Salk vaccine should be used in office practice. In community mass immunization programs, a health department, medical society or other agency takes responsibility for proper storage of the vaccines.

The approximate relative cost of the different vaccines when purchased by a physician is: Salk - four doses, $1.65; Sabin - one dose of each of three types, $1.80; Orimune - two doses, $1.15. Orimune is supplied in two dosage forms: two drops per dose, and two ml. per dose. The manufacturer cautions against dispensing either form in tap water containing free chlorine.