

## MEDICINE

## Knee Noises Give Clues

➤ A MICROPHONE applied to that creaky knee is an aid to diagnosing rheumatoid arthritis conditions before they have progressed far enough for X-ray detection, a Chicago physician reported. He said normal and rheumatoid knees sound different.

Dr. Herbert Fischer of the Rehabilitation Institute of Chicago told the Third International Congress of Physical Medicine in Washington, D. C., that when he fastened a sensitive microphone to the knees of volunteers, he found rheumatoid knee joints produced a low thud.

A series of high frequency bursts at irregular intervals was produced by knees with the degenerative joint disease osteoarthritis. Normal knee joints, however, produced sounds that were relatively uniform in intensity, frequency and wave pattern.

### Help for Hemophiliacs

➤ HEMOPHILIACS (profuse bleeders) whose joints and muscles have been damaged by bleeding can have motion restored by physical therapy.

Dr. Elizabeth Austin of the hemophiliac clinic, California Hospital, Los Angeles, told the Third International Congress of Physical Medicine in Washington, D. C., that ultrasound therapy, electrical stimulation and carefully graded exercise programs had been used in the clinic to restore motion.

Dr. Austin said a study of 35 patients, ranging in age from three to 33, had indicated that augmenting the traditional bed rest, traction and splinting with physical therapy produced far better results than would otherwise have been predicted.

• Science News Letter, 78:151 September 3, 1960

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### Polio Vaccine by Mouth Ready for Use in 1961

➤ LIVE POLIO virus vaccine will be available for mass inoculations in 1961. Now that the U. S. Public Health Service has recommended that the vaccine of Dr. Albert B. Sabin of the University of Cincinnati be made by potential manufacturers, there will

be two polio protection methods in use next year.

The Salk vaccine administered by injection has been widely used for several years, while the Sabin method, a vaccine taken by mouth, has so far had mass tests in two U. S. cities.

Legal regulations on live polio virus will not be completed before Nov. 1, but the manufacturers working with technical details will be able to get under way now.

Dr. Roderick Murray, chairman of the PHS Committee, explains that the Sabin Type I and Type II strains possess the most favorable laboratory and field characteristics, and his Committee has recommended their use.

Sabin Type III strain is also recommended although continued search for a superior Type III strain is urged. All the live polio virus vaccines so far used in this country are safe for humans, but all "candidate strains" except those of Sabin, which have been extensively studied, are of "greater neurovirulence for monkeys." Any vaccine that paralyzes monkeys is considered potentially dangerous for man.

Dr. Murray called attention to the great contributions of Dr. Herald Rea Cox of Lederle Laboratories, and of Dr. Hilary Koprowski of Wistar Institute, Philadelphia, formerly with Lederle.

Originally it was hoped that one oral dose of the live vaccine would be all that was necessary for permanent immunization against polio. Now it is planned to give three or four oral doses, possibly a different strain for the first three doses, and a combined or "trivalent" dose as the final one. Cost is estimated to be less than for the Salk vaccine.

Mass inoculations are recommended, but the details are to be worked out with state health departments and local communities.

The Salk killed vaccine requires three and preferably four injections.

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## SURGERY

### Plastic Blood Filter Helps Open-Heart Surgery

➤ A PLASTIC arterial blood filter that can be sterilized like a test tube has been developed for use during open-heart surgery. Made of a non-wettable halofluorocarbon plastic, the filter needs no silicone treatment before each use and can be sterilized by steam heat in an autoclave, rather than by the tedious "cold" sterilization process used for delicate glass filters.

The transparent plastic, which remains unfogged even after several hundred autoclavings, is important in the filtering unit because the blood must be observed through windows as it flows through the stainless steel filter screen. Air bubbles, which can cause air-embolism in the patient, can be spotted and released through two small vents on top of the unit.

Dr. Alvin A. Bakst and Dr. Phillip Crastopol of Jewish Hospital, Brooklyn, N. Y., have been using the filter "with eminent success" in open-heart operations.

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**PLASTIC IN HEART SURGERY**—A plastic blood filter (center) that can be sterilized by steam heat, instead of by "cold" sterilization methods, is connected to the heart-lung machine. The filter was manufactured by Bonny Manufacturing Corp., Mayard, Mass., from a special plastic supplied by the Minnesota Mining and Manufacturing Co., St. Paul, Minn.