

MEDICINE

Polio Vaccine Effective

Tests of three-way polio vaccine on 161 persons give "encouraging" results. Its production will be delayed until safety trials have been completed.

➤ A VACCINE effective against all three types of poliomyelitis has come through trials on 161 persons with "encouraging" results.

The vaccine brought the anti-polio substances in the blood to as high a level as that induced by an attack of paralytic polio. In some cases a higher protective level was reached.

The vaccine took effect within six weeks. The anti-polio substances, or antibodies, have remained at the high level for four and a half months. This is the longest period studied but presumably the protection will last even longer.

These results are announced by Dr. Jonas E. Salk of the University of Pittsburgh School of Medicine in the *Journal of the American Medical Association* (March 28).

The results should not, Dr. Salk states, be taken to mean that a practical vaccine is now at hand.

(The National Foundation for Infantile Paralysis in New York, which aided Dr. Salk's studies, says no plans have been made yet for field trials of the vaccine.)

The chief reason for the delay in practical vaccine production is the safety factor.

No signs of illness that could be attributed to the vaccine have occurred in any of the persons who got it. A few had some redness and swelling for 24 to 48 hours at the site of the vaccination.

But great care and "considerable time" are needed to prepare and study each new batch of vaccine before it can be given to humans, Dr. Salk points out. This is what limits the speed with which the vaccine can be made practical. Every effort is being made to push the work ahead and overcome this limiting factor.

Next step, Dr. Salk indicated in his report, is to establish precisely the limits within which the effects he reports can be reproduced with certainty. This means not only safety limits but those insuring effective protection in every vaccine batch prepared.

Dr. Salk tried several vaccines. They were made from polio virus grown on monkey kidney and testicular tissues. The kidney tissue gave the best growth of virus with potent antibody raising, or protective, effect.

The virus was treated with formaldehyde to destroy its infectiousness. Injections of it into monkey brains were among the tests for safety through this treatment. For one of the vaccines tried, the treated virus was given in water injected underneath the skin.

Another vaccine was made from formaldehyde treated virus incorporated in a water-in-oil emulsion and was injected into the muscles. This preparation apparently gives better results. The oil emulsion, as has been found in influenza vaccine production, increases the anti-body, or protective, response.

The tests of the vaccine were made on patients at the D. T. Watson Home for Crippled Children, Leetsdale, Pa., and at the Polk State School, Polk, Pa. Some of those given the vaccines were patients who had been paralyzed by polio in recent years. They had, as a result, immunity to the virus type which paralyzed them but not to other types.

Collaborating with Dr. Salk in the studies were: Maj. Byron L. Bennett, U.S.A. (ret.), Dr. L. James Lewis, Miss Elsie N. Ward and Dr. J. S. Youngner, all of the University of Pittsburgh School of Medicine.

Science News Letter, April 4, 1953

• RADIO

Saturday, April 11, 1953, 3:15-3:30 p.m. EST

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS Station.

Archie M. Palmer, chairman of the United States Government Patents Board, discusses "Uncle Sam's Patents."

HEMATOLOGY

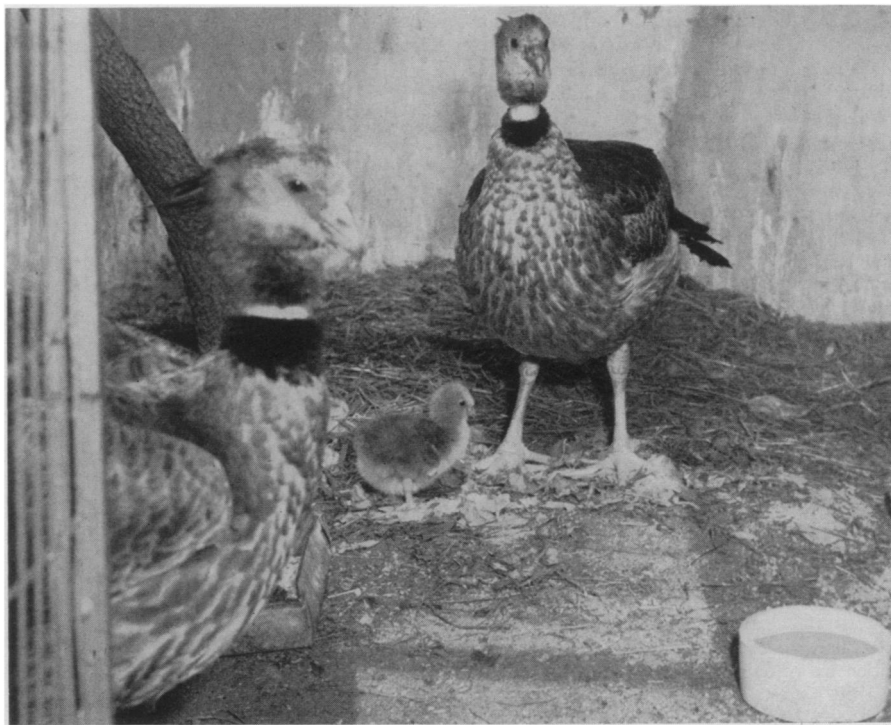
Old as Your Blood Vessels Finds Proof

➤ THE SAYING, "you're only as old as your blood vessels," gets some confirmation from Dr. Daniel J. Perry of the University of California at Los Angeles School of Medicine and Dr. Irwin Linden of the West Los Angeles Veterans Hospital.

Their studies show that after the age of 20, small blood vessels in the normal human body become increasingly fragile. Over 80% of normal people past the age of 60 that were studied had extremely fragile capillaries.

The study involved use of the Rumpel-Leede's test, in which a blood pressure cuff is applied to the upper arm for a given period of time. Fragility of the small blood vessels is determined by the number of capillaries in the arm that then rupture.

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BABY "SCREAMER"—Well protected by its large crested screamer parents, this baby chick was only a week old when its picture was taken. The full-grown bird is as big as a chicken with long neck and legs, according to Dr. William Mann, director of the National Zoological Park, Washington, where it was hatched.