

AUSTRALIAN NEWS AND INFORMATION BUREAU

SAFE VACCINE—The thorough and even breakdown of virus particles is shown in these photographs taken through an electron microscope at the John Curtin School of Medical Research, Canberra, Australia. At left is the virus the way it looked two minutes after mixing with 0.5 percent sodium dodecyl sulphate. In the center, the same virus had been shaken with ether for 30 minutes and at right it had been shaken with ether for only tmo minutes. The white circles are plastic markers magnified many thousands of times.

MEDICINE

Tests Can Save Unborn

MORE BABIES facing death because of the Rh-factor blood disease called erythroblastosis can be saved by transfusions before birth if early tests are made to show that transfusions are necessary.

In erythroblastosis the fetus has anemia or dropsy too early for premature delivery to save its life. The mother has Rh-negative blood and the baby, usually a second child, has Rh-positive blood.

Dr. A. William Liley of Auckland, New Zealand, who performed the world's first direct blood transfusion to a human fetus for treating an Rhfactor disease, told a Symposium on the Child at the University of Chicago that the number of babies saved in this way should be 65% instead of the present 40%.

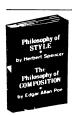
Examination of the amniotic fluid should be done as early as 20 weeks if the pregnant woman has previously suffered a severe affliction or fetal death before 34 weeks, Dr. Liley said.

"The selection of pregnancies for this procedure requires a test of fetal condition which is not only precise but also indicates the maturity at which treatment is required in order that unnecessarily early and hopelessly late interference may be avoided," he emphasized.

The amniotic fluid must be examined by a spectrophotometer, an instrument used for measuring color intensity. The fluid, withdrawn by a needle under local anesthesia, will be a yellow color if hemolytic disease is present. The yellow color results from the presence of at least seven closely related bilirubin, or bile pigments, but the low concentration and uncertain identity of these pigments makes biochemical estimation inferior to spectrophotometric assay.

At least two amniotic fluid tests spaced at intervals of one and one-half to four weeks are required for safety, Dr. Liley said.

The outlook for the Rh-negative baby delivered at the 35th week is very good, and fetal transfusions have been restricted to the number and amount sufficient for the unborn child to reach this goal in a satisfactory condition.



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MEDICINE

Flu Vaccine Developed By Australians Patented

➤ AN INFLUENZA vaccine reported to be free of side effects has earned a patent for the Australian Government's Commonwealth Serum Laboratories.

The new vaccine, developed at the Australian National University, Canberra, is produced by splitting or breaking down the virus particles with sodium deoxycholate, a mild detergent.

The idea of splitting virus particles to reduce their harmful effects is not new, but Drs. R. G. Webster and W. G. Laver of the University's John Curtin School of Medical Research produced a new method that they said is safe and relatively cheap for large producers.

Previously, ether had been used as a splitting agent. Although this was effective in removing side effects, the method was not practical because of fire hazard and other risks.

An Asian strain of the flu virus was used in the Australian experiments but the splitting process applies to all strains. Dr. Webster reported the development in Moscow at the recent meeting of the International Congress of Microbiology.



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