

## IMMUNOLOGY

# 100% Measles Protection

A measles vaccine has been successfully used in an epidemic. Gamma globulin is injected after the live measles virus for results without side effects, Faye Marley reports.

► A MEASLES VACCINE has been successful against an epidemic in the Philadelphia area.

The trick is to inject gamma globulin in the opposite arm immediately after the live weakened measles-virus vaccine is injected, a group of physicians reported.

The vaccine was originally developed by Dr. John F. Enders and his colleagues at Harvard University, but tests with the vaccine alone have resulted in fever and rashes.

Dr. Joseph Stokes Jr. of the University of Pennsylvania, Physician-in-chief at Children's Hospital, Philadelphia, told SCIENCE SERVICE that he and his co-workers had begun tests with human immune globulin combined with the vaccine several years ago.

Also combining live measles-virus vaccine with gamma globulin has been Dr. Fred R. McCrumb Jr., who last June reported that with his colleagues in Baltimore and St. Joseph, Mo., he had immunized some 1,500 children. Dr. McCrumb is on the staff of the University of Maryland Medical School, Baltimore.

The difference in the Philadelphia report is two-fold, Dr. Stokes said. The 605 children involved, including controls injected with killed measles-virus vaccine, were exposed to measles later. Also, the vaccine used was grown in chick embryo rather than in dog kidney.

Dr. Stokes believes that the mammalian dog kidney is too much like the organs of man to be successful.

Dr. Samuel Musser of Philips Roxane Inc., St. Joseph, developed the vaccine in dog kidney.

All the experimental measles vaccines have been based on original work done by

Dr. Enders, but a number of live and killed virus vaccines have been produced since the 1954 Nobel Prize winner first produced his vaccine. (Dr. Enders received the Nobel Prize for polio virus culture.)

The Philadelphia study included 562 children living in a residential environment in Haverford Township, Pa., and 43 children in St. Vincent's Home, an orphanage in the city.

Not a single child who received the live virus vaccine got measles during subsequent epidemics, but a large number who had been injected with killed virus vaccine came down with the disease.

Dr. Maurice R. Hilleman of the Merck Sharp & Dohme Research Laboratories, West Point, Pa., who was one of Dr. Stokes' collaborators on research, said that the relative amounts of gamma globulin and virus in the vaccine are being investigated.

Government standards to control vaccine manufacture also must be issued before any such vaccine can be released for general use.

An international conference on measles immunization is scheduled for Nov. 7 to 9, 1961, at the National Institutes of Health, preliminary to a decision on standards for control.

Details of the Philadelphia report appear in the New England Journal of Medicine, 265:507, 1961. Collaborating on the research were Drs. Robert E. Weibel and J. Ronald Halenda of the Children's Hospital and University of Pennsylvania, and Drs. Eugene B. Buynak and Herman Goldner of the Merck Sharp & Dohme Laboratories.

• Science News Letter, 80:203 September 23, 1961

Cloud pictures from Tiros I indicated that "mother" clouds, where tornadoes originate, could possibly be picked out from other clouds. Tiros III will be used for tracking hurricanes this fall.

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## SPACE

## Landing Satellites On Space Stations

► A SATELLITE whirling through outer space can land at a space station with the help of magnets.

Creating electromagnetic fields around the hulls could eliminate some of the complex systems now proposed, Dr. Elliott T. Benedikt, Space Physics Laboratory at Northrop's Norair Division at Hawthorne, Calif., told an American Astronautical Society meeting in San Francisco.

With a power source in the satellite and electric coils around the hulls, the vehicles can be attracted for landing or repelled for taking off by changing the polarity of the electromagnetic fields.

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**NUCLEAR POWER PLANT** — A 300 kilowatt space power plant, SPUR, designed by the Garrett Corporation, Phoenix, Ariz., will generate electricity from 2,500 pounds of cesium, giving the unit a life of about one to three years. The turbine generator is about three feet long.

## SPACE

## Donations for Space

► AMERICANS are interested in sending man into space.

Dr. James E. Webb, National Aeronautics and Space Administration Administrator, said that many letters containing checks to help pay for Cmdr. Alan B. Shepard Jr.'s space flight have been sent to NASA.

He said that many checks in the amount of \$2.25 were received because that figure had been calculated as the cost of the astronaut's trip to each United States citizen.

When the money is sent by "sincere" persons, NASA keeps it. A letter of thanks is sent to each donor over Dr. Webb's signature, saying the money will be used in the space program. However, if the money is designated to go to a special project, it is returned.

Dr. Webb said NASA will eventually

attempt to send up space vehicles housing 10 to 12 men for space exploration. He said a new kind of thinking is needed to approach the new problems of much larger facilities for building and shooting up much larger spaceships.

The organization now being set up to handle the moon program will be designed to function for at least a ten-year period, Dr. Webb told the National Press Club in Washington, D. C.

He mentioned progress in space communications, weather research and other fields of science. He said that the weather satellite program will attempt to have a Tiros satellite in the air at all times until a permanent weather satellite system (Nimbus) can be launched to send continuous weather information back to earth.