

MEDICINE

Measles Prevention Easy

A one-shot vaccination against measles is now available, and parents are being urged to immunize their children because the disease is considered dangerous—By Faye Marley

➤ ANOTHER spring epidemic of measles may be on the way unless parents have their children vaccinated. The simplest method is with a one-shot weakened live virus type.

The trend now is to omit gamma globulin, often used along with the one-shot vaccine to reduce the occurrence of fever and rash.

More complicated is the killed virus vaccine, which requires three doses one month apart. Parents do not remember to go back for all the shots in many cases. Only special groups that cannot take the one-shot vaccine need to take the three-dose kind.

The latest announcement of a new one-shot vaccine, to be licensed soon, has come from Pitman-Moore, Division of the Dow Chemical Company, Indianapolis.

Named after Dr. Anton J. F. Schwarz of Pitman-Moore, who spent more than six years on its development, the Schwarz-strain vaccine is made by passing the Enders' virus strain through a chicken-embryo tissue culture system 84 additional times under special conditions.

This further weakening of the live virus, first cultivated by Nobelist Dr. John F. Enders of Harvard in 1954, is believed to make unnecessary the accompanying shot of gamma globulin to reduce the occurrence of fever and rash.

The biggest epidemic of measles in recent

years occurred in the spring months of 1964 because parents were not protecting their children with vaccines available.

Early reports in January 1965 from the Communicable Disease Center of the U.S. Public Health Service, Atlanta, Ga., showed 5,203 measles cases as opposed to 3,191 for approximately the same period in 1964.

Official reports of some 400,000 measles cases a year do not begin to represent the actual total in the United States, which the Public Health Service estimates to be four million.

Reeducation of the public is needed to show that measles is by no means a harmless ailment. The American Medical Association estimates one death in every 1,100 reported cases.

Among the potentially dangerous complications of measles are encephalitis, or brain inflammation, middle-ear infection, called otitis media, which can lead to permanent hearing impairment, and the induction of pneumonia, bronchitis and corneal ulcer.

A nationwide immunization program against measles will be in effect if a proposed bill passes linking measles vaccination to legislation already in effect.

The bill would continue present Federal aid for vaccination against polio, diphtheria, tetanus and whooping cough, extending it to include future important vaccines.

• Science News Letter, 87:87 February 6, 1965

MEDICINE

Tranquilizing Drugs Act On Damaged Brain Areas

➤ ALTHOUGH TRANQUILIZING and anti-depressant drugs have been found to act similarly on both manic and depressive patients, nonpsychotics do not seem to be affected by them at all.

This suggests, Dr. Donald F. Klein of Hillside Hospital, New York, told the American College of Neuropsychopharmacology meeting in Washington, D.C., that the drugs act only on specific damage areas in the brain. Doctors should not generalize from the effect of a drug on a normal person to the effect the drug will have on a person with brain damage and vice versa.

These types of drugs seem to "normalize" or repair faulty brain systems. They apparently do not affect normal control mechanisms. Dr. Klein theorizes that two partially independent control networks in the brain regulate human activity. According to his theory, an activating network regulates arousal, activity, pleasure, fear and anger, while a directing network reasons and selectively evaluates the environment.

When the activating mechanisms function improperly, only manic and depressive disorders will occur. However, "breakdown of the directive mechanisms appear to produce schizophrenic conditions where the ability to reason, to interpret, to evaluate and to integrate experience is impaired," the physician said.

The findings with tranquilizing and anti-depressant drugs are paralleled by results from some drugs such as aspirin and digitalis which also require "pre-existing deviations" to be effective. For example, aspirin will lower temperature only in those with fever, not in those with normal temperature.

• Science News Letter, 87:87 February 6, 1965

PUBLIC HEALTH

Measures Recommended By HEW for Smog Control

➤ CONTROLS and additional research are being called for by the Department of Health, Education and Welfare to combat the growing problem of smog.

In a report to the Congress, HEW blamed smog largely on automobiles and said the problem was increasing in frequency and severity in metropolitan areas throughout the United States.

The report recommends that:

1. All necessary steps should be taken to assure the reduction of pollutant emissions from autos.
2. An automotive air pollution research program should be expanded.
3. An inspection system should be started to insure proper maintenance of vehicle emission control systems.
4. Practical measures should be instituted to expedite the flow of traffic in urban areas, since this will help cut smog.

• Science News Letter, 87:87 February 6, 1965



Westinghouse

THE MINISCOPE—A portable oscilloscope weighing only three pounds, is demonstrated by Westinghouse technician Leonard Hunt on a model. By inserting a lead electrode in the device and suction cups in the hands of the patient he can observe heart action on the fluorescent screen of the battery-operated machine.