

PUBLIC HEALTH

Measles on the Way Out

Production of successful vaccines to prevent measles seems assured for 1962. Scientists will meet to discuss controversial questions before approval, Faye Marley reports.

► THE LONG SEARCH for a safe measles vaccine is in sight of its goal—prevention of the disease without side effects.

Production of a successful measles vaccine or vaccines seems assured for 1962. But there are questions to be answered before the U.S. Public Health Service can give the green light to pharmaceutical companies.

Scientists from all over the world will discuss controversial questions at the first International Conference on Measles Immunization called by Surgeon General Luther L. Terry for Nov. 7-9 at the National Institutes of Health, Bethesda, Md. After that, standards for production can be set up.

It looks now as if the family doctor would be giving two shots at one time—vaccine in one arm and gamma globulin in the other—to lessen the side effects of fever and rash that previously have accompanied injections of live weakened measles virus vaccine alone.

This would mean one trip to the physician's office instead of three that would be required if killed vaccine were used such as Buffalo, N.Y., field trials demonstrated.

Goal Is Fewer Shots

Dr. Fred R. McCrumb Jr. of the division of infectious diseases, University of Maryland Department of Medicine, Baltimore, told *SCIENCE SERVICE* that the troublesome series of visits for shots was precisely what the doctors were trying to get away from.

Dr. McCrumb will present his findings from close to 4,000 simultaneous vaccinations of Maryland children with live vaccine and gamma globulin when the Bethesda meetings is held.

"There is still some work to be done in standardization of dosage," Dr. McCrumb said, "but we believe the combined injections will be the only practical procedure for mass immunization."

Dr. Saul Krugman of the New York University School of Medicine, New York, agrees with Dr. McCrumb and others who have used the combined shots of vaccine and gamma globulin.

Dr. Krugman's studies have involved approximately 1,000 infants and children in the New York City area, 1,000 in West Nigeria and 750 in Israel.

One of the most conclusive field trials was in an epidemic situation in and near Philadelphia. More than 600 children, including 43 in St. Vincent's Home, Philadelphia, and 562 in a residential environment in Haverford Township, Pa., were given gamma globulin at the same time they got measles vaccine.

Dr. Joseph Stokes Jr., physician-in-chief of

the Children's Hospital, and chairman of the department of pediatrics, University of Pennsylvania, Philadelphia, said these tests showed 100% protection from measles in an epidemic recently.

Other tests have been carried out by Dr. C. Henry Kempe, professor and head of the department of pediatrics, University of Colorado Medical Center, Denver, who is in charge of the program for the Bethesda meeting.

Numerous university scientists and pharmaceutical companies have been working on measles vaccines.

The vaccines being developed have all been outgrowths of the initial work done by Dr. John F. Enders, Nobel Prize winner of Harvard University, who was first to definitely isolate the measles virus.

This famous virologist was unable to eliminate side effects of fever and rash when his live weakened vaccine was injected, but in field trials in Massachusetts in 1958, retarded children developed antibodies that have remained high.

The meeting at the National Institutes of Health, which is being sponsored by the Division of Biologics Standards, the National Institute of Allergies and Infectious Diseases and the University of Colorado, will bring out in the open controversies that have grown up as a result of the numerous experiments.

The Public Health Service has held two previous national meetings on measles immunization, but because measles is a worldwide problem, international scientists are being included in this conference.

Measles has wrongly been considered harmless by jokesters who forget the disastrous effect it can have.

Last year the number of deaths from this disease was estimated by the National Office of Vital Statistics as 410 out of 436,000 cases as opposed to 260 deaths from polio, which has been made less widespread by the use of vaccine.

Gamma globulin for years has been injected to lessen the effects both of measles and rubella, German measles, which is an entirely different disease that will not be affected by the new vaccines being discussed for ordinary measles. The virus of rubella has not yet been isolated.

No Measles Ordinary

But no measles is ordinary. Parents and doctors who have watched the effects of this deceptively mild illness, know that it is no joke. Inflammation of the brain (encephalitis) and other complications such as ear infection, otitis media, pneumonia and bronchitis have all too often followed the disease.

Most grown-ups in the United States have had measles, and so far it has been no great problem to get enough gamma globulin, a material in the blood, built up during an attack of the disease. If the two-shot combination of vaccine and gamma globulin is licensed, however, there may be difficulty in getting enough of the globulin. Adults



TWO-SHOT INJECTIONS—Live measles virus vaccine and gamma globulin are given separately to prevent measles and any side effects.

as well as children can get measles, and the Central and South American countries report higher death rates than those of some other countries where nutrition and medical facilities are better.

As recently as World War I, measles was among the communicable diseases that struck American soldiers.

In the sixteenth century the disease was epidemic in England, but it was not until the seventeenth century that Dr. Thomas Sydenham, an English physician, positively distinguished measles from other diseases with puzzling rashes.

Another physician mentioned in medical histories is Dr. Francis Home, a Scottish surgeon, who in 1765 reported mitigating the effects of measles and smallpox. He vaccinated children with material from measles patients and apparently produced some degree of immunity.

But the first known reference to measles in medical literature was in the tenth century by an Arab physician named Rhazes. He wrote a classic work still preserved, which he called a "Treatise on Smallpox and Measles," the first monograph on the subject.

In comparing the two diseases, Rhazes said "inquietude, nausea and anxiety are more frequent in the Measles than in the Smallpox." Ten centuries later, the anxiety may be laid to rest for both.

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AGRICULTURE

Soil Bank Senseless in Face of World Food Need

► THE WORLD'S population growth makes restrictions on United States farm production senseless "except as a stop-gap measure," and an inadequate policy for the 1960's, George McGovern, the director of the Food for Peace program, said at New London, N. H.

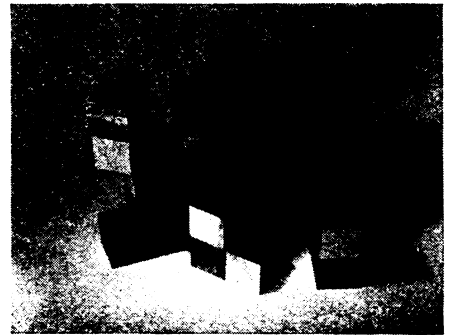
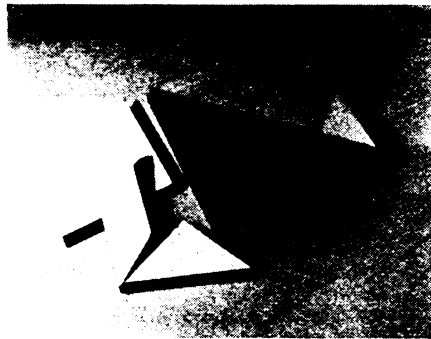
Instead of placing unused farmland in a soil bank, he urged that the U. S. do more to gear farm output to world needs, producing "more milk, more soybeans, more poultry meat, more rice, more fats and oils."

He said the U. S. should teach underdeveloped countries how to farm more efficiently, call upon private industry to help these countries develop better food handling and processing methods, and give our field technicians a better working knowledge of nutritional problems.

Mr. McGovern, speaking at the Food and Nutrition Conference at Colby Junior College, said future historians probably will be puzzled because so many Americans regarded their agricultural abundance as "a national headache" during the past decade.

Soviet Premier Khrushchev, he said, is keenly aware of "food production as a high priority goal," and has reserved his sternest lectures for farmers with poor records. Mr. McGovern pointed out that the American farmer now produces enough to feed himself and 25 others, while the Soviet farmer is barely able to feed himself and four others.

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