

Here is the exclusive story of
medical science's latest breakthrough

MEASLES IS ON THE WAY OUT!

by Theodore Irwin



A distemper virus common to dogs and "live" measles virus tested on laboratory monkeys give promise of saving many children and adults from measles.

JUST AS A serious epidemic of measles was sweeping Panama recently, a plane from the U.S. landed with a load of newly developed vaccines. Doctors had eagerly awaited its arrival. This was to be a critical proving ground for two types of measles vaccine, the largest mass-scale tests so far.

In the experiment, 1,600 children and young adults were involved. Over half were given shots. As the epidemic raged, the results of the trials became apparent: almost all of those vaccinated escaped the disease while many in the unvaccinated group came down with measles.

What happened in Panama will soon affect millions of children throughout the world. With the big breakthrough toward a preventive measles weapon, medical researchers are at last on the verge of conquering the disease.

Although so common that most people accept it as inevitable, measles is often a dangerous illness, particularly for children under three, and for adults. Victims are extremely susceptible to other infections. Complications can lead to pneumonia, deafness or lasting brain damage.

"Last year there were more than twice as many deaths resulting from measles as from polio," points out Dr. John M. Adams of the University of California, Los Angeles, Medical School.

In laboratories across the nation, white-coated virus-fighters are racing to come out first with a sure-fire vaccine. Tests on children clearly indicate the medical researchers are on the right track.

At the Colorado School of Medicine, children were inoculated with a new vaccine and later exposed to fully virulent measles virus. None of them contracted the disease.

At Harvard Medical School, another group of children were injected with a "live" virus vaccine, then brought into close contact with other youngsters who had not been vaccinated. Not one of the unvaccinated children picked up measles from the others. Six months later, tests disclosed that those who were inoculated had about the same protection as children who had just recovered from measles.

At a California state hospital, a measles epidemic broke out not long ago. Checking the cases, an electrifying fact emerged. Three years before, 200 patients had been tested with a new vaccine hopefully aimed at the common cold, but this experiment proved a failure. Now, during the measles epidemic, there were more than three times as many measles cases among the unvaccinated as among those given the shots. Accidentally the California scientists had evidently stumbled on a measles preventive.

The focus has been mainly on two types of vaccine. One is made from canine distemper virus which can bring fever or death to dogs. Many humans, however, have a built-in resistance to distemper virus. This natural immunity or antibody, Dr. Adams figured, might lead to a vaccine for such conditions as the common cold. It turned out, instead,

to be effective not only in the California measles epidemic but was also one of the two vaccines tried in Panama.

The second type of vaccine is made with a "live" measles virus. Work on this phase originated with Dr. John F. Enders of Harvard, who won the Nobel Prize for his basic research on the polio virus. First he took the live measles virus from the throats or blood stream of patients, then weakened the virus 70 times through a complicated process known as tissue culture. The resulting vaccine was tried on laboratory monkeys, then on children at Harvard, in Colorado, Panama and elsewhere.

BECAUSE it would give permanent immunity, the weakened living virus vaccine is generally preferred to the "dead" virus vaccine (such as the Salk shots) which has only a temporary effect. The first trial at Harvard with the live vaccine, reported Dr. Enders and his colleague, Dr. Samuel L. Katz, "encouraged us strongly to believe that a satisfactory vaccine against measles can be produced."

While both types of vaccines unquestionably have provided high immunity, thus far the live virus still gives certain children a temporary fever and sometimes a mild rash. According to Dr. Katz, a moderate reaction seems desirable as a sign of a "take" after vaccination. Further taming of the live virus to eliminate reactions will be possible.

Before a measles vaccine can be released for mass immunization, the U.S. Public Health Service must license drug companies to make and sell the vaccine. Thus far, the Government has hesitated to give the green light to a weakened live-virus polio vaccine until its safety and effectiveness are certain. For a measles vaccine, chances of approval are far greater. If, for instance, a batch of distemper virus vaccine should go wrong, results would merely be negative—measles antibodies would not be built up.

"If progress continues as it has in recent months," says Dr. Carl A. Bunde, research director of a major pharmaceutical company, "we expect that one or more vaccines will be available to doctors before the end of next year."

Incidentally, German measles, which is caused by a different virus, will not be affected at first. But as scientists learn more from their experiments, they hope to develop a combined vaccine for all types of measles.

The significance of the coming victory over measles and its complications is far-reaching. A path has been opened that may lead to further discoveries: vaccines to thwart virus pneumonia, respiratory illnesses, viruses that attack the skin and other ailments still plaguing mankind.

For the present, parents can at least rejoice that the threat of measles will soon be wiped out.

(In next week's issue Family Weekly will present another medical article of vital importance to every parent. Watch for "Are We Letting Polio Creep Back?")

COVER: It's fall, which means football time is here again. Family Weekly launches the season with Chicago artist Frank McMahon's colorful action cover and a story on Notre Dame's new coach, Joe Kuharich, page 8.

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