

## MEDICINE

# Vaccine Against Leprosy

Hope is raised that the BCG vaccine for tuberculosis may also give protection against leprosy. Individual immunity "must exist."

► HOPE that the BCG vaccine for tuberculosis may give some protection against leprosy was raised in a report to the American Academy of Dermatology and Syphilology in Chicago.

The report was given by Dr. Harry L. Arnold, Jr., consulting dermatologist (skin specialist) of the Honolulu Receiving Station for Leprosy and for the Kalaupapa Leprosarium, Island of Molokai, Hawaii.

The hope of vaccination against leprosy comes from a new test devised by Dr. Max Levine, chief of the Hawaii Territorial Department of Health's bureau of laboratories.

In the test, red blood cells of sheep are first treated with tuberculin extracted from tuberculosis germs. Then blood serum of the patient is added to determine at what concentration the serum will cause the tuberculin-treated sheep cells to bunch, or agglutinate.

This test, Dr. Levine has found, shows a much stronger positive reaction in positive cases of leprosy than in positive cases of tuberculosis.

The significance of Dr. Levine's findings "is not yet certain by any means," Dr. Arnold stated, "but suggests the possibility that the biologic defensive reactions against leprosy and tuberculosis may be more closely related than we have supposed.

"It lends considerable color, too, to the recent suggestions that BCG vaccination against tuberculosis may have some protective value against leprosy."

Individual immunity to leprosy "must exist," Dr. Harold M. Johnson, associated with Dr. Arnold, declared at the meeting.

"For example," he said, "four of 11 children develop leprosy with neither parent beings lepers, or a couple infected with leprosy have nine children, of whom only two are lepers."

Most patients with leprosy admitted to Kalaupapa Leprosarium have had a history of leprosy in the parents, but recently as high as 60% of patients admitted have not had a history of intimate relationship or family tie up with leprosy, Dr. Johnson reported. Infection in these cases could have occurred in early childhood, he pointed out.

The number of leprosy patients in Hawaii has gradually decreased from about 1,200 in 1890 to about 300 under treatment at present with several hundred on temporary release.

Most of the estimated three million lepers in the world are in China, India and Africa. The United States is believed to have between 500 and 5,000 unclassified and undiagnosed leprosy patients.

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shown to influence our ability to cope with infectious diseases, it will first have to be separated out of natural foods and will in all probability be a new, and previously unknown, addition to the list of food essentials.

"Against this day we had best maintain an attitude of skeptical waiting."

Dr. Schneider's prediction of the discovery of new resistance vitamins was made in a statement prepared for hearings before the House Select Committee to Investigate the Use of Chemicals in Food Products, of which Rep. James J. Delaney of New York is chairman.

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## AERONAUTICS

## Automatic Controls Work on Helicopters

► AUTOMATIC controls for helicopters, to relieve the pilot of the constant two-hands, two-foot job he now has to do, have been tested by the Piasecki Helicopter Corp. and found successful both in normal flying and in hovering.

Vertical landings and take-offs with the auto-pilot have been made, as well as complete duplication of fixed wing auto-pilot controlled flights. This means that the helicopter is now capable of "blind flying" in the worst weather conditions and can make automatic landing approaches through low weather ceilings. The device used is a Sperry production type automatic pilot already proved in both commercial and military uses.

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**NO HANDS**—Pilot and co-pilot of this helicopter are both extending their hands to show you that the controls are being managed completely automatically.

## NUTRITION

# New Vitamins Predicted

One, which seems to give mice resistance to mouse typhoid fever, already traced to germ of wheat. Best plan at present is to eat well-balanced diet of natural foods.

► DISCOVERY of new vitamins, each giving resistance to special groups of infectious diseases, was predicted by Dr. Howard A. Schneider of the Rockefeller Institute for Medical Research.

Dr. Schneider and associates are already on the trail of one such vitamin which seems to give mice resistance to mouse typhoid fever. The substance has so far been traced to the germ of wheat. Its existence was discovered from studies in which about 55% more mice survived mouse typhoid when on a diet of whole wheat and milk than did mice on a synthetic diet of purified foodstuffs and vitamins.

The mice in these studies were of mixed inheritance, as man is. Consequently, there is a possibility that man is getting resistance

to infection from factors in his diet. But if such resistance factors exist, they are at such low concentrations that they will have to be isolated from foods and made available in concentrated form before any claim can be made that a real resistance vitamin has been found.

For the present, the "prudent course of the home diet planner," Dr. Schneider advised, "will be to continue to arrange for a well-balanced diet of natural foods with well recognized nutritional goals in view, and until we know much more it would be a waste of money to step up consumption of any nutrient, vitamin or otherwise, in the belief that an increased resistance to infection would result."

"Indeed, if any nutrient can ever be