

## MEDICINE

# Trial Area for Sclerosis

The Pacific island, Guam, has become a testing ground for chemicals to check a.l.s., amyotrophic lateral sclerosis, the disease that killed Lou Gehrig.

► WAR-FAMED ISLAND of Guam in the Pacific has become a test area for chemicals that might check a fatal and paralyzing disease of the nervous system and muscles.

The disease is amyotrophic lateral sclerosis. Doctors call it a.l.s. for short, but the general public has known it as Lou Gehrig's disease since it struck and killed that baseball hero some years ago.

Doctors were then helpless to stop the disease that kills its victims in three years, on the average, after the first signs of numbness, muscle weakness and wasting and paralysis start in fingers, hands and shoulders.

There is hope now that a remedy for this disease can be found, although none of those tried has yet proved successful.

The hope for discovery of such a remedy comes from the fact that, unlike the rest of the world, Guam and the nearby island of Rota have many persons afflicted with this disease.

At any one time there are 125 a.l.s. patients on Guam alone, Dr. Leonard T. Kurland of the U. S. National Institute of Neurological Diseases and Blindness reported at the meeting of the American Academy of Neurology in Washington.

From eight to 10 percent of all adult deaths on Guam and Rota are due to a.l.s., he said, whereas in the rest of the world where figures are available, only about one in 1,000 deaths is due to this disease.

Dr. Kurland and Dr. Donald W. Mulder of the Mayo Clinic, now on duty with the Navy, have been studying a.l.s. on Guam and Rota since last September.

With always so many patients afflicted by the disease, vitamins, diet and other possibly helpful treatment or chemicals can be tested and evaluated, and the results, successful or otherwise, determined much faster than ever before possible.

The disease, Dr. Kurland now thinks, is hereditary. Previously, medical men had thought it non-hereditary. The evidence for its hereditary nature is coming from the studies on Guam, where it is much more prevalent in some families than in others. Tracing pedigrees and cases is difficult, but where this was possible, the doctors found the disease had afflicted members of several generations.

One such family, according to native legend, had a "curse" put on it at least 50 years ago, the curse being that the family would be afflicted with lytico, as natives call the disease, for future generations. Curse or no, members of the family have died of it and there are members now afflicted by it.

On Saipan, Chamorros have lytico, or a.l.s., but Carolinians living across the street from them in the same village do not, the doctors found. This also points to a hereditary or genetic factor.

The findings on Guam and nearby islands have led to reexamination of records of cases in the United States. These also give strong evidence for a genetic factor in the disease. In one family in the United States, 12 cases have now been discovered.

How the disease is inherited is not yet known. The genetic factor seems to be a dominant one, but can skip a generation. And there may be environmental factors that cause the disease to develop in those carrying the gene, although the Guam studies have not yet revealed them.

The Guam studies were sparked by Drs. Arthur Arnold of the University of Chicago and Dr. Donald Koerner of Rochester, N. Y., who first called attention to the wide prevalence of the disease on Guam and who made attempts to study it while there during service with the Armed Forces.

Dr. Koerner is quoted as saying he had a choice between spending his spare time in a bar and doing something worth-while. So he chose to spend his off duty hours searching for and examining and helping, as far as he could, amyotrophic lateral sclerosis patients among the natives.

U. S. servicemen and their dependents apparently have not been affected by the disease while stationed on Guam.

Science News Letter, May 15, 1954

*Caterpillars* respond to sound, some by contracting their back muscles.

Television cameras on top of fire lookout towers enable foresters to watch for fires and lawbreakers while remaining at their headquarters.

## Questions

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MEDICINE—What would Methuselah's brain waves probably resemble? p. 313.

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How can psychoanalysis help in growing old? p. 312.

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Photographs: Cover and p. 311, Dr. Ralph Solecki; p. 307, New York Zoological Society; p. 309, Massachusetts Institute of Technology; p. 314, Milwaukee Police Department; p. 320, Bakelite Company.

Weekend crashes killed 15,800 persons and injured 800,000 last year, with 41% of the total deaths and 36% of total injuries coming on Saturday and Sunday.

THE EYE REMEMBERS—THE EAR FORGETS!

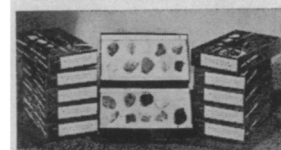
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