

PUBLIC HEALTH

Brucellosis Is Widespread

Countless persons in the United States, Europe, Africa, and many parts of the Orient suffer from this disease contracted from cows, swine and goats.

➤ FROM 40,000 to 60,000 persons in the United States and countless others in Europe, Africa and many parts of the Orient are afflicted with the serious, long drawn-out and sometimes fatal disease called brucellosis. Other names for this sickness that killed Edsel Ford are undulant fever, Malta fever and, in cattle, infectious abortion.

It attacks cows, swine and goats. Humans get it from these animals, either through infected milk or through contact in their work of tending the animals or processing them for foods.

On the European continent, exclusive of the Scandinavian countries, it is estimated that between 15 and 30 of every 100 dairy cattle are infected, Dr. Martin M. Kaplan, Veterinary Officer of the World Health Organization at Geneva, Switzerland, declared at the Third International Congress on Brucellosis in Washington.

"Brucellosis has followed wherever the European breeds of cattle have been introduced in other parts of the world, such as

parts of Africa, India, China, Japan and Oceania," he reported.

The World Health Organization and the Food and Agriculture Organization have designated 14 brucellosis centers in different countries to study the situation in various regions and work out methods of controlling the disease.

In the Argentine coastal region, 90% of the brucellosis cases are found among slaughter house and meat packing plant workers, Dr. E. A. Molinelli and associates of the Malbran Institute, Ministry of Public Health, reported. But in the towns and villages of the Andean region, the chief source of human cases is goat milk products, principally cheese. Drinking milk is not an important source in Argentina because the habit of boiling milk is widespread.

In the United States reported human cases reached a peak of 6,147 in 1947, dropping to 4,143 in 1949, Dr. James H. Steele and L. Otis Emik of the U. S. Public Health Service reported.

Reported cases, however, may be only one-tenth of possible human cases, they pointed out. Difficulty in diagnosing the disease, which mimics many other conditions, and entire absence of reporting because the patient did not see a doctor are among the reasons for the discrepancy between number of reported cases and the number most authorities believe actually exist.

Use of antibiotic drugs, such as penicillin, aureomycin and others for patients sick with fever may also cut down the number actually diagnosed, the Public Health Service doctors said. Patients might be treated and get well without the doctor ever having definitely diagnosed what ailed them, it was suggested.

The long incubation period between infection and the development of sickness and reinfections or relapses also complicated the picture.

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ENGINEERING

Atomic Power's First Use May Be In Ocean Vessel

➤ FROM the present outlook it appears that ocean vessels will be the first to use atomic energy otherwise than in a bomb. The first actual application of this type of energy in propulsion may be in a submarine.

Aviation is looking forward to supersonic bombers powered with atomic energy

that will be able to circle the world in non-stop flights. Predictions are being made that atomic energy will power industrial plants. By-product heat from a government atomic pile may soon be put to work, but the application of atomic energy to industrial plants is not yet a principal objective of nuclear scientists.

Scientists and engineers, however, are hard at work in the design of equipment to use atomic energy in the propulsion of ocean vessels, submarines and airplanes. A major problem at the Knolls Atomic Power Laboratory, Schenectady, N. Y., is the design of a shipboard atomic plant for the U. S. Navy. This laboratory is operated by General Electric for the U. S. Atomic Energy Commission.

Scientists at Oak Ridge Laboratories, Oak Ridge, Tenn., under the sponsorship of the Fairchild Engine and Airplane Corporation, are working on atomic energy as a source of propulsion for aircraft.

One important reason why atomic energy can not be used for all types of propulsion is the enormous weight of the shield around the reactor to protect personnel from dangerous radiation. The usual shield is a six-foot enclosure of special concrete. Its weight would mean little on an ocean vessel, being far less than that of the fuel which now must be carried but would be unnecessary with atomic power. Shield weight presents an important problem in aircraft and, perhaps an insoluble problem in railway locomotives and automobiles.

Some general facts about the submarine atomic reactor being developed at the Knolls laboratory were recently revealed by K. A. Kesselring, assistant head of the laboratory's engineering division. It will use, he said, an atomic reactor operating at a very high temperature to produce heat. The heat, in turn, will be transferred to liquid metal in a closed low-pressure system, and thence to a boiler where steam will be generated to drive steam turbines.

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MEDICINE

Smallpox Vaccine Prevents Mouth Blisters

➤ BLISTERS in the mouth, something like canker sores and fever blisters, that keep coming back can be successfully treated and prevented in some cases by smallpox vaccine.

Details of the treatment, which involves giving gradually increasing doses of the vaccine, were reported by Dr. Donald A. Kerr of the University of Michigan School of Dentistry at the meeting in Atlantic City of the American Dental Association.

Aureomycin, one of the new "wonder drugs," also is "somewhat effective" in treating the condition but does not provide immunity against further attacks, Dr. Kerr said.

Secondary herpetic stomatitis is the name dentists give the condition.

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