

TULAREMIA

Clinical Definition:

A zoonotic bacterial disease with a variety of clinical manifestations related to the route of introduction and the virulence of the organism.



Picture credit:
US Environmental Protection Agency

Source of Infection and Transmission:

- ◆ The bacterium *Franciscella tularensis*
- ◆ Numerous wild animals, especially rabbits, hares, voles, muskrats, beavers, and some domestic animals are the reservoir for the bacteria.
- ◆ The disease is transmitted through the bite of certain ticks and deer flies, or by contact of the skin with contaminated water, blood or tissue while handling carcasses of infected animals.
- ◆ Tularemia could be developed for use in bioterrorism, particularly if used as an aerosolized agent. Cases acquired by inhalation would present as a primary pneumonia.

Incubation Period:

- ◆ Usually 3 to 5 days, ranges from 1 to 14 days

Symptoms:

Symptoms of tularemia could include:

- sudden fever
- chills
- headaches
- diarrhea
- muscle aches
- joint pain
- dry cough
- progressive weakness

People can also catch pneumonia and develop chest pain, bloody sputum and can have trouble breathing and even sometimes stop breathing.

Other symptoms of tularemia depend on how a person was exposed to the tularemia bacteria. These symptoms can include ulcers on the skin or mouth, swollen and painful lymph glands, swollen and painful eyes, and a sore throat.

Major Complications:

- ◆ None

Diagnosis and Treatment:

- ◆ People who have been exposed to the tularemia bacteria should be treated as soon as possible. The disease can be fatal if it is not treated with the right antibiotics. Laboratory diagnosis is confirmed by isolation of *F. tularensis* in a clinical specimen or a fourfold or greater change in serum antibody titer to *F. tularensis* antigen.
- ◆ Streptomycin or gentamycin given for 7 to 14 days is the drug of choice. Alternatives include doxycycline or ciprofloxacin. People who are exposed to tularemia should be treated with doxycycline or ciprofloxacin for 14 days as a preventive measure.

Public Health Message:

- People who have tularemia do not need to be isolated.

Reporting and Follow-Up:

- ◆ Any suspected cases are to be reported to the Office of the Chief Medical Health Officer (OCMHO).
- ◆ Complete *Communicable Disease Report Form*.

Public Education: (Key Messages)

- ◆ Use insect repellent containing DEET on your skin, or treat clothing with repellent containing permethrin, to prevent insect bites. Wash your hands often, using soap and warm water, especially after handling animal carcasses. Be sure to cook your food thoroughly and that your water is from a safe source.
- ◆ Note any change in the behavior of your pets (especially rodents, rabbits, and hares) or livestock, and consult a veterinarian if they develop unusual symptoms.

Epidemiology:

NWT has documented only one case of Tularemia (1999).