

What is Tularemia?

Tularemia is a disease of animals and humans caused by the bacterium *Francisella tularensis*. Rabbits, hares, and rodents are especially susceptible and often die in large numbers during outbreaks.

Humans can become infected through several routes, including:

- Tick and deer fly bites
 - In the United States, ticks that transmit tularemia to humans include the dog tick, the wood tick, and the lone star tick. Deer flies have been shown to transmit tularemia in the western United States.
- Skin contact with infected animals
 - This can occur when hunting or skinning infected rabbits and other rodents, close contact with infected domestic cats, and even contact with infected pet hamsters.
- Ingestion of contaminated water, or inhalation of contaminated dusts or aerosols.
- Laboratory exposure or exposure via bioterrorism.

Symptoms vary based upon the route of infection, and severity ranges from mild to life-threatening. All forms are accompanied by fever, which can reach 104 °F. Blood tests & cultures can help confirm a tularemia infection. A 10-21 day antibiotic treatment period is generally prescribed to treat tularemia, with a high rate of full recovery following treatment. Forms of this disease are listed below:

- **Ulceroglandular:** Most common form of tularemia. Usually occurs following a tick or deer fly bite, or after handling an infected animal. A skin ulcer appears at the infection site. The ulcer is accompanied by swelling of regional lymph glands, typically in the armpit or groin.
- **Glandular:** Similar transmission and symptoms to ulceroglandular form, but without an ulcer.
- **Oculoglandular:** This form occurs when the bacteria enter through the eye. Symptoms include irritation and inflammation of eye and swelling of lymph glands in front of the ear.
- **Oropharyngeal:** This form results from eating or drinking contaminated food or water. May cause sore throat, mouth ulcers, tonsillitis, and swelling of lymph glands in the neck.
- **Pneumonic:** Most serious form of tularemia. Symptoms include cough, chest pain, and difficulty breathing. This form results from breathing dusts or aerosols containing the organism, or when other untreated forms of tularemia cause bacteria to spread via the bloodstream to the lungs.

Steps to prevent tularemia infection:

- Use insect repellents containing 20-30% DEET (N,N-diethyl-m-toluamide), picaridin or IR3535.
- Wear long pants, long sleeves, and long socks to protect from insect bites.
- Remove attached ticks promptly with fine-tipped tweezers.
- Avoiding mowing over sick or dead animals, and consider wearing a dust mask when mowing.
- Wear gloves when handling sick or dead animals, and cook game meat thoroughly.
- Don't drink untreated surface water.

For more information on RMSF, please visit the CDC RMSF website:

- <http://www.cdc.gov/Tularemia/>