



# Tularemia

## What is tularemia?

Tularemia is a disease caused by bacteria. The disease occurs in both domestic animals (sheep and cats) and wild animals (rabbits, squirrels, beavers, and deer). In Boston, tularemia rarely occurs in humans.

## How does tularemia spread?

Tularemia can spread through a tick or deerfly bite. Ticks that transmit tularemia to humans include the dog tick, the wood tick, and the lone star tick. Human infection also can occur after touching, handling, or eating an infected animal. In rare cases, it can spread through drinking contaminated water or inhaling contaminated dust occasionally found in soil. A person cannot directly spread the disease to another person.

## Relative size of ticks at different stages

Lone Star Tick (*Amblyomma americanum*)



Dog Tick (*Dermacentor variabilis*)



## What are the symptoms of tularemia?

The symptoms of tularemia vary depending on how the bacteria enter the body. Illness ranges from mild to life-threatening. Tick bites can cause a person to have painful skin ulcers and/or swollen glands. A sore throat, abdominal pain, diarrhea and vomiting may occur if the germ is eaten. If the germ was inhaled, a person may experience a cough, chest pain and difficulty breathing. All forms are accompanied by fever, which can be as high as 104 °F.

## How soon do symptoms appear?

Symptoms usually appear within 3-5 days of exposure, but it can take as long as 14 days.

## How is tularemia diagnosed?

Tularemia can be difficult to diagnose. It is a rare disease, and the symptoms can be mistaken for other more common illnesses. It is important to tell your health care provider of all exposures, such as tick and deer fly bites, or contact with sick or dead animals. Blood and other laboratory tests can help confirm the diagnosis.

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### **What is the treatment for tularemia?**

Your healthcare provider can give you medicine to treat tularemia. Treatment usually lasts 10 to 21 days depending on the stage of illness and the medication used. Although symptoms may last for several weeks, most patients completely recover.

### **What can be done to stop the spread of tularemia?**

- Prevent insect bites by wearing protective clothing such as long sleeved shirts and long pants and tuck your pant legs into your socks.
- Wear light colored clothes to help you spot any ticks on your clothes before they reach your skin.
- Stay to the middle of paths when in a heavily wooded area.
- Use insect repellants containing DEET on exposed skin. Read labels carefully. Use products with no more than 30% DEET. Do not use insect repellents on infants. Wash skin with soap and water after returning indoors.
- Permethrin may be applied to items such as clothing to repel ticks. Read the product package carefully and follow the directions for use. Do not apply directly on your skin.
- There are others insect repellent products approved by the EPA. For more information, visit <http://www2.epa.gov/insect-repellents/find-insect-repellent-right-you> .
- Conduct tick searches and remove attached ticks immediately. Try not to squeeze or twist the tick.
- Gloves should be worn when handling or skinning wild animals, especially rabbits and rodents.
- Wild meat from all animals, especially rabbits and rodents should be cooked thoroughly before eating.
- Children should be discouraged from handling sick or dead animals, especially wild animals including rabbits.
- Avoid drinking untreated or contaminated water.

