



Indiana State
Department of Health

Epidemiology
Resource
Center

Quick Facts

About... Tularemia

What is tularemia?

Tularemia is a bacterial infection that can be found in small mammals such as mice, rats, squirrels, rabbits and hares. The bacteria that causes the infection is *Francisella tularensis*. In addition to animals, water may occasionally be contaminated. People are more likely to be exposed in rural settings, although urban and suburban exposures occasionally occur.

How is tularemia spread?

Humans become infected through environmental exposures and can develop severe, sometimes fatal illness. Infection typically occurs from:

- Bites by infected insects, mostly ticks
- Handling infectious animal tissues or fluids
- Direct contact with or ingestion of contaminated water, food or soil
- Inhalation of infective aerosols.

Tularemia is **NOT** spread from person to person.

Who is at risk for tularemia?

Anyone who is exposed to the bacteria may be at risk for developing tularemia.

How do I know if I have tularemia?

The signs and symptoms of tularemia vary depending on how the bacteria enters the body. The five main classifications of tularemia are listed and described below. Illness may be mild, life-threatening, or somewhere in between. All forms are accompanied by fever.

- **Ulceroglandular** : This is the most common presentation of tularemia. It usually occurs following the bite of an infected insect (fly or tick) or after handling an infected animal. A skin ulcer appears at the site where the organism entered the body. The ulcer is accompanied by swelling of regional lymph glands, usually in the armpit or groin.
- **Glandular** : This form is like ulceroglandular tularemia but without an ulcer.
- **Oculoglandular** : This form occurs when the bacteria enter through the eye. This can happen when a person is butchering an infected animal and touches his or her eyes. 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. Patients with oropharyngeal tularemia may have sore throat, mouth ulcers, tonsillitis, and swelling of lymph glands in the neck.
- **Pneumonic** : This is the most serious form of tularemia. It results from breathing dusts or aerosols containing the organism. It can also occur when other forms of tularemia (e.g. ulceroglandular) are left untreated and the bacteria spread through the blood stream to the lungs. Symptoms include cough, chest pain, and difficulty breathing.

How can tularemia be treated?

Once diagnosed, tularemia can be treated with appropriate antibiotics. Treatment typically lasts at least 14 days to prevent relapse. As tularemia is not transmitted person to person, there is not a need for isolation.

How is tularemia prevented?

- Educate yourself on the proper handling of sick or dead animals, particularly when hunting, camping, or butchering; and avoid handling them if at all possible.

- Take personal protective measures against biting insects while engaging in outdoor activities.
- There is no vaccine available to prevent tularemia.

All information presented is intended for public use. For more information, please refer to:

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