

# Tularemia

## What is tularemia?

Tularemia is a disease caused by a very hardy, extremely infectious kind of bacteria. The bacteria can survive for up to several weeks in hay, water, soil or animal carcasses.



*Ticks can carry tularemia bacteria*

The symptoms of tularemia can vary, depending on how you're exposed to it. They can include skin ulcers,

swollen and painful lymph glands, inflamed eyes, sore

throat, sores in the mouth, or pneumonia. If you inhale the bacteria, symptoms can include a fever that comes on suddenly, chills, headache, muscle aches, joint pain, a dry cough, and increasing weakness. If it develops into pneumonia, tularemia can cause chest pain, bloody discharge, difficulty breathing or breathing failure.

Symptoms most often appear three to five days after you're exposed to the bacteria, but they can show up anytime between one and 14 days after exposure.

Unless they are treated with antibiotics, people with lung disease – or a general tularemia infection – are at serious risk. Without treatment, 30 to 60 percent of people with this form of the illness may die

About 200 people a year, nationwide, become ill with tularemia from natural sources – mostly in the western and south-central part of the U.S. Five cases have been reported in Minnesota over the last ten years.

## How do you get tularemia?

Tularemia is easy to catch – as few as 10 to 50 individual bacteria can make you sick. Natural sources of the bacteria include small animals like voles, mice, squirrels, rabbits, and hares.

People can get it:

- from the bite of ticks, biting flies and other bugs
- by handling infected animals or animal carcasses
- by consuming or having direct contact with contaminated food, water or soil
- by inhaling airborne bacteria in the laboratory and similar settings

Use of tularemia as a weapon would probably involve releasing it into the air, in a populated area.

## Can you get it from other people?

Spread of the illness from one person to another has never been known to occur. It's also unlikely that people would continue to be infected after the bacteria are first released. It's believed that bacteria released into the air would not survive long.

## Why is it considered a possible terror weapon?

Although it may be hard to do, releasing tularemia into the air – in a populated area – could be a very effective terror weapon. The first sign of a possible tularemia attack would be a wave of people seeking medical treatment, about three to five days later. Many people could die if they don't get antibiotic treatment.



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# Tularemia – Page 2

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The World Health Organization (WHO) has estimated that 50 kilograms (110 lbs.) of tularemia bacteria – released into the air over a city of five million people – would cause very serious problems. WHO believes such an attack would cause about 250 thousand cases of severe illness, and 19 thousand deaths.

Tularemia has several traits that the U.S. Centers for Disease Control and Prevention (CDC) uses to identify possible bioterrorism weapons:

- There are easy ways to spread it, even if it can't be passed from person to person.
- It could have a large impact on human health, including a high death rate.
- It could cause widespread panic and social disruption.
- Special measures are necessary to prepare for a possible tularemia attack

## **Can it be treated?**

Antibiotics can be used to treat lung disease and general illness caused by inhaled tularemia. Without treatment, 30 to 60 percent of people with this form of the disease may die. With treatment, the current death rate for tularemia in the U.S. is less than two percent.

## **Can it be prevented?**

No vaccine is currently available for the general public. The U.S. Food and Drug Administration is currently testing a possible vaccine for lab workers.

## **What should I do if I think I may have been exposed to tularemia?**

If you had been exposed to tularemia, it's unlikely that you would know it. However, if you're concerned about it, talk to your doctor immediately. If you see any suspicious situations or activity in your community – including possible use of disease germs as weapons – alert your local law enforcement agency.