

Legionellosis Fact Sheet

General Information

What is legionellosis?

Legionellosis is a bacterial infection that may cause mild respiratory illness or pneumonia. It is associated with 2 distinct illnesses: Legionnaires' disease and Pontiac fever. Both Pontiac fever and Legionnaires' disease may include influenza-like illness followed by high fever, chills, muscle aches, and headache. Legionnaires' disease is the more severe illness, causing mild to severe pneumonia.

What causes legionellosis?

Legionellosis is caused by the bacterium *Legionella pneumophila*. Most cases occur as single isolated events. Outbreaks are somewhat rare.

Why is it called legionellosis?

In 1976, the American Legion held a convention in Philadelphia where an outbreak of pneumonia occurred. The bacteria that infected people at this convention were later identified as *Legionella pneumophila*; the condition was named legionellosis.

Is this a new disease?

No. While this type of bacterium was only identified following the 1976 convention, earlier cases have retrospectively been confirmed from as early as 1947, and cases probably occurred before that date.

How severe is the illness?

It is estimated that 10 to 40 percent of healthy adults have antibodies to *Legionella pneumophila*, the bacterium that causes legionellosis. Antibodies may reveal a previous exposure to *Legionella*, but only a small percentage of people exposed to the bacteria actually develop symptoms of legionellosis. Legionellosis symptoms range from mild respiratory illness to pneumonia severe enough to cause death. It is estimated that 5 to 30 percent of people with the more serious illness, Legionnaires' disease, die.

Transmission Information

How is legionellosis spread?

The disease appears to be spread through the air from a soil or water source. All studies to date have shown that person-to-person spread does not occur. Outbreaks occur following the exposure of many individuals to a common source of *Legionella pneumophila* bacteria in the environment.

Where is *Legionella* found?

Legionella bacteria are widely distributed in our environment. The bacteria have been found in creeks and ponds, hot and cold water taps, water tanks, water in air conditioning cooling towers and evaporative condensers, and soil at excavation sites.

Who gets legionellosis?

Each year in Utah, around 20 legionellosis cases are reported statewide. This number includes only those patients that were reported to the Utah Department of Health, and it is unknown how many others contract the disease each year. Reported patients have ranged in age from 10 months to 84 years. The disease is most often reported in middle-aged or older men, particularly those who smoke or drink heavily. People with underlying illnesses, for example, cancer, or those with otherwise compromised immune systems are also at a higher risk for disease.

Signs, Symptoms and Treatment

What are the usual symptoms of legionellosis?

The early symptoms of legionellosis may include flu-like symptoms such as loss of appetite, muscle aches, headache, and tiredness, typically followed by rapidly rising fever and chills within 24 hours. Other symptoms such as a dry cough, abdominal pain, and occasionally diarrhea may also be present. Temperatures often reach 102-105°F. A chest x-ray can show the presence of pneumonia.

How soon do symptoms appear?

The time between a person's exposure to the bacteria and the onset of illness for Legionnaires' disease is 2 to 10 days (usually 5-6 days); for Pontiac fever, it is shorter, generally a few hours to 3 days (usually 1-2 days).

What is the treatment for legionellosis?

Antibiotics, especially azithromycin, are be effective in treating the disease.

Additional Information

How widespread is legionellosis?

It is estimated that between 8,000-18,000 cases of Legionnaires' disease occur in the United States each year. Persons with Pontiac fever often have mild symptoms or no illness and are usually recognized only during outbreaks. Outbreaks occur most often in the summer, but sporadic cases occur year-round.

Why is legionellosis so difficult to diagnose?

Legionellosis often causes symptoms similar to those caused by other organisms, including other types of bacteria that cause pneumonia and influenza. Since diagnosis depends on culturing organisms or comparing results of blood tests taken during and several weeks after illness, the diagnosis may not be confirmed until after the person is well.

Why does the health department investigate legionellosis cases?

Cases, especially those related to an outbreak, are investigated to look for possible environmental sources of *Legionella pneumophila*.

Where can I get more information?

- Your personal doctor
- Your local health department, listed in your telephone directory
- The Utah Department of Health, Office of Epidemiology (801) 538-6191

**The Utah Department of Health
Office of Epidemiology (801) 538-6191
UTAH DEPARTMENT OF HEALTH
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