



Indiana State Department of Health

Epidemiology Resource Center

Quick Facts

About...Legionellosis

What is Legionellosis?

Legionellosis is an infection caused by *Legionella pneumophila* bacteria. The disease can cause 2 different clinical conditions. Both forms can occur in persons of any age, including those who have healthy immune systems.

- Legionnaire's disease –severe respiratory illness with pneumonia that may lead to hospitalization or death. Legionnaire's disease most often affects middle-aged and older persons who smoke or use tobacco containing products, have weakened immune systems or underlying medical conditions.
- Pontiac fever—a milder respiratory illness without pneumonia.

What are the symptoms of Legionellosis?

Symptoms of Legionellosis include:

- fever
- chills
- lack of energy
- cough
- muscle aches
- headache
- loss of appetite
- diarrhea and/or vomiting

Symptoms of Pontiac fever usually start about 24 to 72 hours after exposure.

Symptoms of Legionnaire's disease also include pneumonia and usually start about 2-10 days after exposure. Hospitalization for Legionnaire's disease is common and may require antibiotic treatment.

How does Legionellosis spread?

Legionellosis infection happens when a person breathes water droplets from the air (i.e., mist or vapor) that contain the *Legionella* bacteria. The bacteria are NOT spread from one person to another person.

Outbreaks have been linked with exposures to contaminated water towers, evaporative condensers, potable water systems (i.e. sinks and showers), whirlpool spas, water faucets, showers, humidifiers, and respiratory therapy equipment. Outbreaks have occurred in hospitals, cruise ships, hotels, and other large buildings. *Legionella* bacteria have also been found worldwide in creeks and ponds and soil along their banks.

Legionella bacteria are naturally found in freshwater environments but usually not at high enough levels to cause disease. However, warm, still water (90°F-105°F) environments are favorable for reproduction. When contaminated water becomes aerosolized into water droplets and is inhaled in by a person, the bacteria can infect the lungs and cause illness.

Who is at risk for getting Legionellosis?

Most healthy individuals may be exposed to the *Legionella* bacteria but may not become sick. However, individuals are higher risk of getting sick include:

- Older people (usually 50 years of age or older)
- Current or former smokers
- Those with a chronic lung disease (like COPD or emphysema)
- Those with a weak immune system from diseases like cancer, diabetes, or kidney failure
- People who take drugs that suppress (weaken) the immune system (like after a transplant operation or chemotherapy)

How do I know if I have Legionellosis?

See your health care provider. Lab testing is needed to confirm a diagnosis. Your health care provider may take a sample of lung tissue, urine, or fluid from the lungs to test. Almost all people have been exposed to the bacteria in their lifetime. That is why it is important that lab results are looked at carefully to make sure a recent infection occurred and not a past exposure to the bacteria.

How is Legionellosis treated?

Antibiotics are sometimes used for treatment of Legionnaire's disease. Sometimes breathing therapy is needed to help people with breathe easier.

Pontiac fever is a self-limited illness with recovery within 1 week and does not benefit from antibiotic treatment.

How is Legionellosis prevented?

Improved design and maintenance of cooling towers and plumbing systems to limit the growth and spread of bacteria are important. Other prevention measures are to properly maintain and disinfect whirlpool tubs, hot tubs and spas, humidifiers, and decorative fountains. Clean and run them frequently to prevent growth of bacteria. Avoid inhaling water or dunking your head under water when using hot tubs and spas. Avoid using hot tubs, spas, or whirlpool tubs in public places if the water looks dirty or cloudy or if maintenance records are not maintained correctly. Only sterile water should be used in or to clean respiratory equipment i.e., BiPAP, CPAP.

All information presented is intended for public use.

For more information:

Centers for Diseases and Control Prevention (CDC) Web site at:

<http://www.cdc.gov/legionella/about/index.html>

ISDH Indiana Infectious Disease Reports located at:

<http://www.in.gov/isdh/20667.htm>

This page was last reviewed July 1, 2016