

What is legionellosis?

Legionellosis is a respiratory disease caused by *Legionella* bacteria. Sometimes the bacteria cause a serious type of pneumonia (lung infection) called Legionnaires' disease. The bacteria can also cause a less serious infection called Pontiac fever that has symptoms similar to a mild case of the flu. Separately or together, the two illnesses are sometimes called legionellosis.

How is legionellosis spread?

Legionella is a type of bacterium found naturally in freshwater environments, such as lakes and streams. Most people become infected when they breathe in tiny water droplets in the air containing the bacteria. It can become a health concern when it grows and spreads in human-made water systems such as:

- Showers and faucets
- Cooling towers (air-conditioning units for large buildings)
- Hot tubs that aren't drained after each use
- Decorative fountains and water features
- Hot water tanks and heaters
- Large plumbing systems

What are the signs and symptoms of legionellosis?

Legionnaires' disease frequently begins with the following signs and symptoms:

- Headache
- Muscle pain

- Chills
- Fever that may be 104°F (40°C) or higher

By the second or third day, other signs and symptoms may develop that may include:

- Cough, which may bring up mucus and sometimes blood
- Shortness of breath
- Chest pain
- Gastrointestinal symptoms, such as nausea, vomiting and diarrhea
- Confusion or other mental changes

Pontiac fever symptoms are primarily fever and muscle aches.

How long after infection do symptoms appear?

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

Who is most at risk?

You're more likely to develop the infection if you:

- Smoke. Smoking damages the lungs, making you more susceptible to all types of lung infections.
- Have a weakened immune system as a result of HIV/AIDS or certain medications, especially corticosteroids and drugs taken to prevent organ rejection after a transplant.

- Have a chronic lung disease such as emphysema or another serious condition such as diabetes, kidney disease or cancer.
- Are 50 years of age or older.

Legionnaires' disease sometimes occurs in hospitals and nursing homes, where germs may spread easily and people are vulnerable to infection.

What type of health problems are caused by legionellosis?

Legionnaires' disease can lead to a number of life-threatening complications, including:

- Respiratory failure. This occurs when the lungs are no longer able to provide the body with enough oxygen or can't remove enough carbon dioxide from the blood.
- Septic shock. This occurs when a severe, sudden drop in blood pressure reduces blood flow to vital organs, especially to the kidneys and brain.
- Acute kidney failure. This is the sudden loss of your kidneys' ability to perform their main function — filtering waste material from your blood. When your kidneys fail, dangerous levels of fluid and waste accumulate in your body.

When not treated effectively and promptly, legionnaires' disease may be fatal, especially if your immune system is weakened by disease or medications.

How is legionellosis diagnosed?

- People with Legionnaires' disease have pneumonia, which can be confirmed by chest x-ray. Two types of tests are used to determine if a patient's pneumonia is caused by *Legionella*: urine test and a laboratory test that involves taking a sample of sputum (phlegm) or washing from the lung.
- A urine or blood test may also be used to determine if a person has Pontiac fever. However, a negative test doesn't rule out that a person may have it.

How is legionellosis treated?

Legionnaires' disease is treated with antibiotics. The sooner therapy is started, the less likely the chance of serious complications or death. In many cases, treatment requires hospitalization. Pontiac fever goes away on its own without treatment and causes no lingering problems.

How can legionellosis be prevented?

Prevention requires careful cleaning and disinfection of water systems, pools and spas. Disinfectant and other chemical levels in hot tubs should be checked regularly and hot tubs should be cleaned as recommended by the manufacturer. Avoiding smoking is the single most important thing you can do to lower your risk of infection.

Where can I get more information?

- Your personal healthcare provider
- [Centers for Disease Control & Prevention](#)
- [Utah Department of Health](#)