

What is legionellosis?

Legionellosis is caused by bacteria called *Legionella*. The disease has two different forms. Legionnaires' disease is the more severe form of infection that causes pneumonia. Pontiac fever is caused by the same bacteria, but is a milder illness without pneumonia.

The disease got its name after a group of people attending a convention of the American Legion in Philadelphia in 1976 developed pneumonia. Although the *Legionella* bacteria were around before 1976, scientists had never been able to find these bacteria in an ill person's lungs before that time.

Who gets legionellosis?

Anyone can get legionellosis, but it is more common and more severe in older people (usually 50 years of age or older), people who are current or former smokers, people with underlying lung disease (such as emphysema), and people with weakened immune systems. Healthy people who come into contact with the bacteria might not get any symptoms or might experience only a mild illness.

How is legionellosis spread?

Legionella bacteria are found naturally in the environment and grow best in warm water, like the kind found in decorative fountains, hot tubs, whirlpools, hot water tanks, and air conditioning cooling towers. Home and car air-conditioning units do not use water to cool the air, so they are not a risk for *Legionella* growth. The bacteria get into the air when a mist or spray of water is created (for example, by devices like shower heads or whirlpools). People breathe in the mist that has been contaminated with the bacteria and then they might become sick. In general, the bacteria do not spread from person to person.

What are the symptoms of legionellosis?

Legionnaires' disease can have symptoms like many other forms of pneumonia, so it can be hard to diagnose at first. Signs of the disease can include a high fever, chills, and a cough. Some people might also have muscle aches and headaches. The pneumonia can be very serious and about 1 in 10 people with Legionnaires' disease die. Symptoms of Pontiac fever can also include fever, headaches, and muscle aches, but there is no pneumonia.

How soon after exposure do symptoms appear?

For Legionnaires' disease, symptoms usually appear 2-10 days after exposure, with an average of 5-6 days. For Pontiac fever, symptoms usually appear 5-72 hours after exposure, with an average of 24-48 hours.

How is legionellosis diagnosed?

Several laboratory tests can be used to find *Legionella* bacteria in the body. The most commonly used test is the urinary antigen test, which detects the bacteria in a urine sample. If the patient has pneumonia and the urine antigen test is positive, then the patient is considered to have

Legionnaires' disease. The disease can also be diagnosed by culture, when the bacteria are grown in the lab from sputum or other respiratory (lung) secretions. Finally, blood specimens that are drawn shortly after illness begins and again several weeks following recovery can also be used to make a diagnosis.

What is the treatment for legionellosis?

Antibiotics are used to treat Legionnaires' disease. Patients with pneumonia might also require hospitalization, oxygen, and other medical care. Most patients with Pontiac fever get better within 2-5 days without treatment.

How can legionellosis be prevented?

There is no vaccine to prevent legionellosis. The presence of *Legionella* bacteria can be reduced by properly maintaining water systems where the bacteria grow (such as heating, cooling and plumbing systems). Commercial cooling towers should be drained when not in use and should be cleaned periodically to remove scale and sediment. Hot water tanks should be maintained at 140°F to prevent growth of the bacteria and the temperature of the water should be 122°F or higher at the faucet. If there is a risk of scalding, particularly for children, older persons, or those with disabilities, scald-protection measures should be used. People with hot tubs and whirlpool baths should follow manufacturers' recommendations for cleaning and maintenance to keep them clean and free of *Legionella* bacteria. Tap water should not be used in respiratory therapy devices. In addition, avoiding smoking can reduce the risk of getting legionellosis.

How can I get more information about legionellosis?

- If you have concerns about legionellosis, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at <http://www.vdh.virginia.gov/local-health-districts/>.
- Visit the Centers for Disease Control and Prevention website at <https://www.cdc.gov/legionella/index.html>.

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