

Legionellosis

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. While the *Legionella* bacteria were around before 1976, scientists had never been able to find it 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 may not get any symptoms or may 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. 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 may become sick. The disease cannot spread from one person to another.

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 may also have muscle aches and headaches. The pneumonia may be very serious and can cause death in 5% to 30% of cases. Symptoms of Pontiac fever may also include fever, headaches, and muscle aches, but there is no pneumonia.

How soon after exposure do symptoms appear?

The symptoms of Legionnaires' disease appear between 2 and 10 days after exposure (most often, it is 5 to 6 days). For Pontiac fever, symptoms appear between 5 and 72 hours (most often, it is 24 to 48 hours).

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January 2013 – page 2

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 lung biopsy specimens, respiratory secretions, or various other sites. 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 may also require hospitalization, oxygen, and other supportive care. Most patients with Pontiac fever get better within two to five 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 >122 °F to prevent growth of the bacteria. 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?

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