

Legionnaires' Disease, Pontiac Fever, Legionellosis and Legionella

Q: What is Legionellosis and who is at risk?

Legionellosis is an infection caused by Legionella bacteria. Legionellosis can present as two distinct illnesses: Pontiac fever (a self-limited flu-like mild respiratory illness), and Legionnaires' Disease (a more severe illness involving pneumonia).

People of any age can get Legionellosis, but the disease occurs most frequently in persons over 50 years of age. The disease most often affects those who smoke heavily, have chronic lung disease, or have underlying medical conditions that lower their immune system, such as diabetes, cancer, or renal dysfunction. Persons taking certain drugs that lower their immune system, such as steroids, have an increased risk of being affected by Legionellosis. Many people may be infected with Legionella bacteria without developing any symptoms, and others may be treated without having to be hospitalized.

Q: What is Legionella?

Legionella bacteria are found naturally in freshwater environments such as creeks, ponds and lakes, as well as manmade structures such as plumbing systems and cooling towers. Legionella can multiply in warm water (77°F to 113°F). Legionella pneumophila is responsible for over 90 percent of Legionnaires' Disease cases and several different species of Legionella are responsible for Pontiac Fever.

Q: How is Legionella spread and how does someone acquire Legionellosis (Legionnaires' Disease/Pontiac Fever)?

Legionella bacteria become a health concern when they grow and spread in manmade structures such as plumbing systems, hot water tanks, cooling towers, hot tubs, decorative fountains, showers and faucets.

Legionellosis is acquired after inhaling mists from a contaminated water source containing Legionella bacteria. According to the Centers for Disease Control and Prevention (CDC), the leading cause of the Legionella outbreaks reported between 2009 and 2012 was environmental conditions within the portion of the water distribution system from the water meter to the tap in homes and buildings. Although Legionella has been found in public water systems, proper disinfection of water negates the potential for Legionella contamination of public drinking water supplies.

Home and automobile air conditioners are not considered a source of Legionella bacteria, and the disease cannot be spread from person-to-person.

Q: How common and severe is Legionnaires' Disease?

It is estimated that 8,000 to 18,000 cases of Legionnaires' disease occur each year in the United States. Most cases occur as single isolated events, however outbreaks have been noted.

About 1 out of every 10 people who get sick with Legionnaires' disease will die due to complications from their illness.



Q: What are the symptoms of Legionnaires' Disease and how soon do they occur?

Symptoms of Legionnaires' disease include, but are not limited to: fever, chills, coughing, loss of appetite, tiredness, muscle aches, headaches, shortness of breath and pneumonia. Chest X-rays are needed to confirm the presence of pneumonia. The period between exposure to the bacteria and onset of symptoms for Legionnaires' disease is 2 to 10 days, but most often 5 to 6 days.

Q: What is the treatment for Legionnaires' Disease?

Antibiotics such as Erythromycin, Levaquin, or Azithromycin are effective for treating Legionnaires' Disease.

Q: How common and severe is Pontiac Fever?

Because Pontiac Fever is a mild respiratory illness, many cases can go undiagnosed. Up to 20 percent of healthy adults have antibodies showing previous exposure to Legionella bacteria, but only a small percentage have a history of previous pneumonia, meaning that they could have acquired Pontiac Fever and not realized it. Persons with Pontiac fever generally recover in 2 to 5 days.

Q: What are the symptoms of Pontiac Fever and how soon they occur?

Symptoms of Pontiac fever include fever, chills, headache, fatigue, and muscle aches. Unlike Legionnaires' Disease, those affected with Pontiac Fever do not have pneumonia. The period between exposure to the bacteria and onset of symptoms is 5 to 66 hours, but most often 24 to 48 hours.

Q: What is the treatment for Pontiac Fever?

Pontiac fever requires no specific treatment and symptoms typically resolve within 2 to 5 days from onset of illness.

Q: What can be done to prevent Legionellosis?

Properly maintaining heating, cooling and plumbing systems is the best way to prevent Legionellosis. Commercial cooling towers should be drained when not in use and cleaned periodically to remove scale and sediment. Hot water tanks should be maintained at 122°F to prevent growth of Legionella bacteria. Persons with hot tubs, whirlpool baths and decorative fountains should take special care to keep them clean and free of Legionella bacteria.

Q: Where can I get more information about Legionnaires' Disease and Pontiac Fever, Legionellosis and Legionella?

The Oklahoma State Department of Health (OSDH), EPA, and CDC have very good information on these topics.

OSDH Web site on Legionellosis: <https://go.usa.gov/xusY4>

EPA Web site on Legionella: <https://go.usa.gov/xQDdF>

CDC Web site on Legionella, Legionnaires' Disease and Pontiac Fever: <https://go.usa.gov/xQDde>

Information from these Web sites was used to prepare this Fact Sheet.

Q: Where can I get my water tested for Legionella?

DEQ's State Environmental Laboratory (SEL) can test for the presence of Legionella pneumophila (the causative agent in over 90 percent of Legionnaires' Disease cases) in potable (faucet, shower, etc.) and non-potable (cooling tower, hot tub, etc.) waters. Please note that this test does not detect all species of Legionella and therefore cannot completely rule out Legionella contamination in water.

Contact the SEL at (405) 702-1000 or (866) 412-3057 to discuss if our current testing can meet your specific needs and to get information about sampling, scheduling and pricing.