

Legionnaires' Disease (Legionellosis)

What is Legionnaires' disease?

Legionnaires' disease (Legionellosis) is caused by a type of bacteria called *Legionella*. The bacteria got its name in 1976, when many people who went to a Philadelphia convention of the American Legion suffered from an outbreak of this disease, a type of pneumonia (lung infection). Although this type of bacteria was around before 1976, more illness from Legionnaires' disease is being detected now. This is because *Legionella* tests are more often done for patients with pneumonia.

Each year, between 8,000 and 18,000 people are hospitalized with Legionnaires' disease in the U.S. However, many infections are not diagnosed or reported, so this number may be higher. More illness is usually found in the summer and early fall, but it can happen any time of year.

How is Legionnaires' disease spread?

Legionella bacteria are found naturally in the environment, usually in water. The bacteria grow best in warm water, such as the kind found in hot tubs, cooling towers, hot water tanks, large plumbing systems, or parts of the air-conditioning systems of large buildings.

People get Legionnaires' disease when they breathe in a mist or vapor (small droplets of water in the air) that has been contaminated with the bacteria. The bacteria are NOT spread from one person to another person.

What are the symptoms of Legionnaires' disease?

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 suffer from muscle aches and headaches. These symptoms usually begin 2-14 days after being exposed to the bacteria.

Chest X-rays are needed to find the pneumonia caused by the bacteria, and other tests can be done on sputum (phlegm), as well as blood or urine to find evidence of the bacteria in the body.

A milder infection caused by the same type of *Legionella* bacteria is called *Pontiac Fever*. The symptoms of Pontiac Fever usually last for 2-5 days and may also include fever, headaches, and muscle aches; however, there is no pneumonia. Symptoms go away on their own without treatment and without causing further problems.

Are certain people at risk of getting Legionnaires' disease?

People most at risk of getting sick from the bacteria are older people (usually 65 years of age or older), as well as people who are smokers, or those who have a chronic lung disease (such as emphysema).

People who have weak immune systems from diseases like cancer, diabetes, or kidney failure are also more likely to get sick from *Legionella* bacteria. People who take drugs to suppress (weaken) the immune system (like after a transplant operation or chemotherapy) are also at higher risk. Many people in hospitals already have illnesses that increase their risk for *Legionella* infection.

What is the treatment for Legionnaires' disease?

While Legionnaires' disease can be very serious and can cause death in up to 5-30% of cases, most cases can be treated successfully with antibiotics.

How can Legionnaires' disease be prevented in the healthcare setting?

Hospital buildings have complex water systems. If there is no *Legionella* in the healthcare facility environment, then disease cannot occur.

To help prevent the spread of *Legionella* in the healthcare facility, there are a few control measures that can be taken such as:

- Sterilize/disinfect aerosol-producing devices before use.
- Use sterile water to rinse and clean respiratory apparatuses and other respiratory equipment (humidifiers, nebulizers, and respiratory machines).
- Use only sterile water for respiratory humidifying devices.
- Do not use cool-mist room air humidifiers without adequate sterilization or disinfection.

Outbreaks are when two or more people become ill in the same place at about the same time, such as patients in healthcare settings.

In the event of an outbreak of legionellosis, it is recommended that the following control measures be implemented for immunocompromised patients (or those at high risk for legionellosis):

- Immunocompromised and at-risk residents should be on complete water restrictions. This population should not bathe, shower, use ice, brush teeth or in any way use or consume water from the facility's taps, unless legionella-specific filters have been placed on potable water sources.
- Immunocompromised and at-risk residents should drink bottled or filtered water and use ice made from bottled/filtered water.
- Immunocompromised and at-risk residents should shower or bathe with filtered water sources.

For information regarding Legionnaires' disease, visit the following resources:

- <http://www.cdc.gov/legionella/index.htm>