



# **Legionella Bacteria**

FACT SHEET 13-019-0814

## **What is Legionella and what diseases are associated with it?**

Legionella is a bacterium that is found naturally in the environment, including fresh water lakes, rivers and the soil. It is also not unusual for very low levels of bacteria to be present in drinking water supplies; low levels do not present a health risk. However, the bacteria multiply best in warm water and when the levels of bacteria become very high; some exposed people can become ill.

Legionella bacteria can typically cause two forms of illness:

- 1) Pontiac fever, a flu-like illness.
- 2) Legionnaires' disease (LD), a more severe form of infection which includes pneumonia.

## **What causes Legionnaires' disease?**

People can develop LD when they breathe in a mist or aerosol (small droplets of water in the air) that has been contaminated with Legionella bacteria. Such an aerosol can be created in showers, whirlpool spas, or fountains. More cases are found in the summer and early fall, but can happen any time of year. The majority of people exposed do not become infected and LD is not passed from person to person.

## **How soon after exposure do symptoms appear?**

The time between exposure to the bacterium and the start of symptoms of LD is 2 to 14 days; for Pontiac Fever, it is shorter, generally a few hours to 3 days.

## **What are the symptoms of Legionnaires' disease?**

At first, both forms of infection have similar symptoms, including loss of appetite, malaise and headache. A rapidly rising fever with chills occurs within 24 hours. It is not uncommon for fevers to reach 102-105°F. Abdominal pain, nonproductive cough and diarrhea are also common. Among people hospitalized for Legionella, up to a third may die. Pontiac Fever is not associated with pneumonia or death and recovery is spontaneous in 2-5 days, without treatment.

## **How is Legionnaires' disease diagnosed?**

Diagnosis depends on laboratory identification of the bacteria. This can be done through tests on urine, blood or respiratory secretions.

## **What is the treatment for Legionnaires' disease?**

LD is treated with antibiotics. Pontiac Fever resolves without treatment.

## **How common is Legionnaires' disease?**

In the United States, an estimated 8,000 to 18,000 people get LD each year. Some people can be infected with the Legionella bacterium and have only mild symptoms or no illness at all. While outbreaks of LD often receive significant media attention, this disease usually occurs as a single, isolated case not associated with any recognized outbreak since the infection is not transmitted from person to person. When outbreaks occur, they are usually recognized in the summer and early fall, but cases may occur year-round.

## **Who is at risk for Legionnaires' disease?**

People of any age may get LD, but the illness most often affects middle-aged and older persons, particularly those who smoke cigarettes or have chronic lung disease. Also at increased risk are people whose immune system is suppressed by chronic medical conditions such as cancer, kidney failure requiring dialysis, diabetes, or AIDS. People who take drugs that suppress the immune system are also at higher risk. Additionally, Pontiac Fever most commonly occurs in persons who are otherwise healthy.

## **Where are Legionella bacteria found?**

Legionella bacteria live in the environment, especially in water. However, the bacteria reproduce to high numbers in warm, stagnant water (90-100°F), such as that found in certain plumbing systems and hot water tanks, cooling towers and evaporative condensers of large air-conditioning systems, and whirlpool spas. Cases of LD have been identified throughout the US and in several foreign countries. It is believed to occur worldwide.

## **How can Legionnaires' disease be prevented?**

Improved design and maintenance of cooling towers and plumbing systems to limit the growth and spread of Legionella organisms are the foundations of LD prevention. Public health officials seek the sources of the disease and recommend appropriate prevention and control measures, such as decontamination of the water source.

## **Where can I get more information on Legionnaires' disease?**

Additional information can also be obtained by visiting the website of the Centers for Disease Control and Prevention:

<http://www.cdc.gov/legionella/index.html>  
<http://www.legionella.org>