

## Legionellosis Fact Sheet

### What is *Legionella*?

*Legionella* is a type of bacteria that can cause a severe form of pneumonia (Legionnaires' disease), or a mild, self-limiting illness (Pontiac fever). *Legionella* bacteria are found in natural freshwater sources, and can grow and spread in artificial and human-made water systems.

### How common is legionellosis?

In 2016, there were approximately 6,100 legionellosis cases reported in the United States, with over 600 cases reported in California. The number of reported legionellosis cases has risen steadily since 2000, in California and nationwide.

### How do people get legionellosis?

People get infected with *Legionella* by breathing in small droplets of water in the air that contain bacteria, from a contaminated water source. Less often, people can get infected with *Legionella* through the aspiration of contaminated drinking water. Water contaminated with *Legionella* can sometimes be found in buildings with large or complex water systems, such as hotels, hospitals, and nursing homes. Other common sources of contaminated water include hot tubs and spas, air conditioning cooling towers, hot water tanks, and decorative fountains. *Legionella* is generally not spread from person to person. Most people exposed to the bacteria do not become ill. Some people are more likely to become very sick if they are infected with *Legionella*, including:

- People 50 years of age or older
- Current and former smokers
- People with chronic lung disease
- People with cancer or weakened immune systems
- People with underlying illnesses such as diabetes, kidney failure, or liver failure

### What are the symptoms of legionellosis?

*Legionella* causes two illnesses: Legionnaires' disease and Pontiac fever.

- Legionnaires' disease is a severe type of pneumonia. Symptoms usually begin 2 to 10 days after exposure to *Legionella*, and can include cough, shortness of breath, fever, chills, muscle aches, headaches, nausea, vomiting, diarrhea, or confusion.
- Pontiac fever is a mild illness. Symptoms usually begin 1 to 3 days after exposure, and can include fever and muscle aches but not pneumonia.

### How is legionellosis diagnosed?

Urine and respiratory specimens can be tested to diagnose legionellosis. However, the symptoms of Legionnaires' disease are similar to those caused by other types of pneumonia, which make it difficult for healthcare providers to diagnose. Healthcare providers can also order chest x-rays to help diagnose pneumonia.

### How is legionellosis treated?

- Most people who get Legionnaires' disease are hospitalized. Legionnaires' disease can be treated with antibiotics, and people usually recover from the infection if they are properly treated. Overall, 10 percent of people with Legionnaires' disease die. However,

rates of death are higher, approximately 25 percent, when the infection is acquired from exposure to a *Legionella* source at a healthcare facility.

- Pontiac fever symptoms are self-limited without treatment.

### **How can you prevent legionellosis?**

There is no vaccine to protect against legionellosis. Individuals who are at increased risk for Legionnaires' disease may consider avoiding risky water exposures, like hot tubs and spas or decorative fountains. In addition, people who use respiratory therapy equipment with water, such as continuous positive airway pressure (CPAP) machines, should only use distilled water, and ensure that their devices are cleaned often.

### **What can be done to prevent the growth of *Legionella* bacteria?**

Large water systems where *Legionella* can grow must be routinely cleaned and maintained. These include drinking water systems, hot tubs and spas, decorative fountains, and cooling towers. Managers of non-residential facilities, like hospitals and hotels, can consult guidelines from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) for appropriate water temperatures and chemical treatment of water ([http://www.techstreet.com/cgi-bin/detail?product\\_id=232891](http://www.techstreet.com/cgi-bin/detail?product_id=232891)). Hot tub operators and owners can find information on hot tub maintenance on the U.S. Centers for Disease control and Prevention (CDC) healthy water website (<https://www.cdc.gov/healthywater/swimming/aquatics-professionals/operating-public-hot-tubs.html>).

### **What is the California Department of Public Health doing about *Legionella*?**

Legionellosis cases are reportable to the local health departments (LHDs) and the California Department of Public Health (CDPH). CDPH tracks legionellosis cases to monitor trends and detect clusters or outbreaks. CDPH works with LHDs to investigate legionellosis clusters or outbreaks to identify potential sources of infection, recommend methods for mitigation, and thus prevent additional illnesses. Legionellosis investigations often require environmental assessments, which include inspecting high risk water sources to make sure that they are properly disinfected and maintained to prevent the growth and spread of *Legionella*.

### **Where can I get more information about *Legionella*?**

- The [CDPH Legionellosis webpage](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Legionellosis(Legionnaires'_Disease_PontiacFever).aspx): [https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Legionellosis\(Legionnaires'\\_Disease\\_PontiacFever\).aspx](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Legionellosis(Legionnaires'_Disease_PontiacFever).aspx)
- The [CDC Legionella website](https://www.cdc.gov/legionella/index.html): <https://www.cdc.gov/legionella/index.html>

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