

# LEGIONNAIRES' DISEASE

Legionnaires' (LEE-juh-nares) disease is a very serious type of pneumonia (lung infection) caused by bacteria called *Legionella*. If you develop pneumonia symptoms and may have been exposed to *Legionella*, see a doctor right away. Be sure to mention if you have used a hot tub, spent any nights away from home, or stayed in a hospital in the last two weeks.

## Legionnaires' Disease Can Cause Pneumonia Symptoms

Signs and symptoms of Legionnaires' disease can include:

- ▶ Cough
- ▶ Shortness of breath
- ▶ Muscle aches
- ▶ Headache
- ▶ Fever

Doctors use chest x-rays or physical exams to check for pneumonia. Your doctor may also order tests on a sample of urine and sputum (phlegm) to see if your lung infection is caused by *Legionella*.

## Legionnaires' Disease Is Serious, but Can Be Treated with Antibiotics

Legionnaires' disease is treated with antibiotics (drugs that kill bacteria in the body). Most people who get sick need care in a hospital but make a full recovery. However, about 1 out of 10 people who get Legionnaires' disease will die from the infection.

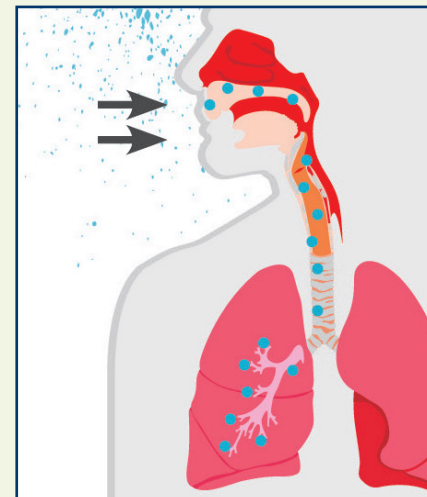
## Certain People Are at Increased Risk for Legionnaires' Disease

Most healthy people do not get Legionnaires' disease after being exposed to *Legionella*. Being 50 years or older or having certain risk factors can increase your chances of getting sick. These risk factors include:

- ▶ Being a current or former smoker
- ▶ Having chronic lung disease, such as emphysema or chronic obstructive pulmonary disease (COPD)
- ▶ Having a weakened immune system from diseases like cancer, diabetes, or kidney failure
- ▶ Taking medication that weakens your immune system

## Legionella Are Usually Spread through Water Droplets in the Air

In nature, *Legionella* live in fresh water and rarely cause illness. In man-made settings, *Legionella* can grow if water is not properly maintained. These man-made water sources become a health problem when small droplets of water that contain the bacteria get into the air and people breathe them in. In rare cases, someone breathes in *Legionella* while they are drinking water and it "goes down the wrong pipe" into the lungs. In general, people do not spread Legionnaires' disease to other people.



Legionnaires' disease, a type of severe pneumonia, is caused by breathing in small droplets of water that contain *Legionella*.

## Common Sources of Infection

Outbreaks of Legionnaires' disease are often associated with large or complex water systems, like those found in hospitals, hotels, and cruise ships.

The most likely sources of infection include:



Water used for showering (potable water)



Cooling towers (parts of large air conditioning systems)



Decorative fountains



Hot tubs

## Frequently Asked Questions

### What is legionellosis?

Legionellosis (lee-juh-nel-OH-sis) is a bacterial disease caused by *Legionella* that can present as either Legionnaires' disease or Pontiac fever. Legionnaires' disease causes severe pneumonia (lung infection) often requiring treatment in a hospital, while Pontiac fever is generally a milder illness that resolves on its own. Although extremely rare, *Legionella* can also cause infections at a body site outside of the lungs, such as the heart or wound infections.

### How common is legionellosis?

More illness is usually reported in the summer and early fall, but it can happen anytime of the year. In the United States, the rate of reported cases of legionellosis has grown nearly nine times since 2000. In 2018, over 350 cases of legionellosis were reported in New Jersey and nearly 10,000 cases of legionellosis were reported in the United States. However, because legionellosis is likely underdiagnosed, these numbers may be an underestimate.

### How do people get legionellosis?

People can get Legionnaires' disease or Pontiac fever when they breathe in small droplets of water in the air that contain the bacteria. People can breathe in small droplets of water by using a shower, hot tub, or sink. Other sources of aerosolized water include decorative fountains and cooling towers.

Less commonly, people can get sick by aspiration of drinking water containing *Legionella*. This happens when water accidentally goes into the lungs while drinking ("goes down the wrong pipe"). People at increased risk of aspiration include those with swallowing difficulties.

### Where are *Legionella* bacteria found?

*Legionella* is a type of bacterium found naturally in freshwater environments, like lakes and streams. It can become a health concern when it grows and spreads in human-made water systems such as hot tubs, building premise plumbing, and cooling towers (structures that contain water and a fan as part of centralized air-cooling systems for building or industrial processes). *Legionella* can live in the water system unless proper steps are taken to prevent the growth of bacteria.

### What are the symptoms of legionellosis?

The usual symptoms of Legionnaires' disease may include:

- Cough
- Shortness of breath
- Fever
- Muscle aches
- Head aches

Legionnaires' disease can also cause other symptoms such as diarrhea, nausea, and confusion. Symptoms can start anywhere from 2 to 14 days after being exposed to the bacteria. Most often, symptoms begin 5 to 6 days after being exposed.

Pontiac fever symptoms are primarily fever and muscle aches; it is a milder infection than Legionnaires' disease. Symptoms begin between within 24-72 hours after being exposed to the bacteria and usually last less than a week.

## **Who gets legionellosis?**

Most healthy people exposed to *Legionella* do not get sick. People at increased risk of getting sick include:

- People 50 years or older
- Current or former smokers
- People with a chronic lung disease (like chronic obstructive pulmonary disease or emphysema)
- People with weak immune systems or who take drugs that weaken the immune system (like after a transplant operation or chemotherapy)
- People with cancer
- People with underlying illnesses such as diabetes, kidney failure, or liver failure

## **How is legionellosis diagnosed?**

Health care providers use chest x-rays or physical exams to check for pneumonia. Your provider may also order tests on a sample of urine and sputum (phlegm) to see if your lung infection is caused by *Legionella* bacteria.

## **What is the treatment for legionellosis?**

Legionellosis can be successfully treated with antibiotics. (NOTE – it is very important to finish your antibiotics, even if you begin to feel better, unless otherwise directed by your health care provider.)

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

- NJ Department of Health <http://www.nj.gov/health>
- Centers for Disease Control and Prevention <https://www.cdc.gov/legionella>
- Your health care provider
- Your local health department

This information is intended for educational purposes only and is not intended to replace consultation with a health care professional.

Adapted from Centers for Disease Control and Prevention

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