



CDC DISCOVERIES

# Legionnaires' Disease



## The Basics

- Identified in 1976
- People can get Legionnaires' disease by breathing in mist containing the bacteria.
- In general, the bacteria do not spread from one person to another.
- Symptoms usually begin 2–10 days after exposure.
- There are no vaccines that can prevent Legionnaires' disease.

## Symptoms

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

In 1976, CDC (in cooperation with other federal, state, and local authorities) launched one of the largest disease investigations in U.S. history following an outbreak of severe pneumonia (lung infection) among the participants of the American Legion Convention in Philadelphia, Pennsylvania. As a result, CDC identified the new bacterium (*Legionella pneumophila*) that was spread through the hotel's air conditioning system. On July 27, three days after the convention ended, the first victim died. Within a week, more than 200 people, mostly men, had been hospitalized, and 34 had died. All had attended the convention and stayed at the same hotel.

People can get Legionnaires' disease when they breathe in mist (small droplets of water in the air) containing the bacteria. One example might be from breathing in droplets sprayed from a hot tub that has not been properly cleaned and disinfected. Outbreaks are most commonly associated with buildings or structures that have complex water systems, like hotels, hospitals, long-term care facilities, and cruise ships. Within these structures, the bacterium can become a health concern when it grows and spreads in human-made water systems, like hot tubs, cooling towers, hot water tanks, large plumbing systems, and decorative fountains. Most healthy people do not become infected with *Legionella* bacteria after exposure.

*The Legionella bacterium causes a type of pneumonia that got its name after the 1976 outbreak at an American Legion convention in Philadelphia.*



CDC is the nation's health protection agency, working 24/7 to protect America from foreign and domestic public health threats. Since its inception, the CDC has been committed to identifying and investigating new pathogens or causes of illness.



Centers for Disease Control and Prevention  
Office of the Associate Director for Communication

CDC **24/7** Saving Lives. Protecting People.  
Saving Money through Prevention.™

## Who is at increased risk?

- People 50 years or older
- Current or former smokers
- Those with a chronic lung disease (like COPD 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

## Treatment

Legionnaires' disease requires treatment with antibiotics, and most cases of this illness can be treated successfully. Healthy people usually get better after being sick with Legionnaires' disease, but they often need care in the hospital. About 1 in 10 people who get Legionnaires' disease will die from the infection.

## Protection

The key to preventing Legionnaires' disease is maintenance of the water systems in which Legionella grow, including drinking water systems, hot tubs, decorative fountains, and cooling towers.

*People can get Legionnaires' disease when they breathe in a mist or vapor (small droplets of water in the air) containing the Legionella bacteria.*

## of note ...



*More illness is usually found in the summer and early fall, but it can happen any time of year. For more information, please see CDC's main page on [Legionnaires' Disease and Pontiac Fever](#).*