

# Legionnaires' Disease

## INFORMATION AND PREVENTION

### What is Legionnaires' Disease?

A serious type of pneumonia caused by *Legionella* bacteria.

### Where does *Legionella* grow?

*Legionella* is naturally found in freshwater environments, such as lakes and streams. It can become a health concern when it grows and spreads in domestic and commercially constructed building water systems.

### What are the conditions for *Legionella* growth?

- The optimal temperature range for *Legionella* growth is 77-108°F.
- *Legionella* grows best in large, complex water systems that are not adequately maintained.
- Fluctuating temperatures and stagnated water in plumbing systems also contribute to *Legionella* growth.
- Improperly maintained plumbing systems can lead to sediment, scale and corrosion, all of which provide a habitat and nutrients for *Legionella* growth.
- *Legionella* can grow on a biofilm, which is a group of microorganisms, such as bacteria, that can attach to the interior surface of plumbing lines, providing a protective barrier for the *Legionella* cells.



### How are people exposed?

- People can get sick when they breathe in small droplets of water containing *Legionella* into the lungs. Water containing *Legionella* can be aerosolized through devices like shower heads, hot tubs, cooling towers, and decorative fountains.
- Less commonly, people can accidentally inhale drinking water containing *Legionella*.



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## Who is at risk?

People who:

- Are 50 years or older
- Are current or former smokers
- Have a chronic lung disease
- Have weakened immune systems
- Have cancer
- Have underlying illnesses such as diabetes, kidney failure, or liver failure



## What steps can be taken to prevent the disease?

### *Public Accommodations/Health Care Facilities*

- Create and implement a water management program for your facility

### *Residential Homes and Buildings*

- Maintain water systems including water softeners and filters
- Maintain water temperature outside the growth range
- Ensure pools, hot tubs, and other water features are properly maintained
- Routinely run water through unused fixtures to prevent water stagnation
- Shock chlorination of a private well and flushing of home plumbing
- Drain garden hoses

## References and General Information

- [Legionnaires Disease and Pontiac Fever](#) – CDC
- [Legionnaires Disease, Pontiac Fever Fast Facts](#) – CDC
- [Legionella Water Management Programs Overview](#) – CDC
- [Legionella: Developing a Water Management Program](#) – CDC
- [Shock Chlorination: A Step-by-Step Guide to Shock Chlorinating Wells and Home Water Supply Systems](#) – SNHD

## Recommended CDC Training

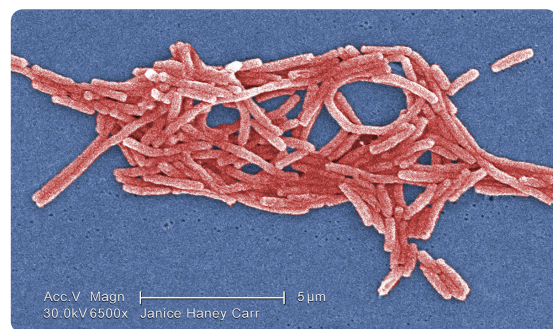
- [Preventing Legionnaires' Disease Training](#) – CDC

## CDC Sampling Videos Link

- [Legionnaire's Disease Environmental Health](#) – CDC

CDC list of certified Environmental *Legionella* Isolation Techniques Evaluation (ELITE) labs for processing of water samples

- [Elite Program](#) – CDC



[www.snhd.info/legionella](http://www.snhd.info/legionella)