



Legionnaires' Disease in Communities and Healthcare Facilities

What is *Legionella*?

- *Legionella* is a type of bacteria that can cause an illness called legionellosis, commonly known as Legionnaires' disease.
- *Legionella* exists naturally in fresh water and moist soil, but grows best in warm water, like the kind found in:
 - hot tubs,
 - cooling towers (parts of centralized air-conditioning systems for large buildings),
 - hot water tanks,
 - large plumbing systems,
 - decorative fountains.
- *Legionella* can become a health concern when it grows and spreads in these water systems, especially if the systems are not well maintained.

What is Legionnaires' disease?

- Legionnaires' disease is a disease caused by *Legionella* bacteria.
- Symptoms of Legionnaires' disease can include:
 - cough,
 - shortness of breath,
 - high fever,
 - muscle aches,
 - headaches.
- These symptoms usually begin 2 or more days after being exposed to the bacteria, but can take two weeks to begin.
- Legionnaires' disease is a form of pneumonia.
- A similar disease, Pontiac Fever, is a milder, influenza-like illness without pneumonia that is also caused by *Legionella* bacteria.

How do people get Legionnaires' disease?

- People get Legionnaires' disease when they:
 - breathe in small droplets of water in the air that contain *Legionella*.
 - aspirate (inhale) water containing *Legionella*.

Can I get Legionnaires' disease from someone who has it?

- It is very rare for Legionnaires' disease to be passed from person-to-person.
- Instead, an overwhelming majority of people get Legionnaires' disease from inhaling the bacteria.

Who is at risk for Legionnaires' disease?

- Most healthy individuals do not become infected with *Legionella* when they have been exposed.
- People at higher risk of getting sick after being exposed are:
 - those 50 years of age or older,
 - current or former smokers,
 - those with a chronic lung disease (like chronic obstructive pulmonary disease or emphysema),
 - those with a weakened immune system from diseases like cancer, diabetes, or kidney failure,
 - those who take drugs that suppress (weaken) the immune system (like after a transplant operation or chemotherapy).

For more information: health.ny.gov/legionella

How common is Legionnaires' disease?

- About 700 cases of Legionnaires' disease and Pontiac Fever are reported each year in New York State, including New York City (2011-2015 data).
- Most cases occur as single, isolated events.
- An outbreak is when multiple people who are diagnosed with Legionnaires' disease were around the same place at about the same time when they were potentially exposed to the bacteria. In a health care facility, even one case is considered an outbreak and is investigated.

What happens when a case of Legionnaires' disease is reported?

- At both the state and local level, health departments investigate all reports of Legionnaires' disease and Pontiac Fever.
- The investigation considers:
 - *who* became ill,
 - *where* people were when they potentially were exposed to *Legionella* and all the potential sources of *Legionella* at these locations,
 - *when* illness started.
- Investigators look for patterns among these three factors which may indicate a common source.
- Investigators also interview the ill person, their caregiver, or other people close to the ill person to see if further actions are needed to test or address the potential source(s) of the *Legionella*.
- Drinking water sampling occurs during investigations when information suggests the water supply in a building could be a possible source of exposure for the ill individuals.
- Sometimes, water samples are collected from other buildings and settings (cooling towers, spas, grocery stores, etc.) when a cluster of legionellosis occurs that suggest a common water exposure.

What happens when a case of Legionnaires' disease is detected in a health care facility?

- Hospitals, nursing homes and other regulated health care facilities in New York State (including New York City) are required to report all suspected and confirmed cases of Legionnaires' disease to the local health department where the patient resides.
- An investigation is required if the reported case is a patient or resident who spent time in a regulated healthcare facility, such as a hospital or nursing home. This investigation includes an environmental assessment of the facility and potential sampling for *Legionella* in the potable (drinking) water system. The purpose of the investigation is to try to learn the source of the exposure so it can be addressed to prevent further illness.
- The investigation will remain active until there has been no additional illness in the facility for six months and the environmental investigation shows satisfactory *Legionella* control.
- Health care facilities may be required to provide alternate sources of water to their patients or residents and staff, sanitize their water systems, modify their systems, or a combination of these measures.

Do you always find out what caused a person or people to become sick with Legionnaires' disease?

- No. Legionnaires' disease outbreaks can be difficult to identify, especially if people travel to a common location, are exposed to *Legionella*, and then return home before becoming sick.
- In many cases the actual source of the bacteria is never identified. While tests exist that allow the bacteria from a sick person to be "matched" to an environmental source, samples from sick persons are often not available.

What protections are in place for people who are vulnerable to this type of illness?

- New York State Department of Health issued regulations to address two sources of *Legionella* – cooling towers and potable water systems in health care facilities.
 - In New York State, all owners of cooling towers are required to test their cooling towers for *Legionella* to assess the effectiveness of routine disinfection and maintenance and to take action if *Legionella* levels are exceeded.
 - All regulated hospitals and nursing homes are required to assess and test their potable water systems for *Legionella*, and to take action if *Legionella* testing results exceed action levels.
 - While there are other sources of *Legionella*, these are the leading causes of deaths and larger outbreaks.

What does it mean if I see a "public notification" that *Legionella* exceeded a NYS action level in a cooling tower in my area?

- The notice is only to make you aware of any cooling tower(s) in your area that may be a potential source of *Legionella*.
- The notice does not necessarily mean that you have been exposed to *Legionella* or that you will become sick.
- If you do develop symptoms that could be associated with Legionnaires' disease (see question 2), it is important to share this information with your health care provider.