

North Carolina Division of Public Health
Legionellosis Fact Sheet – *Legionnaires' disease and Pontiac fever*

What is legionellosis?

- Legionellosis is a respiratory infection caused by *Legionella* bacteria.
- Disease severity can range from a mild respiratory illness known as Pontiac fever to pneumonia (lung infection) known as Legionnaires' disease. The term "legionellosis" refers to either illness.
- Legionnaires' disease is serious and can be life-threatening, but most people recover with antibiotic treatment.

Where are *Legionella* bacteria found?

- *Legionella* bacteria are found naturally in the environment, and may be in any type of water system or in soil.
- *Legionella* bacteria are most commonly found in warm water, especially in stagnant or standing water, and have been isolated from hot tubs, cooling towers, hot water tanks, large plumbing systems and decorative fountains. They do not seem to grow in car or window air-conditioners.

How is legionellosis spread?

- *Legionella* bacteria are NOT transmitted from person to person.
- People can get legionellosis after inhaling mists or spray (aerosols) from a water source that contains *Legionella* bacteria.

Who gets legionellosis?

- Most healthy people do not get legionellosis after exposure to *Legionella* bacteria.
- People at higher risk for getting sick include those over 50; those who have chronic lung disease; current or former smokers; those with a weak immune system from diseases like cancer, diabetes, or kidney failure; and those who take drugs that suppress (weaken) the immune system.

Trends in legionellosis

- More illness is usually found in the summer and early fall, but it can happen any time of year.
- The number of reported legionellosis cases can fluctuate widely from year to year on the state and local levels.
- The incidence of legionellosis has been increasing in North Carolina and nationally during recent years.
- Increases in legionellosis cases have been linked to weather patterns, such as increased rainfall and warm temperatures, and sometimes to aerosol (mist) sources in the community, such as hot tubs, cooling towers (air-conditioning units from large buildings), and water used for drinking and showering.
- Increased reports of legionellosis can also be related to increased awareness and increased testing by providers in a given community.
- The CDC estimates that only 4% of cases reported during 2005-2009 were associated with a known legionellosis outbreak or cluster.

Public health response to legionellosis

- Legionellosis is one of over 70 diseases routinely monitored by public health officials.
- Every case of legionellosis is thoroughly investigated by the local health department to identify risk factors and potential sources of exposure that may put other at risk.
- The vast majority of cases are considered sporadic, meaning that they are not linked to a known outbreak or to other reported cases.
- Legionella infections that are acquired in healthcare facilities require special investigation measures, since patients in these facilities are likely to have illnesses that increase their risk for legionellosis. In addition, these facilities often have very complex water systems that can become contaminated with *Legionella*.
 - Special investigation measures for these cases include enhancing surveillance to identify additional cases and conducting a facility assessment to identify risk factors for legionella infection.
- Two or more legionella cases in the same healthcare facility are considered an outbreak. Rapid response and control measures are needed in this situation, including: Limiting exposures to aerosolized water (e.g. from sinks and showers); conducting a detailed environmental assessment and sampling; and performing water treatment. Restrictions to new admissions and visitors are often put in place while these measures are in progress.

Sources and for more information:

1. CDC General Information: <http://www.cdc.gov/legionella/index.html>
2. CDC surveillance summary: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6032a3.htm>
3. NC DPH: <http://epi.publichealth.nc.gov/cd/diseases/legionellosis.html>