



Legionnaires' Disease and Building Evaluations

Legionnaires' Disease

Legionnaires' disease is a type of pneumonia caused by bacteria (*Legionella*) that grow in warm water. Sources of water with *Legionella* contamination may include cooling towers, showers and hot tubs. You cannot get Legionnaires' disease by drinking the water. People who inhale water vapor (mist) that contains *Legionella* bacteria can get sick. The risk of getting sick from a building's water system is very low, especially for healthy people.

Legionnaires' disease causes flu-like symptoms, and complications from the disease can be fatal. The most important thing to do is to get medical attention right away if you start having symptoms such as fever, chills, muscle aches and cough. This is even more important if you are age 50 or older (especially if you smoke cigarettes), have chronic lung disease, have a weakened immune system or take medicines that weaken your immune system. If you have one of these health issues, take extra steps as a precaution to minimize your exposure to mist.

Legionnaires' disease is easily treated with antibiotics, and most people get better with early treatment. Most people who are exposed to the bacteria do not develop Legionnaires' disease, and it is not contagious — you cannot get it from someone else.

Legionnaires' Disease Surveillance

As part of its public health duties, the New York City Department of Health and Mental Hygiene (NYC Health Department) receives reports of communicable diseases in NYC and routinely analyzes the surveillance data in reports to identify possible clusters of cases that would indicate a shared potential source of exposure to diseases. Approximately 300 to 700 cases of Legionnaires' disease are reported to the NYC Health Department each year. Each reported case is analyzed.

Building Evaluations

NYC's water comes from upstate reservoirs. In the City's water distribution system, the water tends to be constantly moving, with over one billion gallons of water per day flowing to residents. The water is also cold and has disinfectant. These conditions make it so *Legionella* bacteria will not easily grow.

A number of factors make the risk of *Legionella* bacteria growth higher when it enters a building's plumbing system. The water may be more stagnant (not moving), be warmer, and have lower levels of disinfectant. The bacteria attach to water that is released as mist — typically in the shower — and the mist can be inhaled.

When the disease surveillance reports indicate two or more confirmed Legionnaires' disease cases in a 12-month period associated with a single residential building with a shared hot water system, the NYC Health Department initiates a building evaluation to investigate a potential source, in line with guidance from the Centers for Disease Control and Prevention (CDC).

Building evaluations require the owner to hire a qualified water system management team to perform a site-specific analysis of the building's water system. This is a complex process that includes reviewing the building's engineering systems and performing a hazard assessment to evaluate the risks for *Legionella* growth, including testing the water supply. Additionally, the NYC Health Department requires the building owner to notify all residents and staff of the building evaluation process so that people at higher risk can take precautions to minimize their exposure to water vapor by modifying their water usage (for example, by taking a bath instead of a shower).

If *Legionella* bacteria is detected during testing, the building owner is required to take actions to control *Legionella* bacteria growth. There are a variety of corrective measures property owners can implement, typically a chemical shock using an elevated level of a disinfectant such as chlorine-based chemicals or copper-silver treatment. The measure that is best for a building depends on its particular circumstances, and the owner decides which measure works best for their building.

Once the building owner and its water management team have achieved control of *Legionella* bacteria, the NYC Health Department closes the building evaluation, and residents are informed they can return to normal water usage. Building owners are advised to work with their water management team to prepare a **long-term water management plan** and continue to take steps to manage risks of *Legionella* growth in their building water system.

For more information on Legionnaires' disease and water management for buildings, visit nyc.gov/health/legionnaires.

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