



AMERICAN WATER

WE KEEP LIFE FLOWING™

Providing safe and reliable water is American Water's business. We are recognized as an industry leader and work cooperatively with the U.S. Environmental Protection Agency so that implementation of existing drinking water standards and development of new regulations will produce benefits for our customers.



LEGIONELLA

WHAT IS LEGIONELLA?

Legionella are bacteria. There are over 60 species of Legionella that occur in many different environments, including rivers, lakes and soils. Legionella pneumophila is the most common cause of life threatening pneumonia in humans, and fatalities can range between 3-33%. Most susceptible include the elderly, smokers and immunocompromised individuals.

HOW DO PEOPLE GET LEGIONELLA?

Legionella grows in conditions where water stagnates at warm temperatures with not enough disinfectants. People are infected through inhalation of Legionella contaminated water droplets from various sources, such as heating, ventilation, humidification and cooling systems, as well as water features (e.g., hot tubs, water fountains) or possibly even showerheads. Exposure occurs outside the water utility infrastructure, and is most likely in complex plumbing systems like multi-story hotels, hospitals, and high-density residential, industrial or institutional buildings.

DOES THE EPA HAVE GUIDELINES FOR LEGIONELLA IN DRINKING WATER?

The U.S. Environmental Protection Agency (EPA) regulates drinking water for specific contaminants under the Safe Drinking Water Act. Legionella is currently not on the list of contaminants that is specifically monitored under these regulations. However, the EPA

We never forget that at the end of every water pipe there's a family depending on us to provide life's most critical need. That every treatment plant serves as a barrier against potential disease. And that every community should be stronger because we are there.

Zia Bukhari, PhD
Principal Scientist,
Water & Wastewater Research

requires treatment for other pathogens (i.e., Giardia and viruses) using disinfection. These disinfection processes have also been found to be effective for managing Legionella in drinking water systems.

DOES AMERICAN WATER MONITOR ITS WATER SUPPLIES FOR LEGIONELLA?

No standardized methods currently exist to allow for routine monitoring and analyses of Legionella. However, American Water follows all guidelines for maintenance of disinfectant residual throughout the drinking water distribution systems and performs necessary sampling to understand overall water quality. In addition, American Water is leading several externally-funded research projects into the detection and management of Legionella and other opportunistic pathogens.



**QUALITY. ONE MORE WAY
WE KEEP LIFE FLOWING.**



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FOR MORE INFORMATION

For more information, customers can contact the US Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

WHAT CAN PEOPLE DO TO MINIMIZE EXPOSURE TO LEGIONELLA?

Legionella can be most problematic during the summer months or where water stagnates without a disinfectant residual. Large building owners should adopt a proactive approach that promotes use of water management plans, which include assuring the presence of disinfectant residuals coupled with appropriate adjustment of hot water temperature, proper maintenance of building plumbing and heating/cooling systems.

Reference materials for water management plans include:

1. **ANSI/ASHRAE Standard 188-2018, Legionellosis: Risk Management for Building Water Systems:** <https://www.ashrae.org/technical-resources/bookstore/ansi-ashrae-standard-188-2018-legionellosis-risk-management-for-building-water-systems>
2. **Toolkit: Developing a Water Management Program to Reduce Legionella Growth and Spread in Buildings:** <https://www.cdc.gov/legionella/wmp/toolkit/index.html>

HOW AMERICAN WATER HAS CONTRIBUTED TO THE BODY OF SCIENCE ON LEGIONELLA



Below are examples of American Water's research associated with Legionella.

Water Research Foundation:

- Appropriate sampling and monitoring strategies for opportunistic pathogens in drinking water distribution systems.
- Customer messaging on plumbing system issues.

Water Reuse Research Foundation:

- Management of Legionella in water reclamation systems.
- Develop management practices to control potential health risks and aesthetic issues associated with storage and distribution of reclaimed water.

Select Publications Associated with American Water research on Legionella:

- Risk-based critical levels of Legionella pneumophila for indoor water uses: Environmental Science and Technology.
- Development of a Risk Management Strategy for Legionella in Reclaimed Water Systems: Technical Report Water Reuse Research Foundation.
- Occurrence of Legionella in Non-Potable Reclaimed Water: Journal - American Water Works Association.