

Frequently Asked Questions about *Legionella*

1. What is *Legionella*?

Legionella is a bacterium that occurs naturally in freshwater sources and can cause Legionnaires' disease (a severe pneumonia) in some susceptible people if contaminated water droplets are inhaled.

2. Where is *Legionella* found?

Legionella is found in freshwater environments such as lakes and streams as well as moist soil. It may also be found in some water systems of buildings and residences.

3. Is there more than one type of *Legionella* bacteria?

Yes. According to the U.S. Centers for Disease Control and Prevention (CDC), There are at least 60 different species of *Legionella*, and most are considered capable of causing disease. However, most disease is caused by *Legionella pneumophila*, particularly serogroup 1.

4. Is *Legionella* harmful?

Legionella can become a health concern when it grows and spreads in human-made water systems such as cooling towers, hot tubs, decorative fountains, and complex potable water systems like those found in hotels and healthcare facilities.

5. How do people get sick from *Legionella*?

People can get sick by breathing in small droplets of water in the air that contain *Legionella*. Under rare circumstances, people can get sick with *Legionella* when water accidentally goes into the lungs while drinking water contaminated with the bacteria. However, most healthy people exposed to *Legionella* do not become sick. You generally can't get *Legionella* from another person who is sick.

Legionella can grow and multiply in water systems, especially when the water is warm and stagnant (i.e., not flowing), and certain water system fixtures can spray small droplets of water that contain *Legionella* into the air. When water contaminated with *Legionella* is released into the air, people may be exposed to the bacteria by breathing in the contaminated water droplets.

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FMD Goals: ~ 1. Be outstanding stewards for our state **ASSETS** ~ 2. Take care of our **PEOPLE** ~ 3. Provide great **CUSTOMER SERVICE**

6. What diseases are caused by *Legionella*?

Legionellosis is the illness that is caused by *Legionella*. Severe legionellosis that causes pneumonia is called Legionnaires' disease, and mild legionellosis without pneumonia is called Pontiac fever.

7. What is Legionnaires' disease?

Legionnaires' disease is a severe type of lung infection or pneumonia, which often requires hospitalization, though it can usually be treated successfully with antibiotics.

Symptoms include:

- Cough
- Fever
- Difficulty breathing or shortness of breath
- Muscle pain

Only your healthcare provider can accurately diagnose Legionnaires' disease by ordering laboratory tests and x-rays.

8. What is Pontiac fever?

Pontiac fever is a mild flu-like illness, that usually does not require treatment. People tend to recover quickly without seeking medical care. Because Pontiac fever is so mild, public health investigations and response tends to focus mostly on Legionnaires' disease.

9. Who is at risk for Legionnaires' disease?

Most healthy people do **NOT** get Legionnaires' disease even after being exposed to *Legionella*. People at higher risk for getting Legionnaires' disease include those who:

- Are over the age of 50
- Are current and former smokers
- Have chronic lung disease
- Have a disease or take medications that weaken the immune system.

In addition, a person's unique medical conditions are the most important factors in whether they could acquire Legionnaires' disease after exposure to *Legionella*.

If you have any concerns about your risk for Legionnaires' disease, please consult with your healthcare provider.

10. How common is Legionnaires' disease?

Legionnaires' disease is not very common, especially when compared to some other respiratory infections, such as influenza. According to the Centers for Disease Control and Prevention, there were over 10,000 cases of Legionnaires' disease reported in the United States in 2018 (compared with an estimated 28,000,000 cases of influenza in the 2018-2019 winter).

11. When should I consider getting tested for *Legionella*?

You should seek care if you are at higher risk for Legionnaires' disease, believe you were exposed to *Legionella*, and then develop symptoms, such as fever and cough.

12. How common is it to find *Legionella* in an office building?

It is not uncommon to find *Legionella* bacteria in office buildings. Various studies have reported a range of 30%-50% of office buildings in the United States test positive for *Legionella*.

13. Are office buildings considered high risk environments?

Generally, office buildings are considered low risk with respect to *Legionella*. Some buildings that meet specified criteria (are over ten stories, have cooling towers, hot tubs, or decorative fountains or water features), present a higher risk than other office buildings, though these buildings are still considered low risk overall.

14. Are there requirements to regularly test buildings water systems for *Legionella*?

No. CDC does not consider office buildings a high-risk environment for people to get Legionnaires' disease and do not generally recommend routine testing of water systems in these settings.

15. Is there *Legionella* in State Office Buildings?

Legionella is naturally occurring in the freshwater environment and can be found in a variety of water systems and devices, including in homes and office buildings. While little research has been conducted to measure the baseline detections of *Legionella* in office buildings, studies have detected a range of *Legionella* of 30%-50% of tested water taps. As such, it is likely that state office buildings will, at least occasionally, find *Legionella* when testing.

16. Will the State's Return to Office help mitigate against the growth of *Legionella*?

Existing literature on *Legionella* suggests that decreased flow of water can increase the risk of *Legionella* growth. Thus, it is possible that the lack of occupancy of state buildings during the pandemic increased the likelihood that *Legionella* would be present in those buildings. With the advent of hybrid work under this Administration, the increasing occupancy of state buildings will increase flow of water and therefore reduce the condition that supports *Legionella* growth.

17. If *Legionella* is detected, is the goal to eliminate the bacteria from the building entirely?

Because *Legionella* is naturally occurring in the freshwater environment, elimination of *Legionella* is generally not feasible. Even if the presence of the bacteria was able to be entirely remediated after detection, it is entirely possible for it to reoccur in the future.

18. How do you prevent *Legionella* growth and spread?

Because *Legionella* is naturally occurring in the freshwater environment, elimination of *Legionella* is generally not feasible. However, one best practice for managing *Legionella* is the establishment of a water management program for buildings that meet the specified criteria.

A water management program is a building-specific plan to reduce the risk for *Legionella* growing and spreading within the building water system and devices. In general, the principles of effective water management include:

- Maintaining water temperatures outside the ideal range for *Legionella* growth (i.e., 77F-113F)
- Preventing water stagnation
- Ensuring adequate disinfection
- Maintaining devices to prevent sediment, scale, corrosion, and biofilm, all of which provide a habitat and nutrients for *Legionella*

Once established, water management programs involve regular monitoring of key areas for potentially hazardous conditions and implementation of predetermined interventions when control measures are not met.

19. What does the finding of *Legionella* in the water system mean?

Finding *Legionella* in the water system of a building does not necessarily mean that people will be infected with *Legionella*. More than anything else, it means that the water system is not working optimally, and there are issues that need to be resolved. For example, it may be that stagnant water was allowing for the growth of *Legionella*, or temperatures were not in the correct range, or there wasn't enough chlorine in the system.

Many water systems are likely contaminated with *Legionella*, but outbreaks very rarely occur. In California, most legionellosis outbreaks have been associated with hotels, healthcare facilities, cooling towers, and hot tubs.

20. What level of detected *Legionella* is considered acceptable?

There are no specific detection levels that imply greater or lesser risk of human illness (due to expected variations in water conditions at the time of testing, the fixtures that were tested, and the sample storage conditions). However, it is rare to have infections or Legionnaires' disease, even if the building is found to have detections of the *Legionella* bacteria.

21. If *Legionella* is detected in the building, will the building be closed?

Generally, no. The CDC does not recommend the closure of an office building due to the detection of *Legionella* in a given building.

22. What types of remediation actions have DGS put into place to address *Legionella*?

DGS has implemented several disinfecting steps to ensure the safety and hygiene of its buildings that may include:

- Water system flushing to prevent stagnation of water in pipes.
- Monitoring and adjustment of water temperatures.
- Measurements of water quality parameters, such as pH levels and chlorine.
- Maintenance, removal or replacement of specific water fixtures or features.
- Temporary restrictions on use of specific water fixtures.
- Introduction of additional, EPA-approved disinfectant(s).
- Regular cleaning and sanitization.
- HVAC system maintenance.
- Employee training.

23. If *Legionella* is commonplace, should employees avoid using drinking fountains or sinks of office buildings?

The risk of illness in office buildings due to *Legionella* are considered low for most individuals. Most healthy people who drink water, wash their hands, or use kitchen sinks that contains *Legionella* bacteria do not become sick.

Under rare circumstances, people can get sick with *Legionella* when water accidentally goes into the lungs while drinking water contaminated with the bacteria. It is important to note that even among people at higher risk, *Legionella* infection is rare – and most people exposed to *Legionella* do not get sick. If you are at higher risk for Legionnaires' disease, consult with your health care provider.

24. What are public health departments doing about *Legionella*?

Infections caused by *Legionella* bacteria, including Legionnaires' disease and Pontiac fever, are reportable to public health. Cases are investigated to help determine the source of infection and detect outbreaks. If likely sources are identified or outbreaks are detected, further investigation and remediation are recommended. Public health also provides information about *Legionella* infections to clinicians and works to increase awareness when outbreaks occur.

25. Will face masks prevent small droplets of water that contain *Legionella* from infecting a person?

Respirator usage is not typically recommended as a prevention measure to avoid *Legionella* exposure in office building workers. The primary measures to prevent *Legionella* exposure are remediation actions taken on building water systems. However, well-fitting NIOSH-approved N95 respirators can be used to protect people from inhaling aerosolized water droplets that may contain *Legionella*, and any individual can exercise this option to wear a respirator.

26. If I have concerns, who should I contact?

For questions on your personal situation, please contact your supervisor.

27. Where can I get more information about *Legionella* and office buildings?

- [CDPH *Legionella* website](#)
- [CDC *Legionella* website](#)
- [DGS *Legionella* Management Program](#)