

The long term closure of buildings could lead to an increased risk of Legionnaires' disease. Here's how to protect your staff and customers

What is Legionnaires' disease?

Legionnaires' disease is a lung infection. It's uncommon but can be very serious and in some cases fatal. You can catch Legionnaires' disease if you breathe in tiny droplets of water containing the bacteria that cause the infection.

It's usually caught in places like hotels, hospitals or offices where the bacteria have got into the water supply. It's very rare to catch it at home. (Source [NHS website](#))

Who is this guidance for?

This guidance is aimed at hotels, gyms, pubs and restaurants but it is relevant to all public, residential or office buildings, salons and shops of all sizes.

- It is important that during this pandemic, you manage the building water systems to keep them safe while the building is closed or partially shut down.
- This will protect the future health and safety of you, your guests, your customers and your staff.
- The procedures taken by a company or organisation to reduce the growth of the bacteria which causes Legionnaires' Disease (Legionella) will impact on how soon their building(s) can be reopened without causing harm to health.

If your business or place of work has been closed **for more than seven days** following the Coronavirus outbreak, you will need to consider the risks of Legionella and take steps to protect you, your staff and your customers or anyone else who may be exposed when the water supplies are started again.

The dangers of the Legionella bacteria

Legionella is the bacteria which can cause Legionnaires' disease. The bacteria are very common environmental bacteria, widely associated with water droplets or spray. Legionella only becomes a risk to humans when inhaled.

This bacteria can become a problem where lukewarm water is allowed to stand for prolonged periods without flowing which allows the bacteria to grow and build up in pipework.

This falls under the Health and Safety at Work Act 1974. All duty holders (those legally responsible for the premises, not necessarily the property owners) must take reasonably practicable steps to control the risk from Legionella throughout the Covid-19 pandemic.

Duty holders implicated in an outbreak of Legionnaires' disease resulting from actions taken for Covid-19 precautions are not likely to have any exemption from prosecution.

Who is at risk?

Those most at risk of contracting Legionnaires' disease are:

- men over 40 years old
- smokers
- people with an underlying respiratory illness

However, under certain conditions anyone can be at risk and can develop the disease by inhaling the bacteria as airborne water droplets, mist or spray. It cannot be caught by direct human contact like a cold.

What kind of conditions does Legionella grow in?

Legionella bacteria need water as well as the presence of sludge, limescale, rust, algae or organic matter. All this provides a place for bacteria to attach to and multiply on. In a moist environment and at a temperature range of 20°C to 45°C, Legionella bacteria become active and a risk to health. The bacteria rest in a dormant state on hard surfaces.

Where does Legionella bacteria live?

- Air-conditioning systems;
- Hot water systems with a volume of more than 300 litres of hot water. This includes domestic size water systems;
- Cold water storage systems
- Hot and cold water systems
- Sinks
- Wash hand basins
- Showers
- Dishwashers
- Powerwashers
- Irrigation systems

All water systems must be checked, purged and cleaned before being re-instated for use.

How to avoid Legionella bacteria in your water system

If possible, use the hot and cold water systems as though the building was in normal use (even when the building is empty).

Any controls put in place to control the risk of Legionella bacteria growth when the building is occupied must be continued when the building is empty.

If your business or place of work has been closed **for more than seven days** following the Coronavirus outbreak, you will need to consider the risks of Legionella and take steps to protect you, your staff and customers or anyone else who may be exposed when the water supplies are started again.

The Risk Factors

- Is the water temperature between 20°C and 45°C?
- Are there pipes where stagnant water occurs, such as infrequently used (less than once a week) outlets, e.g. showers, taps, washing machines, dishwashers etc? A diagram of your hot and cold water system will help you to identify these areas.
- Is there debris or material in the system which could act as a nutrient or harbour bacteria, e.g. rust, limescale, sludge and scale?
- Are there thermostatic mixing valves set at a favourable temperature for Legionella growth (20°C and 45°C)?
- Are there people in the 'at-risk' groups who may be exposed to contaminated water?

Answering 'yes' to any of the above in the checklist suggests there may be a risk of Legionella exposure which should be appropriately managed.

What to do if there is a Legionella risk?

Put in a place a management system to control the likelihood of Legionella bacteria growth in your water system. This should include steps on how to avoid the circumstances both when the building is shut for more than a few days such as a weekend and when the building is in full operation.

Cleaning your water system

Hot or cold water systems should be cleaned or 'purged' at least once per week and before the building is reopened to staff and/or customers. When purging a part of a water system it is important that the procedure is carried out with the minimum production of 'aerosols' - this is the term given to fine mist and water droplets when moving water and the air combine, which is almost impossible to see. The methods of purging the water systems are as follows:

Taps

- Additional piping may be used to ensure contaminated water goes straight to a drain without creating an aerosol. The flow rate should be slow to start, gradually building up over five minutes to full flow. Both the hot and cold water supply should be run. Those carrying this out should stand at least a metre from the drain area and ensure the room is well ventilated.

Showers

- Where possible the shower head should be lowered into the shower tray (or bath) so that it is as near the drain as possible and so minimise the spray of water droplets.
- If the shower head cannot be lowered far enough to reach the shower tray it should be lowered into a bucket. If this is not possible, a plastic bag can be attached to the shower head with a hole cut in the bottom corner to allow the water to escape. These provide some containment of the water flow if it cannot reach a drain or sink easily. The contents would then be emptied away down a drain.
- The flow rate should be slow to start, gradually building up over five minutes to full flow. Both the hot and cold supply should be run. Once purged, the shower head and pipe can be cleaned and disinfected and, where necessary, de-scaled using a suitable de-scaling solution - follow the manufacturers' instructions.
- More information on Legionnaires' disease is available from [the Health and Safety Executive here](#)

Toilets and Urinals

- These should be flushed at least once a week.

Water storage tanks

- If accessible, check that water tanks are clean and protected from debris or dirt falling into them. The lids to the tanks should be firmly in place.
- Remove sludge and scum frequently to keep any build up under control.
- Replace rusted or damaged tanks as soon as possible.
- If you have turned off the water heater, you will need to turn it back on to heat up to over 45°C before the system is purged or run prior to use.
- If you have left the water heater on it needs to be heated to 45°C or over before the system is purged or run as a precaution before the business is re-opened.

Ongoing management and maintenance of the water system

- Regular monitoring of hot and cold water temperatures to avoid water temperatures between 20°C and 45°C.
- Avoid water stagnation by keeping the water moving.
- Avoid having areas of pipework where the water is not regularly used.
- Avoid the build-up of materials which harbour bacteria, other microorganisms or provide nutrients for microbial growth such as sludge, limescale, rust, algae or organic matter. They provide a place for bacteria to attach to and multiply on, combined with a moist environment, at a temperature range of 20°C to 45°C, Legionella becomes active and a risk to health.
- Control the release of any water spray.
- Maintain the cleanliness of the system and the water within it.

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