

Legionella in Hot And Cold Water Systems

Legionnaires' disease is a potentially fatal pneumonia caused by legionella bacteria. The infection is caused by breathing in small droplets of water contaminated by the bacteria. The disease cannot be passed from one person to another.

Legionella bacteria are common in natural water courses such as rivers and ponds, and may contaminate and grow in other water systems such as cooling towers and hot and cold water systems, also consider humidifiers and spa baths. They survive low temperatures and thrive at temperatures between 20 - 45°C if the conditions are right. They are killed by high temperature.

In hot and cold water systems legionella has traditionally been controlled by storing hot water above 60°C and distributing it above 50°C, and keeping cold water below 20°C, if possible. Other methods that are used include copper ionisation and chlorine dioxide.

You must consider the risks from legionella that may affect your staff or members of the public and take suitable precautions.

- **Identify and assess source of risk:**

Are conditions present, which will encourage bacteria to multiply. For example;

Is water temperature between 20 - 45°C?

Is it possible that water droplets will be produced, and if so, could they be dispersed over a wide area?

Is it likely that anyone particularly susceptible will come into contact with the contaminated water droplets.

- **Prepare a scheme for preventing or controlling the risk.**

Suggested schemes:

Hot Water

Water in the boiler should be kept at a minimum of 60°C and at each outlet point above 50°C within a minute of running the water. It is recommended that these checks are carried out monthly, at the first and last tap on the run, and at a representation of taps annually.

Shower heads and hoses should be dismantled, cleaned, and descaled at least quarterly.

Any units, which are not regularly used must be flushed through and purged to drain without release of aerosols, at least weekly or immediately before use.

Ensure that there are no areas of stagnation of water, which are not under control.

Cold Water

Check that the cold water is stored below 20°C, and maintains a temperature below 20°C at the first and last taps on the run after running the water for up to 2 minutes, recommended at the same frequencies as hot water checks.

Visually inspect the cold water tank annually. Ensure the tank is insulated and that there is a closed lid. Check for debris and if necessary, clean and disinfect.

- **Implement, manage and monitor precautions.**
- **Record precautions and results of control measures.**
- **Named responsible person.**

For further information, obtain the following guidance;
Legionnaires' disease – A guide for employers leaflet. IAC27(rev)

The Control of Legionella Bacteria in Water Systems - Approved Code of Practice and Guidance.