

Legionnaires' Disease

Introduction

Legionnaires' disease is a potentially fatal form of pneumonia and everyone is susceptible to infection. The risk increases with age but some people are at higher risk including:

- people over 45 years of age
- smokers and heavy drinkers
- people suffering from chronic respiratory or kidney disease
- diabetes, lung and heart disease
- anyone with an impaired immune system

They may also be found in purpose-built water systems such as cooling towers, evaporative condensers, hot and cold water systems and spa pools.

If conditions are favourable, the bacteria may grow increasing the risks of Legionnaires' disease and it is therefore important to control the risks. Bacteria colonies tend to grow if the water temperature is between 20°C to 45°C. There is more information [here](#).

What should we do?

Colonies of the Legionella bacteria can develop in hot water systems particularly if there are areas with low circulation. The system can be disinfected by running the system at high temperature for a short time. This is known as thermal disinfection and involves running water through the system at a temperature above 60°C.

It is important to flushing water through the system at a slow flow rate to maintain the high temperature for a suitable period (the contact time). This method is only applicable to Hot Water Systems and is commonly used as a rapid response. It may be less effective than chemical disinfection and may not be practicable where the hot water supply is insufficient to maintain a high temperature throughout

Thermal disinfection of hot water services is carried out by raising the temperature of the whole contents of the calorifier and circulating water for at least an hour. Every hot water outlet throughout the system must then be flushed and, to be effective, the temperature at the calorifier should be maintained high enough to ensure that the temperature at the outlets does not fall below 60 °C. Each tap and appliance should be run sequentially for at least five minutes at the full temperature (but not necessarily at full flow). This procedure should be repeated every six months.

Thermal disinfection may prove to be ineffective where parts of the calorifier or water system fail to reach the required temperature for a long enough period.

Raising the temperature above 60°C creates a scalding hazard to users. Signage and outlet warning labels should be fitted to all areas to alert occupants.

Legal Requirements

The relevant regulation is the

The Health and Safety at Work etc Act 1974 (the HSW Act) and

The Control of Substances Hazardous to Health Regulations 2002 (COSHH)

Further Information

For further information see

What is Legionnaires' disease? <http://www.hse.gov.uk/legionnaires/what-is.htm>

Approved Code of Practice and guidance on regulations
<http://www.hse.gov.uk/pubns/priced/l8.pdf>

Legionnaires' disease Part 2: The control of legionella bacteria in hot and cold water systems
www.hse.gov.uk/pubns/priced/hsg274part2.pdf