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## LEGIONELLA RISK ASSESSMENTS

# LANDLORDS & TENANTS

# What is Legionnaires Disease?

## INTRODUCTION

Legionellosis is a collective term for diseases caused by legionella bacteria including the most serious Legionnaires' disease, as well as the similar but less serious conditions of Pontiac fever and Lochgoilhead fever. 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

The bacterium *Legionella pneumophila* and related bacteria are common in natural water sources such as rivers, lakes and reservoirs, but usually in low numbers. 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.

## WHERE DOES IT COME FROM?

Legionella bacteria are widespread in natural water systems, eg rivers and ponds. However, the conditions are rarely right for people to catch the disease from these sources. Outbreaks of the illness occur from exposure to legionella growing in purpose-built systems where water is maintained at a temperature high enough to encourage growth, eg cooling towers, evaporative condensers, hot and cold water systems and spa pools used in all sorts of premises (work and domestic).

## HOW DO PEOPLE GET IT?

People contract  Legionnaires' disease by inhaling small droplets of water (aerosols), suspended in the air, containing the bacteria. Certain conditions increase the risk from legionella if:

- the water temperature in all or some parts of the system may be between 20-45 °C, which is suitable for growth
- it is possible for breathable water droplets to be created and dispersed eg aerosol created by a cooling tower, or water outlets
- water is stored and/or re-circulated
- there are deposits that can support bacterial growth providing a source of nutrients for the organism eg rust, sludge, scale, organic matter and biofilms

## WHO IS RESPONSIBLE FOR CONTROLLING THE RISK?

**The Landlord**

The legal duty for landlords who provide residential accommodation to consider, assess and control the risks of exposure to Legionella to their tenants is not new.  This requirement stems from the Control of Substances Hazardous to Health Regulations 1989; Section 3(2) of the Health and Safety at Work Act 1974 makes provision for the legislation to apply to landlords of both business and domestic premises.  All water systems require an assessment of the risk which they can carry out themselves if they are competent, or employ somebody who is.

In most residential settings, a simple assessment may show that the risks are low and no further action may be necessary. (An example of a typical lower risk situation may be found in a small building (eg housing unit) with small domestic-type water systems, where daily water usage is inevitable and sufficient to turn over the entire system; where cold water is directly from a wholesome mains supply (no stored water tanks); where hot water is fed from instantaneous heaters or low volume water heaters (supplying outlets at 50 °C); and where the only outlets are toilets and wash hand basins).  If the assessment shows the risks are low and are being properly managed, no further action is needed but it is important to review the assessment regularly in case anything changes in the system.

**The Tenant**

Tenants should be advised of any control measures put in place that should be maintained eg not to adjust the temperature setting of the alorifier, to regularly clean shower heads and to inform the landlord if the hot water is not heating properly or there are any other problems with the system so that appropriate action can be taken.

# Risk Assessment

## WHO CAN UNDERTAKE A RISK ASSESSMENT FOR LEGIONELLA?

As a person in control of premises, you must appoint person or persons responsible for helping you manage your health and safety duties, eg take responsibility for managing risks. A competent person is someone with the necessary skills, knowledge and experience to manage health and safety, including the control measures. You could appoint one, or a combination of:

- yourself
- one or more workers
- someone from outside your business

## HOW DO I CARRY OUT A LEGIONELLA RISK ASSESSMENT?

The purpose of carrying out a risk assessment is to identify and assess any risks in your water system. The responsible person should understand your water systems and any associated equipment, in order to conclude whether the system is likely to create a risk from exposure to legionella, and should be able to identify whether:

- water is stored or re-circulated as part of your system
- the water temperature in some or all parts of the system is between 20–45 °C
- there are sources of nutrients such as rust, sludge, scale and organic matters
- conditions are present to encourage bacteria to multiply
- it is possible for water droplets to be produced and, if so, whether they could be dispersed over a wide area, eg showers and aerosols from cooling towers
- it is likely that any of your employees, residents, visitors etc are more susceptible to infection due to age, illness, a weakened immune system etc and whether they could be exposed to any contaminated water droplets

Your risk assessment should include:

- management responsibilities, including the name of competent person and a description of your system;
- potential sources of risk;
- any controls in place to control risks;
- monitoring, inspection and maintenance procedures;
- records of the monitoring results, inspections and checks carried out;
- arrangements to review the risk assessment regularly

If you decide that the risks are insignificant, your assessment is complete. You may not need take any further action at this stage but you should review the assessment regularly in case anything changes in your system.

## I'M NOT STORING HOT OR COLD WATER

You still need to carry out a risk assessment. There may be other factors within your system that increase the risks of legionellosis, eg deadlegs, shower heads and/or long runs of pipe work containing warm water. A risk assessment should also consider anyone who could be potentially exposed to any legionella bacteria in your system, and particularly groups that are at a higher risk of contracting legionellosis. However, once you have completed your risk assessment you may decide that the risks are insignificant. If you do, you need take no further action other than to review the assessment regularly in case anything changes in your system.

## WHO IS CLASSED AS THE RESPONSIBLE PERSON?

For our purposes it would be the Landlord or Property Manager depending on who would be responsible for effecting repairs or maintenance of the water system.

## WHAT SHOULD BE DONE TO CONTROL THE RISK?

Simple control measures can help control the risk of exposure to legionella such as:

- flushing out the system prior to letting the property
- avoiding debris getting into the system (eg ensure the cold water tanks, where fitted, have a tight fitting lid)
- setting control parameters (eg setting the temperature of the calorifier to ensure water is stored at 60°C)
- make sure any redundant pipework identified is removed.

Where showers are installed, these have the means of creating and dispersing water droplets which may be inhaled causing a foreseeable risk of exposure to legionella. However, if used regularly (as in the majority of most domestic settings) the risks are reduced but in any case, tenants should be advised to regularly clean and disinfect shower heads. Instantaneous electric showers pose less of a risk as they are generally cold water-fed and heat only small volumes of water during operation.

It is important that water is not allowed to stagnate within the water system and so there should be careful management of dwellings that are vacant for extended periods (eg student accommodation left empty over the summer vacation). As a general principle, outlets on hot and cold water systems should be used at least once a week to maintain a degree of water flow and minimise the chances if stagnation.

# Legislation

## LAWS AND GUIDANCE

Health & Safety at Work Act 1974

Approved Code of Practice (ACoP) L8 - Legionnaires' Disease. The control of legionella in water systems.

Control of substances hazardous to health. (COSHH) Regulations 6, 7 & 12.

British Standards 8580 - Legionella Risk Assessments