



Safety & Wellbeing Guidance Document

GD 33 – The Management of Legionella

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Introduction

Legionella is the abbreviated name for *Legionella pneumophila* bacteria that is responsible for the illness commonly known as Legionnaires' Disease.

Legionella bacteria are commonly found naturally in low concentrations, in rivers, lakes and reservoirs where they do not cause any harm. Legionella bacteria can also be found in purpose-built water systems including cooling towers, evaporative condensers, hot and cold water systems and whirlpool spas. In these types of water systems the water can be maintained at an optimum temperature for the legionella bacteria to grow.

Conditions which increase the risk of legionella being present and causing a risk to health include water being stored in any part of the system at temperatures between 20°C and 45°C, stagnation or low flow, the presence of nutrients for the bacteria to grow on, such as rust, sludge, scale and organic matter and where there is the potential for aerosols to be produced by the water system.

What is it?

Legionnaires' disease is a pneumonia-like illness contracted by inhalation deep into the lungs of legionella bacteria in tiny droplets of water (aerosols). There is no evidence of person-to-person spread of the disease.

The incubation period is generally two to ten days following exposure. Symptoms usually begin with high fever, chills, headache and muscle pain. A dry cough and breathing difficulties are also common, and some patients also suffer diarrhoea, vomiting and delirium/ confusion.

Legionnaires' disease can usually be treated successfully with antibiotics, however it can be fatal in around 12% of cases. Anyone can contract Legionnaires' disease however several sectors of the population appear to be at greater risk – men aged 45 and over, heavy drinkers and smokers, those with chronic respiratory or kidney disease and the immunocompromised.

Legal duties

Legislation indicates that those in control of a premise (including landlords) have duties in terms of the health risks of legionella. These duties are expanded upon within the HSE's approved code of practice known as "L8 - The prevention or control of legionellosis (including legionnaires' disease)", the Health and Safety at Work Act 1974 and the Management of Health and Safety at Work Regulations 2006.

The employer/person in control of the premises has a duty under the approved code of practice to ensure a "suitable and sufficient" risk assessment is carried out for all site water systems.

Under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) cases of legionellosis are reportable to the enforcing authority.

The Notification of Cooling Towers and Evaporative Condensers Regulations 1992 require anyone in control of a premise with a cooling tower or evaporative condenser to notify the local authority in writing. The local authority maintains a register of such systems, which is useful in the investigation of outbreaks.

Identifying and Assessing the Risks

The manager in control of the building has a responsibility to ensure a risk assessment that identifies the sources of risk and exposure to legionella has been undertaken. It is vital to understand what water systems are present, the equipment associated with the system such as cold water storage tanks, pumps, calorifiers, heat exchangers, showers etc. and all the component parts. The risk assessment must identify whether the system is likely to create a risk of exposure to legionella and whether:

- water is stored or re-circulated in any part of the water system
- the water temperature in all or any part of the system is between 20°C and 45°C
- there are sources of nutrients, such as rust, sludge, scale or organic matter
- there is a potential for stagnation or low flow
- water droplets are capable of being produced and that they could be dispersed e.g. showers, or aerosols from cooling towers
- susceptible individuals are present (employees, residents, customers, visitors etc.).

The risk assessment should be carried out by a competent person, and whilst this could be a person trained by the Council, an external contractor has been appointed to undertake these assessments on behalf of the manager. Whoever carries out the risk assessment must be competent in identifying and assessing the risks of exposure to legionella bacteria, and also competence in the necessary control measures. The significant findings of the risk assessment should be documented. Employees should also be consulted, and the risk assessment should be reviewed at agreed timescales or after any significant changes have been made to the system or building operation.

Managing and Controlling the Risk

Where the risk assessment identifies a reasonably foreseeable risk of exposure to legionella bacteria then the manager will need to ensure that the assessor has agreed with them the necessary supervision and implementation of adequate control measures.

Ideally the risk of exposure to legionella should be prevented altogether, however realistically such prevention may not always be possible. It is therefore essential to design, maintain and operate water services under conditions that prevent or adequately control the growth of legionella. Any identified risk must be effectively managed by the implementation of effective control measures. Control measures should be specific to each water system and focus on controlling the conditions which favour the growth of bacteria. Regular checks should also be made on the control measures to gauge their effectiveness.

Record Keeping

Documented records must be kept of the significant findings of the risk assessment. Records should include details of:

- person(s) responsible for carrying out the risk assessment;
- significant findings of the risk assessment;
- written control scheme and details of its implementation;
- results of any inspection, test or check carried out, and dates;
- details of whether the system is operating or not.

Records should be kept for the time for which they remain current and for at least two years thereafter. Inspection records should be kept for five years.

Application to the Work of the Council

Managers need to ensure that all water systems within the properties for which they have responsibility have been included within the Council's "Water Quality Management Contract".

Each property will have a log book that records the testing results and the details of any actions taken to manage the risks identified.

These contracts are managed by Asset and Procurement Solutions and Enterprise and Housing Resources (2 separate contracts) and more information on the contract can be obtained from that Service.