Legionellosis

Legionellosis is a collective term for diseases caused by legionella bacteria including the most serious Legionnaires' disease. These bacteria are common in natural water sources such as rivers, lakes and reservoirs. Because of this, they may contaminate and grow in purpose-built water systems such as hot and cold water systems.

Legionnaires' disease is a potentially fatal form of pneumonia. It is contracted by inhaling small droplets of water (aerosols) suspended in the air which contain the bacteria. Potentially, everyone is susceptible to infection. However, the risk increases with age and some people are more susceptible than others. This includes people over 45 years of age, smokers and those suffering from chronic respiratory or kidney disease, diabetes, lung or heart disease, or those with an impaired immune system.

In most buildings the risk from legionella bacteria is usually very low. However, there could be some instances where it is increased. This is particularly so if there are air conditioners and humidifiers; dead legs (dead end pipes) or long runs of pipework containing warm water in the system; or indoor ornamental fountains and showers. Some of these may be more commonly associated with larger buildings. There are simple precautions that you can take to help control the risk of bacterial growth, and protect the people working in or using your premises.

Legal requirements

Depending on your own particular circumstances, you may have a range of duties under health and safety law. For example, if someone is injured you may need to show that you have met your duty of care.

In addition to this, if you are an employer you must comply with more specific health and safety law as well. This includes the Control of Substances Hazardous to Health Regulations.

Broadly, these require employers to:

- complete, record and revise (where necessary) a specific risk assessment to identify what precautions are needed
- take action to eliminate hazardous substances altogether where this is possible
- implement suitable precautions where exposure to hazardous substances cannot be eliminated
- make sure that these precautions are taken and are properly maintained, with some needing to be examined and tested at specified intervals
- provide information and training to any employees and volunteers on what they need to do.

Even if you are not an employer, but control non-domestic premises (e.g. a community hall or church) you will still have to manage any risk presented by legionella bacteria.

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Hazards to look out for

Typical hazards include:

- water stored or re-circulated as part of the water system
- water temperatures in all or parts of the system between 20–45°C
- sources of nutrients such as rust, sludge, scale and organic matter that encourage bacterial growth
- water droplets being produced and dispersed over a wide area e.g. showers, ornamental fountains
- employees, volunteers and visitors who are more susceptible to infection (through age, illness, a weakened immune system etc.) who could be exposed to contaminated water droplets
- the use of humidifiers and air conditioning equipment.*

*Note: this list is not exhaustive

Precautions you can take

Typical precautions include:

- avoiding water temperatures and conditions that favour the growth of legionella
- ensuring that the release of water spray is properly controlled
- making sure water cannot stagnate anywhere in the system by keeping pipe lengths as short as possible and removing redundant pipework
- keeping the water system and water in it clean, avoiding materials that encourage the growth of legionella
- treating water to control the growth of legionella or limit its ability to grow
- arranging for air conditioning units and humidifiers to be cleaned and serviced regularly in line with manufacturers recommendations
- de-scaling shower heads and running showers periodically.*

*Note: this list is not exhaustive

Making a start

Action	Guidance
1. Identify and assess the risk from legionella bacteria at your premises.	You will need to assess any risk of exposure from water systems on the premises and identify any precautions that might be required. Usually, a risk assessment will be needed in most situations, but not all systems will require elaborate precautions. You may need the help of someone who is competent to complete the assessment for you. Your risk assessment should include details of: • those with responsibilities for controlling any risk • your water system • any potential risk sources • the precautions currently in place and others that might be required • any monitoring, inspection and/or maintenance procedures required • records of any monitoring results, inspections and checks carried out • any review that is required (including a review date). Further guidance on legionella risk assessment is provided in the HSE document 'Legionnaires' disease. The control of legionella bacteria in water systems, Approved Code of Practice and guidance document available at **www.hse.gov.uk/pubns/priced/l8.pdf**.

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Action	Guidance
	The hazards outlined above highlight circumstances where there is a reasonably foreseeable legionella risk in water systems. It is not exhaustive and other factors may need to be considered depending upon your own particular circumstances. In completing the assessment you may need to consider: • the source of system supply water, e.g. whether from a mains supply or not • possible sources of contamination of the supply water in the premises before it reaches the cold water storage tank • the normal plant operating characteristics • unusual, but reasonably foreseeable operating conditions, e.g. breakdowns • any means of disinfection in use • the review of any current control measures • the local environment. Most premises will have a simple, domestic-type, hot and cold water system. However, these can vary in size, scale and complexity. All can present a foreseeable risk of exposure to legionella. Further information on managing the risk from these systems can be found at **www.hse.gov.uk/legionnaires/hot-and-cold.htm**. In many cases, the risk will be low, particularly where: • the building is small without individuals especially 'at risk' from legionella bacteria • daily water usage is inevitable and sufficient to turn over the entire system • cold water is directly from a wholesome mains supply (no stored water tanks) • hot water is fed from instantaneous heaters or low volume water heaters (supplying outlets at 50°C) • the only outlets are toilets and wash hand basins (i.e. no showers). Where a simple assessment shows that the risk is low and being properly managed, you may need to take no further action. However, it is important to review your assessment regularly in case of any changes in your system, and specifically if there is reason to suspect it is no longer valid. Other systems may present a risk of exposure as well e.g. humidifiers, indoor ornamental fountains etc. Here, the additional guidance provided at **www.hse.gov.uk/legionnaires/other-risk-systems.htm** will be of use in managing any risk posed by them.

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Action	Guidance
2. Implement any additional precautions that might be necessary.	These should ensure that your water system is operated and maintained under conditions that prevent or adequately control the growth of legionella bacteria. If you identify a risk that you are unable to prevent, you must put in place a plan (referred to as a written control scheme) that will help you manage this. This should describe: • your system, e.g. develop a schematic diagram • who is responsible for carrying out the assessment and managing its implementation • the safe and correct operation of your system • what control methods and other precautions you will be using • what checks will be carried out, and how often will they be carried out, to ensure the controls remain effective. You should also monitor any control measures applied and keep records of these and other actions taken, such as maintenance or repair work. If you decide to employ contractors to carry out water treatment or other work, you should check that they can do this to the standard needed. You should also check that they have adequate insurance to cover the work they are being asked to perform.
3. Ensure that any employee or volunteers with any specific role to play in maintaining water systems or monitoring them know how to do this safely. Make a note of any information or training that is provided to individuals.	Any persons involved in the control of legionella (such as monitoring, flushing, fitting and maintaining water systems) must be appropriately trained. The level of training required will depend on the complexity of the systems involved and the tasks required of them. This may include information, instruction and training on the significant findings of any risk assessment and the precautions to be taken. This may need to be reviewed where circumstance change.
4. Keep records of what you have done.	If you are an employer, you should keep a record of any risk assessment that you make. You may also want to keep a number of other records. Further guidance is available at **www.hse.gov.uk/legionnaires/what-you-must-do.htm**. Records should be kept whilst they are current and for a period of at least two years afterwards. Records of any monitoring, inspection, test or check should be kept for at least five years.
5. Document your arrangements and responsibilities for legionella. Review these where you suspect that they are no longer valid.	If you have prepared a health and safety policy, record these as part of it.

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Want to know more?

Further useful resources are available at
www.hse.gov.uk/legionnaires/index.htm

Note: if you are in Ireland, Northern Ireland, Jersey, Guernsey or the Isle of Man, then regional variations might apply. In this instance, you should check the guidance provided by the Enforcing Agency for your region. This will be freely available on their website.

Risk advice line

(provided by Ecclesiastical professionals or external specialists)

Phone: **0345 600 7531**
Email: **risk.advice@ecclesiastical.com**

Risk specialists are on hand to advise you on a range of topics, including:

- property protection, security, business continuity planning
- health and safety, food safety, environmental management
- construction safety, fire safety, occupational health, water safety or asbestos.

Available Monday to Friday 9am – 5pm (excluding public and bank holidays).

For further information speak to your insurance advisor or call us on **0345 60 20 999**

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