

Legionella Bulletin

HSE Entertainment, Leisure, Commercial & Consumer Services Sector

This bulletin contains information for industry stakeholders and duty holders on managing the risks from exposure to legionella bacteria. It also provides an update on the work currently being carried out by HSE and Local Authorities to raise awareness of the issue and promote effective control of the risk.

What is Legionellosis?

Legionellosis is a term that describes illness caused by exposure to legionella bacteria. Legionnaires' disease is the name given to a form of pneumonia caused by exposure to the bacteria and is potentially fatal. Legionella bacteria can also cause an influenza-like illness but without pneumonia called Pontiac fever. Everyone is susceptible to infection 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
- anyone with an impaired immune system

Legionella bacteria are widespread in natural water systems. However, outbreaks of the illness mainly occur from exposure to legionella bacteria growing in systems within the built environment where water is maintained at a temperature high enough to encourage growth, and the water contains nutrients e.g. cooling towers, evaporative condensers, spa pools, and hot water systems used in all sorts of premises (work and domestic).

People can catch legionnaires' disease by inhaling small droplets of water, suspended in the air, containing the bacteria. Certain conditions increase the risk from legionella bacteria, including:

- water temperature between 20–45 °C, which is suitable for growth
- creating and spreading breathable droplets of water, e.g. aerosol created by a cooling tower, or water outlets
- stored and/or re-circulated water
- a source of nutrients for the organism e.g. presence of sludge, scale or fouling

If conditions are favourable, the bacteria can grow increasing the risks of contracting legionnaires' disease. Therefore, it is important to control the risks by introducing measures outlined in the HSE guidance Legionnaires' disease - The Control of Legionella bacteria in water systems (L8)[1].

Health and Safety Executive (HSE) Initiative

In 2011, HSE conducted a review of legionnaire's disease outbreaks in the UK covering the previous 10 year period. The review revealed common failings in the control of legionella bacteria across a range of industries and a potential risk of further outbreaks, such as those in Edinburgh and Stoke in 2012.

As a result of the review, HSE has organised a range of interventions for 2013/14, focussing on securing compliance with the legislation and on promoting good practice.

Experience shows that factors leading to increased risk include;

- departures from planned maintenance schedules (allowing plant conditions to deteriorate, and providing longer periods for problems to develop);
- changes in the process without revision of policies and procedures (leading to changes in the risks, or rendering existing precautions ineffective);
- staff/contractor changes (leading to a loss of knowledge);
- intermittent use of plant (resulting in inconsistent control measures);
- a combination of the above and unusual weather conditions (e.g. very warm weather causing more rapid multiplication of bacteria)

Cooling towers and evaporative condensers

If you operate a cooling tower or evaporative condenser, you should have already received a letter from HSE requesting that you complete an on-line questionnaire. Individual responses to the questionnaire will be used to prioritise inspections of sites.

Spa pools and hot and cold water systems.

In September 2012 HSE released a Safety Notice for operators of spa pools, hot and cold water systems or other systems, which potentially create water mists, for example, humidifiers (<http://www.hse.gov.uk/safetybulletins/legionella2.htm>), to emphasise the fundamental need to have assessed the risks of exposure to legionella and to have taken appropriate measures to eliminate or where this is not reasonably practicable, control the risk.

HSE Inspectors and Local Authority Environmental Health Officers may look at control of legionella risks when they visit your premises.

Further information is available from the HSE web site at

<http://www.hse.gov.uk/legionnaires/index.htm>

Specific guidance on controlling legionella risk in spa pools has been jointly produced by HSE and the Health Protection Agency (now Public Health England). This can be obtained from the HPA web site at

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1200471665170?p=1158945066455