

## Legionnaires' Disease

### Legionella control during Covid-19 Shutdown

As a result of the Covid-19 pandemic many business and their premises are temporarily closed or only used on a reduced occupancy basis. Therefore, there is a risk of legionella developing in water systems that remain dormant. Business owners, landlords and any property managers must be aware of this and put into place procedures to control that risk.

All water systems need to be monitored but the main risks are systems or equipment which may involve a risk of aerosol i.e where there are showers, hose pipes, sprinklers, washers, irrigation systems, spas, cooling towers, evaporative condensers etc

In order to manage the risk, you must implement a suitable flushing regime which is recommended to take place on a weekly basis or other measures such as draining the system if the building is to remain unused for a long period of time.

If there are any lapses in flushing regimes, systems may need to be cleaned and disinfected prior to building reoccupation. The guidance below says if premises have been shut for a month or more then systems should be subject to full commissioning:

- Flush out the system (avoid generating aerosol)
- Disinfected to 50ppm of free chlorine or equivalent biocide.
- Heat water to 60°C to all parts of the hot water system.
- Full risk assessment, documentation and monitoring

Further guidance is available at:

- European Society for Clinical Microbiology and Infectious Disease on [managing Legionella in building water systems](#)

Also see:

- European Society for Clinical Microbiology and Infectious Disease on [managing Legionella in building water systems](#)
- Health and Safety Executive
- Legionella Control Association
- European Society for Clinical Microbiology and Infectious Disease on [managing Legionella in building water systems](#)
- [Pool Water Treatment Advisory Group](#) for premises such as swimming pools, spas and other leisure facilities.

### Cooling Towers and Evaporative Condensers

What is Legionnaires' disease?

Legionnaires' disease is a type of pneumonia. It was named after an outbreak of severe pneumonia that affected a meeting of the American Legion in 1976. It is an uncommon but serious disease.

Legionnaires' disease occurs more frequently in men than women. It usually affects middle-aged or elderly people, and it more commonly affects smokers or people with other chest problems.

About half the cases of Legionnaires' disease are caught abroad - useful advice on travel can be obtained from the [European Working Group for Legionella Infections](#). The other half are the result of infections acquired in the UK.

How do people get it?

The agent that causes Legionnaires' disease is a bacterium called Legionella pneumophila. People catch Legionnaires' disease by inhaling small droplets of water suspended in the air, which contain the bacteria.

Certain conditions increase the risk from legionella:

- a suitable temperature for growth, 20 to 45°C;
- a source of nutrients for the organism, e.g. sludge, scale, rust, algae, and other organic matter; and
- a way of creating and spreading breathable droplets, eg the aerosol created by a cooling tower or spa pool.

However, remember that **most people exposed to legionella do not become ill**, and **Legionnaires' disease does not spread from person to person**.

What are the symptoms?

The symptoms of Legionnaires' disease are similar to those of flu:

- high temperature, fever and chills;
- cough;
- muscle pains; and
- headache.

In a bad case there may also be pneumonia, and occasionally diarrhoea and signs of mental confusion.

Where does it come from?

Legionella bacteria are widespread in nature, mainly living 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 the water is maintained at a temperature high enough to encourage growth, e.g. cooling towers, evaporative condensers, spa pools, and hot water systems used in all sorts of premises (work and domestic).

Most community outbreaks in the UK have been linked to installations such as cooling towers, which can spread droplets of water over a wide area. These are found as part of air-conditioning and industrial cooling systems.

Fatal cases of Legionnaires' disease have also been associated with spa pool demonstrations.

What measures are there to control legionella?

To prevent exposure to the legionella bacteria, you as a duty holder must comply with legislation that requires you to manage, maintain and treat water systems in your premises properly. This will include, but not be limited to, appropriate water treatment and cleaning regimes.

Remember, legionella can grow in any workplace if the conditions are right - you do not have to work with microbiological agents, eg in a laboratory, for exposure to occur. If you are responsible for any of the water systems described in HSE's Approved Code of Practice (ACoP) and Guidance "**Legionnaires' disease: The control of legionella bacteria in water systems" (L8)** you will need to assess the risk of employees and others in the workplace contracting Legionnaires' disease.

Copies of L8 can be purchased from HSE Books. HSE also publishes several free leaflets and a video explaining legal duties and the control of legionella in cooling systems and hot/cold water systems available from HSE Books.

Further information about Legionnaires' disease can be found on the Health & Safety Executive (HSE) website.

- Go to The [HSE website](#).