

# 5.6 Legionella

Related Credits: LBI-R3: Legionella Prevention

Legionnaires disease is a potentially fatal form of pneumonia which principally affects those who are susceptible due to age, illness, immunosuppression, smoking etc.

HSE Approved Code of Practice (ACoP) L8: Legionnaires' Disease — The Control of Legionella Bacteria in Water Systems applies to plant and water systems which may present a particular risk potential by releasing a spray or aerosol during operation or when being maintained.

Relevant water based systems include but are not limited to:

- Water systems incorporating a cooling tower or an evaporative condenser.
- Hot and cold water systems.
- Other plant and systems containing water which is likely to exceed 20°C and which may release a spray or aerosol during operation OR during maintenance.
- Humidifiers.
- Air washers.
- Spa baths and Pools.
- Car / bus washes.
- Wet scrubbers.
- Fountains and Water features (Indoor and Outdoor).
- Sprinkler and hose reel systems.

## Roles and responsibilities

The design engineers should support the Client in developing guidance including design and operational intent. HSE ACoP L8 requires the owner to appoint an operations manager who should ensure that all responsibilities are clearly defined and formally allocated. The owner is also responsible to ensure that control procedures are carried out to the standard required to prevent the growth of legionella bacteria.

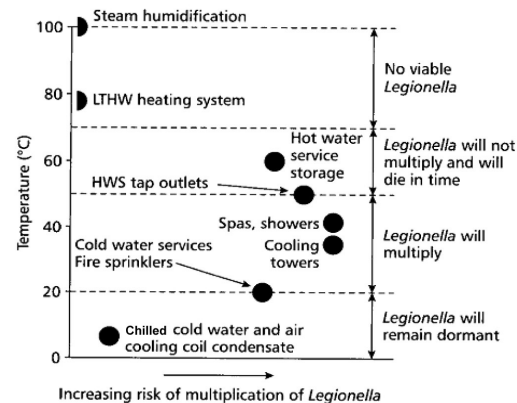


Figure 2. CIBSE TM13: 2002 – Minimising the Risk of Legionnaires' Disease.

Checklist 3: Other risk systems

System/service	Task	Frequency
Ultrasonic humidifiers/foggers and water misting systems	If equipment fitted with UV lights, check to ensure effectiveness of lamp (check to see if within working life) and clean filters	Six monthly or according to manufacturer's instructions
	Ensure automatic purge of residual water is	As part of machinery shut down

Checklist 2: Hot and cold water services

Service	Task	Frequency
Hot water services	Arrange for samples to be taken from hot	Annually
<b>Recommended inspection frequencies for risk systems</b>		
<b>Checklist 1: Cooling water installations</b>		
System/service	Task	Frequency
Cooling towers and evaporative condensers	Monitor water quality, water use and bioactive/chemical use to assess and ensure effectiveness of water treatment regime, including key chemical and microbiological parameters, and observations of internal condition of pond, pack and water	See Table 1
	Central control function, conductivity sensor calibration, blowdown function, temperature of water discharge, condition of spray/nozzles, clarifiers, pack, pond, sensorless heater, fans and control automation	Monthly to three monthly, according to risk (See Table 1)
	Clean and disinfect cooling towers/evaporative condensers, make-up tanks and associated systems, including all wetted surfaces, descaling as necessary. Ponds should be removed and cleaned where practicable	Six monthly
		Annually
		Quarterly or as necessary
Little-used outlets	Flush through and purge to drain, or purge to drain immediately before use, without release of aerosols	Weekly

Dental equipment	Drain down and clean	At the end of each working day
Carbus washes	Check filtration and treatment system, clean and disinfect system	See manufacturers' instructions
Indoor fountains and water features	Clean and disinfect ponds, spray heads and make-up tanks including all wetted surfaces, descaling as necessary	Interval depending on condition

Appendix 1, HSC – Legionnaires' Disease, The control of legionella bacteria in water systems. Approved Code of Practice and Guidance.