



Wilkins Safety Group

Air Handling Units

Information on the health risks associated with air conditioning systems

Air conditioning systems which use evaporative condensers in their cooling process.

Some air conditioning systems use evaporative condensers in their cooling process, these types of system must be registered with the local authority under The Notification of Cooling Towers and Evaporative Condensers Regulations 1992.

This sort of air conditioning system uses water in an evaporative cooling process and has the potential to cause outbreaks of disease if not properly maintained, e.g. by producing Legionella bacteria which can cause Legionnaires Disease.

Given the right set of circumstances legionella can multiply and cause infection in people who inhale airborne water droplets containing the bacteria.

For this reason all air conditioning systems which use evaporative condensers within an area must be registered with the local council's Environmental Health service.

The primary purpose of cooling tower and condenser registration is ensure that the relevant enforcing authority can be satisfied that suitable control measures are in place to protect employees and the general public from the risk of infection by organisms such as legionella.

[Download the Cooling Tower and Evaporative Condenser registration form](#) in Adobe Acrobat format.

form not yet operative >> [e-mail an enquiry to your local council](#)

Risks of Legionnaires' disease

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Legionnaires' disease is a type of pneumonia. 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°C to 45°C;
- a source of nutrients for the organism, eg 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.

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, eg 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.

To prevent exposure to the legionella bacteria, employers must comply with legislation that requires them to manage, maintain and treat water systems in their premises properly. This will include, but not be limited to, appropriate water treatment and cleaning regimes.

The Health and Safety Executive (HSE) have produced an Approved Code of Practice and Guidance on controlling legionella bacteria in water systems to assist employers in assessing the risk of employees and others in the workplace contracting Legionnaires' disease. Copies of the guidance can be obtained from HSE books.

Useful HSE web site links

- Information about Legionnaires' Disease - www.hse.gov.uk/biosafety/diseases/legionnaires.htm
- HSE Bookfinder - www.hsebooks.com