

8. Low-use sections in a water system should be flushed out weekly.
9. Clean water filters on a regular basis.
10. Avoid the use of materials that can harbour bacteria in the water system.
11. Managers of premises should carry out a risk assessment on site in order to identify and assess the risk of legionnaires' disease from water sources and determine any precautionary measures required.
12. Particular attention should be paid to premises or parts of premises that operate on a periodic basis (e.g. closed or partially closed hospital wards, seasonal hotels, hostels etc.) In these situations a full maintenance and cleaning programme should be carried out on the water system/air conditioning system prior to re-opening.

13. Run taps and showers that are not in regular use at least once a week. Water in calorifiers should be brought above 60 degrees C for 1 hour in these cases before being used. Calorifier temperatures should be hot enough to achieve temperatures of 60 degrees C at the taps and appliances during the procedure. Ensure that each tap and appliance should be run sequentially at the full temperature. The risk of scalding should be considered and particular care taken to ensure that water services are not used, other than by authorised personnel until water temperatures have dropped to their normal operating levels.

14. Blending or mixing valves at or near the taps and showers may be used to reduce the water temperature to greater than or equal to 43degreesC with a view to reducing scalding risk. These need to be placed as close to the point of use as possible.

Remember, Legionella can be controlled by proper cleaning and maintenance of all parts of the water system, proper temperature control and the avoidance of water stagnation in all parts of the water system.

For further information on this topic please refer to the Health Protection Surveillance Centre on www.hpsc.ie



HSE ENVIRONMENTAL HEALTH



Issued by the HSE Environmental
Health Service
Date of Issue: January 2009

LEGIONNAIRES DISEASE

INTRODUCTION

Legionella is a common bacterium which may be found in many environmental water sources including potable water supplies. It grows best where there are deposits of sludge, algae, slime, scale, organic matter, etc. such as can be found in water storage tanks, showerheads and similar water fittings.

Water temperatures between 20 – 45 degrees C favour the growth of Legionella.



The bacterium is resistant to the levels of chlorine usually used to treat drinking water and therefore chlorination of waters does not eliminate Legionella.

The bacteria enter the lungs by breathing in fine water droplets (aerosols/mist) which contain the organisms. The inhalation of Legionella contaminated water can result in a condition known as legionnaire's disease. The infection is not contagious and cannot be caught from another person.

LEGIONNAIRES DISEASE

There are on average about 10 cases of legionnaires disease reported each year in Ireland. It can affect all age groups but it is more common in those over 50 years of age. Smokers, heavy drinkers and those with chronic illnesses whose immune systems are weakened are also at greater risk. Males are at higher risk than females.

WHAT ARE THE SIGNS AND SYMPTOMS?

The incubation period is 2-10 days. Symptoms usually appear 5-6 days after infection but may take longer.

The illness usually starts with flu-like symptoms including fever, tiredness, headache, and muscle pains. This is followed by a dry cough and breathing difficulties that may progress to a severe pneumonia.



Some people also develop diarrhoea or may become confused. Death occurs in 10-15% of otherwise healthy people and may be higher in some groups of patients.

SOURCES OF LEGIONELLA

The following are potential sources of Legionella: hot and cold water distribution systems, air conditioning systems, condensers, humidifiers, water taps, showerheads, water fountains, water features, whirlpool baths, Jacuzzis, spas, respiratory therapy equipment, fire sprinkler systems, misting systems, vehicle washes, etc.

PREVENTION OF LEGIONNAIRES' DISEASE

The risk of multiplication and transmission of Legionella bacteria can be prevented by regular maintenance and cleaning of water distribution systems, water-cooling towers in air-conditioning systems, etc.

THE FOLLOWING STEPS SHOULD BE TAKEN AS A GENERAL GUIDE TO OPERATION, MAINTENANCE AND CLEANING.

1. Water heaters in hot water systems must heat the water in the calorifiers to 60 degrees C minimum.



2. Water temperature should be delivered to all outlets such as taps, showerheads etc. at below 20 degrees C or above 50 degrees C. Remove rarely used outlets such as taps, showerheads and deadlegs in the water system.
3. Ensure that the water in storage tanks turns over at least every 24 hours.
4. All water storage tanks must be accessible for inspection and cleaning.
5. All outlet fittings and water storage tanks must be regularly cleaned and flushed out.
6. Avoid water stagnation in any part of the water system.
7. Low-use outlets should be installed before high use ones to ensure maximum flow through the system i.e. to avoid stagnation.