Legionnaires' disease: are you at risk?

Government legislation requires all healthcare facilities to undertake testing of their warm water systems for the presence of legionella bacteria every twelve months. Testing only costs $50.35*(ex. GST) and simply requires a 70 mL jar of water from the tap to be tested.

What is Legionnaires' disease?

Legionnaires' disease is an infection of the lungs caused by exposure to legionella bacteria.

Legionella bacteria are found in low levels in many areas of the environment, including lakes, rivers, creeks and soils. They may also be present in artificial environments, such as air-conditioning cooling towers and warm water systems. These systems provide ideal conditions for growth of the legionella bacteria well beyond normal environmental levels. The presence of other water-borne bacteria, amoeba and algae, can further enhance the growth of legionella bacteria by providing them with nutrients and protection from chlorine that is present in the systems.

Warm water systems were introduced into healthcare facilities to avoid accidental burns during showering of patients, by reducing the temperature of the water at the tap from the usual 60°C-70°C to a much safer 30°C-50°C. The temperature of the water in the warm water systems is regulated by a thermostatic mixing valve (TMV) near the water outlets. The TMV mixes hot and cold water together before the water reaches the tap or showerhead.

The TMV maintains the temperature of the water between 30°C and 50°C which, whilst safer for patients, is an ideal temperature for legionella bacteria to multiply to very high numbers, despite the presence of the usual levels of chlorine. The risk of contamination increases if the system is not regularly flushed or disinfected. It is essential that such systems have microbiological testing performed at regular intervals to check for the presence of legionella bacteria.

Legionnaires' disease is a type of pneumonia caused by *Legionella pneumophila*. There are 39 types of *Legionella pneumophila* but most pneumonia is caused by type 1. Legionnaires' disease can be life-threatening.

Pontiac fever is also caused by legionella bacteria, however this flu-like disease is milder, non-pneumonic and non life-threatening.

How is Legionnaires' disease spread?

The disease is contracted by inhaling water droplets, spray or mist from taps, showerheads, therapeutic pools and spas which contain legionella bacteria.

The disease is not spread from person to person.

The risk of contracting the disease is increased for those people whose immune system is already under stress from an illness or medical treatment. Diabetics, those with chronic lung disease, heart or kidney disease, the elderly, smokers and heavy drinkers are most at risk from Legionnaires' disease. Males are more at risk than females.

Legionnaires' disease: are you at risk?

Section 7 of the Policy Directive from NSW Health entitled *'Water-Requirements for the Provision of Cold and Heated Water'* states that you must ensure the water from the outlet is free of Legionella to a level of 10 colony forming units (cfu/mL).

NSW Health have a second Policy Directive on this topic: *'Microbial Sampling – warm water systems including thermostatic mixing valves.'*

In addition, NSW Health have a third Policy Directive entitled *'NSW Code of Practice for the Control of Legionnaires Disease.'*

These collectively cover the requirements for registering, using and maintaining a regulated warm water system. Specifically, the documents outline the minimum requirements for Legionella testing, which the legislation states must be performed by a laboratory accredited by the National Association of Testing Authorities (NATA). A copy of these documents can be obtained from the following website:

www.health.nsw.gov.au/policies

How do I arrange for testing to be performed on my warm water system?

Our Sonic Food & Water Testing Laboratory is located in Penrith and has been performing food and water testing for more than 20 years throughout NSW. As a NATA-accredited provider (#4034), Sonic Food & Water Testing performs a wide range of microbiological tests using Australian Standard methods.

What type of sample is required?

The test requires a 70 mL jar of water from the tap to be tested. This jar contains a special preservative for legionella testing and looks similar to a normal urine container. The sample must be kept refrigerated until it is picked up by the courier and the facility name, date and time of collection must also be clearly displayed on the sample jar.

How do I obtain the sample jars to test my system?

Simply call the laboratory on (02) 4734 6580 and request sufficient jars for your testing needs. The jars, together with collection instructions and a request form, will be sent to you with the next available courier.

How often do I need to test?

The guidelines require testing warm water systems twelve monthly.

How will I be notified of the results?

All reports are printed on NATA endorsed letterhead and signed by a NATA-approved signatory for legionella testing. All results will be mailed to you but may also be faxed or emailed to you upon request.

All positive results will be phoned and faxed or emailed to you as soon as they become known.

Our information sheet entitled *'Instructions for treating Thermostatic Mixing Valves'* which gives guidance with the procedure for follow up of positive Legionella TMV water tests, can also be provided at this time if requested.

Price: $50.35* (ex. GST)

If you have any enquiries or require further information, please do not hesitate to contact the Sonic Food & Water Testing Laboratory on:
P (02) 4734 6580 | **Toll free** 1800 048 993 | **F** (02) 4732 3306 | **E** infofwt@dhm.com.au
Sonic Food & Water Testing | 31 Lawson Street | Penrith | NSW 2750

*correct at time of printing