



Legionnaires' disease: information on sampling of household water systems for householders

What is Legionnaires' disease?

Legionnaires' disease is a serious and potentially fatal lung infection caused by legionella bacteria. It is usually caught by breathing in small droplets of contaminated water. Anyone can develop Legionnaires' disease, but people are more at risk if they are more than 50 years old, are smokers, have cancer, diabetes, and chronic respiratory or kidney disease.

How does Legionella spread?

Legionella bacteria are common in natural sources of water, such as ponds, rivers and lakes. Sometimes they find their way into man-made water systems, such as domestic water supplies, cooling towers and spa pools.

Legionella bacteria can grow and reproduce when:

- water temperatures remain between 20-45°C (68-113°F)
- there is sediment in the water that the bacteria can use for food – such as rust, algae and limescale
- the water is stagnant.

To cause infection, legionella bacteria would normally need to be inhaled within tiny water droplets (aerosols) which can go deep into the lungs; therefore, infection would only occur after being exposed to a contaminated water source that also produces aerosols such as showers, taps or a spa pool.

When does your water system allow legionella to grow out of control?

Legionella can grow out of control in the water system when:

- the water system has not been used for a period of time (eg over one week) or when there are taps, showers or wash basins that are rarely or never used
- appropriate water temperatures have not been maintained, eg the hot water has not been hot enough, or the cold water has not been cold enough
- a water system has been altered, ie changes have been made to the existing water system
- other potential legionella sources have not been adequately managed, for example, domestic spa pools within the property, domestic swimming pools, garden hose pipes, pressure washing devices, greenhouse watering systems and humidifiers.

Why are we sampling?

Sampling of your household water system may be recommended by your local authority environmental health team. Sampling is carried out as part of the environmental investigation of Legionnaires' disease cases.

Each situation is different, but a household water system may be sampled if a confirmed case of Legionnaires' disease lives in the house and either the home is a likely source of infection or the home needs to be eliminated from a wider range of possible sources under investigation.

If sampling of the water system is required, it would normally be carried out by the local authority's environmental health team who will need permission from the homeowner for this to take place. If the homeowner has contracted Legionnaires' disease and is not well enough to discuss this, the next of kin and/or person in control of the property at the time will be contacted and the matter discussed with them. If no such person can be identified, permission will be sought from the homeowner when they have recovered.

Testing of water samples normally takes 10 to 14 days from the time they are received in the laboratory until results become available.

The person who carried out the sampling will inform you of the test results, offer advice about managing the legionella risk in the household's water system and inform you if any corrective work is needed.

What happens next?

If the results of sampling show that the household water system has high levels of legionella, then you will be advised to arrange for corrective work to be undertaken by an appropriate contractor.

Any corrective work that is required to a water system will have to be paid for by the owner of the property. The local council will not pay for this unless it owns the property itself.

It should be noted that further sampling is not routinely recommended for households after corrective work is completed.

Where can I get more information about Legionnaires' disease and sampling of water systems for Legionella?

1. NHS Choices – Legionnaires' disease
<http://www.nhs.uk/conditions/Legionnaires-disease/pages/introduction.aspx>
2. Guidance on Sampling from Households:
www.gov.uk/government/publications/legionella-species-sampling-of-households
3. Legionella Control Association: www.legionellacontrol.org.uk/

First published: October 2016

© Crown copyright 2016

Re-use of Crown copyright material (excluding logos) is allowed under the terms of the Open Government Licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3/ for terms and conditions.