Water Hygiene

Introduction

This factsheet explains, in general terms, two types of bacteria associated with water hygiene. These are Legionella and Pseudomonas Aeruginosa (hereafter P. aeruginosa) and their associated health risks. It also outlines simple precautions you can take to control those risks within your own home.

What is Legionella?

The Legionella bacteria lives in natural water sources such as rivers, lakes, and reservoirs, but usually in low numbers. Since Legionella bacteria are widespread in the environment, they may also contaminate and grow in purpose-built water systems such as, hot, and cold-water systems, whirlpool spas and indoor ornamental water features.

Sediment, scale, and organisms present in water systems such as bacteria, amoeba and algae can provide the necessary nutrients for the Legionella bacteria to survive and multiply. Legionella bacteria can survive in low temperatures and is most likely to reproduce rapidly in water systems where the temperature is between 20-45°C. High temperatures of 60°C and over will kill them.

Legionellosis is the collective name given to the pneumonia-like illness caused by the Legionella bacteria. This includes the most serious Legionnaires' disease, as well as the similar but less serious conditions of Pontiac fever and Lochgolihead fever.

What is P. aeruginosa?

Pseudomonas is a group of bacteria commonly found in the environment, like in soil and water. It can also thrive in moist places indoors, such as bathrooms, including taps and shower heads, face flannels and sponges. The most common type causing infections among humans is P aeruginosa.

How do people get Legionnaires disease?

People catch Legionnaires disease by breathing in air containing the bacteria. The bacteria are present in the form of an aerosol that might not even be visible. These aerosols form from fine droplets produced by running a tap or shower or flushing a toilet. You cannot usually get it from drinking water or passed from one person to another.

It is uncommon to catch Legionnaires disease, but everyone is susceptible to infection. Those at higher risk, include:

- People over 45 years of age.
- Smokers and heavy drinkers.
- People suffering from chronic respiratory or kidney disease.
- Anyone with an impaired immune system.

How do people get P. aeruginosa?

It is impossible to avoid contact with P. aeruginosa, it is everywhere, and water is its natural environment. You can get a P. aeruginosa infection in several different ways. It can grow on fruits and vegetables, so you could get sick from eating contaminated food. It also thrives in wet areas such as lakes, pools, hot tubs, bathrooms, kitchens, and sinks, taps, drains and plumbing parts. Everyday items in our bathrooms can harbour bacteria such as cleaning cloths, mops, shower mats and face flannels and sponges.

It can spread by:

- Contact with contaminated surfaces or equipment.
- Exposure in the soil or water.
- Person-to-person contact, like from contaminated hands.

If you are in good health, you do not have to worry about getting severely ill from a P. aeruginosa infection. You may only get a mild skin rash or an ear or eye infection. Or you may have already had a P. aeruginosa infection and did not realize it. For instance, P. aeruginosa can cause swimmer's ear and skin rashes from hot tubs.

But if you are sick or your immune system is weakened, P. aeruginosa can cause a severe infection that does not always respond well to antibiotic treatment. In some people, it can be life-threatening. P. aeruginosa is one of the most common and serious infections people get from being in hospital.

The most severe infections occur in health care settings, such as hospitals. P. aeruginosa can easily grow in humidifiers and types of medical equipment (catheters, for instance) if they are not thoroughly cleaned. If health care workers do not wash their hands well, they can also transfer the bacteria from an infected patient to you.

What are symptoms of Legionella bacteria?

The symptoms are like those of flu, i.e. high temperature, fever and chills, cough, muscle pains and headache. In severe cases, there may also be pneumonia and, occasionally, diarrhoea, as well as signs of mental confusion.

Not everyone who encounters Legionella bacteria becomes ill. If you suspect that you or someone in your home has contracted Legionnaires disease, you should contact your doctor urgently.

If your GP diagnoses Legionnaires disease, contact us immediately so that water analysis and any necessary treatment of your water system can take place.

What are symptoms of P. aeruginosa?

P. aeruginosa can cause an infection of the blood, ears, eyes, lungs, skin and urinary tract and symptoms can include increased coughing, mucus, tiredness, and a reduction in lung capacity.

If your GP diagnoses P. aeruginosa, contact us immediately so that water analysis and any necessary treatment of your water system can take place.

How to reduce the risk of Legionella in your home

Where we have responsibility for communal water systems, we will arrange for a competent person to assess the risk from the Legionella bacteria and we will introduce control measures to eliminate or reduce any identified risks, as far as is reasonably practicable. If you would like to know about the risk and associated control measures for your specific scheme, please contact us.

As well as any control measures we carry out as your landlord, there are simple steps you can take to help prevent the bacteria growing rapidly within your own home. These can include:

- Where you have one, keep your hot water cylinder thermostat set at 60°C as water at this temperature will kill any Legionella bacteria. **Warning**: Be aware that water at and above this temperature can cause scalding so we may have fitted thermostatic mixing values (TMV's) to your water outlets to reduce this risk. A TMV will regulate the hot water outlet temperature to between 39°C and 43°C but if you have any concerns about the temperature of water from your tap, please let us know.
- Keeping your shower head and hose free from a build-up of lime scale, mould, or algae growth by de-scaling every three months or more frequently if necessary. You can use any domestic de-scaling solution that you can buy from hardware shops (the same as you would for your iron or kettle). After de-scaling, flush the shower thoroughly and soak in bleach, which helps sterilise and kill any bacteria.
- Cleaning the taps in your bath, basin, and sink, including any spray inserts, by brushing the scale off with a nylon brush and/or wiping them with a domestic de-scaling solution (the same as the one used for shower heads).
- If you go on holiday or leave the property for a week or more, on your return, flush your toilet, with the lid down, and run all taps and your shower continuously for approximately two minutes to flush out any bacteria. You should run the water slowly to start with to avoid spray. You can then run it faster. When running the shower, you should remove the hose from its stand and place it directly over the waste outlet.
- Letting us know of any deposits such as rust or any unusual matter flowing from your taps.
- Letting us know if the hot water is not heating properly or if there are any other problems with the water system.

How to reduce the risk of P. aeruginosa in your home

The main way to reduce the risk of P. aeruginosa is by maintaining a high level of cleanliness and hygiene and reducing the exposure to potentially contaminated water.

- Regularly run your taps and shower to reduce the risk of water-based bacteria (germs) building up as described in the control of the Legionella bacteria.
- Keep all the water outlets clean and free from lime scale.
- Always clean your taps and shower head with a clean cloth before the rest of the bathroom. There is a risk of contaminating your taps and shower head with microorganisms if the same cloth is used to clean the wash hand basin or toilet bowl.
- Regularly disinfect your shower mat or regularly replace if mould spores become visible.
- Do not drape anything over the taps or over the showerhead e.g. a shower mat that may harbour bacteria.
- Regularly clean high-touch surfaces in your home. This includes your sink, basin, toilet handles, and light switches.
- Regularly wash your face flannel, sheets, and towels.
- Rinse fruits, vegetables, and salads before eating.
- Clean your water bottles. Sterilize with boiling water between each use.

General bathroom hygiene

Bathrooms are a space where we shower, use the toilet, leave damp towels and bath and shower mats. Bacteria, yeast, mould and even viruses need moisture to survive and flourish. Bathrooms have regular water flowing and steam being created, not to mention flushing toilets.

If we do not put the seat down when we flush the toilet, the result is an aerosolization of bacteria and virus particles that spread around the bathroom, some of these particles will inevitably end up settling on bath and shower mats. Mould growth can build up around the suckered feet which stick shower mats to the floor, and mould spores, released by running hot water, can rise in a cloud above the water and exacerbate respiratory infections.

For more information on Legionella

Visit the Health and Safety Executive website at www.hse.gov.uk/legionnaires