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Water Safety at Home:

How to avoid Legionnaires' disease

ASHFORD BOROUGH COUNCIL

What is Legionnaires' disease?

Legionnaires' disease is caused by bacteria called Legionella and is an uncommon form of pneumonia that may have serious consequences, particularly for older people.

The bacteria causing the disease exist naturally in the environment including rivers, lakes and reservoirs, usually in low numbers. They can also live in purpose-built water systems such as hot and cold water systems, taps, showers, spa pools and hot tubs. Infection occurs if you inhale tiny water droplets containing the bacteria. The bacteria must be inhaled into the lungs to cause the disease.

Legionella can survive in low temperatures, but thrive at 20 C (68 F) to 50 C (122 F). Over 50 C the bacteria starts to die. Bacteria is killed instantly at 60 C (140 F) which is why some recommend storing water at this temperature, however this increases scalding risk and heating costs.

If conditions are favourable, the bacteria may multiply, creating conditions in which the risk from Legionnaires' disease increases. It is therefore important to control the risks.

How can I reduce the risk of Legionella in my home?

The risk of Legionella is very low, but you can take the following precautions. These are particularly important when you move into a new home or are returning after a week or more absence.

Hot Water Systems

- Hot water systems have the potential to harbour Legionella in places where there may be stagnant or warm water. Examples include showerheads, shower hoses, hot water taps, garden hoses and hot water storage vessels.
- It is important to run your shower or bath continuously for a few minutes when you move in /return after a long absence in order to flush through any bacteria.
- Hot water tanks should ideally be set to store water at 55 C or more to reduce the risk of Legionella. 55 C is sufficient to cut grease in kitchen sink but reduces risk of scalding. Any bacteria in the system will be killed within a few hours at this temperature. Even at this temperature, caution needs to be observed particularly where children, or older people or anyone with delicate skin use the appliances. It is

necessary to lower the water temperature at sanitary outlets to around 48 C to reduce the risk of scalding.

- Hot water systems and filter devices attached to shower and tap outlets should be maintained regularly according to the manufacturer's instructions.
- All hot and mixed sanitary outlets (shower, hand basin, bath taps) that are not used on a regular basis should be flushed weekly by turning on the hot water at full flow rate and run for at least 15 seconds once it has reached maximum temperature. Flushing will help eliminate stagnant water and minimise the multiplication of bacteria that may be present.
- All shower heads, taps and filter devices should be thoroughly cleaned and de-scaled on a regular basis to prevent the build-up of lime scale, mould and algae growth that can harbour bacteria.

Cold Water Systems

- Cold water systems also have the potential to harbour Legionella in places where there may be stagnant or cold water, but due to the lower temperature bacteria is unlikely to multiply. Examples include cold water storage tanks, cold water taps and toilet cisterns. Cold water systems that can be indirectly heated by adjacent hot appliances or the sun may have the potential to provide and environment where bacteria can multiply, e.g. garden hoses and water butts.
- Modern houses tend not to have cold-water storage tanks, with all services being mains water supplied. This is particularly the case if a combination or other such boiler is fitted which supplies hot water on demand (i.e. not hot water cylinder).
- As for hot water systems, the cold water system should be flushed through to eliminate any stagnant water.
- Cold-water storage tanks should be sized to ensure there is sufficient drain off thereby avoiding any stagnation. If you have a large cold-water storage tank but use very little of it (e.g. tend to shower rather than bath) then you need to ensure that its contents are regularly exchanged or reduce its storage capacity to something more appropriate. Alternatively consider having it removed – however, this may well necessitate a major upgrade the plumbing installation which could be expensive.
- Disconnect garden hoses from taps when not in use and allow them to drain out. Flush through initially when using to clear out any stagnant water, especially if spraying or creating a mist.

Please note:

This advice is to help you stay healthy; there is very low risk from hot and cold water systems in dwellings due to the typical regular flushing through of systems in normal daily use and very little evidence of anyone contracting the disease from such systems.

Remember, the risk only presents itself if you inhale infected water into your lungs, so, when flushing through systems please observe caution not to inhale any water droplets.