

Domestic hot tubs/spa pools and Legionella

Advice for households



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Spa pool systems such as hot spas, hot tubs and portable spas can be a source of diseases caused by infectious agents; these can be introduced via bathers, from dirt entering the pool or from the water source itself. The warm water temperatures (between 20°C and 45°C) and deposit such as organic matter, provide ideal conditions for bacterial growth in poorly designed and maintained spa pools.

The environmental conditions of a spa pool are favourable for Legionella bacteria to grow which can cause a severe form of pneumonia (a bacterial respiratory infection) called Legionnaire's disease.

The powerful agitation of water in hot tubs/spa pools leads to the formation of aerosols which can be inhaled, this means that even people not in the immediate surrounding area of the hot tub/spa pool can breathe in the aerosols. This is especially important with Legionella.

Using a poorly maintained hot tub/spa pool can result in other illnesses caused by bacteria, viruses or protozoa such as hot tub rash caused by *Pseudomonas aeruginosa*, which manifests in a red, itchy rash with pus filled blisters, developing a few days after hot tub use or gastrointestinal illness (diarrhoea and vomiting) caused by organisms such as *E.coli* or *Cryptosporidium* with symptoms starting up to 10 days later. The microscopic parasite *Cryptosporidium* can survive in water treated with chlorine or bromine and therefore, adequate filtration is required to remove this parasite from the water. Organisms causing gastrointestinal illness are commonly found in water, food, soil and are excreted by infected persons and animals, even after symptoms have ceased.

Appropriate maintenance, water treatment and regular physical cleaning and disinfection will effectively control not only Legionella and other microbial activity, but also pH levels.

■ DO:

- Always follow the manufacturers' instructions on cleaning and maintenance requirements
- Flush out the wastewater several times in your garden hose before filling your hot tub/spa pool
- Take a shower before using your hot tub/spa pool to remove body lotions and oils from the skin

- Disinfect and clean your hot tub/spa pool regularly – at least once a week while in regular use
- Use chlorine or bromine-based sanitisers (always follow the manufacturers' instruction on the cleaning product)
- Check pH balance of the water at least once a week to make sure pH levels fall between 7.0 and 7.6
- Extract and wash the cartridge filter to get rid of any dirt in between each use, at least once every 3 days. Replace old filters with new ones depending on the intensity of use
- Completely drain and deep clean your hot tub/spa pool every 3-4 months depending on usage
- Inspect the cover for mould, water absorption and any damage in the lining and clean the cover regularly inside and out

■ DON'T:

- Don't wear skin lotions, spray tans and suntan lotions in your hot tub/spa pool
- Don't exceed the maximum number of bathers (one per seat)
- Don't ignore the manufacturers' maintenance instruction or cleaning product directions
- Don't leave your hot tub/spa pool without a cover when not in use
- Don't use your hot tub/spa pool if you have had diarrhoea within the last 14 days

For further information see HSG282 – The Control of Legionella and other infectious agents in spa pool systems (www.hse.gov.uk/pubns/books/hsg282.htm)

