

Spa pool users risk Legionnaire's bug

17:49 14 September 04

[NewScientist.com news service](#)

Deadly *Legionella* bacteria lurk in a quarter of all spa pools, suggests a UK study.

If inhaled, the bacteria can cause Legionnaire's disease, a potentially fatal pneumonia-like condition especially hazardous in infants, the elderly and those with weakened immunity.

Spa pools pose a risk because the hot, swirling waters generate vapours and aerosols which carry the bacteria into bathers' lungs. But the sheer number of contaminated spas has alarmed investigators from the UK's Health Protection Agency (HPA). They want testing for the bacteria made compulsory.

Susanne Surman-Lee and her colleagues at the HPA found that, of the 108 pools they examined in 88 premises, 23 individual pools were contaminated with the bacteria.

Cleared checks

Sixteen of the contaminated pools had been cleared by routine microbiological and safety checks, raising fears that the checks are not thorough enough.

"I was surprised at how bad the maintenance and training was," says Surman-Lee, who presented her results at the agency's annual meeting in Warwick, UK, on Tuesday.

All the offending pools were in facilities considered by the investigators to be mismanaged, or to have poorly trained staff.

Spa pools are tricky to sterilise because bacteria thrive at the relatively high water temperatures. "This makes considerable demands on the disinfection and filtration systems, making it easy for the bacteria to develop and spread if the system is not properly maintained," says Surman-Lee. In many of the worst-maintained facilities, operatives failed to rectify or report unacceptably low levels of disinfection, for example.

Physical purging

And many problems related to the actual design of the tubs, with complex and inaccessible piping underneath that could not be removed and physically purged of pipe-lining film where the *Legionella* bacteria breed and multiply. "You'd need to be tiny to reach some of them," says Surman-Lee.

'Fail to follow instructions for spa pool use are sometimes to blame for encouraging bacterial colonisation, as spending in the tub - or having too many people in it at the same time - makes it harder for disinfectants to work properly.

And sometimes they fail to shower beforehand, bringing oils, soaps and lotions into the tub, all of which serve as nutrients for the bugs.

Surman-Lee is on a panel updating the HPA's guidelines and legislation for managing spa pools, originally published in 1994. She hopes that the revisions will increase pressure on operators to maintain and monitor tubs more thoroughly, and train operatives to a higher standard.

In 2003, there were 27 cases of Legionnaire's disease resulting from visits to spa pools in England, three of them fatal. So far in 2004, there has only been one case.

[Andy Coghlan](#)