

Building owners 'face risks' from chlorine-resistant bacteria

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Buildings with storage tanks can face increased risks from chlorine-resistant bacteria in water, according to researchers at the University of Strathclyde.

A study examining more than 50 tap [water](#) samples found water had very few [bacteria](#) in buildings without cisterns but there was noticeable contamination in buildings where storage tanks were present or plumbing had been altered or otherwise disrupted.

The problem was likely to have been caused by the plumbing changes or improperly maintained cisterns, opening the risk of [bacterial resistance](#) to [disinfectants](#).

The [researchers](#) have recommended precautions should be taken to prevent the introduction of bacteria into the system as a way of minimising contamination risk.

Dr Charles Knapp, a Senior Lecturer in Strathclyde's Department of Civil & Environmental Engineering, led the study. He said: "Water supplies in the UK are highly regulated and bacterial contamination tends to be minimal, with the use of chlorination to control its levels.

"However, water companies do not have control over the structure and maintenance of plumbing systems in buildings and the contamination we found tended to be in properties where the plumbing disrupted or water was stored in some way.

"The surviving bacteria may have developed chlorine resistance; the best solution to this is to prevent bacteria from contaminating the system.

"What we have found in this study related to the actions of water users, who need to be aware of the risks and have them managed appropriately, with proper safeguards."

More information: Sadia Khan et al. Relationship between antibiotic- and disinfectant-resistance profiles in bacteria harvested from tap water, *Chemosphere* (2016). [DOI: 10.1016/j.chemosphere.2016.02.086](https://doi.org/10.1016/j.chemosphere.2016.02.086)

Provided by University of Strathclyde, Glasgow

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