



Photo: peterschreibermedia/123RF.com

Case study: Legionella don't like it hot

September 16, 2021 | Simone Kral

Topics: Wastewater | Climate Change & Energy | Drinking Water

It is well known that Legionella bacteria can contaminate drinking water systems in buildings. A case study published in Aqua & Gas by Eawag and the Lucerne University of Applied Sciences and Arts now shows how they can be controlled by different temperature strategies.

Legionella are bacteria that occur, among other things, in drinking water systems and can cause fatal pneumonia in humans (Legionnaires' disease). In Switzerland, setting high temperatures at the outlet of the water heater/hot water tank is the main strategy to prevent Legionella contamination of drinking water systems in buildings.

In a case study conducted as part of the federal project LeCo , researchers from Eawag and the Lucerne University of Applied Sciences and Arts have now investigated how different technical interventions related to hot water production and distribution affect the concentration of Legionella (*L. pneumophila*) bacteria in a contaminated drinking water system.

The study found that a moderate temperature (45 °C to save energy) combined with periodic high heating (to 70 °C, Legionella switching) was not sufficient to control the pathogen in the system under consideration. By contrast, a daily high temperature at the outlet of the water heater (60 °C) proved effective in keeping the concentration of *L. pneumophila* below critical levels. The results show that a simple adjustment of the temperature in the water heater can be sufficient to effectively control Legionella in drinking water installations.

Cover picture: peterschreibermedia/123RF.com

[Read the full article in Aqua & Gas issue 9, 2021.](#)

Related Links

Further information on the LeCo project

Main Contact



[Franziska Rölli](#), HSLU

Contact



Frederik Hammes

Group Leader

Tel. +41 58 765 5372

frederik.hammes@eawag.ch

<https://www.eawag.ch/en/info/portal/news/news-archive/archive-detail/case-study-legionella-dont-like-it-hot>