GUARDIAN IPCO
Advanced Water Management

SPECIAL PATHOGENS LABORATORY®
THE LEGIONELLA EXPERTS®

Legionella: Myth vs. Fact
7 Common Misconceptions

1. No safe level of Legionella in your building water system.

The CDC has stated that "there is no safe level of Legionella in a water system." This view reflects a public health response to a crisis situation in which the tolerance for risk is zero. However, from a performance perspective, this is an unrealistic proposition.

The FDA and EPA provide action levels for a variety of contaminants because getting and staying at zero, while ideal, is nearly impossible. They establish maximum contaminant goals (MCG). For a more realistic approach, establish targets for Legionella: action levels, minimum levels, and goals. Aim for zero cases of Legionnaires' disease not zero Legionella.

2. Heterotrophic Plate Count is predictive of Legionella.

Many people believe total bacteria count provides an accurate snapshot of what's in your water including Legionella. However, studies show there is no correlation between total bacteria count and Legionella. Legionella requires specialized culture media and will not grow on HPC media.

Lin Yu, *JAWWA, 1998:90, 112-121*

3. Only those with defined risk factors (elderly, smokers, immunocompromised) get Legionnaires' disease.

Approximately, 25 percent of those who contract Legionnaires' disease are not in these risk groups.

Squier, *AJIC, 2005; 33:360-7*

4. Look first to the cooling tower.

Air-conditioning systems and cooling towers aren't responsible for the majority of cases of Legionnaires' disease. Current data suggest that cooling towers and evaporative condensers may be overemphasized as a means of Legionella transmission. Domestic (potable water) plumbing systems are a notable source. Such systems have been commonly linked to occurrences and transmissions of Legionnaires' disease in large buildings and complexes.

Yu, Int. J. *Hyg. Environ. Health 211(2008) 229-234*

5. Legionella is everywhere (ubiquitous).

Many say there is no point in testing for Legionella because you will always find it. However, a range of studies show that Legionella is not everywhere. Legionella colonizes the water in 12 to 70 percent of buildings but not in all buildings.

Lin YE. *Infect Control Hosp Epidemiol. 2011 32(2):166-173*

6. Maintenance of your water system is the key to prevention.

A widespread misconception is that good engineering practices and preventive maintenance of the water distribution system will prevent Legionella colonization. However, hospitals and commercial buildings that followed a preventative maintenance program that included cleaning or flushing hot water storage tanks on a weekly to annual basis were as likely to be contaminated with Legionella as those that did not.

Stout J, *ASHRAE, 2007*

7. Water stagnation causes Legionella to multiply.

Our 2006 study, using a model plumbing system study, to determine the effect of flow regimes on the presence of Legionella within microbial biofilms failed to show that stagnation promoted growth of Legionella. Removing dead leg pipes did not decrease Legionella colonization.

Liu Z. *J Appl Microbiol. 2006;101:437-42*

More Information

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