

LEGIONELLA RISK MINIMIZATION



In the 20 years since gaining public awareness, much has been published on risk minimization of Legionella. Virtually all major health, water, and engineering related agencies have extended guidelines and best practice methodology for managing risks. Across the board the common thread is a regime which emphasizes the implementation of halogenation and overall system cleanliness. Regardless of the specific programs you follow, implementation can be jeopardized without consistent and reliable control mechanisms.

USFilter Stranco Products has a complete line of equipment that can compliment your existing or future practices for Legionella risk minimization programs.



Strantrol®
Oxidation Reduction Potential (ORP)– Accurate control of oxidant based biocide programs.



Vortisand®
High efficiency water filtration to remove particles and minimize anaerobic breeding zones.



Automatic Switch ChemFeed System
Improve product delivery and reliability with system designed to automatically start redundant pump when trouble is detected with primary feed pump.



Solid Halogen Feeders
Reliable and accurate feed delivery of solid halogen donors with automation features for direct interface with Stranco Strantrol ORP controllers.



Water Champ®
High efficiency submersible mixers. Ensures proper biocide distribution and minimizes water stagnation in bulk water supplies.

**LEGIONELLA
RISK
MINIMIZATION**

**TAKE THE
NEXT STEP**

Since the outbreak of Legionnaires' disease in 1976, a heightened awareness to minimize the risks of harboring the legionella bacterium and means of controlling its growth has taken on a new sense of urgency in industries. The U.S. Department of Labor Occupational Safety and Health Association (OSHA) states that any water system can be a source of Legionnaires' disease, however, the primary sources of exposure to contaminated water are heat rejection systems (including cooling towers), and domestic hot-water systems.

The Cooling Technology Institute (CTI) summarizes a consensus of recommendations to minimize the proliferation of *Legionella pneumophila* and the associated risk of Legionnaires' disease. Those recommendations include:

- Minimize water stagnation.
- Minimize process leaks into the cooling system that provide nutrients for bacteria.
- Maintain overall system cleanliness. This will minimize the buildup of sediments that can harbor or provide nutrients for bacteria and other organisms.
- Apply scale and corrosion inhibitors as appropriate.
- Control the overall microbiological population ([Legionellosis Guideline](#))

Figure 1 illustrates the chain of events that must occur in order for Legionnaires' disease to result. The events of amplification, dissemination, and transmission can be influenced by maintenance and engineering practices (Geary, 44). To compliment water treatment programs, USFilter Stranco Products offers a variety of products to filter water, provide high-energy mixing, control disinfection and feed chemicals required to augment legionella risk minimization programs.

In addition, the American Society of Heating, Refrigerating, and Air-Conditioning Engineers Inc. (ASHRAE) article *New Guidelines on Legionella* (Sep 2000), David Geary states, "The key treatment recommendations of Guideline 12 are that the system be maintained clean and that a biocidal treatment program be used. Further, it is recommended to use a qualified water treatment specialist to define and oversee treatment"(47).

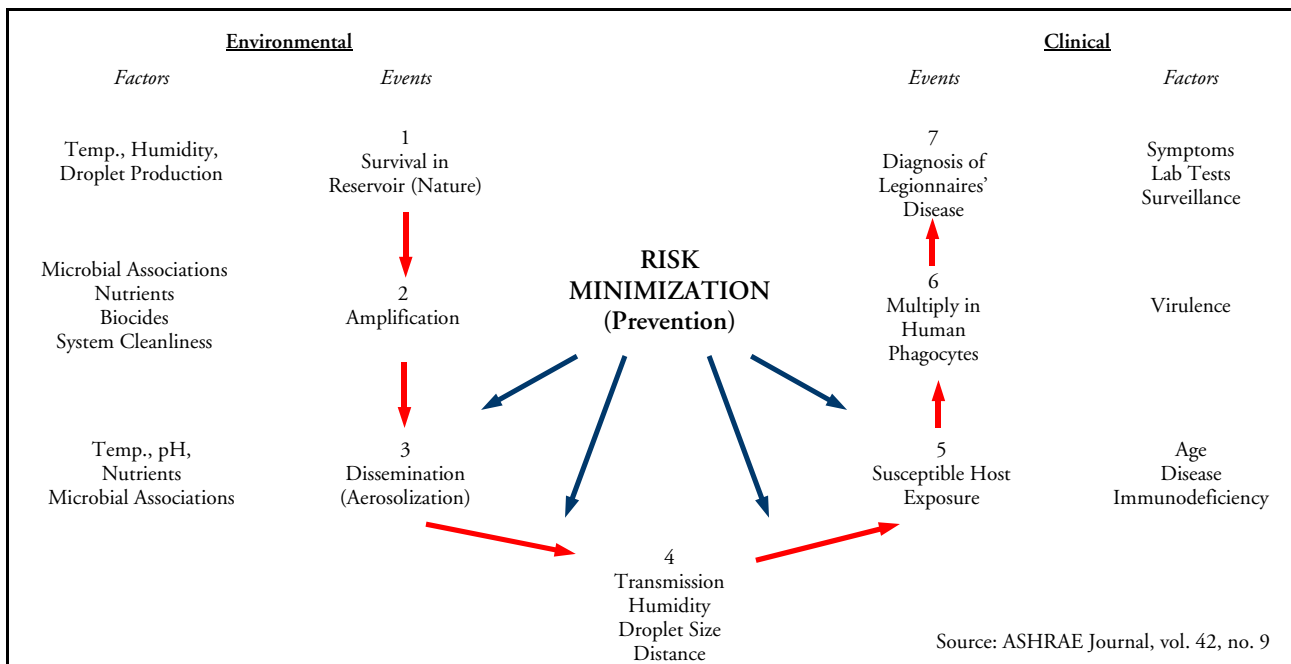


FIGURE 1

Sources

Geary, David. "New Guidelines On Legionella." *ASHRAE Journal*, Sep. 2000, vol. 42, no. 9, p. 44-49, Oct. 31, 2001, <<http://www.ashraejournal.org>>

Legionellosis Guideline: Best Practices for Control of Legionella. Feb. 2000. Cooling Technology Institute, 31 Oct. 2001, <http://www.cti.org/downloads/legion_2000.pdf>

United States. OSHA: Legionnaires' Disease. *OSHA Technical Manual*, Jan. 1999. Section III, Chapter 7, Section V, para. A, Jan 20, 1999, <<http://www.osha-slc.gov/sltc/>>



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