

Legionnaires' Disease at Temporary Events or Trade Shows A Guide for Event Coordinators & Vendors

Please read if you are a coordinator or vendor showcasing equipment that can generate water aerosols, such as:

- **Recreational or physical therapy tubs** (e.g. hot tubs, whirlpools, float tanks, birthing pools)
- **Cooling equipment** (e.g. misters, spraying devices)
- **Water features** (e.g. decorative fountains)
- **Plumbing fixtures** (e.g. shower heads, taps)



What is Legionnaires' disease and why is it concerning?

Legionnaires' disease is caused by *Legionella* bacteria that can grow rapidly in stagnant, under-disinfected water at temperatures above 20°C. The public may be infected when they inhale *Legionella*-contaminated aerosolized water droplets from the product displays.

- Symptoms are similar to pneumonia, including fever, dry cough, chest pain, headache, malaise, and muscle aches.
- Case fatality rates of up to 30% have occurred in Legionnaire's disease outbreaks.
- Smokers, older adults, males, and individuals with underlying health conditions, such as immunosuppression, chronic lung disease, diabetes, and cancer are the most susceptible to the disease.

Recommendations to prevent the growth and spread of *Legionella* bacteria and reduce the risk of *Legionella* bacteria causing illness:

Event Coordinators: Set up vendor stations in an area located at least 10m from air intakes.

Vendors:

1. Do not let water stagnate for more than six (6) hours and drain water at the end of each event. Drain, scrub, and disinfect the equipment if water becomes cloudy.
2. Maintain a sufficient concentration of disinfectant (i.e. 3-5 ppm free chlorine/check using a swimming pool test kit) in the circulating water and maintain water temperatures at or below 20°C during the event and off hours.
3. Check and maintain records of free chlorine, disinfection, and cleaning records during the event.
4. Clean and sanitize equipment before and after each event:
 - **Recreational or physical therapy tubs:** use 20 ppm free chlorine (0.4 mL of 5% domestic bleach/litre of tub water) to hyperchlorinate all components including the surge tank, filters, and piping for one (1) hour with the hydrotherapy jets off. Then, turn on the hydrotherapy jets to circulate the hyperchlorinated water for nine (9) additional hours.
 - **Cooling equipment:** soak all aerators, misters, and sprayers in a chlorinated solution (such as 1,000 ppm chlorine – 21 mL of 5% domestic bleach/litre of water) for at least 10 minutes after each event. Hoses should also be flushed, dismantled and kept clean. Drain any water reservoirs in misters every 24 hours.
 - **Water features or plumbing fixtures:** Scrub thoroughly and disinfect the system with 10 ppm (0.2 mL of 5% domestic bleach per litre water of fixture water) free chlorine for one (1) hour after each event.
5. Remove filters for cleaning and let dry in between uses. Replace filters regularly as per manufacturer's instructions.
6. Drain and store all components of the equipment in a dry and cleaned manner between events.

Sources:

<https://www.awt.org/pub/035C2942-03BE-3BFF-08C3-4C686FB7395C>

<http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%201%20-%20CDC/Legionella%20Guidelines.PDF>

<https://www.ccohs.ca/oshanswers/diseases/legion.html>

<https://www.cdc.gov/legionella/downloads/hot-tub-disinfection.pdf>

<https://epi.dph.ncdhhs.gov/cd/docs/LegionellaTemporaryFactSheet25Sep19.pdf>

Heymann, David L. *Control of Communicable Diseases Manual*. American Public Health Association, 2015.

<https://www.mayoclinic.org/diseases-conditions/legionnaires-disease/symptoms-causes/syc-20351747>

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