

Operating Hot Tubs/Spas

Quick Facts

The Issue

Low water volumes combined with high water temperatures and heavy bather loads make hot tub operation challenging. The result can be low disinfectant levels that allow the growth and spread of a variety of germs (e.g., *Pseudomonas* and *Legionella*) that can cause skin and respiratory recreational waterborne illnesses (RWIs). Operators and patrons have a shared responsibility to prevent the spread of RWIs.

Strategies to Reduce and Prevent Hazards

- **Be proactive**
 - Develop a facility-specific pool safety plan with the goal of identifying facility-specific hazards. Carry out strategies and protocols to reduce risks.
- **Get educated and be available**
 - Make sure staff have received their certification in pool operation, have been trained in the facility's pool operation and the facility-specific pool safety plan, and have received chemical handling and supervision training where appropriate.
 - Make sure trained operation staff are available during weekends when hot tubs are used most.
- **Maintain proper water quality and adjust as necessary**
 - Maintain appropriate disinfectant levels continuously.
 - Maintain the pH level of the water at 7.2–7.8 and make sure combined chlorine levels are .5 mg/l or below.
 - Test pH and disinfectant levels before opening and then every two to four hours.
 - Maintain accurate records of disinfectant/pH and other water quality measurements.
- **Develop and perform facility-specific standard operating procedures**
 - Maintain filtration and recirculation systems according to manufacturer's recommendations. Include a check for any potential suction entrapment issues.
 - Inspect accessible recirculation system components and hot tub surfaces for a slime layer (biofilm, where germs can hide from disinfection) and clean (scrub) as needed.
 - Enforce bather load limits.
 - Drain and replace all or portions of the water on a weekly to monthly basis, depending on usage and water quality.
 - Treat the hot tub with a biocidal shock treatment on a daily to weekly basis, depending on water quality and frequency of water replacement.
 - Provide response procedure guidelines for fecal accidents and body fluid spills.
 - Develop a clear communication chain for reporting operation problems.
 - Cover hot tubs, if possible, to minimize loss of disinfectant and reduce the levels of environmental contamination, e.g., debris and dirt.
 - Maintain a locked safety cover for the hot tub when not in use when possible.
 - Prevent the water temperature from exceeding 104° F (40° C).
 - Institute a preventative maintenance program to replace equipment or parts before they fail (e.g., feed pump tubing, sensor probes).

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- ***Educate hot tub users about appropriate hot tub use***
 - Recommend that all pregnant women consult a physician before using a hot tub, particularly in the first trimester.
 - Exclude children less than five years old from using hot tubs.
 - Educate patrons on their role in preventing recreational waterborne illnesses. Teach them about the need for pre-swim cleansing showers, and about not swimming if they have diarrhea or if they have had diarrhea in the previous two weeks.