

Pseudomonas aeruginosa Information Sheet

Pseudomonas aeruginosa in whirlpool water is of public health concern because it can cause skin rashes and ear infections. The water conditions in whirlpools are ideal for these bacteria to survive. The turbulent water and heavy bather load make it more difficult to maintain adequate disinfection. *Pseudomonas* can even survive the chemical treatment used to destroy most bacteria. The warm water opens the pores of the skin and permits bacterial invasion.

Preventive Measures

1. Exclude persons having obvious or known infections.
2. Require patrons to take a cleansing shower using warm water and soap before entering the pool. (*Pseudomonas* can be present on the skin).
3. Quickly remove all waste that may enter the pool.
 - a. Ensure that the filtration system is operating properly.
 - Frequent filtering of the water is very important. A whirlpool greater than 4 m³ (4000 liters) in volume requires a minimum of three (3) complete water turnovers every hour. A whirlpool less than 4 m³ (4000 liters) in volume requires a minimum of four (4) turnovers every hour.
 - Maintain your filters by following the manufacturer's instructions. Replace sand as often as recommended (usually yearly). In the case of cartridge filters, clean them as often as necessary. Clean filters and filter media help prevent it from harbouring resistant strains of *Pseudomonas*.
 - b. Remove the scum line at least once a day (or more frequently if necessary).
 - Body oils can build up fast, leaving a layer of fat that will adhere to the whirlpool; bacteria can then grow underneath that layer.
 - c. Change the water as often as necessary.
 - Unoxidized materials in the pool can accumulate and reduce the effectiveness of your chlorine disinfectant.
4. Destroy disease-producing organisms by maintaining a proper disinfectant residual and pH. For best results in a whirlpool:
 - a. The free chlorine residual should be at least 3 - 5 ppm and higher as necessary.
 - b. The pH level must be between 6.8 and 7.6, optimum of 7.0 - 7.2
5. Submit water samples to the Provincial Laboratory of Public Health at least once a week.