

Hyperchlorination procedure – *Cryptosporidium* contamination

Recommendations for aquatic facilities
Water Unit, January 2018

The intestinal parasite *Cryptosporidium* is highly resistant to normal levels of swimming pool chlorination. If a pool becomes contaminated by *Cryptosporidium*, it can spread to swimmers, even when chlorine levels are well maintained.

If a cryptosporidiosis outbreak is linked to an aquatic facility, hyperchlorination may be required to minimise the risk to public health.

Elevated levels of chlorine involved in the hyperchlorination procedure may damage the pool and its components. If necessary, consult a pool treatment specialist to determine the most effective methods and safety procedures for individual pools.

The following hyperchlorination procedure is designed to inactivate cryptosporidium in a swimming pool using unstabilised chlorine:

1. Close the pool during the hyperchlorination procedure. If multiple pools share the same filtration system, they must all be closed. Do not allow patrons to enter the water during the procedure.
2. Raise the free chlorine concentration to achieve a CT [free chlorine concentration (mg/l) × time (min)] of 15,300 mg-min/L and maintain the pH at 7.5 or lower. This can be achieved by maintaining a free chlorine concentration 20.0 mg/L for 12.75 hours, or higher concentrations for a shorter time periods.¹
3. Confirm the filtration and coagulation system is operating effectively while maintaining the required free chlorine and pH levels.
4. Backwash the filter directly to waste. Do not return the backwash through the filter.
5. Allow patrons to return to the pool only after the required time has elapsed and the free chlorine and pH levels are within the limits as specified in the Public Health and Wellbeing Regulations 2009. Sodium thiosulphate can be added to neutralise excess chlorine.
6. Record the details of all actions taken.

For further information, contact the Water Unit at the Department of Health and Human Services on 1300 761 874 or [email](mailto:water@dhhs.vic.gov.au) <water@dhhs.vic.gov.au>.

1. Shields JM, Hill VR, Arrowood MJ, Beach MJ. Inactivation of *Cryptosporidium parvum* under chlorinated recreational water conditions. *Journal of Water and Health*. 2008;6(4):513-20.