



## ***Management of Pool Contamination***

***Wisconsin Swimming, Inc.*** (August 15, 2007)

**Purpose:** To establish guidelines for the management of contamination of the pool deck or pool water with urine, vomit, blood, or feces. The policy of USA Swimming requires following the guidelines established by the specific pool facility or the guidelines of the appropriate State Department of Health. No State of Wisconsin mandates exist regarding pool contamination according to the State of Wisconsin and Waukesha County Departments of Public Health. These agencies advise following the guidelines of the Center for Disease Control, which can be located at [www.healthyswimming.org](http://www.healthyswimming.org).

This document, "Management of Pool Contamination," summarizes those guidelines. These recommendations do not replace existing state, local, or facility regulations or guidelines.

### **Contamination of Pool Deck/Surfaces**

Surfaces contaminated with urine, vomit, blood, or stool should be cleaned and disinfected immediately.

Procedure:

1. Block off the affected area until clean-up and disinfection is completed.
2. Wear disposable gloves, latex or vinyl.
3. Wipe up the contamination with paper towels and place in a plastic bag.
4. Disinfect with either a commercial product designed for such contaminations or a bleach solution consisting of nine (9) parts cool water and one (1) part household bleach. Let disinfectant remain on the contaminated area for twenty (20) minutes.
5. Wipe up remaining disinfectant with paper towels and place in a plastic bag.
6. Disinfect all non-disposable cleaning materials such as mops and brushes by saturating with bleach solution or commercial disinfectant and allow to air dry.
7. Place all gloves and disposable cleaning items used in a plastic bag, double bag, tie bag, and discard it.
8. Wash hands thoroughly with soap and water.

### **Contamination of Pool Water with Urine**

No response necessary as long as pool chlorination is maintained at one to two (1-2) parts per million (ppm) or one to two (-2) mg/L.

**Contamination of Pool Water with Blood**

The Center for Disease Control has no data indicating that infections such as HIV or Hepatitis B are transmitted to swimmers from a blood spill in a pool. No public health reason exists to recommend pool closure following a blood spill as long as chlorine is maintained at one to two (1-2) ppm. Closing the pool for fifteen to thirty (15-30) may be prudent to satisfy concerned patrons.

**Contamination of Pool Water with Vomit**

Often vomiting is the result of swallowing too much water, and this vomit is probably non-infectious. If the full contents of the stomach are vomited (solid material present), then the proper disinfection protocol should be followed.

Procedure:

1. Direct everyone to leave the pool. If pool water is recirculated to other pools, these pools need closing as well. Do not allow re-entry to the contaminated pool(s) until the decontamination procedure is completed.
2. Remove as much of the vomit material as possible using a net or scoop and dispose of it in a plastic bag. Vacuuming is not recommended. Clean the net or scoop and then leave the net or scoop immersed in the pool for the remainder of the disinfection time, or clean with bleach solution or commercial product and allow to air dry. Double bag all disposable material.
3. If the pool's free available chlorine concentration is less than 2 ppm or 2 mg/L, raise the pool's free available chlorine concentration to 2 ppm, or 2 mg/L and pH 7.2 to 7.5. If the pool's free available chlorine concentration is normally at 2 ppm or greater, keep pool closed for thirty (30) minutes.
4. Ensure this concentration is found in all co-circulating pools by sampling at least three (3) widely spaced locations away from return water outlets.
5. Maintain the pool's free available chlorine concentration at 2 ppm, pH 7.2-7.5 for at least thirty (30) minutes before re-opening the pool.
6. Higher free available chlorine concentrations may be required if chlorine stabilizers such as chlorinated isocyanurates are used.
7. Ensure that the filtration system is operating while the pool reaches and maintains the proper chlorine concentration during the disinfection process.

**Contamination of Pool Water with Formed Stool (solid, non-liquid):**

Formed stool is less of a contamination risk than diarrhea. The infectious agents largely are contained within the stool. Avoid breaking up the stool while proceeding with its removal.

Procedure:

1. Same as steps one to seven for vomit of stomach contents, as listed above. Again, do not vacuum the stool.
2. Establish a fecal accident log for the pool facility and record: date/time of event, note formed stool or diarrhea, chlorine levels at time of event. At time of re-opening the pool, record pH, the procedures followed, and the duration of closure.

**Contamination of Pool Water with Diarrhea (liquid stool):**

Diarrhea accidents are significantly more likely to be infectious and place other swimmers at a more significant risk of becoming ill. It is important to stress with swimmers and parents that swimming when ill with diarrhea is unacceptable pool behavior.

Procedure:

1. Direct everyone to leave the pool. If pool water is recirculated to other pools, these pools need closing as well. Do not allow re-entry to the contaminated pool(s) until the decontamination procedure is completed.
2. Remove as much of the diarrhea material as possible using a net or scoop and dispose of it in a plastic bag. Vacuuming is not recommended. Clean the net or scoop and then leave the net or scoop immersed in the pool for the remainder of the disinfection time; or clean with bleach solution or commercial product and allow to air dry. Double bag all disposable material.
3. Raise the free available chlorine concentration to 20 ppm (20 mg/L) and maintain the pH at 7.2-7.5.
4. Maintain the pool's free available chlorine concentration and pH in all co-circulating pools for at least eight (8) hours.
5. Ensure this free available chlorine concentration is found in all co-circulating pools by sampling at least three (3) widely spaced locations away from return water outlets.
6. Higher free available chlorine concentrations may be required if chlorine stabilizers such as chlorinated isocyanurates are used.
7. Ensure that the filtration system is operating while the pool reaches and maintains the proper chlorine concentration during the disinfection process.
8. Backwash the filter thoroughly after the eight (8) hour period and be sure the effluent is discharged directly to waste. Do not return the backwash through the filter and replace the filter media, if appropriate.
9. Swimmers may return to the pool after the eight (8) hours has elapsed and the chlorine level has returned to the normal operating range.
10. Establish a fecal accident log for the pool facility and record: date/time of event, note formed stool or diarrhea, chlorine levels at time of event. At time of re-opening the pool, record pH, the procedures followed and the duration of closure.