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OREGON PUBLIC HEALTH DIVISION INFORMATION BULLETIN

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POLICY AND INTERPRETATION MANUAL

FECAL ACCIDENTS / PROTOCOL / POOLS & SPAS

QUESTION:

What should I do to handle fecal and vomiting accidents in the swimming pool or spa?

BACKGROUND:

Swimming pools have been the subject of much public attention in recent years. *E. Coli* O157 H7, *Cryptosporidia*, *Giardia* and other organisms have been making the news as people become ill from the organisms after swimming.

Swimming and bathing in swimming pools has become increasingly popular. Unfortunately, in addition to providing fun, the water also washes away dirt, oils, bacteria, perspiration, dead skin, and fecal material from our bodies. These contaminants can accumulate to dangerous levels in the absence of corrective measures. We have tried to reduce the risks by first providing better dilution by constantly flushing water through the pool and, in more recent years, by filtration and disinfection as clean water resources have become more scarce.

Over time, public pools have come under stricter and more stringent rules regarding pool water quality. We have reached the point where the public expects pool water to be as clean and safe as their tap water. We can do a lot to keep the water clean and healthy, but no one can totally **eliminate** the risks associated with swimming.

Most organisms found in a pool are killed very quickly. Usually a few seconds of disinfection is enough time to kill 99.9 % of the organisms. Recently, however, we have begun to see organisms such as *Cryptosporidia* which are very resistant to disinfection. Unfortunately, *Crypto* causes very watery diarrhea, so these accidents are seldom noticed or reported. When contamination does occur, it can only be identified after people start becoming ill, a week or more after the contamination of the pool. Anyone entering the water can contribute harmful organisms which could cause an infection. High-risk groups, diaper-age children and immuno-compromised persons (cancer patients, persons with transplants and persons with active HIV infections) are of special concern. Diaper-age children are a greater problem because they are most likely to have an accident, and they also ingest the pool water. Immuno-compromised persons are more at risk because they cannot fight off the organisms.

This policy calls for a two-pronged approach. First, educate the public that there are risks involved in swimming and what they can do to reduce the risks involved. Secondly, treat **identified** fecal accidents as if they contain the more easily killed organisms, because accidents containing *Cryptosporidia* are not often noticed nor reported before people begin to get sick.

POLICY / INTERPRETATION / GUIDELINE:

PREPARE A PLAN:

1. In the event that you are contacted by persons who are ill or who have questions, how would you answer questions and complaints? To whom would you refer these individuals? How would you manage press inquiries in the event of an outbreak?
2. Prepare and implement a written fecal accident policy for your pool. Teach this policy to all employees. Be sure that employees enforce your policy. Instruct lifeguards and other personnel to monitor the pool area for fecal accidents and behavior that can put others at risk (e.g., rinsing off the soiled buttocks of an undiapered child in a pool, or rinsing the diaper.).
3. Unfortunately, fecal accidents that are caused by *Cryptosporidium* infection are likely to be in the form of watery diarrhea, and therefore will probably not be seen or reported. It is therefore important to:
 - A. Train staff (lifeguards and instructors) to report illnesses they experience to the management and not to swim if ill with diarrhea or abdominal cramps.
 - B. Develop a policy for pool usage by diaper-aged and toddler children. These children are at high risk for having fecal accidents in the pool. Require the use of swim diapers.
 - C. Provide signage in a conspicuous location before the pool entry. The sign shall state:

“PROTECT OUR WATER”

"If you have or have had diarrhea in the past two weeks,
please do not use the pool."

"Shower your child and yourself. Take a cleansing shower before
entering the pool or after using the toilet."

“Bathers who are not toilet trained shall wear a swim diaper.

4. Develop a public education program to discuss the disease-transmission risks, and inform the public what you are doing to reduce those risks. This can include articles or interviews with the news media, newsletters, handouts at the pool, and other activities.

HANDLING THE FECAL ACCIDENT:

The development of these guidelines was a cooperative effort of a committee made up of pool operators, sanitarians, state swimming-pool program staff and state epidemiologists.

We felt that over-treatment of the pool, in an effort to deal with every accident as if it involved *Crypto*, was unrealistic. Reviewing reported outbreaks indicate that the *Crypto* fecal accidents are not evident until people become ill.

All fecal and vomiting accidents are handled basically the same way,

→ Well-formed Stools / Vomit →	to	→ Diarrhea →
<ol style="list-style-type: none"> 1. Clear the area. 2. Check for adequate disinfectant in the area. 3. Remove as much of the material as possible using a net or scoop. Vacuuming is not recommended unless it discharges to waste. (If the material is sent back to the filter, we may only be spreading the problem.) 4. Add additional disinfectant as necessary. 5. Reopen area. 	<p>→</p> <p>to</p> <p>→</p> <p>to</p>	<ol style="list-style-type: none"> 1. Clear the pool. 2. Add chlorine to raise the pool to 5 ppm, or equivalent using other disinfectants. 3. Remove any chunks or pieces. 4. Allow some time for the disinfectant to spread and work on the extra organic material. In addition, we need to avoid "hot" spots of disinfectant through which swimmers may swim. Allow about an hour of total time down. 5. Recheck for adequate chlorine. 6. Reopen pool.

Any material removed from the pool should be disposed of in a biohazard waste bag. Clean your equipment and wash your hands.

As the stool becomes less less-formed, the procedure would transition from the well-formed procedure to the procedure for diarrhea.

For limited-use pools:

Follow the above procedures for the diarrhea, except allow additional downtime and close the pool during the above process. Keep the pool closed at least an hour, and up to one turnover of your pool for loose stools and diarrhea.

WHAT ELSE:

In addition to the above, it is also important that the pool and pool area be kept clean and disinfected, this includes the dressing, toilet and shower areas.

Maintaining your pool recirculation rates and proper functioning of filtration systems, while frequently checking and maintaining proper disinfectant levels, will also provide significant levels of protection from the risk of spreading a disease-causing organism.

What if someone tells you he or she currently has an ongoing *Cryptosporidia* infection and just had an accident in your pool?

In this unlikely event:

1. Clear and close the pool.
2. Inform patrons and staff of the situation. Have them contact the local health department and their doctor if they become ill. It will usually take 7 to 10 days before anyone becomes ill. Young children should not attend daycare if they develop a diarrheal infection.
3. Add disinfectant to bring the pool up to 20 ppm chlorine or equivalent. Remove any pieces of stool and place them in a biohazard bag. Avoid handling the stool, and wash well afterwards. Disinfect the net or other equipment. (The net can just be thrown into the pool.)
4. Notify the local health department of the situation.
5. Maintain the disinfectant level for 12 hours and ensure the circulation flow is at its maximum effective rate during this time. Balance the water chemistry.
6. Backwash the filters thoroughly.
7. Rebalance the water chemistry and adjust the disinfectant. Open the pool.
8. Monitor staff for illness and restrict ill staff from the water until they obtain a negative stool sample for *Cryptosporidia*, or for two weeks after the diarrhea ends.
9. Emphasize public education (especially for high-risk populations) and increase your fecal-accident monitoring vigilance.