



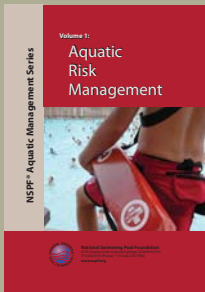
Prevention Advisor

News That Aquatic Professionals Need To Know

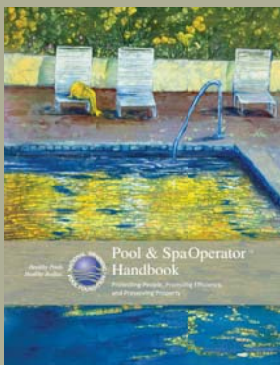
Issue 10, January 2009

Quick Hits

New @ NSPF:
The **Aquatic Risk Management** book, a guide to help identify, analyze, and take steps to reduce or eliminate exposures to loss.



Order a CD of the 2008 conference proceedings for only \$50.00!



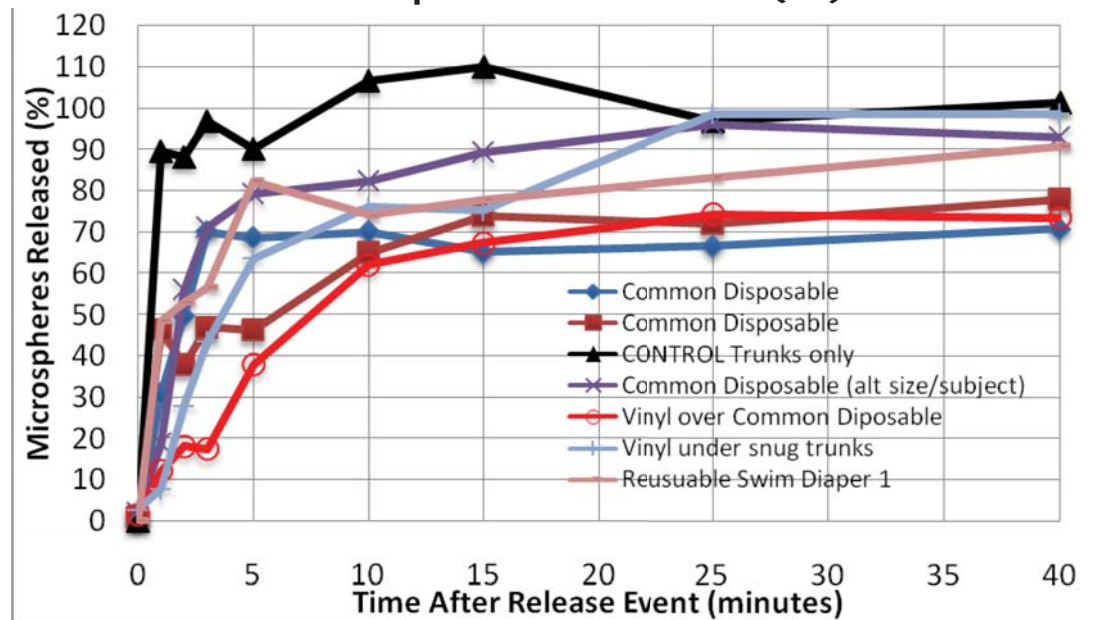
Coming in February 2009!

How Well Do Swim Diapers Work?

How well do they contain a watery diarrhea accident typical of a *Cryptosporidium* (*Crypto*) infected child?

Here are some results from a UNC – Charlotte research study by James Amburgey, Ph.D., Michael J. Arrowood, Ph.D., and Roy R. Fielding, B.A., M.Ed. that examined how well a variety of swim diapers trap or release microspheres that mimic *Crypto*. This work was presented at the 2008 World Aquatic Health™ Conference.

Microsphere Releases in Time for Different Swim Diaper Combinations (%)



What percentage of the 10 million *Crypto*-like particles remain in a swim diaper 5 minutes after a release event? The answer is that only 10-62% of *Crypto* remain in the swim diaper after 5 minutes. In the majority of these experiments (shown in the figure above), more than 50% of these 5-micron sized particles were released within the first 2 minutes. Whether you release 3.8, 5, or 9 million *Crypto* into the pool, a serious problem is created for the swimmers. Therefore, swim diapers are not the best solution.

Working to prevent fecal accidents remains the best defense. Parents and children must be educated about the Six “PLEAs” recommended by the CDC for protection against recreational water illnesses:

1. PLEASE do not swim when you have diarrhea. You can spread germs in the water and make other people sick.
2. PLEASE do not swallow pool water. Avoid getting water in your mouth.
3. PLEASE practice good hygiene. Take a shower before swimming and wash your hands after using the toilet or changing diapers.
4. PLEASE take your kids on bathroom breaks or check diapers often. Waiting to hear “I have to go” may mean it’s too late.
5. PLEASE change diapers in a bathroom or a diaper-changing area and not at poolside.
6. PLEASE wash your child thoroughly (especially the rear end) with soap and water before swimming.

For more information on *Crypto* and to download the CDC poster on the Six “PLEAs” for Protection against RWIs, go to the *Crypto* Tool Kit on our website at <http://www.nspf.org/CryptoToolkit.html>. In the event fecal accidents occur, it is important to note that very high chlorine levels are needed to inactivate *Crypto*. As a result, operators should consider other techniques at their facility to help inactivate *Crypto* and to reduce the risk of RWI. For example, ultraviolet light (UV) systems or ozone systems have been shown to inactivate *Crypto*. For more information about these techniques, WAHC seminars have been posted online at www.eProAcademy.org. Dr. Amburgey and his colleagues have also shown that water clarifiers can help sand filters to remove the vast majority of *Crypto* as it passes through a sand filter.

Take Home Messages on Reducing *Crypto* Outbreaks:

- Educating patrons on the Six “PLEAs” is the key to preventing *Crypto* outbreaks.
- On their own, sand filters are not very efficient at removing *Crypto* (about 2 days to remove 90% and close to a week to remove 99.9% *Crypto*).
- With proper water clarifier use, 99.6% of the *Crypto* can be removed more quickly (i.e., with a single passage through the filter) versus 23.3% without clarifier.
- Regular use of water clarifiers can help mitigate *Crypto* outbreaks.
- Consider other lines of defense at your facility including UV, Ozone, or enhanced filtration to reduce the risk of RWI outbreaks.
- Prevention Advisor subscribers will receive outbreak alerts when NSPF and CDC are aware of one in your region.



To view the entire online seminar by Dr. James Amburgey, go to the [NSPF® Online Shopping Cart](#).