*Views From the E-List** – Cleaning Equipment

Query

Some concerns have come up at the facility I work at after a patient reported that she developed a fungal infection in her axillary area--she (or her doctor, I'm not sure) believes it was caught from using a noodle under her arms for deep water work. This may or may not be accurate, but it raised the question, what do you all use to clean that type of equipment, as many pieces of aquatic equipment are so porous. We've used antiseptic wipes, and I do feel like they may not be the best, most effective cleaning tool. We called the manufacturer who recommended against any type of spray. Any ideas?

Responses:

Some participants are especially sensitive to noodles that are OLD. Like, more than 2 years, if they have been in chlorine or in the sun, and start to deteriorate. Noodles are inexpensive, so consider replacing them if they are a problem. The cleaning products you are using may also be contributing to the problem.

I always have my students rinse their equipment before we restore it after each class. I have found that if we do not do this, the chlorine eats away at the equipment. My equipment lasts longer if we rinse it.

A member of ours commented on a facility in TX that had a voluntary system for people to 'dunk' barbells from the pool after use into a bucket of what appeared to be water but could be sanitizer.

While it might seem very logical that the pool chlorine would take care of any equipment cleaning problem, the chlorine in our pools is not of sufficient strength to take care of the really nasty infectious bacteria. Remember the concentration needed to clean up after a body fluid spill? We don't swim in that concentration (it even spots jeans). But, that concentration does kill the germs on equipment (and CPR Manikins) when cleaning is done properly.

The reverse question might be -- why does pool chlorine work at all, then? Well, the water also diffuses the concentration of most infecting agents. But, there are still those items (like feces and vomit) that necessitate additional chemical action for complete protection. That's why pools have to close and take decontamination measures.

I'm not good at the chemistry of all this. But, I do know that personal use equipment (snorkels, etc) and equipment that becomes contaminated during use (spit, vomit, blood, etc) needs to be cleaned with the same chlorine solution used for body fluid clean-up.

If people in a general population class are just using barbells, for example, in the normal manner, there should be no more danger then there would be touching anything else that person touches (a door frame, for example). If the individual has a drippy cold, for example, or if they bleed on the equipment, then decontamination is warranted.

According to the EPA, tap water (potable water/ drinking water) has an upper limit on chlorine level of 4 ppm free chlorine. The typical range of chlorine in swimming pool water is 1-5 ppm. One may

have more chlorine in tap water than they do in the pool. Household bleach is typically 5% (50,000 ppm). Bleach used to chlorinate public pools is typically 10-12 % (100,000 - 120,000 ppm). When one considers the concentration times the time (CT Value), bleach has a very high concentration, so it takes a lot less time to kill pathogens. The high concentration makes biofilms or fecal matter that may protect bacteria less relevant.

Disinfection of biological materials is often harder because the bacteria are protected in a biofilm that makes their inactivation more difficult. With the a few exceptions, chlorine is very good at killing most anything that can make people sick. If it weren't most of the people on this elist (my self included) would be dead because our average life span would still be like it were in the 1800s.

There is so much to teach on disinfection and so little time. Fortunately, there are courses and seminars available on these topics from a variety of sources including NSPF (nspf.org)

We found that storing the barbells in an open-air wire basket so they can dry, works well in preventing mold etc. growth. We also replace any old barbells when the material starts soaking up the water, to insure quicker drying time. The barbells with the solid handle lasts longer than the sponge handle types. I have been places where they rinse them with fresh water after use but, I didn't notice a difference in how long the equipment lasted. At times I did notice mold growing on the fresh water rinsed equipment. They said they rinsed the equipment to keep the chlorine from ruining it.

So far as yet we don't have any process for any extra 'cleaning' of our aqua fitness equipment. It is used, hung up and dries overnight. The area is 89 degree (target) pool and air goes from 85-91 depending on the day.

I am not sure that any extra measures are necessary as there are not known problems at this time.

**Opinions and suggestions expressed in this column represent e-list member responses to the query posted. They are not represented by the Aquatic Therapy and Rehab Institute and/or the author(s) of this column as recommendations regarding appropriate practice.*