



Vision Alert

June 2006

Contact Lenses and Aquatics

Summertime brings us to the water in many ways (pools, lakes, oceans, hot tubs/spas, showers, etc.). Contact lens wearers must take specific precautions to avoid the risks of infection and injury. A recent article in the professional journal "Contact Lens Spectrum" reviewed the literature and made many practical recommendations that, if followed, should lead to a safe summer water experience.

Can I swim in the pool with my contact lenses?

There are various risks associated with contact lens wear in swimming pools. First relates to chemical exposure (chlorine, etc.), which can be absorbed by soft contact lenses (not by rigid lenses). Absorption can result in redness, irritation, and possibly light sensitivity. These effects are short lived and not dangerous. To minimize this effect, instill re-wetting drops immediately after exiting the pool. Additionally, due to the low salt content in pool water (compared to the human tears or a soft contact lens) the soft lens can shrink and tighten on the eye after pool swimming. Removal can result in superficial corneal irritation. Again, placing appropriate re-wetting drops will help. Most importantly, the danger of serious eye infection exists if one swims in a pool with contacts (especially soft lenses). Risks of bacterial infection is highest, especially if the pool is not properly treated chemically. However, probably the most devastating eye infection that can occur is due to an amoeba infection called *Acanthamoeba*. This condition is often difficult to diagnose and more difficult to treat. It can result in permanent vision loss. In order to avoid all of the above mentioned risks, the use of high quality, water tight swim goggles is highly recommended. Additionally, consider being fit with single use disposable contact lenses to be used for water sports.

Can I swim in lakes, rivers, or the ocean with my contact lenses?

The risk of infection is much higher in these environments vs. chemically treated swimming pools (especially in the freshwater environments). As such caution is suggested by using water tight swim goggles over your contact lenses. Again, consideration should be given to the use of single use disposable lenses for these activities. Specific to ocean water exposure, lenses can float off the eye easier due to the high salt content of that water. Of course rigid lenses are at a higher risk for loss vs. soft lenses and activities like water skiing, high diving, a water polo further increase the risk of lens loss.

What consideration should be given to scuba or snorkeling with contacts?

Vision correction is optimized with the use of contact lenses for these highly visual activities; however concern about infection is still paramount. The use of high quality dive masks is obviously helpful. Specific to deeper dive scuba is the exposure to high nitrogen levels. This can result in corneal swelling (edema) which can cause blurry vision and increase the risk of infection. To minimize this effect, divers should be wearing newer contact lens materials that allow high amounts of oxygen to pass through them. Also, it is suggested to instill re-wetting drops after the dive and wait at least 5 minutes before removing the contact lenses.



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Hot tubs, spas, etcetera with contact lenses.

This is likely the highest risk environment for contact lens wear. Be sure that the water has been properly chemically treated to minimize your risk of serious eye infection.

Care, cleaning, and disinfection of contact lenses after water activities.

If one is using re-usable contact lenses (those that will be worn again after water activities) then very careful attention should be given to appropriate cleaning and disinfection of the lenses. Utilizing FDA approved systems which were prescribed by your doctor and using them according to the instructions given is critical in order to reduce the risk of serious infection after water activities. NEVER USE TAP WATER ON SOFT CONTACT LENSES, AND DO NOT INSERT RIGID CONTACT LENSES IN THE EYE IMMEDIATELY AFTER RINSING WITH TAP WATER. Acanthamoeba infection risk is very high with direct contact lens exposure to tap water.

Other helpful hints.

Never sleep with contact lenses on that have been exposed to aquatic environments. Always clean and disinfect or dispose of lenses that were worn in the water. Always have a pair of glasses available in case of contact lens loss or secondary eye infection. Finally, seek professional eye care immediately if you suspect you have developed an eye infection or injury.