Keeping your **eyes healthy** while wearing **contact lenses**

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Introduction

Many people rely on contact lenses to improve their vision. In addition, some contact lenses are used to correct special vision problems, to treat eye diseases or for cosmetic purposes, for example, to change or enhance the colour of the eyes. While contact lenses provide many benefits and are generally safe, they are not completely risk-free, especially if not used, cleaned, stored or cared for correctly.

This article will focus on contact lens care and the healthy habits necessary to reduce the possible risks associated with contact lens wear.

Different types of contact lenses

There are several different types of contact lenses. Based on the lens material, contact lenses can be divided into soft/hydrophilic lenses, which are made of soft, flexible plastics, or rigid gas-permeable (RGP) lenses. Soft lenses allow oxygen to pass through to the cornea, are fairly comfortable to wear and are usually easier to adapt to than RGP lenses.

Contact lenses also differ according to their:

- Wear schedule i.e. some are designed for daily use while others are suitable for extended/overnight continuous wear (ranging from six to 30 nights).
- Replacement schedule i.e. one-day disposable lenses need to be replaced daily, while other lenses need to be replaced according to a schedule, either every two weeks, monthly, quarterly or as indicated by the optometrist.

The dos and don'ts of taking care of contact lenses

There are a variety of contact lens care systems and solutions available including multipurpose solutions (MPS), hydrogen peroxide-based systems, saline, daily cleaners, enzymatic protein removers and rigid gas permeable care systems. It is best for contact lens wearers to only use solutions and lens products that have been recommended by their eye care practitioner.

In order to minimise the potential of contamination the correct disinfection and lens cleansing procedures should be followed.

Below are a few points on the dos and don'ts on taking care of contact lenses:

Dos

- Wash hands thoroughly with soap and water and then dry them with a clean, lint-free cloth before handling contact lenses.
- Follow instructions from the optometrist/ophthalmologist and lens care product information on how to rub, rinse, clean and disinfect contact lenses. Rubbing reduces the number of microorganisms on the lens, thereby reducing the potential for infection.
- Clean, rinse and air-dry lens cases when not in use. Contact lens cases are a potential source of infection and should also be replaced frequently (every three to six months).

Don'ts

- Reuse or "top-up" lens solution in the contact lens case; left-over contact lens solution should be discarded after each use.
- Use solutions and lens products beyond the expiry or discard dates.
- Expose lenses to any type of water including tap, distilled, bottled, lake or ocean water. Exposure of contact lenses to water has been linked to corneal infection (*Acanthamoeba keratitis*) which is resistant to treatment and cure.
- Put contact lenses in the mouth to wet them; saliva is not sterile.

- Pour contact lens solutions into smaller travel size containers. The sterility of the solution may be affected.
- Substitute sterile saline solution for MPS. MPS are used to rinse, clean, disinfect, and store lenses during their overnight soaking while sterile saline solutions are only intended for rinsing.
- Wear someone else's contact lenses.
- Wear lenses for too long or sleep while wearing daily-wear lenses.

Contact lens wearers should consult their pharmacist or eye care professional before using any eye drops as some eye drops may affect their lenses, for example, soft contact lenses can absorb benzalkonium chloride (a preservative used in eye drops). Soft lenses should therefore not be worn within 24 hours of instilling benzalkonium chloride-containing eye drops. If possible, contact lens wearers should use preservative-free products.

In addition, contact lens wearers with infective conjunctivitis should not wear contact lenses until after the infection has completely cleared and until 24 hours after any treatment has been completed.

Risks associated with contact lens wear

Contact lens wear and/or lens care solutions can provoke eye reactions including eye discomfort, red-eye reactions, allergic reactions or conjunctivitis.

Eye irritation can also occur as a result of lens deposits, allergic reactions to preservatives in the contact lens care solutions or foreign bodies trapped under the contact lens.

Serious eye conditions associated with contact lens wear include eye infections (infectious keratitis), corneal abrasions and ulcers (open sores in the outer layer of the cornea).

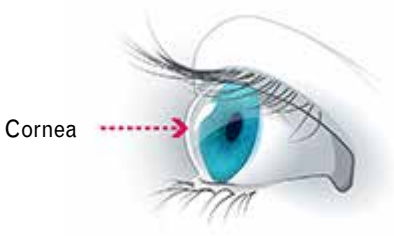

Figure 1. Cornea (transparent covering over the front of the eye). Adapted from the Centers for Disease Control and Prevention (CDC). Available from: https://www.cdc.gov/contactlenses/germs-infections.html

It is important that these conditions are diagnosed and treated early as they can develop rapidly, be very serious and in rare cases, could lead to blindness. Symptoms of eye infection or irritation include:

- Discomfort
- Pain
- Blurred vision/changes in vision
- Unusual redness
- Unusual light sensitivity
- Excess tearing or other discharge
- Burning, itching or gritty feelings
- Swelling in and around the eyes, including eyelids

Contact lens wearers presenting with any of these symptoms should be advised to immediately remove contact lenses and consult with an eye care professional. Contact lenses should be stored and taken to the eye care professional for further investigation (to help identify a potential microorganism causing an infection or to determine possible causes of the symptoms).

Conclusion

Practising healthy contact lens habits helps contact lens wearers to enjoy the benefits and comforts of contact lenses while lowering their chance of complications.

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