

CONTACT LENSES

Contact lenses are a popular alternative to spectacles for correcting refractive errors. Properly prescribed contact lenses provide excellent vision and comfort. In some cases contact lenses provide better vision than spectacles, while their advantages for athletes and other people with active lifestyles are obvious.



Contact lenses can also provide a better cosmetic effect, especially as they can often be tinted to change the colour of the wearer's eyes.

Although contact lenses have many advantages, they do have some considerations. They must be individually prescribed to ensure that they fit the eyes correctly, as well as focussing properly. Poorly fitting lenses can lead to severe eye problems such as infections. Because contact lenses are placed in direct contact with the eyes they must be cleaned and disinfected regularly, and contact lens wearers need more frequent eye examinations in order to prevent any problems developing.

Some points worthy of discussion are listed below...

- Lens types
- Replacement schedules
- Wearing schedules
- Lens care
- Consultations
- Costs

Lens Types

There are two main types of contact lenses: soft and rigid.

Soft

Soft contact lenses are the most commonly prescribed type of contact lenses. Around 90% of all the contact lenses prescribed are soft lenses. Soft contact lenses are made from soft, flexible plastics, known as hydrogels, which contain water. The water allows oxygen to pass through the lens to the eye. This is important, as the cornea (the clear front surface of the eye) obtains its oxygen supply directly from the air. Most soft contact lens wearers find that they adapt to the lenses quickly and they are comfortable straight away (unlike rigid lenses, which require some adaptation). This makes soft lenses suitable for people who do not want to wear their lenses every day, such as a footballer or netballer who only wears their lenses when they are playing. Soft

lenses are particularly suitable for sports, as they are difficult to accidentally dislodge.

Soft lenses are suitable for correcting most refractive errors. Special "toric" lenses can be used to correct astigmatism.

Soft lenses can be tinted to enhance or change the colour of the eyes.

Rigid

Rigid lenses are made from plastics which are less flexible than those used for soft lenses. While the earliest materials used to make these lenses did not allow any oxygen to pass through the lens, the materials used today are permeable to oxygen, which is why these lenses are most commonly referred to as "rigid gas permeable" or "RGP" lenses. Some of the newer materials allow almost as much oxygen to reach the eye as if no lens was being worn.

Rigid lenses provide better vision than soft lenses, as the optics can be better controlled, and are suitable for a wider range of refractive errors. In some conditions in which the front surface of the eye becomes distorted, such as keratoconus, rigid lenses are the only way of satisfactorily correcting vision.

Rigid lenses require some adaptation on the part of the wearer.

Typically they are less comfortable than soft lenses for the first week or two of wear, but after that they do not cause any discomfort. Adapting to rigid lenses is a bit like breaking in a new pair of shoes - initially they may be a little uncomfortable, but soon you can wear them all day without even noticing you have them on.

Rigid lenses are more durable than soft lenses, so they do not need to be replaced as often.

Replacement schedules

No contact lens lasts forever, but different types of lenses need to be replaced at different intervals, both because the lenses wear out and to maintain good eye health.

Soft lenses (apart from frequent replacement or "disposable" lenses) generally need to be replaced after about one year if they are worn regularly.

Frequent replacement - "disposable" :

Most soft contact lenses these days are intended to be replaced at shorter intervals, typically every day or two to four weeks. This ensures that the lenses are always clean, as they are replaced before any deposits can build up on them. These materials provide good vision and ocular function.

Rigid lenses are typically replaced every one to two years. Often the replacement is necessary because the wearer's prescription has changed.

Wearing Schedules

The amount of time different people wear their contact lenses varies, but no lenses should be worn longer than the maximum wearing time recommended by your optometrist who prescribed them. Overwearing lenses is a common cause of problems with contact lenses.

Daily wear

The most common wearing schedule is "daily wear", where the lenses are inserted in the morning, worn through the day, and taken out at night. The lenses are then cleaned and disinfected before being worn again, unless they are daily disposable.

Extended wear

Some newer lens types allow wearers to sleep in their contact lenses, either occasionally, or for up to 30 days. This is known as "extended wear". These special lenses allow a large amount of oxygen to pass through the lens, ensuring that the eye receives enough oxygen.

These lenses are not suitable for everyone. Your optometrist can tell you if they would suit your eyes.

You should NEVER sleep in your contact lenses unless your optometrist has specifically advised you that you can do so. Sleeping in the wrong type of lenses can cut off your corneas' oxygen supply while you are asleep, causing severe inflammation and possibly permanent damage.

Lens Care

All contact lenses - except daily disposables - have to be cleaned and disinfected after every time they are worn. Poor lens hygiene is one of the common causes of problems with contact lenses, particularly eye infections.

Cleaning

Contact lenses have to be cleaned each time they are removed from the eye in order to prevent the buildup of deposits. The deposits are composed of proteins and lipids from the tears, and if they are not removed they can make the lenses uncomfortable, as well as making it easier for micro-organisms to adhere to the lenses.

There are special lens cleaning solutions provided for different types of lenses. The lenses are usually rubbed between the fingers, using an appropriate cleaning solution, then rinsed.

Disinfection

After cleaning, contact lenses need to be disinfected to kill any bacteria or other micro-organisms which may still adhere to the lenses.

There are a variety of disinfection systems available for different types of contact lenses. It is important to use the system recommended by your optometrist who prescribed the lenses and not to change systems without their advice, as some of the systems are not interchangeable.

Consultations

Prescribing contact lenses is a specialised process. Contact lenses must not only correct refractive errors, but must also fit without causing any injury to the surface of the eye. They must move on the surface of the eye and allow the lids to ride over them with each blink, without being uncomfortable. They must also not provoke any reaction from the eye or the immune system.

Professional care and advice is essential.

Prescription

There are many steps involved in arriving at a prescription for contact lenses. After assessing the health of the eyes and measuring any refractive error that is present, the optometrist will discuss the various types of contact lenses with the patient, as well as the patient's visual needs, lifestyle and other factors that may influence the decision on what type of lenses to prescribe. Some additional measurements will need to be taken, including measuring the curvature of the front surface of the eye.

A trial lens may then be placed on the eye, so that the optometrist can assess the fit of the lens. Several trial lenses may need to be used to arrive at the best possible fit. When this has been determined, a preliminary prescription can be made, and a pair of lenses ordered.

These preliminary lenses are then placed on the eyes, and the patient is instructed on how to put the lenses in and out of their eyes, as well as how to clean and maintain the lenses. The optometrist will usually reassess the lenses after they have been worn for a week or two, in order to make sure that the lenses are fitting and performing properly, and that the patient is not having any difficulties. It is sometimes necessary to alter the lens prescription at this point to solve any problems which may have arisen.

After-care

Contact lens wearers need to have regular eye examinations. Since a contact lens sits directly on the eye, it increases the risk of complications such as eye infections. Regular eye examinations allow any problems to be detected and corrected early, before they have had time to cause permanent damage.

While serious complications of contact lens wear are rare, they can cause severe damage to the eyes and even blindness, so regular eye examinations as directed are a good insurance policy.

Costs

The costs associated with contact lenses can be broken down into three main categories: consultation fees, lens costs and maintenance costs.

Consultation fees

Consultation fees are the fees charged by optometrists for their services. Some of these fees are covered by Medicare, while others are not.

Medicare

Medicare provides benefits for initial eye examinations for all Australians, although there are some limitations. A full benefit is payable for an eye examination by an optometrist every two years, or more frequently if there is a clinical justification for the examination. If a person consults a second optometrist within two years of their previous examination, a reduced benefit is paid unless the person has been referred by the previous optometrist.

Medicare also pays benefits for consultations relating to prescribing contact lenses, however not all Australians are eligible for these benefits. In order for benefits to be paid, a patient must meet certain criteria based on their clinical condition.

Non-Medicare

People who are not eligible for Medicare contact lens benefits will have to pay private consultation fees. These vary, and people contemplating contact lenses should discuss them with their optometrist.

Lens costs

The cost of a pair of contact lenses can vary enormously, depending on the type of lenses. Although frequent replacement lenses are less expensive than conventional lenses, they need to be replaced more often. As a result, the annual cost of wearing contact lenses is similar for both frequent replacement and conventional lenses.

Maintenance costs

All contact lenses, apart from those which are intended to be discarded after one use, need to be cleaned and disinfected. There are therefore ongoing costs involved in lens wear as cleaning and disinfection solutions will need to be purchased.