Ref refractive surgery

Over the last 25 years developments in medical technology and refractive surgery allow almost all need for glasses and contact lenses to be eliminated. Currently there are a number of effective procedures available to correct myopia (short-sightedness), hypermetropia (long-sightedness) and astigmatism. Laser vision correction (Excimer laser surgery) and lens implants are all available at Eye Surgery Associates.

The most appropriate procedure for you can only be determined after a detailed assessment of your eyes at your initial consultation. We look forward to the opportunity to discuss these options with you. In the meantime, you may find the following information helpful.

Common refractive errors

In a normal eye, light rays pass through the cornea and lens and are focused on the retina to generate a clear image. The cornea is the clear window on the surface of the eye. The lens is the clear focusing muscle within the eye. Variations in the shape of the cornea will cause refractive errors. The three main forms of refractive error are as follows:

**Myopia (short-sightedness):** This is due to the light rays bending (refracting) too much when they enter the eye, causing the image to focus in front of the retina. This results in a blurred image.

**Hypermetropia (long-sightedness):** This is due to the light rays not bending enough when they enter the eye, causing the image to focus behind the retina. This results in a blurred image.
Astigmatism: This is when the cornea is not spherical (like the surface of a basketball) but is steeper on one axis (like the side of a football). This results in light being focussed at two points within the eye. This results in a blurred and distorted image.

I Wear Glasses Only When I Read

Often confused with a refractive error is a condition called Presbyopia. With normal aging, the focusing Lens within the eye loses some of its flexibility and can no longer focus as clearly for up close. This results in a gradual deterioration in near vision, therefore the need for reading glasses. This condition usually presents itself at around 45 years of age.

Who is Suitable for Refractive Surgery?

Patients who are over 18 years of age and have not had a significant glasses or contact lens prescription change over 12 months are eligible for an assessment for Refractive Surgery.

Common Reasons People Choose To Have Refractive Surgery

- Independence from glasses and contact lenses
- Intolerance to contact lenses
- Freedom to play sports
- Occupation e.g. the police force, the Air force

Types of refractive surgery

- Intralase LASIK
- PRK (Surface treatments)
- Implantable Contact Lenses (ICL)
- Acrysof® Cachet™ Lens (ACL)
- Refractive Lens Exchange (RLE)
- Astigmatic Keratotomy (AK)

Laser Vision Correction

Laser vision correction uses an Excimer laser to re-shape the front surface of the cornea, adjusting the angle of the light entering the eye (Refraction). The laser uses pulses of high-energy ultraviolet light (Argon Fluoride), removing tissue without heating or damaging surrounding areas. The amount of tissue removed is thinner than a human hair. While the actual procedure time is only a few minutes on each eye, you will need to be at the Laser Centre for approximately three hours on the day to make sure that all pre-operative and
post-operative checks are performed.

1. **Intralase LASIK:**
   In LASIK (laser in situ keratomileusis), a corneal flap is created of uniform thickness. The flap is then folded back on the hinge and exposed surface is then re-shaped by the laser. The flap is then placed back to its original position and adheres without the need for sutures. Traditionally the corneal flap was created using a microkeratome blade. Eye Surgery Associates uses the most advanced medical equipment available, the Intralase Laser. This blade-free method uses a laser to create a hinged corneal flap instead of the microkeratome. This allows for increased accuracy.

2. **Photorefractive keratectomy (PRK):**
   In PRK the surface layer of the cornea (epithelium) is removed and then the Excimer laser is performed. PRK is completed with a bandage contact lens placed over the cornea to allow regular healing, this is taken out after three days.

**Other Types of Refractive Surgery**

1. **Implantable Contact Lens:**
   The implantable contact lens (ICL) is a thin, soft, foldable implant similar to a contact lens. The ICL is inserted through a small incision and placed within the eye, in front of the natural lens and behind the Iris. ICL’s are very effective for treating very high levels of myopia or hypermetropia and astigmatism which are beyond the range of laser. Vision recovers rapidly within a day or two of surgery and the procedure is permanent however can be reversed if ever required.

2. **Acrysof® Cachet™ Lens:**
   The Acrysof® Cachet™ Lens (ACL) is the latest development in Refractive Surgery. It is very similar to the ICL - it is a soft foldable Lens that is inserted into the eye with rapid recovery. It differs to the ICL in that the ACL is placed behind the cornea and in front of the Iris. It is used to treat moderate to high levels of myopia only.

3. **Refractive Lens Exchange:**
   Refractive Lens Exchange (RLE) is an operation similar to cataract surgery in which the eye’s natural lens is surgically removed and replaced with an intra-ocular lens (IOL). The power of the IOL is selected to achieve the desired final refraction. There are a number of different types of IOLs available to aim give you a desired outcome for e.g. Toric IOLs to treat astigmatism and multifocal IOL’s to help with near vision. You can also choose to have part of this procedure done with the latest state of the art in medical technology, the LenSx laser. You can discuss all of these options with your doctor at your consultation. The best candidates for this procedure are over 55 years of age.
4. Astigmatic Keratotomy:
This is a procedure used for patients with high degrees of astigmatism. The operation involves making small relaxing incisions around the mid periphery of the cornea. This allows the cornea to take on a more regular spherical shape. These incisions can be made using the most advanced LenSx femtosecond laser to allow for improved precision, Femtosecond laser assisted astigmatic keratotomy.

Result Of Refractive Surgery

Refractive Surgery is a successful way of reducing dependence of glasses and has improved quality of life for millions of people worldwide. It is important however, to have realistic expectations.

Most patients achieve an excellent result with a single treatment of laser surgery. A small number (approximately 5%) decide to have a re-treatment, called an Enhancement. This is due to a small amount of residual refractive error after the first treatment, this is called Regression. Typically an enhancement is performed at approximately six months after the first treatment.

Patients who are older than mid 40’s can have their distance vision corrected with Refractive Surgery however they may require reading glasses following Refractive Surgery. This is due to Presbyopia (as explained above). Younger patients, who have undergone Refractive Surgery, like everyone, will still develop presbyopia in their mid 40’s. Consequently, they will require glasses for near vision when this time comes.

Can Refractive Surgery Help Me Throw Away My Reading Glasses?

Monovision can provide a solution for this aging condition in some people. This is when one eye is corrected for near and the other eye is corrected for distance. Not everyone is suitable for monovision. If you are over 40 years old and are interested, please ask us about it at your consultation.

Multifocal IOLs are another option for patients with Presbyopia. These are only used when a refractive Lens exchange is performed (see above). The revolutionary multifocal IOL improves can improve vision for arrange of distances, from near and far.

Both Monvoision and Multifocal IOLs have advantages and limitations. If you are interested, these will be discussed further with your doctor at your consultation.

Risks Associated With Refractive Surgery

Refractive surgery is considered to be very safe. However, all surgery carries some risk.
Although they are rare and generally minor it is important that all patients have an understanding of the potential complications. You can then make an informed decision to accept these risks and will be better prepared to deal with any difficulties that might be encountered during the procedure or postoperative period.

The risks of refractive surgery are listed in detail in your consent form. Your ophthalmologist will go over these with you at your consultation. If you have any particular concerns regarding complications you should raise them with your ophthalmologist.

**Pre-Operative Assessments**

Your free **Refractive Assessment** can be performed at the laser centre, the Melbourne Excimer Laser Group (MELG) in East Melbourne or at our East Melbourne or Doncaster sites. This is a half hour appointment with one of our trained Orthoptists to determine whether you are suitable for Refractive surgery. Please bring any old glasses or contact lens prescriptions. If you are suitable, you will be booked in for an initial consultation with the Ophthalmologist.

The **pre-operative consultation** is performed at one of the Eye Surgery Associates clinics.

You will need to bring a referral from either your optometrist or general practitioner in order to claim your Medicare rebate. At this appointment you can expect to have a corneal topography scan. Corneal topography or Computerized Video Keratography (CVK) is a non-invasive medical imaging technique for accurately measuring the thickness, contour and shape of the cornea. This allows your surgeon will advise you of the treatment option for which you are best suited. You should allow up to 2.5 hours for this appointment and will have drops in your eyes that dilate and blur your vision. You may experience blurred vision for 24 hours following the appointment; therefore you cannot drive home afterwards. Contact lenses alter the shape of your cornea and, if worn prior to this appointment, testing is unreliable.

You need to ensure you have not worn your contact lenses prior to your initial consult:

- Soft lenses minimum of 1 week
- Toric lenses minimum of 2 weeks
- Hard lenses minimum of 4 weeks

**Booking Your Refractive Surgery**

You may book your procedure at any time following the consult. Once you decide to proceed you will receive:

- A Informed consent form, providing a list of the risks of your treatment.
• A financial consent form. Our fee includes all pre-operative assessments, facility fee, surgeon’s fee, routine post-operative medications and care for 6 months and enhancement (retreatment) procedure if necessary within the first year.
• Pre-operative instructions and FAQ’s.

Anticipated Time Off Work And Driving Following Your Surgery

- LASIK: 1-2 days
- PRK: 7-10 days
- Lens Implants (ICL/ACL/RLE): 2-3 days (per eye)
- Astigmatic keratotomy: 1-2 days

Where is the procedure performed?

Laser refractive procedures (LASIK/PRK) are performed at MELG in East Melbourne. This facility uses the state of the art Bausch and Lomb Zyoptix Excimer laser and Intralase femtosecond laser.

ICL, ACL, RLE and Astigmatic keratotomy are performed at the Day Procedure Unit at Manningham Medical Centre in Doncaster.

Is Refractive Surgery Covered by Health Insurance or Medicare?

Medicare will not provide any rebate for refractive surgery and neither does most health insurance company. However, some private health insurance may offer a rebate for members in the top extras cover. You will need to contact your private health insurance to find out.

Consultation

Should you require a consultation for refractive surgery, please call 1800 986 695

At Eye Surgery Associates we can assist you with an appointment at any one of our three sites: East Melbourne, Malvern and Doncaster.

More references

You may find useful information at the following sites: