Cataract(s)

A cataract is an opacity or cloudiness of the eye’s natural lens. Located behind the coloured iris, the lens is responsible for focusing light and producing a clear image on the retina at the back of the eye. When the lens develops opacity, light cannot pass to the retina and the resulting image appears blurred or "cloudy”. Compare a clear glass window to a smoky opaque bathroom window that lets in light but does not allow a clear view, and this is somewhat like the change the lens undergoes when a cataract develops.

Cataracts are a natural part of aging and are the leading cause of vision loss among adults 55 and older. They can also exist at birth (congenital cataract); be caused by an injury (traumatic cataract); some medications (such as prednisolone); or be caused by conditions like diabetes or severe glaucoma. The vast majority of people with cataracts are extremely healthy and have no other eye disease. Cataracts usually develop in both eyes, although not always at the same rate. Their rate of development will vary from person to person, but generally develop slowly over a period of time. Occasionally the effect on vision however, can be faster, occurring over a period of several weeks.

Symptoms

You will notice cataracts in different ways depending upon what your normal activities are. As your cataract develops, you may notice any of the following:

- deterioration of your distance and reading vision
- the vision may seem dull and colours appear less bright
- sensitivity to light
- glare intolerance (especially at night)
- double vision or halos around lights
- becoming more myopic (short-sighted)

These may be noticed during reading, watching television, driving (particularly at night.) or any other activity.

Treatment

Currently, there is no medical treatment (drops or tablets) that will prevent cataracts or reverse them once they develop. Surgery is the only treatment. The decision to proceed with cataract surgery is an individual one and made in consultation with your ophthalmologist. The timing of surgical intervention will vary, depending on the degree to which the cataract is impairing your vision and the effect this is having on your lifestyle.
Surgical treatment, known as small incision cataract surgery, involves removing the eye’s natural, cloudy lens and replacing it with a clear, permanent intraocular lens (IOL) implant. The cataract is aspirated through a small incision by a technique called Phacoemulsification. The lens is replaced with a foldable IOL. The incisions are small enough so that they seal without suturing. The wound is sutured in a small number of cases as a precautionary measure. Eye Surgery Associates surgeons use the latest technology for this procedure using state-of-the-art foldable implants, micro-incision technique and the latest surgical equipment. The procedure takes between ten and thirty minutes.

We are pleased to advise that ESA is the first practice in Victoria to offer Femtosecond Laser Assisted Cataract Surgery (LACS). This Laser is used to perform the first three critical steps of cataract surgery. We have been performing and evaluating LACS since November 2011. The femtosecond laser is an extremely precise surgical tool offering the potential to improve refractive and visual outcomes, with international experience and published evidence building rapidly in support of LACS. Proposed advantages of LACS include:

- Precise and consistent placement, size and architecture of corneal incisions
- Improved centration of the anterior capsulotomy
- Perfect roundness of the capsulotomy
- Improved positioning of the intraocular lens, leading to better refractive outcomes and increased visual performance (particularly of aspheric, toric and multifocal lenses)
- Significantly reduced Ultrasound energy and fluid flow during phacoemulsification, leading to decreased endothelial cell loss

Whilst the majority of patients will benefit from LACS, some may not be suitable for clinical reasons such as poor pupil dilatation or significant corneal scarring. For these reasons, we will continue to offer conventional small incision cataract surgery when appropriate.

Surgery is done on one eye at a time and usually the second eye operation takes place within the next month if required.

All surgery takes place in a modern day facility with the emphasis on safety, precision and comfort. By gently numbing the eye with local anaesthetic this allows you to remain awake and stay pain free throughout the procedure with immediate post-operative recovery. You may be given some sedating medication to make you feel more relaxed. A sterile drape (cover) is placed over the eye and oxygen piped underneath. A small clip keeps the eyelids separated and prevents the patient from blinking. Most patients find themselves enjoying a cup of tea or coffee within fifteen minutes of leaving the operating room. Once surgery is completed you will be monitored by trained staff members to make sure you are comfortable and safe to return to your home with your escort. Instructions for post-operative
care will be discussed with you prior to your discharge. During and after the surgery, you will be monitored by an anaesthetist with trained nurses. Some patients will have the procedure done under general anaesthetic, although this is uncommon.

The procedure takes usually between ten and thirty minutes. Most patients are able to sit up relatively soon afterwards. They will be offered a small snack and drink. Your post-operative care will be discussed with you prior to your discharge.

Recovery after cataract surgery

Most patients wear a patch over the eye for the first night and return to the consulting rooms the next day, when the patch will be removed. Visual improvement is often noticed within the first few days following the operation and is usually stable within a few weeks.

You will need to anticipate some time off work and be unable to drive for a short period. Patients, without other significant eye disease, can resume driving within one to two weeks post-surgery. This varies from case to case and you will need to have a contingency plan should this period be longer. This can be discussed with your surgeon at your post-operative visits.

Drops will need to be administered on average for one month, most commonly four times per day.

Results from cataract surgery

Cataract surgery is an elective procedure. The surgery is a benefit of modern technology and medicine, offering an alternative that can enhance the quality of life.

The aim of cataract surgery is to improve vision. For many patients, cataract surgery has the extra benefit of reducing their dependence on glasses. Many patients have their distance vision corrected which means they don’t need to wear glasses or contact lenses for distance. Generally glasses will only be needed for reading.

It is important to have realistic expectations. The final level of vision will depend on the health of the rest of the eye. If the eye has been affected by macular degeneration or glaucoma this may limit the final improvement.

Presbyopia and near vision

Once patients reach their late 40’s and beyond, the lens inside their eye loses its ability to alter shape and hence focusing on near objects becomes difficult. For most patients this means they need reading, bifocal or multifocal glasses to read. This condition is called presbyopia. Most patients with cataracts are at the age where they have already developed
presbyopia.

Younger patients undergoing cataract surgery may not have yet developed presbyopia. There are several options for addressing presbyopia at the time of cataract surgery:

1. **Most patients have Monofocal IOL implants for distance vision in both eyes. This means they still need glasses for near vision such as reading. This option in the most popular has the longest track record.**

2. **Monovision**: Some patients elect to have different power monofocal implants, one to give distance vision in one eye and near vision in the other.

3. **Multifocal IOLs**: these implants allow both near and distance vision in each eye. Patients choosing this option need to be aware that these lenses are not suitable for everyone. These lenses carry some unique post-operative issues which need to be considered. These lenses are also more expensive than monofocal lenses, often attracting fewer rebates from health insurance companies resulting in a greater out of pocket expense for the patient.

Regardless of the planned outcome, patients should be prepared for the possibility of requiring glasses for at least some visual tasks. Even those embarking on the multifocal IOL or monovision option may find they need glasses in some circumstances.

**Astigmatism**

Astigmatism occurs when the surfaces of the eye are not spherical (like the surface of a basketball) but is more steeply curved in one axis (like the side of a football). Instead of light being focussed at a single point on the retina, it is focussed at two points. Traditionally astigmatism was either not treated by the cataract surgery, or incisions were placed in the cornea called limbal relaxing incisions. More recent developments have allowed some patients to have their post-operative astigmatism minimized by implantation of a toric IOL. These lenses have unique shape that treats the astigmatism of the eye.

**Complications**

Cataract surgery is one of the most commonly performed procedures worldwide with excellent results. However, as with any surgery, complications can occur which may affect your vision. At Eye Surgery Associates we consider your preparation for surgery as important as the operation itself. By giving you the opportunity to ask any questions and make sure you have a thorough understanding of the risks and benefits involved, you can proceed with confidence.

**Measurement of the IOL power**

The power of the IOL for implantation is determined using special formulae. The technology used to determine the IOL power is state of the art and utilizes highly accurate...
measurement of the dimensions of the eye. The IOL power calculation accuracy is further enhanced by experience from the outcomes of thousands of cases. Every effort is made to ensure the accuracy of the implanted IOL. IOL power calculation is slightly less predictable in patients who have had prior laser refractive surgery, although this is improving as our experience with this group increases.

**Pre-operative assessment**

At this assessment you will see one of our highly trained orthoptists prior to seeing your ophthalmologist. Your orthoptist will undertake a full vision and refraction assessment (glasses check).

At this assessment you will have the pupils dilated with eye drops allowing your surgeon to perform a thorough examination with a clear view of the cataract, retina and optic nerve. Dilating drops generally blur the vision for several hours until they wear off and for this reason it is advisable to organise a driver or alternative transport for this consultation. A pair of dark glasses or sunglasses will help reduce the glare if it is a sunny day.

After your assessment your surgeon will discuss the findings and your options. A decision will be made together whether to proceed with surgery, including a discussion on the benefit and risks of cataract surgery and the opportunity for you or your accompanying person to family member or friend to ask any questions. Further reading material can be provided.

If, after your consultation, you agree to proceed with cataract surgery, the orthoptist will take measurements of eye to determine the power of the IOL for implantation.

Please set aside two hours for the entire consultation. If you wear contact lenses, you should leave them out for at least one week prior to your assessment and one week prior to surgery. This improves the accuracy of the measurements for the power of the IOL.

**Booking the procedure**

Once you have decided to proceed with surgery the Eye Surgery Associates staff will provide you with a date for your surgery and times for the anticipated post-operative visits. You will also receive full financial consent explaining the costs of the procedure and what this entitles you to.

**Consultation**

Should you require a consultation for cataract surgery, please call Eye Surgery Associates at any one of our three sites: **East Melbourne, Malvern and Doncaster**.
More references

You may find useful information at the following sites:

Royal Australian and New Zealand College of Ophthalmologists

Vision Australia

The Eye Digest

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