

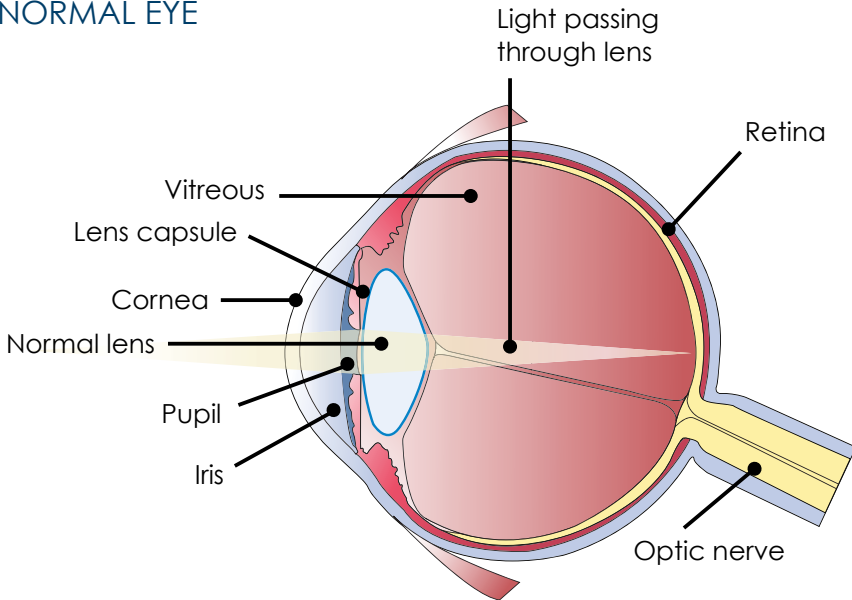
CATARACT SURGERY
CAPITAL EYE SPECIALISTS



NORMAL EYE FUNCTION

When an eye is functioning as it should, light enters the eye through the cornea, passes through the lens and forms an image on the retina. The normally clear lens helps to focus light onto the retina.

A NORMAL EYE



WHAT IS A CATARACT?

A cataract is an eye condition that occurs when the lens of the eye becomes cloudy.

HOW DO CATARACTS OCCUR?

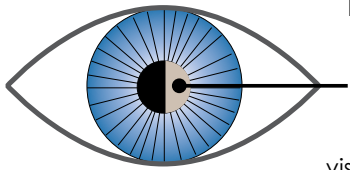
Cataracts develop as a normal part of the ageing process of the eye.

By the age of 70 nearly everyone has some cataract formation. Cataracts can develop at an early age. Congenital cataracts can be present in newborn babies. Previous eye injury or surgery, diabetes, chronic eye disease, excessive ultraviolet light and some medications can cause cataracts to develop more quickly.

AN EYE WITH A CATARACT

The lens, contained in a clear membrane called the *lens capsule*, sits between the *iris* and the *vitreous*.

Normally the lens is transparent, but as the eye ages the lens starts to become cloudy, forming a cataract.



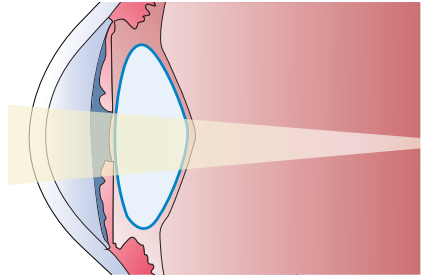
Behind the iris (eye colour), the right half of the pupil is shown with a visible cataract

WHAT CHANGES OCCUR IN VISION AS A CATARACT DEVELOPS?

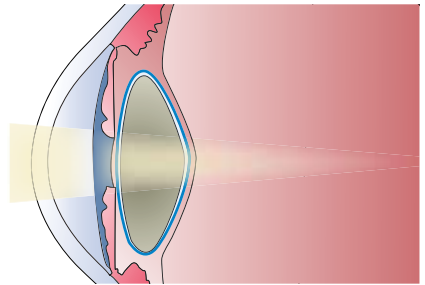
Cataracts develop slowly. Light coming into the eye is scattered or blocked by the cataract, making vision foggy, hazy or cloudy, and causing glare.

Haloes may appear around lights, making it difficult to drive at night or in wet weather. Colours become dull and yellowed. Daily activities and hobbies may be affected.

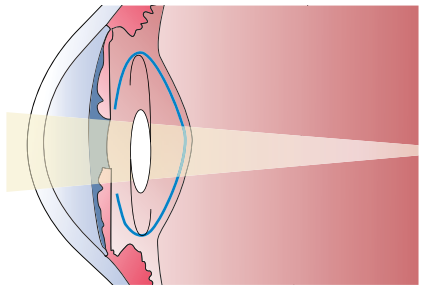
Stronger glasses may mask cataract development for some time, but sight will continue to deteriorate because the cataract will continue to develop.



Normal lens, clear light path to retina



Cataract creating cloudy vision



Cataract replaced by lens implant and clear vision is restored.

FIRST CONSULTATION

Cataract patients are typically referred to Capital Eye Specialists by an Optometrist or GP, although patients may also refer themselves.

Prof Wells or Dr Reeves and our fully qualified, expert cataract team will examine the external and internal structure of the eye. They will assess the degree to which vision is affected, check if any other eye condition is present and determine whether treatment is required.

If a cataract is present and is affecting you significantly, surgery will be discussed at this stage.



PLANNING TREATMENT

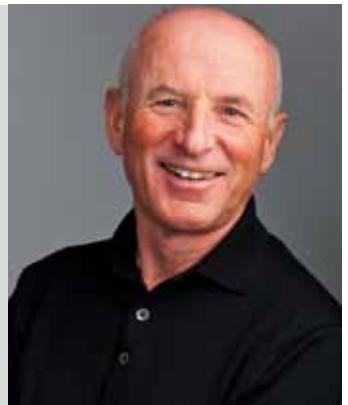
Cataract surgery is carried out as a day procedure in the day-stay unit at a private hospital, for example Southern Cross Hospital in Newtown.

The majority of patients require only an eye drop anaesthetic prior to cataract surgery. Other approaches, such as general anaesthesia, may be necessary under some circumstances; for example, if you suffer from claustrophobia or severe anxiety.

If both eyes have cataracts, a decision will be made as to which eye is to be operated on first. Usually we choose to do the worst eye first (although on rare occasions, we may choose to do both eyes on the same day, if this seems the best option). When cataracts are treated separately, the interval between operations can be anywhere between a week and many years, depending on the situation; typical intervals are one, or four, weeks. While waiting for the second eye to be done, a small percentage of patients have significantly altered balance between the two eyes, which may need temporising measures, such as changing a glasses lens or using a temporary contact lens.

It is likely that glasses may still be required for some activities after cataract surgery. You can discuss with the CES team the activities for which you would most like to be glasses-free.

“I was a bit nervous about having a plastic sheet over me as I am a little bit claustrophobic, but once I had told the nursing staff they pinned the sheet to one side which made me feel much better.”



RISKS AND COMPLICATIONS

The risks of having cataract surgery will be discussed with you.

PROCEDURE STATISTICS:

- More than 95% of procedures result in a successful outcome within 24 hours.
- There is approximately a 4% chance you will have treatable or minor complications during or after the procedure; full recovery to excellent vision can be expected once these are treated or resolved.
- There is less than a 1% chance the procedure will make your vision worse.

ADVERSE OUTCOMES AND RISKS:

- Irritation of the eye. This is common and will usually settle quickly with eye drops. Occasionally the eye may feel dry for longer but this is not serious.
- Bleeding. Minor bleeding on the white of the eye may occur – this is common and usually resolves without specific treatment.
- Inflammation. This may occur after surgery; you will be given eye drops to reduce the inflammation and avoid any secondary problems. This usually settles quickly, but occasionally additional drops may be needed for longer periods.
- High pressure within the eye. This is usually transient and it is very uncommon for it to cause problems beyond the first day or so. Occasionally, if we consider it might be significant or it is uncomfortable, you may need extra eye drops or other management.
- Retinal detachment. This is very rare in a straightforward operation. Treatment would require a separate operation, for which success rates are excellent if treated early.



- Blindness. This is very rare, occurring as a consequence of surgery in fewer than 1 in 1000 cases. The most common causes are severe infection or bleeding inside the eye.
- Posterior Capsular Opacity (PCO). This can occur several months or even years after surgery. Sometimes called 'secondary cataract', it is a slow thickening of the posterior capsular membrane just behind the lens implant. Sensitivity to bright light is typical, and vision can become blurred. Should PCO develop, a quick laser procedure will help clear the opacity and restore the level of clarity present immediately after cataract surgery.
- Limitations of surgical results by other eye diseases. The results of cataract surgery depend on the rest of the eye being healthy. Vision after surgery may be impaired by, for example, the presence of glaucoma, macular degeneration, diabetic changes, or other retinal disease.
- Unexpected refractive outcomes. Despite best efforts and best available technology, sometimes we don't get the expected result (eg more short or long sighted than intended). This can be corrected if needed.

NOTES/ QUESTIONS:

PRE-ASSESSMENT

A pre-operation assessment will be completed by the Ophthalmology Nurse. This will take approximately one hour, usually within a few weeks of the planned operation.

Documentation (such as consent forms) will be completed and important medical information will be gathered. This will include your medical history, any allergies you may have, all medications you may be taking (including drugs to thin the blood) and if you have any blood disorders. Your hospital admission pack will also be prepared.

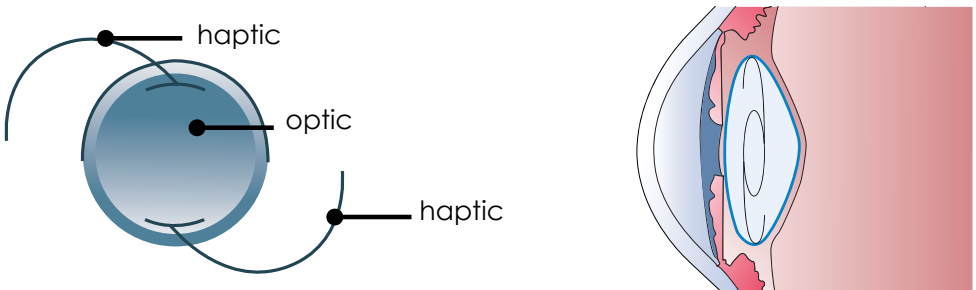
You will be advised of the date and time for your surgery, as well as the surgery costs.

A post-operation appointment at Capital Eye Specialists for the day following your surgery will also be arranged.

INTRAOCULAR LENS (IOL)

The lens implant that replaces the cataract is designed to restore focus to the eye, and is called an "IntraOcular Lens", or IOL. This consists of two parts: a clear plastic or silicone disk with a shape similar to your natural lens (the "optic"), and stabilising arms (the "haptics"), which hold the lens in place. This artificial lens, to be placed into your lens capsule when the cataract has been removed, will last a lifetime.

AN INTRAOCULAR LENS



During pre-assessment several measurements will be taken of the eye. The most critical of these are the distance between the front of the eye and the retina; and the curvature of the cornea. These measurements are the major ones that determine the best choice of type and power of the IOL to be fitted to replace the cataract. We use sophisticated formulas to predict the best power and type of lens to use, generally with excellent accuracy.

From their mid-40s onwards, most people have difficulty seeing near objects and need reading glasses. This is due to a condition called presbyopia, whereby the lens of the eye hardens and the eye loses focus range.

Most lens implant options are not adjustable like a young person's lens, so there isn't an easy way around presbyopia. However, in choosing an IOL, there are some ways of improving near or reading vision without the need for glasses, while keeping good distance vision. All of these options involve some small compromises in visual function.

Issues to consider and discuss with your surgeon:

- Would you like to have sharp distance vision - for driving, golf, concerts, etc. - without needing glasses?
- Do you have hobbies or interests (e.g. reading, music, crafts) requiring prolonged near vision, you would like to be able to do without glasses?
- Do you drive extensively at night (e.g. ambulance or police work)?

It is unlikely that you can be completely free of glasses after cataract surgery, although most people do not depend on them and wear them only a small proportion of the time.

TYPES OF INTRAOCULAR LENSES

MONOFOCAL LENSES

These lenses have a single clear zone of focus, usually set for distance vision. When both eyes are set for distance vision, glasses will be required for near vision, e.g. when reading or sewing.

You can choose to have either distance monofocal lenses for both eyes (great distance vision but glasses will always be required for reading) or near lenses for both eyes (glasses needed for distance vision), or a combination of distance in one eye and near in the other (see “Blended vision”, below).

BLENDED VISION

A common option is blended vision (also called “monovision”) where the dominant eye (the eye the brain prefers to see with) is targeted to focus at distance without glasses and the non-dominant eye is targeted for near or reading vision without glasses.

The main benefit of blended vision is flexibility; some people never wear glasses again; both reading and distance tasks can be done easily without glasses. However, many dominant-eye-distant blended vision patients find that prolonged reading, of say more than 15 minutes, makes them tired; they put on reading glasses for sitting down with a novel or for prolonged computer work.

Alternatively, the non-dominant eye can be targeted for middle distance rather than near, giving excellent distance-middle vision; reading glasses will still be needed for near tasks and small print.

There can be a brief period of adaption while the brain learns which eye to use for near and which to use for distance tasks. Rarely, blended vision causes problems from a lack of balance between the two focal ranges; this can be corrected by inserting an adjustment lens into one eye, in a minor operation.

TORIC LENSES

These are special lenses used to correct astigmatism (occurs when the surface of the cornea has an uneven curvature). Toric IOLs are monofocal lenses that correct astigmatism in addition to setting overall focusing distance. This helps to sharpen vision considerably, without glasses, in people with astigmatism. We'll discuss this with you if we think you would benefit from a toric IOL. As with other IOLs, results of the calculations and predictions are generally excellent.

MULTIFOCAL LENSES

These lenses attempt to incorporate distance and near vision corrections into one lens. They work in a similar way to graduated or progressive glasses, but each eye effectively looks through the distance and near parts of the lens at the same time. The aim of these lenses is to combine good distance and near vision but they have significant limitations.

Problems with multifocal lenses include reduced contrast sensitivity, poor intermediate vision, and haloes around lights. The most significant limitation is decreased image quality that cannot be corrected with glasses.

ACCOMMODATING LENSES

These are special lenses designed to alter their focusing power in response to the eye adjusting for distance or near vision. In theory they should enable good distance, intermediate and near vision in each eye. Image quality is not compromised as with multifocal lenses, but the near-vision improvement from accommodating lenses seems to only last for a few months, leaving the eye no better off than it would have been with a monofocal lens.

Insurance does not cover the additional costs of premium lenses, e.g. toric or accommodating lenses.

DAY OF SURGERY

You will need to be at the hospital one hour prior to surgery. You will be admitted to the day-stay unit, where your blood pressure will be taken. You will be given a gown to wear over your clothes and covers for your head and shoes.

Prior to surgery, eye drops will be administered at fifteen minute intervals to dilate (open up) the pupil.

On entering theatre you will lie flat on a bed. Your eye will be washed with iodine solution. Your face and body will be covered with a translucent plastic sheet with a small opening for the operation.

A pipe, supplying air with some extra oxygen, will hold the sheet away from your face. Your eyelids will be held open by a support, to prevent blinking during the operation.

If required, a pillow can be placed under your knees for your comfort.



“I just kept staring at this bright light. You can’t help feeling a bit tense but there was absolutely no pain and it was all over before I knew it.”

SURGERY

Local anaesthetic eye drops are administered to numb the eye, and the main incision (about 2mm wide) is made in the cornea, with one or two even smaller incisions.

In some patients an injection of local anaesthetic around the eye is used to help keep the eye still during surgery.



Using a procedure known as phacoemulsification, an ultrasound probe, inserted into the eye, through the incision, simultaneously dissolves the cataract and sucks up the broken-down material. The cataract-affected lens is painlessly removed using this technique.

The intraocular lens is folded and injected through the 2mm incision. It unfolds and is placed inside the lens capsule.

The incisions are all self-sealing and normally do not require stitches. The procedure takes 20 to 30 minutes.

Finally, a clear plastic shield is placed over the eye for protection.

IMMEDIATELY AFTER SURGERY

You will be given a pack containing post-operative instructions and eye drops. These will include antibiotic drops, which are to be used for a week; as well as steroid and anti-inflammatory drops to reduce irritation, redness and swelling, which are to be used for a month. These drops also protect against secondary swelling of the retina.

It is important that you start your eye drops the evening of the day of surgery and that you continue with any other regular eye medications (e.g. glaucoma medications). Remember that any two eye drops need a gap between them of at least 5 minutes to allow the first one to soak in.

DAY AFTER SURGERY

The next day you will need to keep the post-operative appointment, arranged prior to surgery, at Capital Eye Specialists.

Your plastic shield may be removed the morning after surgery.

Temporary side effects may include blurred vision, slight discomfort and slight bruising of the eyelid. Taking Paracetamol and using your eye drops as instructed will help relieve these symptoms.

If you notice any deterioration in your vision or have worsening pain in your eye, you should contact us as soon as possible.

“I can now read the newspaper, do the crossword without glasses; it is unbelievable. The only bad thing was looking in the mirror and seeing all my wrinkles!”



SUPPORT CARE

If you have had a local anaesthetic, you can be on your own overnight, although it is nice to have someone with you to help with meals and to put in your post-operative drops. You should not drive until the day after surgery.

If you have had a general anaesthetic, you must have an adult stay with you overnight. You are not permitted to drive or use machinery for 24 hours after a general anaesthetic.

CARE SHOULD BE TAKEN AFTER SURGERY:

- **Avoid heavy lifting for the first week.**
- **Wear sunglasses to protect your eye in bright or windy conditions.**
- **Wash your hands prior to putting in your eye drops.**
- **Use a fresh, clean tissue to wipe away excess drops.**
- **Do not rub your eye.**
- **You should avoid swimming for at least two weeks**

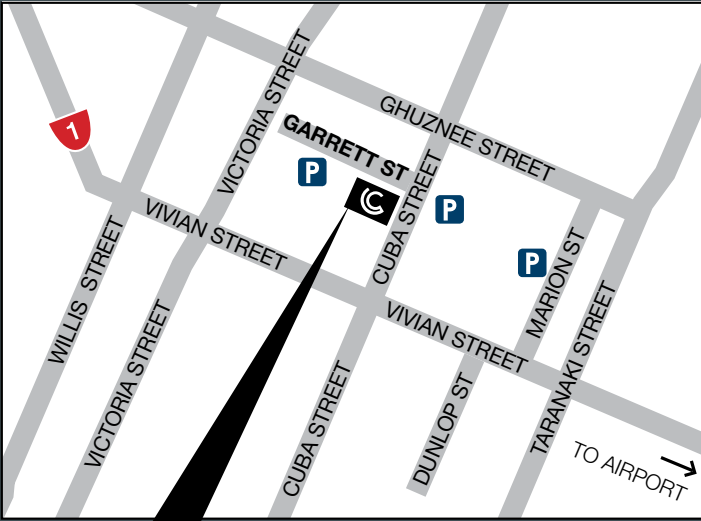
KEEP IN TOUCH

Education is an important part of your surgery.

You have been provided with this information to guide you through your surgical procedure and to provide you with a basic understanding of the important issues. If you think that this booklet has missed something, or it could be improved, please let us know. Once you are finished with this booklet, please feel free to pass it to someone else.

If you have any questions, or if you are unwell prior to the surgery, please contact the staff at Capital Eye Specialists.

QUESTIONS OR CONCERNS PLEASE CALL: 04 384 3937



Entrance via Garrett Street

- P** Car Park - 9a Garrett Street
- P** Car Park - 151 Cuba Street

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