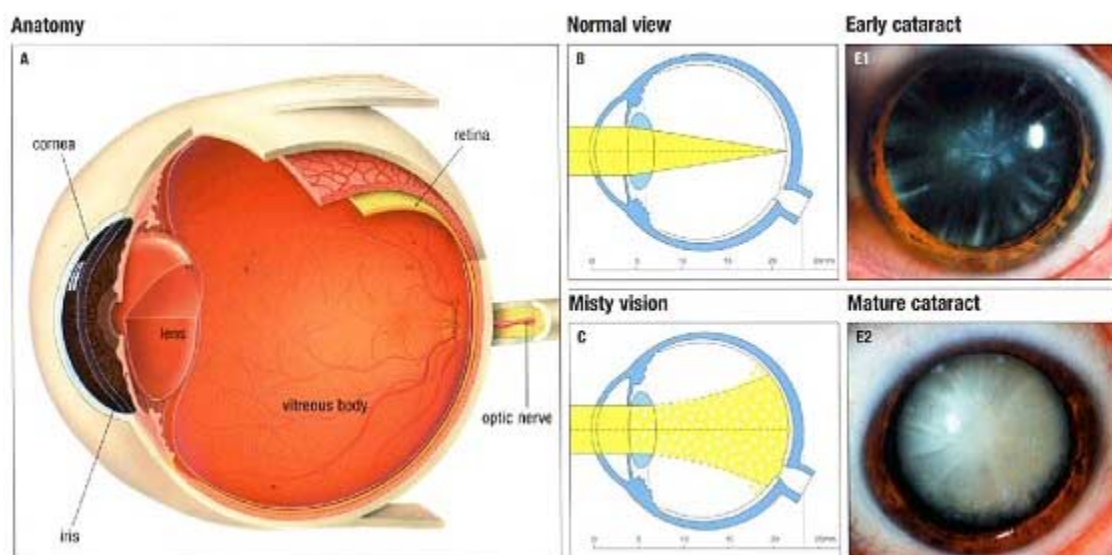


Cataract surgery

What is a Cataract?

Every eye contains a small lens. The job of the lens is to focus light which enters the front of the eye to form a picture at the back of the eye (the retina). In a young person, the lens of the eye is clear but it becomes gradually cloudier with increasing age - like a window which is never washed. When there is a cloudy area in the lens of the eye, it is called a cataract. A cataract blocks light entering the eye and interferes with focusing. As a cataract develops, the eyesight becomes worse, even if the correct spectacles are worn.



Cataracts are a normal feature of aging. About half of adults aged 65 to 74 have cataracts.

Cataracts normally develop slowly but can occasionally worsen over a short period. Very occasionally they can develop for reasons other than normal aging.

Most people with cataracts have one in each eye. Sometimes, a cataract may develop earlier in one eye causing the vision to be worse in that eye.

Many people with cataracts don't even know it. Their cataract may be mild, or the changes in their vision may not bother them very much. Other people who have cataracts cannot see well enough to do the things they need or want to do.

How Does a Cataract Affect Vision?

The following are some symptoms of a cataract:

- Cloudy, fuzzy, foggy, or filmy vision
- Changes in the way you see colours.
- Problems driving at night because headlights seem too bright

- Glare from lights or the sun
- Frequent changes in your eyeglass prescription
- Double vision in one eye

These symptoms can sometimes also be signs of other eye problems.



Normal vision

Vision with a cataract

How is a Cataract Diagnosed?

Your eye doctor or optician will ask you to read a letter chart to see how sharp your sight is. He will use eye drops to enlarge the pupils (the round black centre of the eye). This helps to see the inside of your eyes. A slit lamp microscope will be used to examine the eye to see if it is clear and also check for other problems at the back of your eyes which may also be affecting your vision or which may need treatment.

Other eye tests may also be used occasionally.

How is a Cataract Treated?

When a cataract is not very cloudy, it may cause only mild or occasional problems with your vision. A change in your glasses, stronger glasses, or the use of a magnifying glass and good lighting may help improve your vision and be all that is needed to improve your vision.

There are no medicines, eye drops, exercises or glasses that will cause cataracts to disappear once they have formed. Surgery is the only way to remove a cataract. When you have a cataract which stops you seeing well enough to do the things you like to do, a change in your glasses may have little effect to improve your vision and cataract surgery should be considered.

Cataracts cannot be removed with a laser, only by a surgical operation. In cataract surgery, the cloudy lens is removed from the eye. The focusing power of the natural lens is restored by replacing it with a permanent implant lens.

How do I Decide Whether to Have Surgery?

Just because you have a cataract does not mean it must be removed immediately. Cataract surgery can almost always be put off until you are unhappy with the way you see.

You are never too old to have cataract surgery. If it will help your vision and make daily activities easier, it is usually a good idea to have surgery.

Most people have plenty of time to decide about cataract surgery. Your doctor cannot make your decision for you, but talking with your doctor can help you decide.

If you have an early cataract, the improvement in vision following surgery will not be very noticeable. If the cataract is more advanced and causing more trouble with your vision, the improvement in vision after surgery will be much more apparent.

Tell your doctor how your cataract affects your vision and your life. Consider the statements below and decide which of them apply to you:

- My eyesight bothers me a lot
- My glasses do not help me see well enough
- I have difficulty recognising faces
- I do not see well enough to do things I like to do (eg, read, watch TV, sew, go out with friends)
- I do not see well enough to do the things I need to do at home.
- I need to drive, but there is too much glare from the sun or headlights
- I need to drive, but can not read road signs
- I need to drive but cannot read a number plate at the appropriate distance – 20 meters (66 feet – or about 5 car lengths), in good day light.
- I do not see well enough to do my best at work.
- I am afraid I will bump into something or fall
- Because of my vision, I am not as independent as I would like to be

You may also have other specific problems that you wish to discuss.

What Will the Doctor Ask Me?

When you come to be assessed for cataract surgery, you will be asked about

- any previous eye problems
- the strength of your glasses

- any medical problems or operations you have had in the past
- problems with lying down, breathing or your blood pressure
- a list of all medicines and tablets you take
- any allergies or drug reactions you have had
- who can help you if necessary after surgery
- an emergency contact number for your next of kin or friend

It will be very useful if you can write this information down – you may need the help of your GP.

Many people are worried about being able to lie still, lie flat, coughing, sneezing or being short of breath during the operation – do not worry. The doctors who look after you will be able to assess if this is likely to be a problem and will be able to discuss a way around the problem. It is rare that anyone is unsuitable for surgery for one of these reasons.

If you decide to proceed, measurements of the eye will be taken (biometry) which enable your surgeon to choose the appropriate lens implant for your eye.

Intraocular lenses (IOLs)

Intraocular lenses are made of an acrylic or silicone material. Modern IOLs are foldable and this allows the 6mm lens to fit through a 3mm incision. The strength of the IOL is usually chosen to give you good distance vision, but reading glasses will be required for close work.



Recent advances in IOL design have resulted in a range of implants with different properties;

- Accommodating IOLs which restore some degree of near focus and so reduce patient's dependence on reading glasses
- Tinted IOLs which may reduce the risk of developing age-related macular degeneration
- IOLs with properties which significantly reduce the risk of developing posterior capsule opacification.

These more sophisticated IOLs are expensive and may not be available under the NHS. They may however, be an option for patients choosing CESP Private treatment - enquire of your local CESP office.

The Day of Surgery

Modern cataract surgery has made long hospital stays a thing of the past. You usually do not even need to change into a hospital gown.

- Drops are put into the eye to dilate the pupil upon arrival.

- A local anaesthetic is administered close to the eye to prevent you feeling any discomfort during the operation. It will also stop you blinking or moving your eye.

Operating theatre

- The skin around the eye is cleaned with antiseptic.
- Sterile drapes are placed around the head and face. For your comfort a tube blows fresh air under the drapes during the short operation.

- Under an operating microscope a small incision is made into the eye. State of the art technology enables your surgeon to remove the cloudy lens by a process known as phacoemulsification.



- A new lens implant is then inserted into the eye. The incision does not normally require stitches.



- A protective shield will then be placed over your eye at the end of the operation.

After Surgery

- You will usually rest in a reclining chair with a cup of tea or coffee but will be able to go home after an hour
- The protective shield can be worn for the first few nights.
- Eye drops will be needed for a few weeks.
- It is safe to read, cook and watch television.
- Avoid heavy physical exertion.
- Do not rub the eye.
- It is safe to have a shower or bath, try not to get water in your eye.

- Do not resume driving unless you are advised that it is safe and you feel confident to do so.
- Promptly report any pain or sudden deterioration in vision.

Risks of Surgery

Cataract surgery is one of the most successful procedures in modern medicine. More than 99% of patients experience an improvement in their vision. However, even in the best hands complications may still occur.

Tears of the posterior lens capsule.

The lens capsule is the transparent bag which surrounds the lens. During cataract surgery a circular hole is torn in the front surface of the capsular bag so the surgeon can then remove the cloudy lens material. Every effort is made to preserve the remainder of the capsular bag so that the implant lens can be placed in this bag once the cataract has been removed. Tears in the back (posterior) of the capsular bag occur in approximately 2-3% of cases (Royal College of Ophthalmologists National Audit 1997). Although the complication rate for surgery carried out by a Consultant Ophthalmologist is often closer to 0.5%.

Should this complication arise it is usually still possible to place an intraocular lens on top of the remaining capsule. Very occasionally a small piece of lens material falls into the vitreous jelly, if this happens a second operation may be necessary to remove this lens material.

Choroidal Haemorrhage

Bleeding within the layer of blood vessels that nourish the retina is a very rare and unpredictable complication of cataract surgery. If the bleeding is localized the eye may recover but in more severe cases permanent, severe visual loss may occur.

Endophthalmitis (infection inside the eye)

This is potentially the most serious complication of cataract surgery, but fortunately it is also the least common (approximately between 1 in 1,000 to 1 in 1,500 operations). Every precaution before, during and after surgery is taken to prevent the development of endophthalmitis. The first signs and symptoms are of increasing pain, redness and deteriorating vision in the first 5-7 days after surgery. If these symptoms occur you should contact your surgeon immediately.

Posterior vitreous detachment and retinal detachment (see A-Z for further details)

Cataract surgery slightly increases the risk of posterior vitreous detachment and subsequent retinal detachment.

Myopic patients and those who suffer a posterior capsule rupture during surgery are at greater risk than normal sighted patients or those who have uncomplicated surgery. New floaters in your field of vision and flashes of light are warning signs and if they occur you should contact your surgeon immediately.

Cystoid macular oedema (CMO)

The centre of the retina that serves detailed central vision is called the macula. After routine cataract surgery inflammation may cause swelling in this area of the

retina, which is referred to as cystoid macular oedema. This condition results in blurred central vision 3-6 weeks after surgery and in the majority of cases resolves without treatment after 2-3 months. Occasionally anti-inflammatory drops or tablets may be prescribed to speed up recovery.

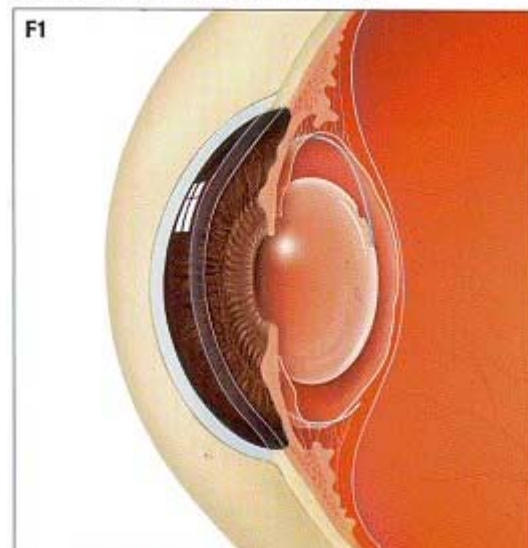
Intraocular lens errors

During cataract surgery the strength of the intraocular lens implant is chosen to help correct any previous long or short sightedness. The aim of surgery in most cases is to provide good distance vision with no glasses, or just a weak spectacle correction, but reading glasses will be needed for close work. Although the equipment used to calculate the strength of the implant is very accurate there is still the possibility that small errors can occur, especially in very long or short sighted eyes. This may mean that following surgery you may be slightly more long or short sighted than your surgeon had planned. In very rare cases a second operation may be needed to replace the implant with one of a different strength.

Posterior Capsule Opacification (PCO)

Thickening of the posterior lens capsule occurs in approximately 1 in 4 patients following cataract surgery. If you notice a gradual decline in vision 1-2 years after cataract surgery this is the most common cause. PCO is often detected by your optician who will then refer you back to the clinic for laser treatment (Link to Yag capsulotomy document). This is carried out using a laser mounted on a slit lamp. Treatment only takes 2-3 minutes to carry out and is painless.

Posterior capsule opacification



Treatment by laser

