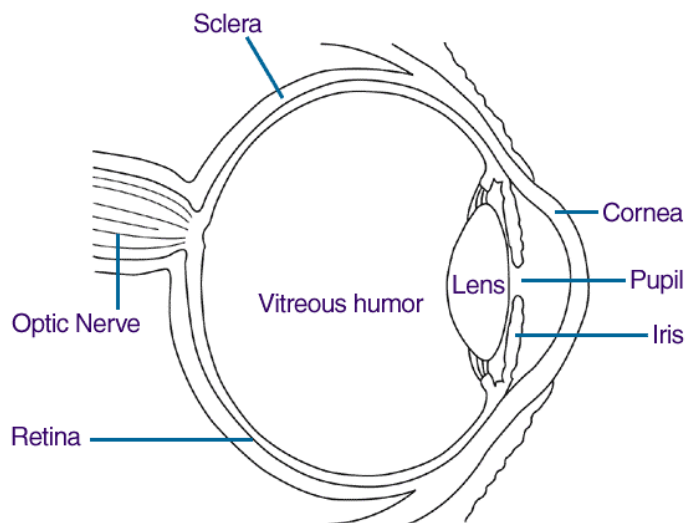


## What is a Cataract?

Think of your eye as a camera system. It has a lens at the front that focuses pictures onto the retina (Camera film). In a young person, this lens is clear but when it becomes cloudy, with increasing age, it is called a cataract. It is like a glass window that is now dirty. 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 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?

A cataract can cause the following symptoms

- 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.

## 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/She 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 and to 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 that 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. Replacing it with a permanent implant lens restores the focusing power of the natural 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 play sport, read, see labels when I shop 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 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 answers to 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.

## What Should I Know About Surgery?

Cataract surgery is the most frequently performed operation worldwide and also one of the most successful. Anaesthesia **NO LONGER** involves sharp needle injection. You can choose to have anaesthesia involving just eyedrops or a deeper numbing of the eye. The latter provides deeper anaesthesia but is more likely to result in a red eye following surgery. You are awake while the operation is taking place on the eye but you should not feel any pain. You do **NOT** have to worry about holding your eye open-it automatically stays open. The eye is **NOT** pulled out of its socket! You need to lie reasonably still. It is possible for you to move, cough, sneeze during the operation provided you warn the surgeon by squeezing the hand of a nurse who will be holding your hand. Surgery normally takes 30 minutes or less. Most people do not see anything during the operation but you may see light or movement at most. The vision recovers after a few hours as the anaesthetic wears off but you will not see very much until the protective eye pad is removed the following morning. Local anaesthetic is preferred to general anaesthetic as it is a safer way to have surgery because it puts no stress on the heart or breathing and the recovery is so much quicker and with fewer complications. Cataract surgery is almost always carried out as a day case. You will need to visit the hospital for only a few hours on the day of surgery and can go home after surgery. It is very unusual to need to stay in hospital overnight but this sometimes happens if you

- have nobody to look after you at home
- need to travel a long distance
- are in generally poor health
- need to have a general anaesthetic (put to sleep for surgery)

Very occasionally, surgery may be postponed on the day of surgery if there is an eye infection, if the blood pressure is too high to safely carry out the operation or if there is any problem giving the anaesthetic injection. It is best to have a friend or family member to take you to hospital and to take you home afterwards.

## Benefits and Risks of Cataract Surgery How is the Operation Performed?

### Improvements in Activities

If the back of the eye is healthy, there is usually a significant improvement in vision even without glasses. Vision is usually clearer with improved contrast and colours appear more vivid. However, glasses usually make the vision even clearer and the full improvement in vision after surgery may be achieved only when wearing glasses.

- .Everyday activities
- .Driving
- .Reading
- .Working
- .Moving around
- .Social activities
- .Hobbies
- .Safety
- .Self-confidence
- .Independence

Ask the surgeon or your optician about how soon you can resume driving or work.

### Possible Complications

Cataract surgery normally heals well without any problems. However, problems sometimes occur even when the operation is straightforward. Less serious and minor problems are not uncommon after cataract surgery and can usually be easily dealt with or settle spontaneously. More serious complications are rare but may require further surgery or prolonged treatment that is not always successful in restoring vision. A nurse will explain the early warning signs of these problems before you return home after your surgery so that you will know whether you might need to be seen urgently by the doctor.

### Examples of Less Serious Problems Are:

- .minor irritation of the eye
- .inflammation after surgery
- .allergy to eye drops
- .floaters
- .elevated pressure in the eye
- .waterlogging of the cornea
- .difficulty focussing
- .spectacles different from what is predicted
- .drooping eyelid
- .a change in the position of the implant lens
- .waterlogging of the retina (the seeing layer at the back of the eye)
- .double vision

### Examples of More Serious Problems Are:

- .infection inside the eye
- .bleeding inside the eye
- .retinal detachment

- loss of vision or very rarely, blindness
- loss of the eye

## How is the Strength Of The Implant Lens Calculated?

The calculation of the strength of implant lens that is used to replace the cataract is based upon measurements of the length and curvature of your eye and the depth of the front chamber of the eye. The length of the eye and depth of the front chamber are measured by a light interference method (ocular coherence biometry), which is accurate to within very small fractions of a millimeter. If the cataract is too cloudy for this method to work, the length of the eye is measured by sound waves (ultrasound). The curvature of the surface of the cornea is measured by the reflections of small lights from the surface of the eye. The various measurements are entered into a formula to calculate the strength of implant lens that is most likely to give the eye the best focus after surgery. For most people, this means aiming to leave the eye with clear distance vision without needing to wear glasses. Sometimes there are circumstances where a different point of focus may produce a better result and if this applies to you, the surgeon will discuss this with you before your operation. If you wear contact lenses it is important to refrain from wearing them for two weeks prior to the measurement.

The measurements of the curvature of the cornea will show if it is more curved in one direction and flatter in another (shaped like a rugby ball rather than a soccer ball). This is called astigmatism and most people have a small amount of it. If you have more than a small amount of astigmatism, the surgeon may decide to try to reduce it at the same time as carrying out your cataract operation. This may make you less dependent on wearing glasses to see clearly for distance vision only. It can be done by moving the position of the cataract surgery incision to a different point on the cornea or by using a special implant called a toric lens. There is a small margin of error in the measurement of the eye. This means that most people end up with a point of focus and a spectacle correction, which is very close to what is predicted, but occasionally it may not be. The usual reason for this is that the implant lens may rest in a slightly different position in the eye. Small fractions of a millimeter difference can affect the point of focus and the need for glasses. Modern implant lenses are designed to last your lifetime. They are made of materials which do not cause a reaction in the eye and which minimise the chance of the capsule membrane of the lens becoming cloudy following surgery. They can be folded in half or injected so that they can be placed through an even smaller incision and then unfold once inside the eye.

## Before Surgery

Telephone the hospital if you will be late or if you cannot attend for surgery. Decide who will help to look after you following your operation Make your travel arrangements in good time Do not use facial make up for 3 days Take your normal tablets and eye drops unless instructed differently by your doctor Take to hospital: • your tablets and medicines •your glasses •any relevant paperwork

## After Surgery

Before you leave the hospital, a nurse will explain to you:

- When to wear the eye shield
- How to take your eye drops
- How to look after your eye
- Precautions to take
- How to contact us if there are problems
- Your next appointment

### **When to Wear the Eye Shield**

Remove the eye shield the morning after surgery. The eye pad underneath it may be stained red or pink by your tears – this is normal and nothing to worry about. You may need to bathe gently with boiled water and cotton wool to clean around the eye before starting your eye drops. Wear the shield over the eye at nighttime for 2 weeks. This will protect it until it is stronger in case you should rub it accidentally while asleep. You can stick it with Cellotape if you do not have hospital tape

### **How to Take Your Eye Drops**

You will be given an antibiotic (usually Chloramphenicol) and steroid (usually Maxidex) eye drops to take 4 times daily in the operated eye for 4 weeks after your operation. Instill one drop only onto the eye by balancing the bottle on the bridge of your nose while looking upwards or behind the lower eyelid by pulling the lower eyelid down slightly. You may need the help of somebody else.

## Dos & Don'ts After Surgery

- do use your eye drops as directed
- do shield at night
- do ask the doctor about resuming driving or work
- do avoid children, animals and gardening for a couple of weeks in case your eye is poked
  
- don't rub your eye and avoid squeezing your eyes vigorously
- don't strain, bend or lift anything heavy
- don't allow soap or shampoo in your eye
- don't go swimming for 2 weeks

## Problems After Surgery

### Emergency Telephone Numbers

Fast Track appointment request via website: [www.eyec consultant.info](http://www.eyec consultant.info)  
01865 240097 Mr. Patel's Office (10am-3pm)  
08707 621600 Mr. Patels Voicemail (24 hours)  
01865 311188 Radcliffe Infirmary  
020 8872 3872 Clementine Churchill Hospital

If for any reason you are unable to contact us in the event of an emergency, you should contact a local eye hospital, casualty department or doctor, even if abroad.

### What is Normal After Surgery?

Pain

Red Eye

Vision Becoming Worse Worsening Vision

Redness and Discomfort

Floaters

Flashing Lights

Double Vision

Eyelid Swelling

Eyelid Drooping

I Have Run Out of Eye Drops

I Cannot See Clearly With My Old Glasses

I Can See Clearly For Distance But Not to Read

What if I Accidentally Rub or Knock My Eye?

What Problems Need to be Seen Urgently?

## **What is Normal After Surgery?**

Each patient's eye is unique and this is reflected in variable postoperative recovery. Some patients see clearly instantly but most take between 3-14 days to settle. In the days following cataract surgery, there will be inflammation in the eye and this is part of normal healing. The eye can feel a little sore or irritated, the vision may not be very clear and the eye may be a bit red. There may be a little dried crusty material on the edges of the eyelids for a couple of days. These symptoms usually settle over a few days as long as you take your eye drops so that the eye becomes comfortable and the vision becomes clearer. It usually continues to improve over the next 2 weeks or so. If these symptoms come back as you reduce or stop the eye drops you should contact us in case you need to restart the drops for a short period.

## **Pain**

The eye is often a little sore after surgery. This is usually helped by over-the-counter painkillers such as Paracetamol in addition to the eye drops you have been given and settles over a couple of days. It is unusual for the pain to be severe or persistent. If the eye becomes progressively more uncomfortable or if pain is severe or persistent, contact us as soon as possible for advice.

## **Red Eye**

The eye may be a bit red after surgery but this normally settles down over a couple of days as long as you are taking your eye drops correctly. Occasionally there may be a red or purple patch on the eye or the eyelid that is seen as soon as you remove the eye patch the morning after surgery. This is probably a bruise from the anaesthetic injection and although it may sometimes appear dramatic, it is of no harm and will disappear over 10-14 days. If the eye becomes progressively redder after cataract surgery, contact us as soon as possible for advice.

## **Vision Becoming Worse**

The vision normally becomes gradually clearer after cataract surgery. Sometimes this can take a couple of weeks. It is unusual for the vision to become very blurry shortly after an initial improvement. If the vision becomes progressively worse after cataract surgery, contact us as soon as possible for advice. When a toric implant is used it can in theory rotate resulting in blurring of vision. With modern implant designs this is very unusual but if it happens another small operation may be required to reposition the implant.

## **Worsening Vision, Redness and Discomfort**

If you have a combination of worsening vision, redness and discomfort at any time after your cataract surgery, this can be the early sign of an INFECTION and you should contact my office as an EMERGENCY. The emergency telephone number is at the top of this page. If for any reason you are unable to contact us, you should contact a local eye hospital, casualty department or doctor, even if abroad. The prompt treatment of infection inside the eye can prevent loss of vision.

## **Floaters**

It is not uncommon to see something like spots or a net curtain or water effect over your vision after cataract surgery. These are usually just shadows on the retina from fibres that normally form part of the gel in the eye (Vitreous). The gel of the eye can



become more mobile after surgery so that these fibres can come into the line of vision. Also, light enters the eye more directly after the removal of a cataract so that it is more likely to cast a shadow. Floaters are more noticeable against a plain background and in good light. Floaters almost always settle down or even disappear with time, usually a couple of months. Occasionally they can remain as a nuisance but they cause no harm and nothing needs to be done about them.

Very occasionally new floaters that develop after cataract surgery can be an early sign of a tear or a detachment of the retina. These floaters often occur suddenly or dramatically and can be associated with seeing flashing lights. They are more likely if you are very short sighted. If your floaters are of this type, you should contact me as soon as possible for advice. Your eye may need to be examined again to see if you have one of these problems which may require laser treatment or even surgery.

### **Flashing Lights**

It is unusual to experience flashing lights after cataract surgery. When this happens it may be a sign that the gel of the eye is peeling away from the retina. This is a normal aging change for the eye but if it has not happened already before your cataract operation, surgery can sometimes make it happen. Occasionally, flashing lights can be associated with seeing new floaters and can be an early sign of a tear or a detachment of the retina.

If you develop flashing lights, you should contact us as soon as possible for advice. Your eye may need to be examined again to see if you have one of these problems that may require laser treatment or even surgery.

### **Double Vision**

Double vision can be difficult to understand. Double vision is the seeing of two objects where only one exists. It is not the same as a blurred image or a ghost image so be careful to distinguish these. The commoner causes of double vision after cataract surgery are described below. If you develop double vision after cataract surgery, you should contact me or your family doctor for advice.

If you cover the eye that has not had surgery and you still see two images, the position of the implant lens may have shifted. Your eye will need to be examined again to see if anything needs to be done.

If you have double vision that disappears and becomes single when either eye is covered, it may be because the eyes are not working together. This often happens if there is a dramatic improvement in vision after surgery because the brain may have learnt to ignore the poor eye and must now learn to match it with the good eye. This can take weeks and in rare instances, months to adapt to.

Similar problems can occur if there is a quite a difference in the spectacle prescription between the two eyes which is more than the brain can match. The problem may improve when your glasses are adjusted after 6 weeks and with time. Sometimes though, if there is also a cataract in the other eye, it may need to be removed earlier than otherwise so that the two eyes are left with the about the same spectacle prescription.

If you have double vision that disappears and becomes single when either eye is covered, it may also be because one eye is not moving properly. This can often happen for about 12 hours after surgery until the anaesthetic injection wears off but it may not be noticed because of the shield covering the eye when you are sent home. It double vision of this type develops at a later stage than this it may be that one of the muscles which moves the eye has stopped working properly.

### **Eyelid Swelling**

Eyelid swelling often occurs after cataract surgery but it is usually mild and disappears in within a week. It is commoner in older patients in whom the eyelid skin may not be as robust as when younger. It is thought to be caused by the accumulation of tissue fluid or anaesthetic during the operation. No specific treatment is needed.

### **Eyelid Drooping**

Eyelid drooping can sometimes occur after cataract surgery. It usually happens in older patients in whom the eyelid may not be as robust as when younger. It is thought to be caused by pressure or bruising from either the anaesthetic injection or the clip used to part the eyelids during the operation. It almost always disappears with time but this can take a number of months. It is rare that any specific treatment is needed.

### **I Have Run Out of Eye Drops**

If it is less than three weeks after your operation or if your eye is still red or uncomfortable, you should contact your doctor to obtain another bottle. If it is more than 3 weeks and your eye is comfortable, you may wait until your 4 week appointment.

### **I Cannot See Clearly With My Old Glasses**

The focus of the eye changes after cataract surgery so that the lens of your glasses will probably need to be changed to allow you to see clearly. It is usually best to wait 6 weeks before visiting your optician to arrange this.

### **I Can See Clearly For Distance But Not to Read**

The implant lens chosen for your eye is usually calculated to give clear distance vision. However, it has a fixed focus and cannot change focus to allow you to see clearly for near. You will probably need reading glasses from an optician.

### Will I Need to Wear Glasses After Surgery?

Glasses are an aid to seeing clearly. Adults will not come to harm from not wearing them. You may well find that after surgery you are less dependent on glasses for most activities. The implant lens usually has a fixed point of focus. If an implant lens is used which is calculated to produce clear distance vision, things will be clearer for distance than near. Your distance vision may be satisfactory for many activities without glasses but glasses will probably make activities that require better vision or longer periods of concentration easier such as driving or watching TV. Glasses will almost certainly be required to read clearly but you may be able to read some things if the print is larger and the lighting is good.

### When Should I Change My Glasses After Surgery?

It is best to wait about 6 weeks after surgery, until healing has taken place, before having the lens of your glasses changed. You should arrange this with your optician. Your glasses can be changed sooner but the prescription of your glasses could continue to change slightly causing the vision to become blurred a little.

### Surgery for the Second Eye

We usually wait for the first eye to settle down before operating on the second eye. This can take a couple of weeks but the more usual interval between the eyes is about a month or more.

### Can a Cataract Return?

A cataract cannot return because the cloudy lens has been removed. However, in a about a proportion of people, the capsule membrane which holds the implant lens may become cloudy like a net curtain in the period following surgery. If this occurs, it is usually a year or more after surgery. It may cause similar problems with vision as the original cataract. The treatment for this condition is to use a laser light to make a small opening in the capsule membrane to clear the line of vision once again. This procedure is called YAG capsulotomy. This surgery is quick and painless and does not require a hospital stay. Most people see better after YAG capsulotomy, but, as with cataract surgery, complications can occasionally occur and the doctor will discuss these with you should you ever require the procedure.