

CATARACT





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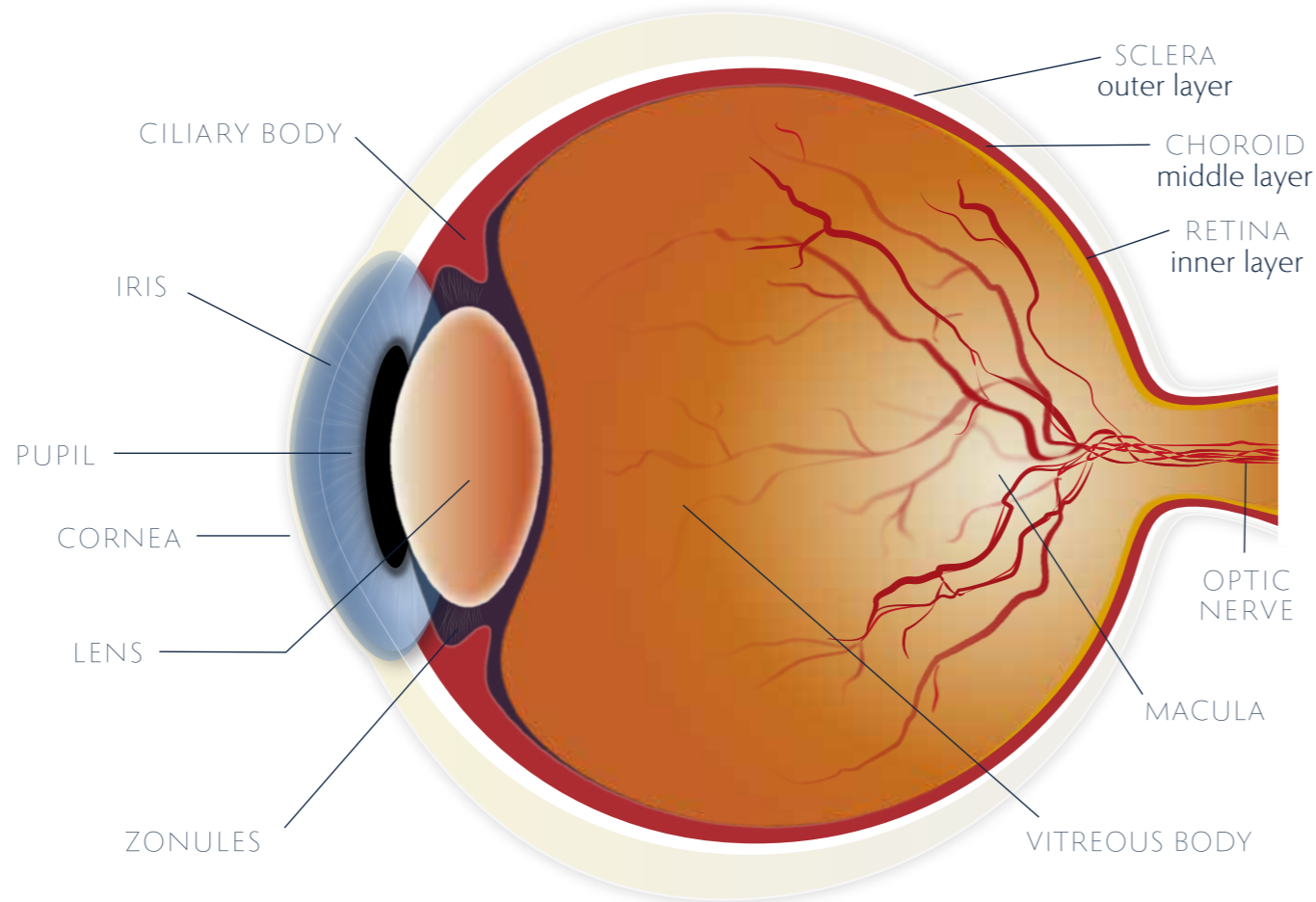
07.

AFTER SURGERY

anatomy

EYE ANATOMY

It is helpful to know a little about the eye and how it works in order to understand the effect cataract has on your vision, and how it can be treated.



The cornea forms the clear window into the eye. The iris, which is the coloured part of the eye with the black pupil in the middle, is behind the cornea. The lens lies behind the iris.

In a healthy eye, the lens is clear and able to focus light on to the retina, the light-sensitive nerve layer that lines the inside of the eye. The wall of the eye is formed by three layers, the retina, the choroid and the sclera. The choroid is the underlying vascular (blood vessel) layer of the eye from which the photoreceptors of the retina receive oxygen and nutrients. The sclera or 'white of the eye' forms a tough protective coat.

The retina sends signals via the optic nerve to the brain, where sight is interpreted. This process can be likened to the lens in a camera focusing light on to photographic film, from which images can be developed.

In a normally-sighted eye, a healthy young lens has the ability to adjust the eye's focus, letting us see things clearly both near and far away.

Many people begin to lose this ability when they reach middle age, finding, for the first time, that they need a spectacle correction for reading. This is called presbyopia.

what is cataract?

Cataract is a clouding or opacity of the eye's natural lens.

02.



As we get older, the lens loses elasticity, causing a deterioration in reading vision - a change known as presbyopia. A particular form of cataract, known as nuclear sclerosis, can cause a change in prescription which actually improves reading vision without glasses (myopic shift). Over time, gradual opacification of the lens occurs, and this obscures and clouds the vision. Any opacity of the lens is called cataract.

03.



CAUSES OF cataract

Cataract is generally associated with the normal ageing process. Surprisingly, this may cause a temporary improvement in your near vision, but this effect is short-lived and disappears as the cataract worsens.

Cataract may develop prematurely in certain situations, for example:

- following direct injury to the eye
- in medical conditions such as diabetes
- in patients taking steroid therapy
- following previous eye surgery or inflammation
- presenting at birth (congenital cataract).

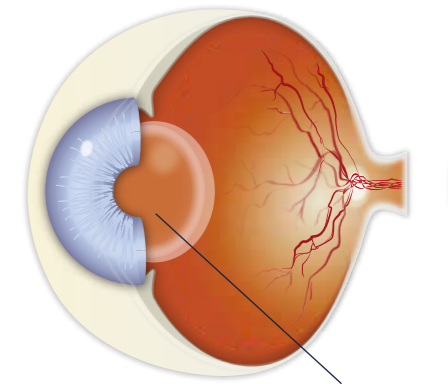
Many people consider poor vision to be inevitable as they get older, but for the vast majority of patients with lens opacity, cataract surgery is an extremely successful procedure to restore vision.

symptoms

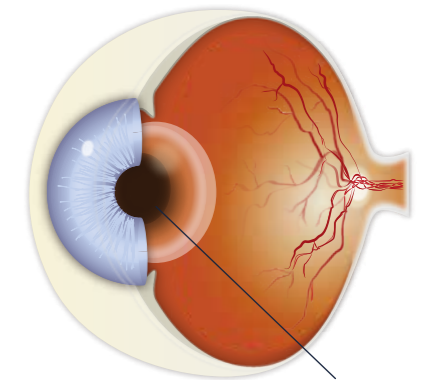
CATARACT SYMPTOMS

- Blurred vision, especially for distance
- Glare from lights, especially headlights at night
- Spectacles seeming dirty or scratched
- Frequently changing spectacle prescription
- Colours appearing washed out or faded
- Double vision in the affected eye

There are different forms of cataract, and the visual effect you experience may depend on the type you have. Cataracts do not cause pain or redness. If you have either of these symptoms you should report this to us. Cataract begins slowly, and at first may have little effect on vision. Your local optometrist may be able to improve your vision with a change in spectacle prescription during the early stages. As the lens becomes cloudier however, it interferes with light rays passing to the retina, and sight becomes increasingly blurred. You will reach a stage at which a change in spectacle prescription no longer improves your vision.



NORMAL LENS



LENS WITH CATARACT



04.

CATARACT treatment

WHEN SHOULD YOU HAVE CATARACT SURGERY?

There is no specific level of vision at which surgery is indicated, but as soon as your impaired vision interferes with your daily life, the procedure is worth considering. You may notice your impaired vision when reading, working, watching TV, driving, playing sport or caring for others.

If you are a driver, you must be able to achieve the visual standard required by the DVLA, and it may be necessary to have cataract surgery to keep your licence.



Leaving a cataract untreated does not damage the eye, but as the lens opacity worsens your vision will deteriorate, until little sight remains. Surgery at this stage may be more difficult. Complications can arise if the thickened lens causes the eye pressure to increase, but this is unusual and we will inform you if you are at risk of this happening.

In the past, eye specialists delayed surgery until a cataract was 'ripe' or 'mature'. Surgery involved a large incision in the eye which required sutures (stitches) at the end of the procedure, and the outcome of surgery was less predictable. Cataract surgery is now performed earlier due to major improvements in the surgical technique itself, the very low risk of complications, and the visual benefit of modern intra-ocular lenses (IOLs).

Surgery involves removing your cloudy lens and replacing it with a clear plastic implant lens which you cannot feel, and which remains permanently in your eye. If you require cataract surgery to both eyes, it may be appropriate to offer surgery for both eyes on the same day, however this is not recommended for those who live alone. When special lenses are being used, we may suggest a delay of at least one week between the two single eye procedures.

05. BEFORE SURGERY

WHAT TO CONSIDER PRIOR TO SURGERY

It is important that we have knowledge of any prescribed medications you are taking. You will probably be asked to continue these in the usual way, but some medications can cause complications during ophthalmic procedures.



If you take a diuretic ('water tablet') and are having surgery on a morning operating list, you may wish to postpone taking it until after your operation.

As most cataract surgery is carried out using drops to numb the eye (referred to as 'topical anaesthesia'), there are usually no restrictions on what you may eat and drink prior to admission. If the use of sedation during surgery has been discussed, you should avoid eating a heavy meal during the two hours before admission.

TYPES OF IMPLANT LENS

As with spectacle lenses, there are different implant lenses available. If the eye is otherwise healthy and you seek a degree of independence from spectacles, we

will discuss the use of an implant which is either multifocal or extended-depth-of-focus. These are the alternatives to a regular, monofocal (single-vision) intraocular lens. We will discuss with you the type of implant lens that will best suit your needs, and the visual outcome you can expect. It is important to note that the advanced multifocal lenses are not suitable for everyone, and even with a multifocal lens, some patients may still require a spectacle prescription following surgery. Further literature is available on the newer, advanced implant lenses. For all patients undergoing cataract surgery, biometry measurements will be taken to ensure that an implant lens of the correct power is selected.

This involves sitting at a machine that, without touching the eye, takes various measurements. We can then calculate the most appropriate lens power. Most patients can be medically assessed on the day of surgery, but occasionally a pre-assessment is required. This will be discussed at your initial consultation. If you use contact lenses, you must refrain from wearing them for one week before biometry is carried out, and for 24 hours prior to your surgery. Please make us aware if you wear gas permeable or hard contact lenses, as they may need to be removed for a longer period.

WHAT HAPPENS NEXT

Once a decision has been made to proceed with surgery, our secretarial team will liaise with you to arrange a convenient date on one of our operating lists. This will be at one of the private hospitals in your local area. You will receive confirmation of your admission date from the hospital bookings department and our secretarial team, together with a health questionnaire and some general information about



your chosen hospital. The procedure is usually carried out as a day case, with a hospital stay of a few hours. Remember, you should not drive yourself to the hospital. You may want a relative or friend to accompany you, or to drop you off and return to collect you when you are ready to go home. Alternatively, if you find getting to and from the hospital difficult, we may be able to offer assistance. Please alert the secretarial team if this is the case, as the hospital bookings office is not able to help with transport arrangements.

HOW TO PAY FOR SURGERY

If you belong to a private health insurance scheme you may be obliged, under the terms of your policy, to undergo surgery at a particular hospital. It is therefore important that you notify your insurer of the intended procedure, and check

whether you are fully covered for admission to the hospital of your choice.

Cataract surgery is a medical necessity and therefore covered by most insurance companies. Premium lenses however, which are chosen to reduce spectacle dependence, may incur an additional charge. If you do not have private health insurance, you may choose to pay for your procedure as a self-funding patient. Please ask for details of the costs involved as prices may vary between hospitals, and are subject to change.

The fixed cost covers all procedures carried out on the day of surgery, additional surgical correction within one month, and the first post-operative check. Additional costs may be incurred for more prolonged follow-up and subsequent treatments such as laser capsulotomy.

06.

THE DAY OF surgery

WHAT TO EXPECT ON ADMISSION TO HOSPITAL

You will be welcomed at the hospital and shown to the ward where you will be settled in. A nurse will carry out routine investigations including checking your pulse and blood pressure.



The nurse will also check details of any medications you are taking, and ask questions about your general health. If your biometry measurement was not carried out prior to admission, this will be performed soon after your arrival. Once this has all been completed, the nurse will instil the drops, or a pellet, which dilate your pupil in readiness for the operation.

The ophthalmic nurse will come to see you on the ward to explain what will happen during and after the operation, and to answer any further questions you may have.

You will be asked to sign a consent form to state that you have been provided with, and understand, all the information given relating to the operation (including the risks and benefits of surgery) and that you agree to the proposed treatment. You will be taken to the operating theatre in your normal clothes, so it is important to wear something comfortable.

DURING SURGERY

Most cataract surgery today is carried out using topical anaesthesia. This involves using eye drops to numb the eye and surrounding area. You will be awake during the operation and aware of some movement, touch and water, but the procedure will be painless.

For some patients, we may recommend local anaesthesia which involves gently injecting anaesthetic around the eye. You will be offered sedation which will help you relax while the procedure is carried out.

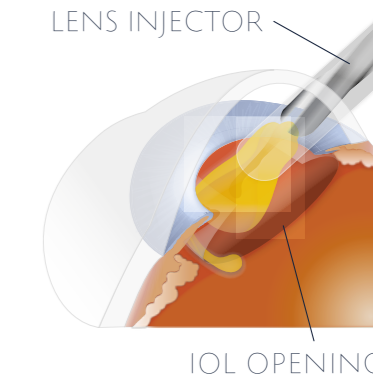
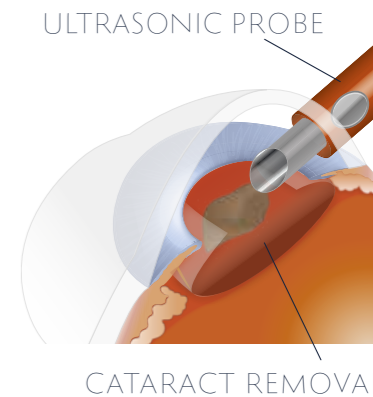
You will be made comfortable on the operating table, following which the skin around your eye will be thoroughly cleansed and a sterile cover ('drape') will be placed over your eye and face.

The cover will be lifted off your mouth so you can breathe and talk easily. Your eyelids will be gently held open, and you will be asked to look at a central light which positions your eye in preparation for surgery.



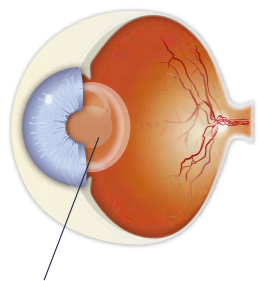
You will see little of what is happening during surgery, but we will explain what we are doing as the operation goes along. The theatre staff will make sure you are comfortable, and help you relax. Someone will be there to hold your hand if you wish. The operation usually takes 10-15 minutes, but in some cases it may take longer.

The modern technique of cataract extraction is called phacoemulsification. It is performed using an operating microscope and involves making a very small incision in the cornea of the eye (the clear part at the front covering the iris and pupil), through which a tiny probe is inserted.



The incision is self-sealing so stitches are not required. The natural lens of the eye is contained within a 'capsular bag'. The aim of surgery is to remove the lens contents while leaving the capsular bag intact, apart from a circular hole on the front surface through which we work. An ultrasonic probe breaks up and then vacuums away the cataract material, leaving a cavity into which the new lens is inserted.

The rolled-up implant lens slips into the eye through the tiny corneal incision, and once situated within the capsular bag, unrolls and is adjusted into position.



NEW LENS IN PLACE

You will not be able to feel this new implant lens. An easy way to visualise this process is to think of the cataract as a Smartie – the chocolate being removed to leave an empty transparent case in which the new implant lens will sit.



IMMEDIATELY AFTER SURGERY

After the operation, you will return to the ward with a clear plastic shield covering the operated eye. This remains in place overnight.

You will be given eye drops to take home, which are both anti-inflammatory and antibiotics, with written instructions on how to instil these, and the frequency with which they should be used.

We will make sure you know how to care for your eye when you get home.

While resting after the operation you will be offered refreshments. You may leave the hospital when you feel ready.

During the first few hours after your operation the eye may feel sore. This is nothing to worry about, and standard analgesics can be taken, such as those taken for headache.



AFTER Surgery

THE DAY AFTER YOUR CATARACT SURGERY

The plastic shield can be removed on the morning after your surgery. You do not need to use it thereafter, although some patients prefer to wear the shield for the first few nights for peace of mind.

You may find the eye a little sticky and there might have been a slight pink discharge overnight. This is quite normal and you should only cleanse the eye if necessary, by wiping gently across your closed eyelids with cotton wool dampened with clean water. You will then need to start your eye drops, noting the detailed written instructions given to you before you left the hospital.

You will also be given advice on when to reduce and stop using your eye drops. If you are running out of drops before your post-operative follow-up appointment at the clinic, we will be able to provide you with a repeat prescription (usually without the need to be seen at the practice). You will receive a telephone call from the ophthalmic nurse within 48 hours of your surgery to check that all is well.

If you have any concerns before this, please do not hesitate to contact us via the telephone number at the back of this booklet.

How quickly will your vision improve?

Your vision may well be blurred on the first post-operative day until your pupil returns to its normal size.

Thereafter, the operated eye can take time to settle, but you should start to notice an improvement in your vision within a couple of days.

When can you resume normal activity?

You may return to your normal daily activities as soon as you feel ready to do so. As a guide however, for the first two weeks you should refrain from swimming, strenuous activities, high-impact sports, heavy lifting and wearing eye make-up.

DRIVING AND TRAVEL

It is not advisable to drive until you feel confident to do so. Your ability to drive may be dependent upon a number of factors, including the vision in your other eye and the quality of your vision when using both eyes together. This will be discussed with you prior to discharge from hospital. If you are in any doubt regarding your visual status you should refrain from driving until you have been seen for review in the clinic. It is acceptable to travel (including by air) following cataract surgery. However, please remember that you will need to continue putting drops in the eye for four weeks.

When to change your spectacles

If you wore glasses prior to cataract surgery, it is unlikely the prescription lens will still be suitable for your operated eye. You will be advised at your follow-up appointment when to return to your local optometrist. We always recommend that you wait at least one month from the date of surgery before getting new glasses, as your eye needs time to settle



and the prescription can change. In the interim, many people find they need to have the spectacle lens removed from the operated side if they are reliant upon a prescription lens for the non-operated eye. Other patients find they manage better without glasses for distance, using simple reading glasses for near.

A follow-up appointment is usually arranged within one month of cataract surgery. Most patients choosing a short delay between the two eyes will proceed without being seen again in the outpatient clinic. The result of first eye surgery will be assessed on the ward when you attend for your second eye surgery. There may be a feeling of imbalance between the two eyes before the second procedure is

carried out, and we can offer advice to help you deal with this.

Ways to help make the operation a success

Following your cataract surgery, it is very important you instil the eye drops as instructed, as this will help prevent any complications such as infection or inflammation in the eye. You should avoid knocking or rubbing your eye, but you may touch the surrounding area. Although it is safe to have a shower or bath, take care when washing your hair to avoid getting soapy water in your eye.

The eye can seem more sensitive to bright light for the first few days, and you may find dark glasses helpful, especially in strong sunlight.



THE RISKS AND COMPLICATIONS

The aim and potential outcome of cataract surgery will be discussed with you in clinic, and again prior to your operation. If cataract is not the only condition affecting your eyesight, for example if you have age-related macular degeneration or diabetic eye disease, the potential for visual improvement may be limited. Cataract extraction is one of the most successful surgical procedures in modern medicine, with over 98 per cent of patients experiencing an improvement in vision.

Our team operates from modern private hospitals where the equipment and products used in the operating theatre are of the highest standard. Every effort is made to minimise risk and ensure your operation is safe.

Serious problems during or after cataract surgery are rare, however every surgical procedure has risks and potential complications.

Complications at the time of surgery

- **Tearing of the lens capsule.** Capsular rupture makes it difficult to place the new lens within the capsular bag. If we are unable to position the implant lens safely, this part of the operation will be deferred to a later date.
- **Loss of cataract material into the eye.** Dislocation of all or part of the cataract into the back of the eye during surgery necessitates a more complex procedure (vitrectomy) to remove the lens fragments.

Complications early in your recovery

- **Endophthalmitis.** Infection in the eye, affecting less than one in a thousand cases, is a rare but potentially devastating complication. All aspects of comfort and vision should improve over the first few days following surgery, but if there is any deterioration, you should contact us immediately or attend the eye casualty department. Prompt treatment improves the chance of avoiding permanent visual loss.

- **Bruising of the eye or eyelids.** If local anaesthesia is used, it may cause some bruising around the eye, particularly on the lower lid. This is avoided when using topical anaesthesia. The sclera may be red where the tiny incisions are made into the eye. This usually resolves completely within the first month.
- **Double vision.** If a local anaesthetic injection is used to numb your eye, it takes some time to wear off and this may leave one or more of the muscles around the eye weak for the first few hours. This causes double vision, which resolves spontaneously.
- **A temporary increase in the intra-ocular pressure.** This necessitates an additional course of eye drops or tablets. Patients with advanced cataract or known glaucoma may be asked to take oral medication to prevent this.
- **Cystoid macular oedema.** Swelling of the central macular area of the retina causes blurred vision. This usually resolves within a few weeks, using additional eye drops.

- **Corneal oedema.** Clouding of the cornea is rare and usually clears within a couple of weeks.
- **Allergy to eye drops.** Ocular allergy typically causes lid swelling, itching or redness. If this happens, please let us know and we can prescribe an alternative drop. Some patients are allergic to the preservative used in eye drops. If you have previously had a reaction, please inform us prior to surgery so we can prescribe a preservative-free option.

Complications late in your recovery

- **Thickening of the posterior capsular bag.** This can occur at any time after cataract surgery. The new lens implanted in your eye cannot develop cataract like your natural lens, but some patients develop similar symptoms of mistiness over time as the capsular bag thickens and becomes more opaque.

This is easily corrected with a simple and painless laser procedure known as YAG capsulotomy, which allows light to once again to pass without interruption to the retina.



- **Retinal detachment.** This is a sight-threatening condition in which the retina becomes separated from the wall of the eye. In most cases the retina can be re-attached and vision restored, but action should be taken promptly. If you notice floaters, flashing lights or a shadow blocking out part of your field of vision, you should contact us immediately or attend the eye casualty department.
- **Instability of the implant lens.** Movement of the implant lens within the capsular bag is most unusual. If this occurs however, it can be repositioned surgically.
- **Desired focusing not achieved.** Despite modern assessment techniques and implant lens technology, very occasionally patients do not achieve the focusing outcome they desire. If wearing a spectacle correction is unacceptable, we can consider either adjustment of the implant lens or corneal refractive procedures, for example laser eye surgery.
- **Glaucoma.** Any ocular surgery can increase the risk of glaucoma in later years. Glaucoma is damage to the main optic nerve of the eye, caused by an unsuitably high pressure. It can nearly always be controlled with eye drops, but occasionally a laser procedure or even surgery may be required.
- **Dry eyes.** This is a common symptom with increasing age, for which many sufferers use simple lubricating drops. Interfering with the conjunctiva on the surface of the eye can upset the production of mucus, which is an important constituent of the tear film. In most cases this is temporary, responding to simple measures such as ocular lubricants and warm compress-bathing. We will advise you on a treatment regime if required.



ADVICE AFTER YOUR SURGERY

If you experience any deterioration in your vision, increasing discharge from the eye, continual aching or worsening pain, please contact us immediately.

0238 2000 200

During out-of-office hours, please contact the hospital where the surgical procedure was conducted.

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