

# Understanding cataracts

**Eye Pre-assessment Team**  
**Tel: 01271 311594**

## Other formats

If you need this information in another format such as audio CD, Braille, large print, high contrast, British Sign Language or translated into another language, please contact the PALS desk on 01271 314090 or at [rduh.pals-northern@nhs.net](mailto:rduh.pals-northern@nhs.net).

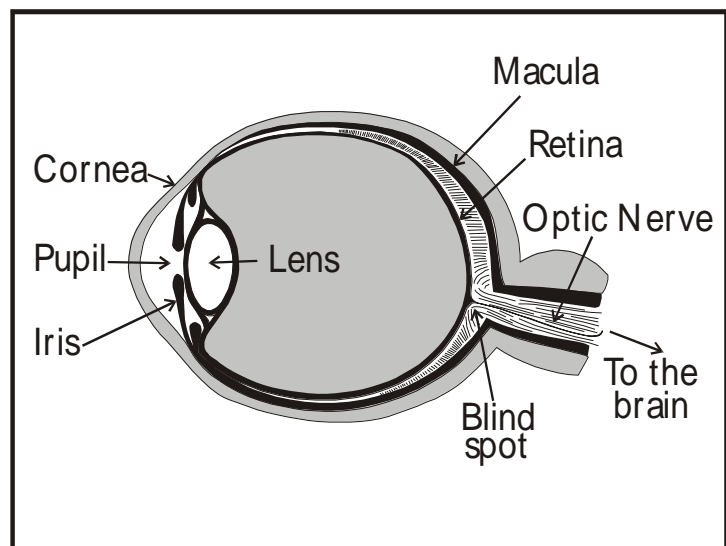
**This booklet contains information you will need before and after your operation. Please bring it with you to the pre-assessment clinic and when you come in for your operation.**

## What is a cataract?

A Cataract is a very common eye condition. It causes a change in the lens of the eye, which makes your sight cloudy. Cataracts slowly get worse, so your sight gets cloudier over time. However, they can be removed with surgery and an artificial lens fitted to enable you to see again.

## The lens

The lens is a transparent body behind the iris (the coloured part of the eye). The lens bends light rays so that they give a clear image to the back of the eye – the retina. As the lens is elastic, it will change shape, getting fatter for close objects and thinner for distant objects.



To help produce a sharp image, the lens must be clear. The diagram shows the main parts of the eye.

## What causes a cataract?

Cataracts can form at any age, but most develop as people get older. These are usually called age-related cataracts. Most people over the age of 65 have some changes in their lens which will eventually lead to a cataract. Apart from getting older the other, common causes of cataract include:

- Diabetes
- Medications, such as steroids
- Eye surgery for other eye conditions
- Injury

Cataracts can also be present at birth. These are called congenital cataracts.

Although researchers are learning more about cataracts, no one knows for sure what causes them. There may be several causes; some studies have linked smoking, excessive exposure to sunlight and poor diet with cataract development.

## Some symptoms

### **'I'm not seeing as well as I used to'**

You may notice that some things seem blurred round the edges, or that your glasses seem dirty or scratched.

### **Seeing double**

The cloudiness in the lens may occur in more than one place, so that the light rays that reach the retina are split, causing double vision.

### **Poor vision in bright light**

You may find that bright light or very sunny days make it more difficult to see.

## **Change of colour vision**

As the cataract develops, its centre becomes more and more yellow, giving everything you see a yellowish tinge.

## **What can be done to help?**

The only effective treatment for cataracts is a small operation to remove the cloudy lens. This cannot be performed by laser, although laser is sometimes needed afterwards. (see “The benefits and risks of cataract surgery” on page 16)

## **What is a lens implant?**

When the cloudy lens has been surgically removed, it is almost always replaced by a plastic lens. If there are complications during the operation it might be necessary to replace the lens at a later date. The lens makes the eye focus properly.

## **When should I have the operation?**

Usually you can decide if, and at what stage, you want to have the operation. In the past, eye specialists often waited until the cataract became ‘ripe’ before suggesting you had it removed. Nowadays, with modern surgery, the operation can be carried out at any stage of the cataract’s development. If visual impairment interferes with your ability to drive, read, work, or do the things you enjoy, then you will probably want to consider surgery.

## **Will I still need glasses after the operation?**

The aim is to enable you to see as well as possible in the distance and some patients do not need distance glasses at all. Most patients require them to see as clearly as possible, and to drive. You will almost certainly need glasses to read afterwards. This is the case even if you did not wear glasses before surgery.

If you are keen to reduce your dependency on glasses after surgery, this may only be possible with a 'premium' lens such as a multifocal, accommodative or toric implant. These options are mainly available privately but can be offered on the NHS if you have astigmatism with +3 or -3 vision or worse. This should be discussed with your ophthalmic doctor when you are listed for cataract surgery. Alternatively, please contact his or her secretary for more detailed information prior to the consultation.

## **Pre-surgery**

Before you have your cataract surgery, your eye health and general health will be checked carefully in what is often called a pre-operative assessment. Your vision and your eye will be measured very carefully. This is usually done by a machine which measures the length of your eye ball and the shape of the front of your eye. These tests help the ophthalmologist decide which lens to implant when they perform your operation, to make sure your vision is as good as possible after the operation. If you have cataracts in both eyes, in most cases the eye with the worst cataract will be operated on first.

We may have to perform other eye examinations and request blood tests or an ECG which can increase the time needed for your appointment. This could be 1 – 2 hours.

## **Do I need to do anything different the day of my operation?**

Wear clean, loose-fitting clothing or buttoned clothing from the waist upwards. Do not wear any make-up or nail varnish on your fingers or toe nails.

Eat and drink as normal. However if you are having a general anaesthetic (being put to sleep), you will be given eating instructions at your pre-assessment appointment.

Take your normal medications unless told otherwise at pre-operative assessment.

Blood thinning medications need to be stopped as follows:

- Warfarin – finger prick test 7 days before operation and stop 2 doses
- Dabigatran U/E – blood test 7 days before operation and stop 2 doses
- Apixaban, Rivaroxaban and Edoxaban – stop 2 doses before operation
- Clopidogrel and Aspirin – do not stop

## Where do I go to have my operation?

The operation will take place in the eye theatre unit at North Devon District Hospital. You will be given directions and a map at your pre-assessment appointment. There is a drop off zone in front of the eye theatre unit.

When you arrive, a nurse will give your driver/relative some idea of how long you will be (approximately three to five hours). There is limited space in the unit and, unless absolutely necessary, your driver will be encouraged to leave you in the care of the theatre staff.

The nurse will check your details and put a pellet inside your lower eyelid to enlarge your pupil. The doctor will see you and you will need to sign a consent form.

When it is your turn to have your operation, you will be given the opportunity to go to the toilet. You will then be walked or wheeled, as appropriate, into the anaesthetic room.

## Who will perform my surgery?

We cannot guarantee that a particular person will perform your operation. However, the person will have appropriate experience/supervision, or will have had adequate training to be competent to participate in your operation.

The NHS relies on training junior surgeons in order to be sustainable in the long term. We usually have one surgeon in training on each operating list. You will meet our trainees at the pre-op ward round. Your operation or part of it may be carried out by the trainee. Appropriate supervision by a senior surgeon or consultant will be guaranteed.

## **What happens during the operation?**

The theatre staff will ensure that you are as comfortable as possible and supported with pillows as necessary. It is very important that you lie still.

Normally cataract surgery is performed with a local anaesthetic. The local anaesthetic numbs the area that is being operated on. You will be awake but will feel no pain. Sensations of pressure, light and fluid moving over your eye are quite normal and do not mean that anaesthetic injection is not working.

The doctor will cover your face with a light sheet. This sheet will be raised above your face and rested over a bar so that it is not touching your mouth or nose. You may be given a pipe to hold which has air coming through it. You will be given a buzzer to hold in case you want to cough or feel uncomfortable, so you can alert the staff.

Usually the eye specialist will explain what is happening as the operation goes along, unless you request otherwise.

## Cataract Surgery: Phacoemulsification

1. Lens is broken into small pieces and removed.

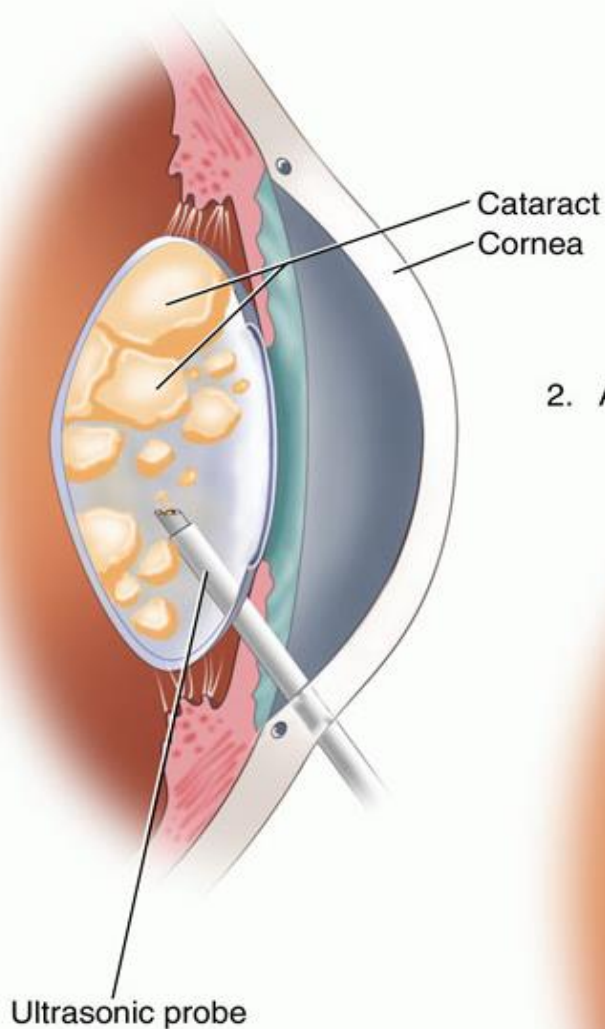
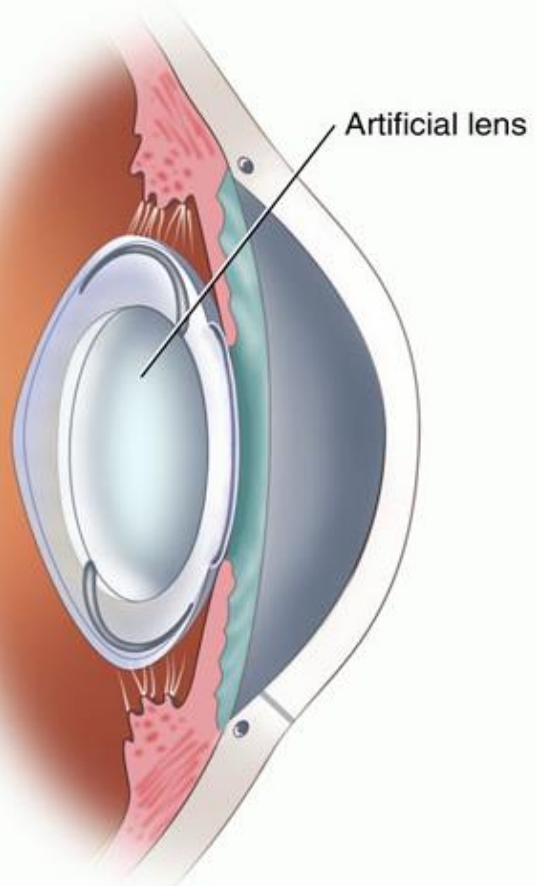


Diagram courtesy of Elsevier Inc.  
MD Consult  
3251 Riverport Lane  
Maryland Heights,  
MO 63043, USA

2. Artificial lens is placed in eye.



The most-common way to remove cataracts is called phacoemulsification. This technique uses ultrasound to break up your cataract. Only really small cuts are used, so you normally don't need any stitches.

Wound closure relies on a “valve” mechanism and it is therefore important that you **do not** rub your eye after surgery, press on it with your fingers or touch it with e.g. the eyedrop bottle. Sometimes your surgeon may decide to put a couple of stitches in for added safety. These can be easily removed in the eye clinic by a nurse practitioner, usually four weeks after your operation.

Very rarely, a doctor will decide that the eye is not suitable for a lens implant after the cataract has been removed. In these cases, contact lenses or special glasses will be prescribed instead.

We want to reassure you that your eye is not taken out of its socket during surgery. The operation is not painful.

When the surgery is complete you will be wheeled back into the waiting room and given some refreshments.

## When can I go home?

For the majority of people, it is expected that they will go home the same day. You will be kept in the eye theatre unit until you have fully recovered, usually about an hour after the operation.

You will be given two different types of eyedrops, and sent an appointment for review in the eye clinic.

## After the operation

Generally your eye may feel gritty for 24-48 hours after surgery. This sensation should **continually improve**. You should ring us urgently if your eye feels worse instead of better as times goes on. The following symptoms – especially if they occur in **combination** and/or **after** 48 hours – can be the warning signs of a complication:

1. Sensitivity to light
2. Eye pain – If you are a diabetic or on immunosuppressant medication this sign can be absent
3. Blurred vision
4. A generalised red eye (though an isolated red patch of haemorrhage at the injection site is normal)



5. Floaters and/or flashes that are getting worse
6. A dark shadow or curtain from above or below
7. A **milk-like fluid level** in front of your iris (the coloured bit of your eye) – this is an important warning sign

If any of the above symptoms occur, please ring **01271 322577** and ask for the eye doctor on-call to assess you over the phone, or if necessary in A&E. You would need to specify that you have had eye surgery and that you have detected warning signs that you wish to report. If in doubt, always insist to be assessed on a slit-lamp microscope.

Ideally you should not go to A&E without ringing ahead as this may entail a significant delay in your being seen. Obviously if you cannot get hold of anyone via phone, please go to A&E directly. You could politely mention to the triage nurse that as a postoperative patient you are a “category 2” and should be seen within 10 minutes.

Your sight will usually improve within a few days, although complete healing may take several months.

- It is alright to bend down
- Avoid rubbing your eye
- You don't need to stay indoors, but take care if it is windy, in case anything blows in your eye
- Avoid eye make-up for six weeks
- Take care washing your hair so water and soap do not go in your eyes
- You can resume your sex life a week or two after the operation
- Avoid driving for one week. If you do not feel safe to drive after a week, then wait until you have been seen by the doctor or clinical nurse specialist (CNS)
- You should refrain from working for two weeks and you may require longer depending on the type of work you do
- Flying is not restricted, but you may want to stay in this country until you have had your follow-up appointment

The eye specialist or a nurse in the eye clinic will be able to answer any questions you may have.

## Medication

You must put your eye drops in regularly and as directed. This is usually four times a day for four weeks. You will have two different kinds of drops (an anti-biotic and an anti-inflammatory) and must leave a five-minute gap between them. These drops will be in addition to any other eyedrops you use. Please use these drops for four weeks, unless told otherwise.

Your eye may be slightly sticky in the mornings. You can bathe your eyelids using cooled boiled water, gauze or kitchen roll. Do not use cotton wool or tissues. If your eye is sensitive to light you can wear sunglasses or clip-on sun lenses.

## Diet

You may continue with your usual diet.

## Leisure activities

You may read, knit, sew and watch television, but if your eye aches, stop for a while and rest it. You should avoid activities such as golf, football, aerobics, gardening and DIY for two weeks, and swimming for six weeks.

## Follow-up

When you go home, you will be given an appointment to see the doctor or clinical nurse specialist in four to six weeks' time.

The clinician will advise you when to visit the optician to have your eyes tested for new glasses, usually six weeks after the operation.

# The benefits and risks of cataract surgery

## Benefits

The benefits of cataract surgery are clearer vision and improved colour vision. Lens implants are selected to resolve focusing problems, and most people find their eyesight improves considerably after surgery. However, cataract surgery does not mean you will no longer need to wear glasses.

## Risks

Provided the eye is otherwise healthy, the majority of patients will see better after a cataract operation. However, there is a less than 5% risk of complications occurring during and after the operation, which can lead to transient or permanent loss of sight. These complications occur even in the best surgical hands. These risks may be higher if your eye;

- is especially “brittle” (e.g. pseudoexfoliation)
- has a dense/hard cataract
- has a pupil that does not dilate well
- has a floppy iris

There are risks with all operations and cataract surgery is no exception. However, without surgery, you would continue to lose vision and may become blind in the affected eye. The risks of cataract surgery are very small but can be serious, so it is important you are aware of these before deciding to go ahead with surgery.

## Possible complications

### During the operation

- Tearing of the back of the lens capsule with disturbance of the gel inside the eye that may sometimes result in reduced vision
- Loss of all or part of the cataract into the back of the eye. This requires another operation with a general anaesthetic in Exeter.

- Bleeding inside the eye – this is extremely rare but can lead to total loss of sight

## After the operation

- You may experience edge glare or dark line, an arc or shadow which is periodical in character but will usually resolve within three months
- Bruising of the eye or eyelids
- High pressure inside the eye
- Clouding of the cornea
- Incorrect strength or dislocation of the implant
- Swelling of the retina (macular oedema) 3.5%
- Detached retina, which can lead to loss of sight
- Infection in the eye (endophthalmitis), which can lead to total loss of sight or even the eye (very rare – 0.74%)
- Allergy to the medication used

## Serious or frequent complications

1:5 chance of requiring laser treatment later  
(see “A common occurrence” below)

1:30 chance of a complication\*

1:50 chance of no improvement in vision

1:100 chance of the vision being worse

1:100 chance of needing a further operation

1:1000 chance of losing some or all vision in the operated eye

1:10,000 chance of losing the eye

In certain circumstances the risk of complications may be higher than this. Please discuss this with your surgeon.

These complications can occur regardless of where the operation is done or who performs the surgery.

A common occurrence that can develop some months or even years after surgery is called posterior capsular opacification. When this happens, the back part of the lens capsule, which was left in the eye to support the implant, becomes cloudy. This would make your vision blurry. To treat this, the eye specialist uses a laser beam to make a small opening in the cloudy membrane to improve the eyesight. This is a painless outpatient procedure, which normally takes only a few minutes.

## Further information

If you have any questions once you get home, please telephone:

Day surgery unit **01271 322455** or

Eye Clinic **01271 322467**

Monday – Friday, 9am – 5pm

Outside of hours, ring the main switchboard on 01271 322577 and ask to speak to the ophthalmic doctor on call.

## Useful contacts

Royal National Institute of the Blind – [www.rnib.org.uk](http://www.rnib.org.uk)

Email: [eyehealth@rnib.org.uk](mailto:eyehealth@rnib.org.uk)

Royal College of Ophthalmologists – [www.rcophth.ac.uk](http://www.rcophth.ac.uk)

The Royal College of Ophthalmologists is unable to comment on individual patient care.

Drivers and Vehicle Licence Agency (DVLA)

[www.dvla.gov.uk](http://www.dvla.gov.uk)

Drivers Customer Services (DCS)

Correspondence Team DVLA

Swansea SA6 7JL

Tel: 0870 240 0009

*This booklet has been produced with the kind assistance of the Royal National Institute of the Blind.*

## Consent

When you have read this leaflet, please sign the tear off slip and bring this with you to your pre-assessment appointment. **Please note we cannot do your operation until this has been received.**

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I have been given the opportunity to be made aware of the risks of cataract extraction and lens implant and I am willing to go ahead with surgery.

Signature ..... Name (print) .....

Address .....

Date .....

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## PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email [rduh.pals-northern@nhs.net](mailto:rduh.pals-northern@nhs.net). You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

## Have your say

Royal Devon University Healthcare NHS Foundation Trust aims to provide high quality services. However, please tell us when something could be improved. If you have a comment or compliment about a service or treatment, please raise your comments with a member of staff or the PALS team in the first instance.

Tell us about your experience of our services. Share your feedback on the Care Opinion website [www.careopinion.org.uk](http://www.careopinion.org.uk).

Royal Devon University Healthcare NHS Foundation Trust  
Raleigh Park, Barnstaple  
Devon EX31 4JB  
Tel. 01271 322577  
[www.royaldevon.nhs.uk](http://www.royaldevon.nhs.uk)

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