Understanding cataracts

RNIB supporting blind and partially sighted people

RCOphth

RNIB's Understanding series

The Understanding series is designed to help you, your friends and family understand a little bit more about your eye condition.

Other titles in the series include:
Understanding age-related macular degeneration
Understanding Charles Bonnet syndrome
Understanding dry eye
Understanding eye conditions related to diabetes
Understanding glaucoma
Understanding nystagmus
Understanding posterior vitreous detachment
Understanding retinal detachment
Understanding retinitis pigmentosa

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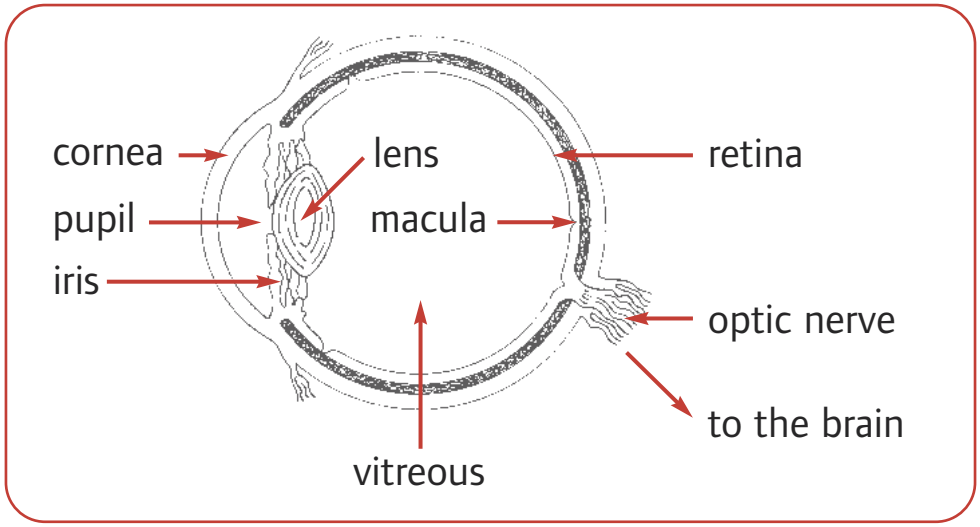
About cataracts

Cataracts are a very common eye condition. As you get older the lens inside your eye gradually changes and becomes less transparent (clear). A lens that has turned misty, or cloudy, is said to have a cataract. Over time a cataract can get worse, gradually making your vision mistier. A straightforward operation can usually remove your misty lens and replace it with an artificial lens to enable you to see more clearly again.

This guide is about cataracts in adults. Some children develop cataracts, called congenital cataracts, before or just after birth but these are usually dealt with in a different way to cataracts in adults. You can find information about congenital cataracts on our website at rnib.org.uk



How your eye works

When you look at something, light passes through the front of your eye, and is focused by your cornea and your lens onto the retina. Your lens is normally clear so that light can pass directly through to focus on your retina (the lens is clear because of the way the cells in the lens are arranged). Your lens focuses light onto the retina, which converts the light into electrical signals. A network of nerves delivers these signals from the different parts of your retina to the optic nerve and then onto your brain. Your brain interprets these signals to "see" the world around you.

Your lens can change shape, allowing you to focus on objects at different distances, called "accommodation of vision". As you get older, your lens is unable to change shape as well as it used to; even people who can see clearly in the distance without glasses will need reading glasses to see things up close. This process is not caused by a cataract.

Cataracts result from changes in the way the cells of your lens are arranged and their water content, which causes the lens to become cloudy instead of clear. When this happens, light cannot pass directly through your lens and you may notice problems with your vision. A cataract is not a growth or a film growing over your eye; it is simply your lens becoming misty.

Causes

Cataracts can be caused by a number of things, but by far the most common reason is growing older. Most people over the age of 65 have some changes in their lens and most of us will develop a cataract in time. Apart from getting older, the other common causes of cataract include:

- diabetes
- trauma
- medications, such as steroids
- eye surgery for other eye conditions
- other eye conditions.

In general, the reason why you have developed a cataract will not affect the way it is removed.

Most cataracts are caused by natural changes in your lens, which happen as you get older. However, the following factors may be involved in cataract development (please note that these are only suggested causes which are the subject of ongoing research):

- tobacco smoking
- lifelong exposure to sunlight
- having a poor diet lacking antioxidant vitamins.

Symptoms

Cataracts usually develop slowly and although symptoms vary there are some symptoms that most people experience. Most people will eventually develop a cataract in both eyes, though one eye may be affected before the other. When your cataract starts to develop, you may feel your sight is not quite right. For example, if you wear glasses you may feel that your lenses are dirty, even when they are clean. Gradually, you may find your sight becomes cloudier and more washed out. Edges of stairs or steps become more difficult to see and you may feel you need a lot more light to read smaller print.

Another common symptom of a cataract is a problem with bright lights. Lights can seem to glare, or you may find that the headlights of a car dazzle you more than they used to. You may also notice a slight change in your colour vision – things may appear more yellow than before. This often happens if one eye develops a cataract first and colours look different when you compare one eye with the other.

If you notice any of these changes, you should have your eyes examined by an optometrist (optician) who will be able to tell whether you have a cataract or not. The optometrist will then discuss how badly the cataract is affecting your vision and, if you agree, refer you via your

GP to the eye clinic. You may be told during this eye examination that you have early cataract or initial signs of a cataract which does not need referral. If you are unsure about anything during your eye examination then ask to have it explained. Eye examinations are free for everyone in Scotland and for everyone over sixty years old in the UK. Many other people also qualify for free eye examinations.

If a cataract is not removed, your sight will become increasingly cloudy. Eventually, it will be like trying to see through a frosted window or a heavy net curtain or fog. Even if your cataract gets to this stage, it can still be removed and your sight may be the same or almost the same as it was before the cataract developed.

Treatment

The only effective treatment for cataracts is surgery to remove your cloudy lens and replace it with an artificial lens implant. This is done by an ophthalmologist (eye specialist) at a hospital. Lasers are not used to remove cataracts and there is no evidence to suggest that changing your diet, taking vitamins or using eye drops

can cure cataracts. Cataract surgery is available free on the NHS.

Removing cataracts

The operation to remove your cataracts can be performed at any stage of their development. There is no longer a reason to wait until your cataract is "ripe" before removing it. However, because any surgery involves some risk, it is usually worth waiting until there is some change in your vision before removing the cataract. This is something to discuss with your optometrist, as a good time to have the surgery may vary from person to person.

Most people choose to have their cataracts removed when the change in their vision starts to cause them difficulties in everyday life. The timing of this varies from person to person. If you have problems in bright light, or you find reading or getting out and about, cooking or looking after yourself increasingly difficult then it may be time to consider having your cataract removed. When you go to your appointment in the eye clinic you need to make clear to the specialists any everyday problems you are having.

When you are first referred to the eye clinic you will have an outpatient appointment to examine your eyes and

then discuss the best options for you. This is the time to ask questions and it is useful to write down any you have thought of beforehand.

Many people with cataracts are still legally able to drive. If you have any concerns about whether you should be driving, your optometrist should be able to tell you whether your sight is within the legal limits for driving. Sometimes people may be legally able to drive but might find driving difficult in bright sunlight or at night. If this is the case, then you may think it is a good time to consider having your cataracts removed.

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 surgery. If you have had laser surgery to reduce your need for glasses you need to tell your ophthalmologist as soon as

possible, as this may affect the power of the lens they implant. If you have a cataract in both eyes your ophthalmologist will use these tests to decide which cataract to remove in the first operation. In most cases, this is the eye with the worst cataract.

Surgery

Cataract surgery usually takes about 30 to 40 minutes and most people go home from hospital a few hours later. It is usually done with a local anaesthetic, which means you will be awake during the operation but you will not feel any pain. You can talk to the operating team if you need any assurance. The local anaesthetic may involve drops and an injection or just drops.

For your surgery, you will be given drops to dilate your pupil. Your face will be covered by a sheet, which helps to keep the area around your eye clean during the operation. The most common way to remove cataracts is called phacoemulsification. This technique uses high frequency sound energy to break up your natural lens with the cataract. Only really small cuts are used, so you do not need any stitches, and this helps to speed up your recovery from the surgery. Usually, the ophthalmologist uses a machine which acts as a microscope to get the best view of your eye.

The lens in your eye is made up of different layers and the outside layer is called the lens capsule. During the operation, the ophthalmologist cuts through the front of the lens capsule so they can reach the lens inside. Using the same instrument, the ophthalmologist can break up your lens and the cataract inside your eye, and remove it using suction. Your lens capsule is kept in place so that the artificial lens implant can be placed inside it. The tiny implant is folded so that it can be put into your eye through the same instrument that is used to remove your cataract. Once it reaches the right position, the ophthalmologist unfolds the artificial lens so that it sits in the right place inside your lens capsule.

As you are awake during the operation it is important that you keep as still as you can. You will be able to hear what is happening in the operating room and can communicate with the ophthalmologist and the nurses. They are on hand to reassure you and offer any help if you needto move. Because the eye is anaesthetised and your pupil is dilated, you may be able to see some lights and movement but not the details of the instruments used. You should not feel any pain in your eye.

A short time after your operation, your eye will be examined, to make sure the operation has been a success.

Your eye will be covered with a dressing which stays in place when you go home, normally a few hours later. Your eye may begin to feel sore once the local anaesthetic starts to wear off. Usually the pain is not too bad and you can take a painkiller tablet, such as paracetamol, to help. The dressing, which is put on in the hospital, usually needs to stay on your eye overnight, but you should be able to take it off the following morning. Your eye may look red and you might develop some bruises but these will improve over the next few days.

Immediately after the operation

Some people can tell that their sight has improved straight away. If your cataract was quite mild you might not notice a big change in your vision but if your cataract was quite bad you may be able to notice a bigger improvement. Either way, your sight may not be as good as you expect for the first week after the operation, as the eye is still recovering from the surgery and will probably be a little swollen.

Immediately after the surgery you will be given eye drops. You will probably have two types of drops – an antibiotic drop to prevent infection and a steroid drop to help reduce any swelling. It is important to take these

drops as the ophthalmologist recommends and to complete the course. Your eye clinic should be able to give you information on how to use your eye drops. If you have problems using the drops you should let your GP know as they may be able to arrange some help for you.

Most people have no problems after the surgery and they are up and about as normal the next day. Some people may find certain lighting too bright, wearing sunglasses or tinted lenses can help with this but usually this is only for a few days after the surgery. If your eye is very painful or your vision suddenly gets a lot worse, then you should let the hospital know as soon as possible as this may mean they need to see you again.

Activities

After surgery, you can usually go back to your everyday activities as soon as you feel able. Apart from taking eye drops, you can usually carry on as normal but you may need to avoid the following for the first week to ten days:

- rubbing your eye. You may have to wear an eye shield (patch) when you are sleeping to avoid rubbing your eye

- swimming (until your ophthalmologist says you can) to avoid contact with dirty water while your eye is healing
- strenuous exercise, contact sports and heavy lifting. Everyday lifting like light shopping is usually fine, but heavy lifting like moving furniture is best avoided
- wearing eye makeup until the hospital are happy with your recovery.

You also need to take extra care:

- when it is windy or dusty outdoors, in case something blows into your eye, but you don't need to stay indoors
- with bright lights for a few days after the surgery. You may need a pair of sunglasses or tinted lenses to help you for a few days
- washing your hair. Avoid soapy water in your eye.

Usually, you will see the ophthalmologist about six weeks after the operation. At this appointment you can ask them about returning to all your usual activities.

When should I have new glasses?

The lens that is implanted in your eye is usually designed to give you clear distance vision without needing glasses.

Sometimes this is not quite achieved and you will need a pair of distance glasses to fine tune the focus and get the best possible distance vision. Because the lens implant cannot provide in-focus near vision, nearly everyone needs to wear reading glasses after the operation and usually this is a different pair than you had before the operation.

In most cases an eye examination, sometimes called a refraction, will be done four to six weeks after the operation. This may be done by an optometrist in the hospital or you may be asked to see your own optometrist, in the high street.

Some lens implants are available which try to provide clear vision in the distance and up close. These are called multi-focal lenses. There are different types available, but usually implanted in the same way as the more common lenses. At the moment, multi-focal lenses are normally only available privately.

Between operations

If you have cataracts in both eyes, the period between having the first and second operation can be difficult. This is because your eyes will not be balanced in terms of glasses and correction for any short or long sight you

may have. Normally, people are encouraged to wait until they have a second operation before getting new glasses. This avoids the need to buy glasses that would only be useful for the short time between the operations. Some people find they can manage with their old reading glasses, but this may not be possible for everyone. The gap between the two operations is usually about six weeks to three months so most people can manage.

Complications

Cataract surgery is generally very successful. Only about three per cent of people who have cataracts experience complications. The most common complications can be dealt with and usually do not affect sight in the long term.

One of the most common complications is a thickening of the lens capsule which holds the lens in place. This may occur a couple of months or even years after the original operation. If this happens, your sight will become cloudy again, as though the cataract has come back. Doctors call this complication posterior capsule opacification or posterior capsule thickening and it is usually easily dealt with by a small laser operation done through an outpatient appointment. There is information

available on posterior capsule opacification if you contact our Helpline on 0303 123 9999 or check our website at rnib.org.uk

More serious complications are much rarer and include:

- retinal detachment
- problems with the lens implant, the wrong lens implant or problems with its position
- a break in the lens capsule
- infection.

These complications are much rarer and treatments are available which will minimise their effects on your vision. Before being offered a cataract operation the ophthalmologist will talk you through the potential risks specific to your situation.

Other eye conditions

People with cataracts often have other eye conditions as well. This is because many eye conditions affect older people. For example, many people with macular degeneration, glaucoma or diabetic eye problems also

develop cataracts. Removing cataracts when you have other eye conditions is possible, but there may be other things to consider. Ask your ophthalmologist to explain any extra considerations for a cataract operation in your particular circumstances.

Coping

Being diagnosed with an eye condition can be very upsetting. You may find that you are worried about the future and how you will manage with a change in your vision. All these feelings are natural. RNIB can help you with our telephone Helpline on 0303 123 9999 and our emotional support service.

Most people who have cataracts without any other eye conditions have very good vision following the operation. However, if you have another eye condition that affects your sight, or there are complications with the cataract surgery which affect your sight, then there are lots of things you can do to make the most of the vision you have. This may mean making things bigger, brighter or using colour to make things easier to see. Ask your ophthalmologist, optician or GP to refer you to your local low vision service.

Our Helpline can also give you information about low vision clinics and the support available from social services and can also offer advice if you have any difficulties accessing these services. Our website rnib.org.uk offers lots of practical information about adapting to changes in your vision and products that make everyday tasks easier.

Useful contacts

Royal National Institute of Blind People
105 Judd Street, London WC1H 9NE
0303 123 9999
helpline@rnib.org.uk
www.rnib.org.uk

Royal College of Ophthalmologists
17 Cornwall Terrace, London NW1 4QW
020 7935 0702
www.rcophth.ac.uk

Driver and Vehicle Licensing Agency (DVLA)
Drivers Customer Services (DCS)
Correspondence Team DVLA
Swansea SA6 7JL
0300 790 6801
www.dvla.gov.uk

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Information sources

We do all we can to ensure that the information we supply is accurate, up to date and in line with the latest research and expertise.

The information used in RNIB's Understanding series of leaflets uses:

- Royal College of Ophthalmologists guidelines for treatment
- clinical research and studies obtained through literature reviews
- information published by specific support groups for individual conditions
- information from text books
- information from RNIB publications and research.

For a full list of references and information sources used in the compilation of this leaflet email publishing@rnib.org.uk

RNIB Helpline

0303 123 9999

helpline@rnib.org.uk

If you, or someone you know, is living with sight loss, we're here to help.

Alcon

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