# Congenital cataract

A cataract can make your vision blurry or misty, a bit like trying to look through frosted glass. Some babies are born with cataracts or develop cataracts at a very early age.

## What are congenital or infantile cataracts?

A cataract is a clouding of the lens inside your eye.

Your lens sits just behind your iris, the coloured part of your eye. The lens of your eye is usually clear and helps to focus the light entering your eye, but a lens that is opaque (misty or cloudy) is said to have a cataract. Cataracts can cause your sight to be blurry or hazy. It is not a layer of skin that grows over your eye or eyes; it is simply the lens of the eye(s) that has become cloudy.

Some babies are born with cataracts and some develop them in the first six months of their lives. When a baby is born with a cataract, it is called a “congenital cataract”. If a cataract develops in the first six months of life, it is known as an “infantile cataract”.

Children can have cataract in one (unilateral) or both (bilateral) eyes. Most children with cataract in only one eye usually have good vision in the other eye.

## How does the eye work?

When light enters your eye, it is focused first by the cornea, which is the clear window at the front of the eye, and then more accurately by the lens so that it is correctly focused on the retina. The focusing that the cornea and lens do help to make your vision clear and sharp.

Your retina is the light sensitive layer that lines the back of your eye. It converts the light into electrical signals that travel along the optic nerve to our brain. The brain interprets these signals so we can "see" the world around us.

The following diagram shows the cross-section of an eye. From the front to the back of the eye, it is labelled cornea, pupil, iris, lens, optic nerve, macula, retina and choroid.



## How does our vision develop in childhood?

When you’re born, your eyes and brain must learn to work together. As you grow, you use your eyes to collect visual information which is sent to the brain to process, and this builds up a connection between them. This connection between the eyes and the brain is known as the visual pathway.

The visual pathway develops throughout your childhood and up to the age of about seven or eight years old. During this time, it’s important that your eyes send clear and similar images to your brain. The eyes and brain use your visual experiences to improve how they work together (their coordination) and allow your visual pathway to develop as fully as possible. The most crucial time is the first two to four months of life; if the eyes don’t send the brain a clear image during this time, the brain may never learn to see clearly.

After the age of about eight years old, the visual pathways and the “seeing” parts of the brain are fully formed and are difficult to change. If a child is born with an eye condition which affects vision, such as cataract, then their visual pathway may not develop normally. This is because a cataract lowers the amount of visual stimulation the eye and brain receive. Therefore, it’s critical to treat childhood sight issues which happen in the first few months of life.

## How can congenital or infantile cataract affect visual development in childhood?

If one of your child's eyes is sending poorly focused, unclear images to their brain because they have a cataract in this eye, their brain will learn to ignore these images in favour of those provided by the better seeing, or “stronger” eye. This prevents the visual pathway from developing properly in the eye which has the cataract. This is known as amblyopia or “lazy eye”. Amblyopia may result in permanently reduced vision as the visual pathway has not developed, particularly when the brain doesn’t get a chance to see clear images in the first few months of life.

### Unilateral cataracts

With unilateral congenital cataract, the brain tends to rely on the eye without a cataract and learns to switch off from the eye with the cataract and reduced vision. In these cases, it can be difficult to encourage the visual pathway to develop in the eye with the cataract.

### Bilateral cataracts

Bilateral cataracts can cause amblyopia to develop in both eyes. If a child has bilateral cataracts so that both eyes are sending a cloudy image to the brain in the first months of life, then the brain will “ignore” the images from both eyes. The visual pathway may still develop, but it would be limited and therefore, result in some vision being reduced permanently.

## What are the types of congenital cataracts?

There are many types of congenital cataract. Some affect vision and others never do. A cataract located towards the centre of the lens is more likely to affect vision and visual pathway development, than one which is around the edge of the lens, though this will depend on its size and how dense, or cloudy, the cataract is.

Very dense cataracts can cause blindness in babies if left untreated, or if treated too late. An ophthalmologist (hospital eye doctor) will check your child's eyes and vision and be able to tell you how much the cataract is affecting your child's vision.

Congenital cataracts can continue to develop, although this normally takes months to years. The ophthalmologist would assess how much the cataract is affecting your child's vision and then discuss treatment with you if they feel it is needed.

## What causes congenital cataracts?

Around 3 per 10,000 children in the UK are born with a cataract which affects vision. About a third of cataracts do not have any cause and aren’t linked with any other disease or condition.

Unilateral cataract usually has no known cause. In some cases, it can be linked with other conditions in the eye, such as having an abnormally small eye, or other eye structures not developing as they should when the baby was growing in the womb.

Bilateral cataracts often run in families, which means a baby might inherit them. They can also be linked with other conditions affecting the entire body, or infections, such as measles or rubella, when the baby was growing in the womb. Medical conditions that affect the baby’s metabolism, that is how their body turns food into energy, can also cause congenital cataracts.

If a cataract is passed on to a baby from a parent, it is usually dominantly inherited. Dominant inheritance means that you inherit the condition from only one of your parents. Genes usually come in pairs. You inherit one gene from each of your parents to make each pair. In dominant inheritance, the “faulty” gene that is inherited from one parent is the dominant one and over-rides the “normal” gene from the other parent. One parent may know that they have cataracts themselves but sometimes they may only have a tiny cataract which doesn’t affect their vision and which they’re unaware of. This is why it can be helpful for the ophthalmologist to examine the eyes of the parents and siblings of a child with cataract, even if they’re unaware of any issues with their eyes.

Most children who are born with, or develop infantile cataracts, do not have other medical issues, but some do. If an ophthalmologist is concerned that a baby may have other health conditions, they will arrange for an examination from a paediatrician (a doctor specialising in children’s conditions).

## How is the diagnosis made?

### At birth

If the paediatrician or paediatric nurse suspects that your child has a cataract at birth, they will arrange a referral to an ophthalmologist for a full examination of their eyes. An ophthalmologist would carry out this examination at hospital.

All babies in the UK are screened for eye problems including congenital cataracts within the first 72 hours after birth as part of the National Screening procedure. Babies are normally checked again by a health visitor or community paediatrician around six to eight weeks of age. If you are concerned about your baby's vision, it is important to discuss it with your health visitor. Your baby’s “red book” (Personal Child Health Record) has advice on how their vision will develop. If your health visitor notices any signs of a possible eye issue or cataract, they would refer your baby to a hospital ophthalmologist for a full examination.

### Later in childhood

If cataracts develop later in childhood, there may be noticeable outward signs if they affect vision. For example, sometimes a child may appear to have difficulty focusing on certain objects, may develop a wobbly movement in the eyes (nystagmus), may hold their head at a certain angle or they may develop a squint (a turn in one eye). If you’re concerned at any stage that your baby or child isn’t seeing normally, you should discuss this with your GP or an optometrist (optician). Your GP or optometrist would assess your child's eyes and refer them to see an ophthalmologist.

### Examining the eye

Usually, the ophthalmologist would examine your child’s eye with a microscope before and after putting some dilation drops into your child's eyes to make their pupil larger. Dilation allows more light into the eye so they can see the cataract more clearly and examine the health of the eye. An ophthalmologist would also use an instrument called an ophthalmoscope to examine the back of your child's eyes, to look for any other eye related issues. The ophthalmoscope and the lenses the ophthalmologist use to view your child’s eye will not touch it. Sometimes a child may be given a general anaesthetic to allow the ophthalmologist to carry out an eye examination. This allows them to look thoroughly at your child’s eye whilst they are still and without causing any distress.

It is unlikely that a cataract would change the appearance of a baby’s eye so that their parent would be able to notice it themself. A very dense cataract can cause a baby or child’s pupil to look white as the cloudy cataract can be seen through it. However, there are other causes of a “white pupil” which would need to be checked as an emergency as they can be serious.

## What is the treatment?

Some cataracts do not cause visual problems and treatment is not needed. If the cataract is affecting your child's vision, surgery will usually be considered to remove the affected lens from the eye. Once a cataract is removed, it cannot grow back.

### Considering surgery

If your baby’s cataract or cataracts are likely to have a significant effect on their vision, surgery is considered early on and under the age of three months as visual development in the first few months of life is vital.

The ophthalmologist will discuss the options with you and what treatment might give the best results. They will discuss both the risks and benefits of surgery with you before any decision is made.

Bilateral cataracts which only affect a small area of your child’s lenses may just need monitoring to track their progress. Dense cataracts that are likely to interfere with your baby’s vision are usually removed, very early, during the first few months of life. If one eye has a denser cataract and the other has a smaller or less dense cataract, then the eye with the denser cataract would usually be treated first. If surgery is required in both eyes, then it may be done on the same day or scheduled very soon after the first one.

Unilateral cataract that is large and located in the middle of the lens will need to be operated on early for your child to have the best visual outcome. However, unilateral cataract that is small, or doesn’t affect the centre of the lens, may not require surgery immediately; instead patching the good eye or using dilating drops in the good eye so that your child is forced to use the affected eye, may be prescribed. It’s still possible that a small cataract affecting only one eye will cause amblyopia, so the specialist may wish to treat your baby’s cataract despite it being small.

If your child has unilateral cataract, or bilateral cataracts with a cloudier lens on one side, your child's ophthalmologist will also consider patching your child's stronger eye to help their brain switch onto the weaker eye. This is just as important as the cataract surgery itself. Children with unilateral or congenital cataract affecting one eye more than the other, are very unlikely to have good vision after surgery unless some patching is used. Patching is discussed in more detail under ‘amblyopia’ further on in this information.

### During surgery

Your child will be given a general anaesthetic so that they won’t be able to feel anything during the operation. The surgeon will make several small openings in the side of the cornea at the front of the eye, and then make a small hole in the natural capsular bag which encases the lens inside the eye. The cloudy lens is removed via these holes using suction.

In children aged under five years, a hole is also made in the back of the capsule, through which some of the jelly (vitreous gel) that normally sits in the middle of the eye, is removed. The vitreous gives internal support to the eyeball and is usually held in place by the lens. Removal of some of the gel is necessary to stop it coming forwards in a young eye and causing problems after cataract removal. All the holes made in the cornea are stitched closed using sutures that will dissolve in time.

Usually, you and your baby will stay at the hospital overnight so the clinical team can make sure your baby has recovered well from the anaesthetic and can show you how to care for your baby’s eye.

### Lens replacement used in surgery

Once your child's natural lens with cataract has been removed, it may be replaced by an artificial clear plastic lens implant placed inside the eye, called an intraocular lens or IOL. If a lens implant is used during surgery, it is hoped that it will last for life and not need replacing. If your child is very young (aged under two years), then the ophthalmologist may recommend using a contact lens on the front of the eye rather than an implant inside the eye. This is because IOLs in younger eyes often lead to children needing more surgery to remove membranes that grow across the artificial lenses (called visual axis opacity). It is also difficult to correctly estimate the power of the IOL needed for a young child’s eye.

When your baby is born, their eye’s natural lens is very round and more powerful than in adulthood. The power of your baby's lens and the length of their eye from front to back (axial length) changes rapidly over the first few years of their life. This means that the power of an IOL used at a very young age may not be right for them as they get older, and this can cause short sightedness (when distance vision is not focused properly). Children who have IOLs at the time of cataract surgery can end up needing very strong glasses anyway. However, leaving a child without a lens inside in their eye (called aphakia), can cause severe long sightedness (when close vision is not focused properly), so that contact lens and/or glasses are needed to correct vision.

As contact lenses are not implanted into the eye, they are much easier to change or remove if necessary. IOLs can be implanted later, in a separate surgical procedure, when a child is a bit older, and their eye is more developed; this will reduce the chances of inflammatory membranes from growing across the IOL and deciding on the best power for the IOL will be more accurate.

An IOL is often used during cataract surgery for older children. The decision to use an IOL is very individual and although a good option for one child, it may not be the best or safest option for another. The ophthalmologist would discuss with you the possible risks and benefits of using an IOL for your child. They would consider both your child's level of vision and their age.

Most children will have an IOL implanted at some point and will require glasses or contact lenses as well to provide the best possible vision for them.

## What happens after cataract surgery?

### What to expect

Following the operation, your child's eye will be a bit painful for the first day. The hospital will give you eye drops to put in your child's eye every two to four hours which will help to prevent inflammationor infection. After cataract surgery you would usually put eye drops in your child's eye for a month or two to help the healing process**.** The hospital may also give medicine or tablets for the first night after surgery to help with any pain.

The ophthalmologist will monitor recovery following surgery and check on progress. They will also advise you on how to use any medication or eye drops.

### How do I look after my child’s eye(s)?

The nurses will show you how to put drops into your child's eye before they are discharged from the hospital. Putting drops and/or ointments into a baby’s eye can be tricky. There are some very helpful videos that you can watch online showing different techniques that can be used to instil drops in young babies and children; links to useful videos and podcasts can be found at the end of this information.

The nurses will also go over any post-operative care techniques, such as bathing your child, wearing a plastic eye shield, or keeping the eye clean without wiping inside the eye or washing it out.

It’s important to protect your child's eye and keep it clean following surgery, including being careful not to get dirty water or shampoo in the eye. This is to give their eye the best recovery and to minimise the risk of infection. It also helps your child to feel as comfortable as possible.

The hospital may provide an eye shield to place over your child’s eye, especially for use at night. Thishelps to protect the eye, as a shield can usually stop your child from rubbing their eye whilst it is healing from surgery. The hospital staff would tell you when and for how long to use the shield. They would also normally give you a sheet of instructions on how to look after your child's eye whilst they are recovering from cataract surgery.

### Glasses and contact lenses

After cataract surgery children usually need glasses or contact lenses. This is because the artificial lens implant or contact lens used to replace your child's natural lens has a fixed focus. This means it can't change shape to focus clearly both at near and in the distance, as our natural eye lens can.

Glasses or contact lenses will help make sure your child can see as clearly as possible at all distances, and make sure that a clear image is being presented to their developing brain. This is extremely important to your baby’s visual development and therefore glasses and contact lenses should be worn as prescribed.

Your child might need a pair of glasses or contact lenses which correct either their near or distance vision. Or they may need bifocal glasses where the top section of the lens corrects distance vision and the bottom part of the lens corrects near vision.

If your child does not have an IOL implanted during cataract surgery, then they would also be prescribed glasses and/or contact lenses. Glasses for children without an IOL would require a strong prescription making them thick and heavy. Sometimes in very young babies, it can be difficult to find glasses that will stay on a baby’s face. For these reasons, contact lenses are often a more practical solution.

The hospital specialists can usually provide the right glasses or contact lenses for your child. They will also show you how to put the lenses in and take them out of your child's eye or eyes so you can feel confident doing this at home. If your child is under the age of one, the hospital may wish to monitor their eyes every two to three months to check how well they are focusing.

As a child grows, their eyes also grow. It is very common to have frequent changes in glasses and contact lenses prescriptions in the first few years.

## What are the possible complications following surgery?

After surgery some children may develop an eye complication such as:

**Glaucoma**. A condition that causes damage to the optic nerve and eye structures resulting from an increase in eye pressure. This is always a possible risk in children who have had congenital cataract surgery, meaning they will require regular monitoring in the long term. Glaucoma can usually be managed with eye drops but, when it develops after congenital cataract surgery, it often needs to be treated with surgery.

**Visual axis opacity (VAO).** This is a very common complication that can occur following cataract surgery. It occurs because lens cells remaining after cataract surgery collect to form a membrane which grows across the holes made in the capsular bag causing it to thicken and become slightly opaque (cloudy). This means that light is less able to travel through to the retina at the back of the eye. Further surgery may be required to correct this. Laser can be used in older children to correct this. You can find more information about VAO, which in adults is called posterior capsular opacity (PCO), on our website or by calling our Helpline.

**Eye infection**. Antibiotic drops normally safeguard against infection. If a serious and rare eye infection called endophthalmitis develops, then it can threaten sight in that eye. However, this kind of serious infection is rare and can be treated.

**Retinal detachment**. This is where the retina detaches from the back of the eye. Thanks to modern surgery techniques which allow removal of the vitreous gel without pulling on the retina, this is now uncommon. If this does occur, further surgery as soon as possible can put the retina back in place. You can find more information about retinal detachment on our website or by calling our Helpline.

## Ongoing monitoring of eye health and vision

The ophthalmologist will monitor your baby's eye very carefully after surgery. This will include checking the health of your child's eye(s), the eye pressure, the focusing power of the eye, as well as vision. Your child’s glasses or contact lenses must be kept up to date to ensure the developing brain is being shown a clear image. If your baby develops a complication, the ophthalmologist can often treat it and will try to save as much sight as possible.The chances of your baby developing a complication are usually low.

### What should I look out for?

If you notice any swelling, bleeding, a lot of stickiness, redness in or around your baby's eye, or if they seem to be in pain after surgery, contact the hospital immediately, or go to the Accident and Emergency department (A&E), so your child can be seen quickly.

These complications can often be treated successfully if they are caught early enough. If you have any concerns about your child’s eye or post-operative care, contact the hospital where the surgery took place. Parents and carers will often be given 24-hour contact details before leaving the hospital.

## What other eye conditions can develop because of congenital cataracts?

**Strabismus** (squint) can develop if the eyes are not working together properly. If your child has a squint or amblyopia (described later in this section), these conditions may be managed by an orthoptist at the hospital. Orthoptists are experts in how the two eyes work together (known as binocular vision) and this includes the assessment of squints, double vision and amblyopia. If your child is suspected to have any of these conditions, they are usually one of the first professionals they will see if they are referred to the hospital. Orthoptists are extremely skilled in testing vision in young children, diagnosing strabismus, prescribing patching therapy and any eye exercises that may help. You can find more information about strabismus on our website or by calling our Helpline.

**Nystagmus.** This is when there is uncontrolled movement of the eyes. The movements are usually side to side but can also be up and down or in a circular motion. You can find more information about nystagmus on our website or by calling our Helpline.

**Amblyopia** (lazy eye) can develop when the brain switches off from the eye with worse vision and just switches on to the eye with the better vision. Glasses and patching can help. Patching the stronger eye encourages your child to use their weaker eye which is known as occlusion therapy. This is an important treatment to help develop your child’s vision and prevent amblyopia; however, this can be a lengthy process and very demanding for both the child and parent.

* Your child's “stronger” eye may be patched for several hours a day in early childhood
* Patching aims to encourage your baby's visual system in the “weaker” eye to develop. It is important to follow prescribed timings for patching. Some parents may feel that extra time patching may benefit but this would only cause problems with normal vision development in the good eye
* If the orthoptist’s patching advice is strictly followed, the better the chance of your baby developing the best vision possible in the weaker eye
* If cataracts have been removed in both eyes and one eye sees better than the other, patching the better seeing eye for short periods may be recommended
* The specialist may advise you to patch your baby's stronger eye even if they have not had cataract surgery. If your baby's cataract is not dense or large enough to be removed by surgery, patching the stronger eye can help your baby's brain to switch onto the eye with the cataract
* There are different types of “patches” that can be used; some can be stuck onto the face and others can be put over glasses or worn “pirate style”. The orthoptist could explore which ones would work best for your child
* Techniques to encourage your child to wear their patch could include reward charts/stickers, associating patching with enjoyable activities such as games, music, etc. Continue to be persistent and consistent with patching. Asking teachers, family members and friends to help and encourage your child may also help them understand that it is something that must be done
* If wearing a patch is not possible then sometimes drops can be put in the stronger eye to blur vision for a period of time, rather than wearing a patch.

The orthoptist at the hospital will be able to advise on the various ways to help a child to develop their vision as much as possible, such as glasses and patching.

## How about the future?

With early detection and treatment as well as the dedication of parents and carers, many children with congenital cataracts in the UK go on to have a good level of vision for the remainder of their lives. Parents and carers of children with congenital cataract(s) put in a tremendous amount of effort, commitment and persistence during their child’s treatment, and this is rewarded with a better visual outcome for most children.

Children with unilateral cataract can have reduced vision in that eye, but if vision is normal in the unaffected eye, then overall vision is very good. Even with reduced vision in one eye, children can adapt very well to using their better eye. This doesn’t mean that they will be overusing their better eye or causing any damage to the better eye. It’s unusual for children with good vision in one eye to need additional support in their education. People with good vision in only one eye can drive a car if the vision in that eye can meet the visual standards for driving.

Children with bilateral cataracts may have better vision in each eye compared to those with cataract in one eye, but often vision is still affected. Most will attend mainstream school but may require additional support. Your child will likely have better sight if they don’t have any other eye condition or experience complications following surgery.

It is important for your child to continue to have regular eye checks with the hospital or with an optometrist. This ensures your child is wearing the right type and strength of glasses or contact lenses, so their vision develops as well as possible. The hospital will advise you on how often your child should have an eye examination.

Children with cataract may have other eye or health problems. These are usually detected by a heath care professional early on, with treatment or support given where needed. Talk to your eye team or GP if you have any other concerns.

## Coping if your child has sight issues

On hearing that your child has issues with their sight, you may feel like your world has been turned upside down. Different people respond in different ways but it’s natural to experience many emotions which may include shock, fear, grief, sadness, or despair. All these feelings are quite common and part of the process you may go through during the early weeks and months.

You may have left the consulting room in a daze and may not have heard all the words that were said to you during the consultation. You may be asking yourself what happens next and what the future holds for your child.

Different feelings come and go and can catch up with you when you least expect it. All the while your child’s need for food, love, warmth and security continue to demand your energy, care and attention. But the first step is to make sure you have access to all the information and help that is available.

You probably have a million different questions. You will want to know which organisations can help you, what resources are available or simply want to know “what do I do next?” You may also want to meet other parents who have been through a similar experience.

It’s a good idea to write down any questions that come to your mind on some paper and take it along when attending eye clinic appointments. This will ensure that you don’t forget to ask the medical team about them during your visit.

Your local authority (LA) should have at least one qualified teacher of visually impaired children (QTVI) to work with you and your child both at home and at school. QTVI are qualified teachers who can provide support with development, play, learning and education. At an early stage, ask your local authority to put you in contact with a QTVI. Your child’s eye hospital may also have an Eye Care Liaison Officer (ECLO) who can help. The ECLO and QTVI will support you and your child as soon as a vision impairment is suspected or diagnosed. If you have difficulty getting help or need the details of the specialist teacher in your area, contact RNIB Helpline on **0303 123 9999**.

## Other sources of support

**LOOK** (National Federation of Families with Visually Impaired Children)

Tel: 01432 376314

Email: **info@look-uk.org**

Web: **look-uk.org**

**Guide Dogs - Children and Young People’s service (formerly Blind Children UK**)

Tel: **0800 781 1444**

Web: **guidedogs.org.uk/**

**Royal Society for Blind Children** provide a range of services in London and across England and Wales for blind and partially sighted children and young people, their families, and the professionals who work alongside them.

Tel: **020 3198 0210**

Web: **rsbc.org.uk**

Email: **connections@rsbc.org.uk**

**Visually Impaired Children Taking Action** (Victa)   
Tel: **01908 240831**

Email: **admin@victa.org.uk**

Web: **victa.org.uk**

### Further information

If you have questions about anything you’ve read in this factsheet, or just want to speak to someone further, please get in touch with us. We’re here to support you at every step.

Our Helpline is your direct line to the support, advice and services you need. Whether you want to know more about an eye condition, buy a product from our shop, join our library, find out about possible benefit entitlements, or be put in touch with a trained counsellor, we’re only a call away.

Call our Helpline on **0303 123 9999**, we’re ready to answer your call Monday to Friday 8am – 8pm and Saturday 9am – 1pm. You can also email us at **helpline@rnib.org.uk**. You can also say, “**Alexa, call RNIB Helpline**” to an Alexa-enabled device.

You can also get in touch by post or by visiting our website:

**RNIB**

105 Judd Street

London WC1H 9NE

**rnib.org.uk**

**The Sight Advice FAQ**

The Sight Advice FAQ answers questions about living with sight loss, eye health or being newly diagnosed with a sight condition. It is produced by RNIB in partnership with a number of other sight loss organisations. **sightadvicefaq.org.uk**

**Connect with others**

You can meet or connect with others who are blind or partially sighted online, by phone or in your community to share interests, experiences and support for each other. From book clubs and social groups to sport and volunteering, our friendly, helpful and knowledgeable team can link you up with opportunities to suit you. Visit **rnib.org.uk/connect** or call **0303 123 9999**.

## Online videos on how to administer eye drops and ointments in children

Visit the link below to watch a helpful YouTube video on administering eye drops and ointment in children:

**youtube.com/watch?v=d3wtEWX7HxU**

Visit the link below for useful resources on administering eye drops and ointment in children:

**rnib.org.uk/your-eyes/eye-conditions-az/congenital-cataracts/#useful-resources**

### We value your feedback

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Send your comments to us by emailing us at [**eyehealth@rnib.org.uk**](mailto:eyehealth@rnib.org.uk) or by writing to the Eye Health Information Service, RNIB, 105 Judd Street, London, WC1H 9NE.

This factsheet has been written by the RNIB Eye Health Information service. Our factsheets have been produced with the assistance of patient and carer input and up-to-date reliable sources of evidence. The accuracy of medical information has been checked by medical specialists. If you would like a list of references for any of our factsheets, please contact us at **eyehealth@rnib.org.uk**

All of our factsheets are available in a range of formats including print, audio and braille.

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