



Cataracts and cataract surgery in children

This leaflet aims to answer some of the questions you might have about your child’s cataract surgery. Please note that this leaflet doesn’t cover everything, as every child and cataract is different. Your surgeon will discuss your child’s particular case with you. Please ask the clinical staff if there is anything you would like more information about.

What is a cataract?

Your child has a natural lens inside their eye that helps them to see. The lens should be transparent (like glass) but a cataract makes the lens cloudy. Figure 1 shows a mild cataract and Figure 2 shows a severe cataract.

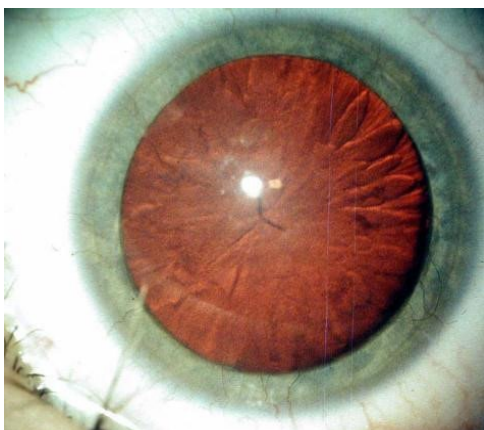


Figure 1



Figure 2

What causes cataracts in children?

There are many different causes of cataract in children. Sometimes, no one can determine exactly why the cataract has occurred. However, the most common causes are:

- Infections while the baby is still in the womb, like chicken pox or rubella (German measles).
- Inherited conditions: Some types of childhood cataracts run in families. Children may inherit the gene(s) for cataracts from a parent who may also have had childhood cataracts.
- Syndromes: Some conditions, such as Down's syndrome, carry an increased risk of childhood cataract. Some but not all of these conditions are inherited from parents.
- Eye conditions such as uveitis (inflammation in the eye).
- Conditions that affect metabolism, such as diabetes.
- Trauma to the eye.

How are cataracts in children treated?

Having cataracts is a problem that can only be treated by surgery. No other medical treatment is currently available. However, not all cataracts need an operation and sometimes glasses will improve the vision. Even if no surgery is done, your child will still need to be regularly checked in clinic to monitor how their eyes are developing.

Cataract surgery in children

In older people, cataract surgery is a common and quick operation that is almost always successful. However, cataract surgery in children is more complicated and the results less predictable because the eyes are still growing. In addition, there is more inflammation and scarring produced in response to the operation.

Adults have cataract surgery with a local anaesthetic, where the eye goes numb but they are awake. Children have a general anaesthetic, where they are asleep for the operation.

Before the operation, measurements of the eye will be taken in clinic using a scanner machine to measure the power of intraocular lens that needs to be put in the eye during surgery.

Sometimes, it's not possible to do these measurements in clinic and it will be carried out when child is anaesthetised for surgery.

During the operation, which takes between 30 to 60 minutes, the doctor will remove the lens with the cataract in it from the eye. Then they may fit an artificial lens (called an intra-ocular lens or IOL) inside the eye (see figure 3 below). IOLs are usually fitted in children who are eighteen months and older. Younger children or those with very complicated eye conditions may be left without a lens (aphakic).

After surgery, a pad and a clear protective shield are usually placed over the treated eye. These are kept on for the night after surgery and can be removed the next morning. The shield will usually need to be worn overnight to protect the eye for one to two weeks.

If your child has cataracts in both eyes, each eye will require a separate operation, usually within a short time of each other. The two operations are not usually done together because that could increase the risk of infection.

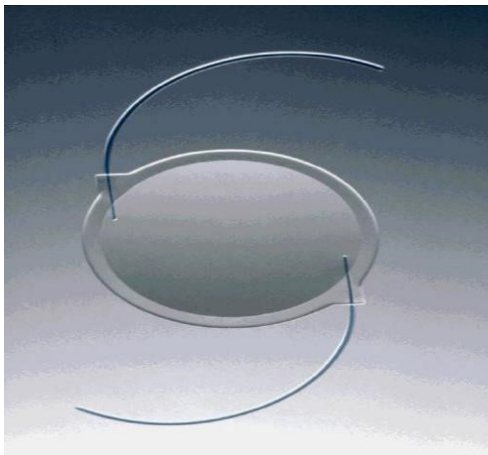


Figure 3: artificial lens (IOL)

Before and on the day of surgery

Your child will have a pre-operative assessment before surgery where you will be given information about the general anaesthetic process. Your child may need a further anaesthetic assessment before the operation goes ahead.

Surgery aftercare

As a parent/carer, your input into your child's care after surgery is extremely important. It can make the difference between the success or failure of the operation.

Following the operation, your child will need regular eye drops to prevent inflammation (redness and soreness) and infection. One of the drops used to prevent soreness also dilates (enlarges) the pupil.

If your child's eye is painful, you can give them pain relief such as paracetamol and/or ibuprofen. **Do not allow your child to rub their eye as this could loosen the stitches.** You may be given a plastic shield to put over your child's eye to protect it at night and this can be used in the daytime as well, if you wish.

The doctor will need to see your child frequently in our paediatric clinic after surgery – sometimes the day after surgery, then one, two and four weeks after surgery and regularly thereafter for at least a few years.

If no artificial lens was placed in the eye, a contact lens will be fitted about two weeks after the surgery or sometimes strong glasses are given instead.

If your child has an artificial lens put in, it will help them to see clearly in the distance, with or without the help of glasses. However, the artificial lens will not be able to change shape and focus at different distances like a natural lens can. Your child will therefore need bifocal or varifocal glasses to help them to see clearly at different distances. Please note that the prescription of the contact lenses or glasses may change frequently.

In addition, your child might need patching treatment (where your child wears a patch over the good eye to encourage the vision in the weaker eye to improve). This treatment is absolutely crucial and families must be committed to doing this otherwise the vision will remain very poor after the operation.

If no artificial lens was placed in the eye, another surgery may be done to put one in when your child is much older.

What are the risks of the operation?

A child's eyes are very delicate and as with all surgery, there are possible side effects. However, as long as your child is regularly checked by the ophthalmologist, it should be possible to quickly identify and address any problem.

Most side effects are mild, such as soreness, redness and bruising. Listed below are some of the more serious possible complications. Very serious complications are rare but have the potential for the sight or the eye to be permanently damaged.

- **Infection:** Infection inside the eye (called endophthalmitis) is very rare but can cause severe damage to the eye. Keeping the eye clean and using the antibiotic eye drops help to prevent it. If your child does get an infection, it will be treated with antibiotics.
- **Loose stitches:** Stitches may be used to close the opening in the eye through which the lens was removed. These may become loose and cause the eye to become sore and red. The stitches used are usually the type that dissolve with time and do not need to be removed.
- **Different eye appearance:** Surgery can cause the shape of your child's pupil to look a bit different afterwards. It may become oval or appear off centre, but this will usually not affect their vision.
- **Glaucoma:** This is where pressure inside the eye increases, which can gradually damage the nerve responsible for sight, causing vision loss. It may require treatment with drops, medicine or even surgery. The risk of glaucoma after childhood cataract surgery varies and is between 6%–58%, depending on certain risk factors. The risk is greatest if cataract surgery is done before your child is six weeks of age. Regular monitoring of children after cataract surgery will help detect a rise in pressure so that it can be treated / managed in the eye clinic.
- **Amblyopia (lazy eye):** This happens where visual development in one or both eyes has been held back. The usual way to treat amblyopia is to wear a patch over the stronger eye to encourage the weaker eye to work – 'patching'.

Amblyopia can develop in virtually all cases where cataract affects only one eye, whether the cataract is treated or not.

- **Strabismus (squint):** A squint or eye turn may develop, which will sometimes need treatment with glasses or surgery. A squint can develop in virtually all cases where cataract affects only one eye, whether the cataract is treated or not.
- **Capsule thickening:** The membrane behind the lens implant inside the eye (called the posterior capsule) can cloud over, and often happens in young people. Sometimes, to prevent this, a hole is made in the posterior capsule at the time of surgery. Your surgeon will decide whether this is necessary on the day of surgery, based on a case by case basis. Alternatively, a thickened capsule may need later treatment through laser or additional surgery.

Anaesthetic risks

Anaesthetics are usually safe, but there are small and potentially serious risks. Unpredictable reactions can occur in one in 10,000-20,000 cases. The risk of death is around one in 100,000 cases.

How successful is cataract surgery in children?

When young people do require surgery, it is not easy to predict its success. Factors that affect the success of surgery include how bad the cataract is and whether any complications happen after surgery. For most who need an operation, surgery will improve the vision but there will be some children who continue to have poor vision afterwards.

- Children with cataracts in both eyes who need surgery usually achieve an average vision of 6/18 (half way down the vision chart) after surgery.
- Children who have a cataract in only one eye and need surgery usually achieve on average 6/60 vision in the affected eye (the top letter of the chart only) after surgery.

It is important to note that the common cause of poor vision after surgery for a cataract in one eye is due to inadequate patching, which is why following the patching treatment is absolutely crucial.

Further information

- The NHS Website explains cataract surgery in detail, visit <https://www.nhs.uk/conditions/cataract-surgery/>
- Also, <https://www.nhs.uk/conditions/childhood-cataracts/treatment/>
- Royal National Institute of Blind People (RNIB). Find out more at www.rnib.org.uk or phone the RNIB Helpline on 0303 123 9999.

Contacting us

If your child has a minor eye problem, please seek advice from your GP, optician or pharmacist. If urgent, please attend Eye Casualty or call 111.

Eye Casualty (Reading):	Mon-Fri 8.30am to 5pm; Sat & Sun & bank holidays 8.30am-12.30pm; Closed Christmas Day and New Year's Day.
Eye Casualty: Prince Charles Eye Unit (Windsor):	Mon-Fri 8.30am to 5pm; Sat 8.30am-12.30pm; Closed Sun & bank holidays.
Dorrell Ward (Reading):	0118 322 7172 (24 hours a day)
Eye Day Unit (Reading):	0118 322 7123 (Mon-Fri 7am-6pm)

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

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