CONDITION

Congenital cataract

A congenital cataract is clouding of an eye's natural lens that is present at birth and can disrupt early vision development.

WHAT IT IS
Clouding of the eye's natural lens present at birth

BODY SYSTEM
Eyes and vision

MAIN SYMPTOMS
White pupil, poor visual attention, crossed eyes, reduced vision

WHAT CAUSES IT
Genetic changes, pregnancy infections, metabolic conditions, or unknown cause

HOW IT IS DIAGNOSED
Red reflex check and full dilated eye examination

MAIN TREATMENT
Cataract surgery, vision correction, and amblyopia therapy

CAN IT BE CURED?
Sometimes - surgery clears clouding, but vision may stay reduced

IS IT AN EMERGENCY?
Sometimes - a white pupil needs urgent assessment

LONG-TERM OUTLOOK
Often good with early care; severe cases may limit vision

Overview

A congenital cataract is a cloudy area in the eye's natural lens that is present at birth. The lens sits behind the coloured part of the eye and normally focuses light onto the retina, the light-sensitive tissue at the back of the eye.

A cataract can affect one eye or both eyes. It may cloud the entire lens or only a small part. Some are found during the newborn examination, while others become noticeable during the first months or years of childhood.

A small cataract away from the centre of the lens may have little effect on sight. A dense or central cataract can block clear images from reaching the brain. This matters because the visual system develops rapidly in infancy and early childhood.

If one eye sends a blurred image, the brain may start relying on the other eye. This can cause amblyopia, sometimes called "lazy eye." If both eyes are affected, overall visual development may be delayed. Early assessment and, when needed, treatment give the brain the best opportunity to develop useful vision.

Symptoms

A baby cannot explain that their vision is blurred. Congenital cataracts are therefore often found through eye screening or changes noticed by a parent or caregiver.

Possible signs include:

A white pupil is called leukocoria. Cataract is one possible cause, but other eye conditions can also cause it, including conditions that need urgent treatment. A white reflection in a single photograph can come from lighting or the camera angle. A repeated white pupil, especially in the same eye, should be assessed urgently.

Small cataracts may cause no obvious symptoms. This is why newborn red reflex checks and later childhood vision screening are important.

- A white, grey, or cloudy-looking pupil
- A missing, dull, or uneven red reflection in photographs
- Eyes that turn inward or outward, called strabismus
- Rapid, uncontrolled eye movements, called nystagmus
- Poor eye contact or difficulty following faces and objects
- Sensitivity to bright light
- Different visual behaviour between the two eyes

Causes and risk factors

The lens forms early in pregnancy. Congenital cataracts can develop when that process is altered, but in many children no specific cause is found.

Genetic changes are an important cause, particularly when cataracts affect both eyes. A child may inherit a genetic change from a parent, or the change may occur for the first time in the child. Some inherited cataracts occur by themselves, while others are part of a condition affecting other areas of the body.

Less commonly, congenital cataracts are linked to:

A cataract affecting only one eye is often linked to a local difference in how that eye developed. Persistent fetal vasculature is one example. In this condition, blood vessels that are normally present before birth do not disappear fully. Often, however, no clear cause is identified.

A family history of childhood cataracts increases the chance of an inherited cause. If a parent had a congenital cataract, this information can help guide the child's examination and any genetic assessment.

Congenital cataracts are not caused by reading, screen use, ordinary childhood activities, or something a parent did after the child was born.

- Infections during pregnancy, especially rubella
- Metabolic conditions that affect how the body processes certain substances
- Chromosomal or genetic syndromes
- Abnormal development of other structures inside the eye

Diagnosis

Newborns are usually checked for a red reflex. During this test, a healthcare professional shines a light into each eye. A healthy reflection is usually red or orange. A missing, white, or uneven reflection can mean that something is blocking light inside the eye.

A child with an abnormal red reflex or suspected cataract needs an examination by an ophthalmologist, a doctor who specialises in eyes. Eye drops are used to widen the pupils. The doctor then examines the lens and the rest of the eye.

The examination looks at:

If the cataract prevents a clear view of the back of the eye, an ultrasound scan may be used to examine structures behind the lens.

The doctor will also assess how the child uses their vision. Depending on age, this may involve watching how the baby follows a light or face, using picture-based tests, or reading an eye chart.

When both eyes are affected, or when there are other health or developmental concerns, further assessment may be recommended. This can include a physical examination, targeted blood or urine tests, infection testing, or genetic testing. Not every child needs every test.

- Whether one or both eyes are affected
- The cataract's size, density, and position

- How much it blocks the visual pathway
- Whether the eyes are aligned and moving normally
- Whether the retina, optic nerve, and other eye structures appear healthy

Treatment and management

Treatment is based on how much the cataract interferes with vision, not simply whether a cloudy area exists.

A small cataract that does not block the centre of vision may be monitored with regular eye examinations. Glasses may be needed if the child is long-sighted, short-sighted, or has astigmatism, which means the eye does not focus light evenly.

A dense or central cataract that significantly blocks vision usually needs surgery. Timing is important because prolonged blur can interfere with visual development. The ophthalmology team balances this against the child's age, eye development, anaesthetic needs, and the risks of surgery.

During surgery, the cloudy natural lens is removed. The child then needs another way to focus light. Options include:

The best option is not the same for every child. In very young babies, an artificial lens may not be inserted during the first operation because the eye is still growing rapidly. Some children receive one later.

Removing the cataract does not complete treatment. The brain must learn to use the clearer image. If one eye is weaker, patching the stronger eye may be recommended for set periods. This encourages the brain to use the treated eye and helps manage amblyopia. Some children use eye drops instead of patching in selected situations.

Contact lenses and glasses need frequent adjustment as the eye grows. Families are shown how to handle lenses safely and how to use prescribed eye drops after surgery. Follow-up visits are essential even when the eye looks normal.

- A contact lens
- Glasses, particularly when both eyes are affected
- An artificial lens placed inside the eye, called an intraocular lens

Complications

A congenital cataract can lead to lasting reduced vision if it blocks sight during an important stage of visual development. This can happen even after successful surgery, especially if the cataract was dense, affected one eye, or was treated after vision had already been suppressed.

Possible effects of the cataract include amblyopia, strabismus, nystagmus, and reduced depth perception. Depth perception relies partly on the two eyes working together.

Surgery can also have complications. These may include inflammation, infection, changes in eye pressure, or clouding of tissue behind the pupil. This later clouding is sometimes called visual axis opacification. It is not the original cataract growing back, but it may require another procedure.

Glaucoma is an important long-term risk after infant cataract surgery. Glaucoma damages the optic nerve, often in connection with raised pressure inside the eye. It may develop months or years after surgery, so lifelong eye-pressure monitoring may be advised.

Other possible problems include an artificial lens moving out of position, changes in focusing needs, or, rarely, retinal detachment. Your child's ophthalmology team can explain which risks are most relevant to their eyes and treatment.

Prevention

Most congenital cataracts cannot be prevented. This is especially true when the cause is inherited, related to early eye development, or unknown.

Rubella infection during pregnancy can cause congenital cataracts and other serious health problems. Vaccination before pregnancy helps prevent congenital rubella. The measles, mumps, and rubella vaccine is not given during pregnancy, so vaccination status is best reviewed before becoming pregnant.

Good pregnancy care can help identify and manage infections or health conditions, but it cannot prevent every case. Parents should not assume that a congenital cataract resulted from something they did or failed to do.

Newborn eye checks do not prevent cataracts, but they can help find visually important cataracts early. Attending recommended childhood vision screening can also identify cataracts that were not obvious at birth.

Living with it and what to expect

The outlook is influenced by whether one or both eyes are affected, how much light the cataract blocks, when treatment begins, and whether the child has other eye or health conditions.

Many children develop useful vision with early treatment and consistent follow-up. Some achieve vision close to that of other children, while others continue to have reduced sight in the affected eye. When only one eye has a dense cataract, developing equal vision in both eyes can be particularly difficult because the brain naturally favours the clearer eye.

Treatment often continues for years. Glasses or contact lens prescriptions change as the eyes grow. Patching may be adjusted according to vision test results. Children who have had surgery require long-term checks for glaucoma and other delayed complications.

Contact lenses, glasses, patching, and repeated appointments can be demanding. If patching is prescribed, resistance is common and does not mean anyone has failed. The eye team can suggest practical routines and check whether the patch or lens is causing skin or comfort problems.

Children with reduced vision may benefit from support at nursery or school. This might include sitting closer to teaching materials, larger print, better lighting, or help from a visual impairment service. Many children with a treated cataract take part in ordinary play, education, and physical activities. Eye protection may be recommended for sports, especially when one eye has much stronger vision than the other.

The cataract itself does not spread from one person to another. Once the natural lens has been removed, it does not grow back. However, focusing needs and the health of the operated eye continue to change, which is why follow-up remains important into adulthood.

When to get medical help

Arrange an urgent assessment if you notice a white or grey pupil, a repeated white reflection in photographs, or a missing red reflection in one eye. These signs do not prove that a child has a cataract, but they need prompt examination because several eye conditions can cause them.

Prompt medical advice is also appropriate if a baby:

After cataract surgery, follow the eye team's instructions about urgent contact. Seek urgent care for increasing redness, swelling, discharge, apparent eye pain, persistent vomiting, a sudden change in visual behaviour, or an eye injury. Severe swelling, marked pain, or sudden loss of vision requires emergency assessment.

Routine follow-up is different from urgent care. Keep planned appointments for vision testing, glasses or contact lens checks, patching review, and eye-pressure measurement, even when

there are no new symptoms.

- Does not begin following faces or objects as expected
- Develops a new inward or outward eye turn
- Has rapid, repetitive eye movements
- Seems to use one eye more than the other
- Develops a new cloudy appearance inside an eye

Common questions

Can a congenital cataract go away on its own?

A true cataract does not dissolve or clear with eye exercises, glasses, or medicine. A small cataract may remain stable and never need surgery, but it still needs monitoring to make sure it is not affecting vision.

Does every baby with a congenital cataract need surgery?

No. Surgery is generally considered when the cataract blocks the visual pathway enough to threaten visual development. Small or off-centre cataracts may be managed with observation, glasses, or amblyopia treatment.

Will my child have normal vision after surgery?

Surgery clears the visual pathway, but it cannot guarantee normal vision. The result is affected by how early the cataract interfered with sight, when it was treated, whether one or both eyes are involved, and how the brain responds to treatment.

Is congenital cataract inherited?

It can be. Inherited causes are more common when both eyes are affected or when other relatives had childhood cataracts. Many children have no family history. Genetic assessment may help explain the cause and the chance of cataracts occurring in other family members.

Can the cataract grow back after surgery?

The removed natural lens does not grow back. Tissue behind the pupil can become cloudy later, creating blurred vision again. This is a known complication and can often be treated with another procedure.

Why does my child need to wear a patch after surgery?

A patch covers the stronger eye so the brain has to use the weaker eye. This treats amblyopia. Patching does not remove the cataract, and the schedule needs to be reviewed as the child's vision develops.

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