

henshaws

beyond expectations

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• common childhood eye conditions

There are a huge variety of different eye conditions, and each one affects vision and individuals in different ways. We've listed information on some of the more common visual impairments in children in this ebook.

Albinism is a group of genetic disorders in which the affected individual has reduced, or absent pigmentation in the eyes, skin and hair. Children with albinism find their greatest problems arise on sunny days and in brightly lit environments (photophobia). Virtually everyone with albinism has nystagmus (fast 'to and fro' movements of the eye).

There are two main types of albinism:

Ocular Albinism mainly affects the eyes of the child, while skin and hair may only be a little lighter than other family members.

Oculo-Cutaneous Albinism affects the eyes, hair and skin to the extent that the child may have a very fair, almost white appearance.

Children with albinism have very short sight that cannot be fully corrected by wearing glasses. Find out more at www.albinism.org.uk

Amblyopia – this is sometimes called a 'lazy' eye. It means that an eye has a decrease in vision which cannot be corrected with spectacles. It is usually caused by an eye turn (strabismus/ squint), so it's more likely that one eye is affected. It is important that a young child's squint is treated as quickly as possible while there is still time to improve the development of vision.

Aniridia is a rare congenital condition causing incomplete formation of the iris and loss of vision, usually affecting both eyes. Although not entirely absent, all that remains of the iris (the coloured part of the eye) is a thick collar of tissue around its outer edge. The muscles that open and close the pupil are entirely missing. The appearance of a "black iris" is the result of the really enormous pupil. Children with aniridia may also find that they are extremely sensitive to light and may develop fast 'to and fro' movements of the eye (nystagmus).



Anophthalmia is a rare condition where a baby is born without one or both eyes. Whilst it is not possible to restore sight to a baby with anophthalmia, artificial eyes are used to help with cosmetic appearance.

If a baby is born without an eye, the socket does not receive the correct signals to grow. In order to fit an artificial eye, it is important that the socket continues to develop. For this reason, it is important that parents of a baby born with this condition receive information and advice from the medical profession as soon as possible. Find out more at <https://macs.org.uk/>

Astigmatism is caused by an irregularly shaped cornea, causing the vision to become blurred. The cornea, instead of being shaped like a sphere, is 'cone shaped' and reduces the cornea's ability to focus light. The condition can cause difficulties with seeing fine detail and can often be corrected by contact lenses with a different curvature and sometimes with refractive surgery.

Buphthalmos (Congenital Glaucoma) is a condition in which the clear fluid that is normally secreted into the eye, fails to drain back into the bloodstream. This leads to a rise in pressure in the eye and subsequent damage to the optic nerve. If the raised pressure is present before the age of 3, the baby's eye will stretch, causing the vision to be affected, the eye to become uncomfortable and sensitive to light (**photophobia**).

Cataract (Congenital) occurs when part of the lens becomes cloudy, preventing light from reaching the retina and causing broken and unclear images. Treatment may include an operation to remove the cataract and correction of the affected eye with glasses or contact lenses.

Children may develop extreme sensitivity to light (**photophobia**).

Coloboma is a gap in part of the structures of the eye. This gap can occur in a range of areas within the eye and can cause quite mild or more severe visual problems. The coloboma is usually noticeable by the 'keyhole' shape of the pupil and can affect the child's visual acuity and cause sensitivity to light (**photophobia**).



Cerebral vision impairment – usually results from damage to parts of the area of the brain that processes vision. Some children have specific processing and perception problems. It is very common in children with complex additional needs.

Colour confusion – not being able to distinguish certain colours from each other, sometimes called ‘colour blindness’. Around 8% of boys have colour confusion, typically with red and green.

Conjunctivitis – inflammation of the conjunctiva.

Cortical Visual Impairment (CVI) is also sometimes referred to as Neurological Visual Impairment (CVI) or Cortical Blindness. CVI occurs when the part of the brain that is responsible for seeing is damaged. This means that the eye itself is working, but the brain is unable to process the information properly.

CVI affects vision in a variety of ways and the degree of vision loss may be mild or severe, varying greatly from day to day. It is not possible to predict what a young child’s vision will be like as they mature.

Hypermetropia or hyperopia is long sightedness and a condition in which the child has difficulties focussing on objects near to them. This can be typically corrected by wearing glasses or contact lenses.

Keratitis – an infection or inflammation of the cornea.
Keratoconus – thinning of the cornea causing it to become cone shaped, resulting in distorted vision; more common in older children and young adults.

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Lebers Congenital Amaurosis (LCA) – this is a rare inherited condition caused by defects in one of a number of different genes. LCA causes the specialised light-sensing photoreceptor cells at the back of the eye to stop working properly which causes vision loss.

For more information visit <https://www.fightingblindness.org/>





Microphthalmia is a condition where one or both eyes are abnormally small. It can affect vision in different ways and is dependant on how much smaller the eye is. Children with milder forms of microphthalmia tend to be long sighted and may benefit from wearing glasses. Some children may develop fast ‘to and fro’ movements of the eye (nystagmus).

Find out more at
<https://macs.org.uk/>

Myopia is a condition in which the child has difficulty focussing on objects in the distance. Myopia can vary in its severity and ‘high degree myopia’ may result in other problems due to changes on the retina. Typically this can be corrected with glasses or contact lenses.

Nystagmus is an uncontrolled movement of the eyeball causing fast ‘to and fro’ movements of the eye that can be vertical, horizontal or even circular movements. It is sometimes known as ‘Wobbly Eyes.’

Central vision is often reduced because it is not possible to provide a stable image on the retina. It may be present at birth or, less commonly, may result from disease or injury. In some cases, the condition can reduce or interfere with vision. For example, children with nystagmus may frequently lose their place when reading.

Find out more by visiting
<https://nystagmusnetwork.org/>

Optic atrophy is a group of diseases involving damage to the optic nerve, which transmits signals from the retina to the brain. It may also result from inflammation of the optic nerve or from glaucoma when the pressure inside the eye remains too high. This can result in the child having blurred vision, night blindness and poor colour vision.

Optic Nerve Hypoplasia is a congenital underdevelopment of one or both optic nerves for which there is no known cause. The effects of this condition can vary significantly ranging from normal visual acuity to no light perception at all. A high percentage of children with this condition, also have nystagmus and photophobia.



Retinal Detachment – The covering of light sensitive patches at the back of the eye forms a thin film known as the retina. If this film peels off from the back of the eye then a retinal detachment is said to have occurred. There may be a shadow or curtain appearing in the visual field and sometimes this is accompanied by stabbing pains. These symptoms require immediate attention; a retinal detachment is a medical emergency and must be promptly treated.

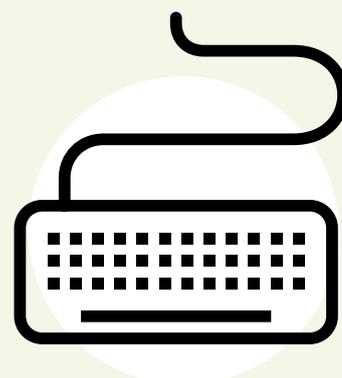
Retinopathy of Prematurity (ROP) occurs when blood vessels in a baby's eye develops abnormally. It only occurs in premature babies and is most common in babies who are born more than 12 weeks early. Currently, treatment relies on the destruction of the areas of the retina that are without blood vessels. This becomes necessary only if the disease has reached a certain, well defined stage, as the milder forms often regress spontaneously. The result of 'ROP' may vary between a slight loss of vision or a total retinal detachment causing total blindness.

Retinoblastoma is a malignant tumour on the retina, generally affecting children under the age of 6yrs and highly curable if treated early. It may be present in one or both eyes.

The first sign of retinoblastoma is often a white pupil that does not reflect the light. This means that the affected eye may look white in a photograph.

Once retinoblastoma has been diagnosed, it is important that professionals act quickly to treat the cancer and try to save the sight in the eye.

Retinitis Pigmentosa (RP) is the name given to a group of hereditary eye disorders. These disorders affect the retina, (the light-sensitive tissue lining the back of the eye) in which the first stages of seeing take place. Visual loss may be slow or rapid. Often the first symptom of RP is night blindness (difficulty seeing in the dark), followed by a narrowing of peripheral vision that leads to tunnel vision. For more information visit <https://retinuk.org.uk/>



Rod/cone or Cone/rod dystrophy are conditions that affect the retina causing deterioration of the cones/rods and can lead to varying degrees of sight loss.

If vision is blurred around the edges and especially poor in the twilight and dark, the problem will be with the rod photoreceptors.

If the central vision is blurred and most colours are faded, the problem will be with the cone photoreceptors.

Many children with Rod-Cone photoreceptors can have very poor sight and unfortunately are able to see very little. They may also develop fast 'to and fro' movements of the eye (nystagmus).

Strabismus (squint) – sometimes called an eye 'turn', where both eyes point in different directions due to a muscle imbalance or long sight. A very common condition – it is estimated that around 5% of children will have some kind of strabismus. Treatment may include prescribing glasses or wearing an eye patch (on the good eye). Find out more at <https://www.strabismus.org/>

Top tip

Check out our videos discussing different eye conditions in our Knowledge Village www.henshaws.org.uk/knowledge-village



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 www.henshaws.org.uk

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