

GENERAL INFORMATION

# CHILDREN'S EYE HEALTH



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# WHY SHOULD I HAVE MY CHILD'S EYES CHECKED?

Early diagnosis and treatment is vital for many paediatric eye conditions. Any eye condition raised during routine health checks, such as those by a maternal and child health nurse or GP, should be taken seriously and a prompt eye examination carried out.

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**ALL CHILDREN SHOULD HAVE THEIR EYES TESTED AT PRE-SCHOOL AGE. THIS CAN BE DONE BY A PAEDIATRIC OPTOMETRIST OR OPHTHALMOLOGIST.**





## Eye health issues for children include:

**Refractive error** such as short-sightedness (myopia), long-sightedness (hyperopia) or astigmatism. In these conditions, the eye is unable to refract (bend) light so that it focuses on the light-sensitive tissue at the back of the eye (retina), meaning that images are blurry or distorted. A thorough eye examination is required to diagnose refractive errors.

**Conjunctivitis** caused by bacterial or viral infection, allergy or underlying systemic illness. Neonatal conjunctivitis can occur in the first month of life and is serious because it is potentially vision-threatening, so a paediatric ophthalmologist should be seen urgently.

**Lazy eye (amblyopia)** occurs when the visual development in one eye is not normal and the brain starts to ignore the images from this eye, causing vision to deteriorate. Lazy eye usually involves one eye, but may affect the vision in both eyes. This condition should be managed by a trained optometrist or ophthalmologist, and often requires ongoing treatment over months to years with the aim of improving the child's vision.

**Crossed eyes (strabismus)** is also known as having turned eyes, with one or both eyes turning inwards, outwards, upwards or downwards. This may happen all the time or just occasionally. A thorough examination is required to exclude serious disease, prevent the development of lazy eye and correct the crossed eyes.

**Congenital droopy eyelid (ptosis)** affects the upper eyelid and occurs when the muscles responsible for raising the eyelid are weak or the nerves that control those muscles are damaged. The condition can be serious enough to interfere with vision. If severe, a prompt examination to diagnose the underlying cause is required, as well as treatment.

**Childhood (congenital) cataracts** are present when a baby is born but often not discovered until the first few years of life. Early diagnosis is critical to determine if the child's vision is at risk and the best course of management. Surgery is not required in all cases, but is considered for children whose visual development will be affected.

**Childhood (congenital) glaucoma** is present at birth and can often be very difficult to diagnose as signs and symptoms can be very subtle. If in doubt, an examination should be carried out. Any child with a family history of congenital glaucoma should be checked.

**Eye injuries and foreign bodies** occur commonly in children. Even minor trauma (e.g. a corneal abrasion or scratch on the eyelid) can potentially result in significant vision problems, so a prompt eye examination is recommended.

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**ALWAYS SEEK PROMPT MEDICAL ATTENTION FOR YOUR CHILD'S EYE CONCERNS TO REDUCE THE RISK OF SERIOUS COMPLICATIONS.**





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# WHAT ARE THE SYMPTOMS OF EYE CONDITIONS IN CHILDREN?

## Some of the common symptoms associated with childhood eye conditions include:

- **Foreign body** – irritation, redness, watering, constant rubbing of the affected eye
- **Conjunctivitis** – discharge (white, greenish, clear) and swelling of eyelid and conjunctival membranes (white tissue of the eye)
- **Refractive error** – squinting, sits very close to computer screen, holds objects close to the face to see (e.g. books, mobile phone or tablet)
- **Lazy eye (amblyopia)** – difficulty judging depth, unusually clumsy, falls frequently
- **Crossed eyes (strabismus)** – one or both eyes are turned inwards/outwards/upwards/downwards, may have an abnormal head/chin/face posture
- **Ptosis** – droopy eyelid, may have a chin-up posture
- **Cataracts** – similar symptoms to lazy eye, very sensitive to light, reduced field of vision for the affected eye so child appears to ignore objects on one side
- **Glaucoma** – extremely sensitive to light, eye ‘waters’ constantly, often one eye more affected than the other, people may compliment child on having ‘big and beautiful eyes’.

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# WHAT HAPPENS DURING A CHILD'S EYE EXAM?

**Your child should have a comprehensive eye examination with an optometrist from around 3 years of age, unless an eye problem is noticed prior to this.**

If there are any concerns, your child may be referred to an ophthalmologist for further investigation and/or management. Early detection of any eye problem will ensure prompt treatment and help to minimise any vision loss or visual dysfunction.

Tests that may be performed during a paediatric ophthalmology exam include:

**Visual acuity test** to determine how well a child can see. A chart with pictures, symbols, letters and/or numbers is used for testing children.

**Eye muscle test** to check the function of the muscles responsible for moving the eye. Your child will be asked to look at a pen or another object without moving their head, while the doctor moves it in various directions.

**Cover testing and prism measurements** to help determine the presence of misalignment between the eyes. If a turned eye is present, this will be measured using a non-invasive prism bar test.

**Refraction test** to see whether or not your child needs corrective lenses. It also helps determine the lens prescription if glasses are required.

*In order to carry out the next part of the testing, your child's pupils are dilated with eye drops.*

**Retinal examination** allows your ophthalmologist to evaluate the back of your child's eye, including the retina, macula and the optic nerve.

**Fluorescein eye stain** to accurately diagnose a corneal abrasion or ulcer. This test uses fluorescent orange dye and a blue light to detect damage to the cornea.

Additional tests that may be required as part of the examination (reserved for children aged 6 years and above) include visual field testing, OCT and corneal topography.



# HOW ARE CHILDREN'S EYE CONDITIONS TREATED?

It's important to remember that some eye conditions such as refractive errors, lazy eye (amblyopia), congenital cataracts and congenital glaucoma are life-long conditions. Ongoing review appointments are required, especially in the first few months after diagnosis and as the child gets older (until high school age) and their visual needs change.

## REFRACTIVE ERROR

If your child has a refractive error (e.g. short-sightedness, astigmatism or long-sightedness), he/she will be prescribed corrective glasses. Contact lenses are an option for older children (e.g. if their glasses interfere with sports).



## **LAZY EYE (AMBLYOPIA)**

Children with a lazy eye require therapy and exercises to strengthen the weaker eye, and treatment may include using an eye patch over their normal (good) eye or atropine eye drops. Treatment is usually overseen by an orthoptist. The type of treatment will depend on the degree of amblyopia, the age of the child and the duration of treatment.

Your child's vision will be tested to determine if he or she needs to wear glasses as well. Regular checks are required to monitor this condition.

## **CROSSED EYES (STRABISMUS)**

Misalignment of the eyes requires intervention as early as possible to prevent irreversible vision loss later in life.

Treatment may include glasses, lazy eye treatment or surgery on the eye muscles under general anaesthesia.

## **DROOPY EYELIDS**

Treatment for droopy eyelids depends on the severity of the condition, but may include glasses, lazy eye patching treatment and/or surgery on the eyelids (one or both) under general anaesthesia.

## **CONGENITAL CATARACTS**

Most children diagnosed with childhood cataracts are able to live a full and normal life. The aim of management in this condition is to maximise the child's vision. This may be achieved in the initial stages with glasses, but surgery may be needed in the following years. Infants and children under the age of 5 years are at risk of severe visual loss, so surgery may be considered earlier for these patients.





## CONGENITAL GLAUCOMA

Initially, eye drops or oral medication may be prescribed to lower the pressure inside the eye. However, surgery is often the mainstay of treatment for this disease. There are several types of surgeries that can be considered and your ophthalmologist will discuss these with you.

## INJURIES AND TRAUMA

A child with an eye injury or eye trauma should be taken to your GP, ophthalmologist or hospital emergency department immediately. If you are coming to one of our clinics with an emergency, please ring ahead and notify us so that we can be prepared for your arrival and institute emergency procedures where necessary.

## CONJUNCTIVITIS

Your GP can determine if the conjunctivitis is viral or bacterial. Most cases, even if bacterial, are mild and resolve by themselves. Generally, you will only be referred to an ophthalmologist if there are complications, or if the condition does not improve or worsens.

- **Bacterial conjunctivitis:** Antibiotic eye drops or ointment may be prescribed. Even without medication, the infection should clear up after several days.
- **Viral conjunctivitis:** Unfortunately, there is no treatment for this. The virus needs to run its course, which may last for 2 or 3 weeks. It's important to have your child's eyes checked to ensure that healing is occurring.



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## FAQs

### **When should I have my child's eyes tested?**

If you notice any issues with your child's eyes or eyesight, you should take them for an eye check. Any concerns about an infant's vision should be reviewed by an ophthalmologist.

Even if your child's vision seems fine, it is recommended that children have a full eye examination with an optometrist at 3 years of age, and then every 2 years as they progress through primary and secondary school.

### **Can too much screen time affect my child's eyes?**

Screen time includes time watching or interacting with any electronic device – e.g. computers, TVs, mobile phones, tablets and video game consoles. Set acceptable limits for screen time and ensure children take short breaks for at least 5 to 10 minutes every hour. Make sure the room is well lit and reduce glare and reflection from lights or windows to prevent digital eyestrain.

Encourage your child to spend time outdoors every day, even during winter. Australian research shows increasing exposure to outdoor light is a key factor in reducing the risk of becoming short-sighted.



## **What are the signs that my child may have a vision problem?**

They might tilt their head when looking at something, or frequently blink or rub their eyes. You might find they have difficulty reading or hold the book or screen close to their eyes. Other signs include squinting or having difficulty seeing an object or someone in the distance. They might also complain of headaches or blurred vision.

## **How can I help protect my child's eyes?**

Make sure children wear good-quality, UV-rated, wraparound sunglasses and broad-brimmed hats when they are outside to protect their eyes from excessive UV exposure. While this is particularly relevant during sunny weather and other bright, glary conditions (e.g. at the snow), UV exposure can still be high during overcast days.

Provide your child with a healthy diet containing lots of fruit, vegetables and fish.

To reduce the risk of complications, always seek prompt medical attention if your child suffers any eye injury or trauma.



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## OUR PAEDIATRIC EYE CLINICS

For more information or to find a Vision Eye Institute clinic that treats children's eye conditions, visit:

[visioneyeinstitute.com.au/services/childrens-eye-health/](http://visioneyeinstitute.com.au/services/childrens-eye-health/)

This information is general in nature. All medical and surgical procedures have potential benefits and risks. Consult your ophthalmologist for specific medical advice.



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