

# Squints

KiDS  
EYES

Busamed Modderfontein Private Hospital Orthopaedic  
& Oncology Centre  
4 Cransley Crescent, Long Lake, Sandton, 2090  
Tel: 011 458 2027/8 or 0724674639



Squints occur when the eyes do not **work as a team**. One eye may **look forward while the other looks in a different direction** (that eye may turn inwards, outwards, upwards, or even downwards, while the other eye looks forward).

Medically the term for this is called "**Strabismus**" (being cross-eyed) and is actually a fairly common occurrence affecting 2 to 3% of the population. Usually it affects younger children between the ages of **18 months and 4 years of age**.



## Risk factors for developing a squint

- Positive family history (i.e. if a parent has had a squint or needed glasses from an early age, there may be an increased chance that their child may also be affected)
- Prematurity and low birth weight
- Cerebral palsy and Down syndrome
- Tumours (in rare cases)



## Did you know?

Certain squints can be treated with glasses.



## Causes

- The exact cause of most childhood squints has never been discovered - this is termed **idiopathic**
- This, however, does not mean that it cannot be corrected

### Certain conditions can result in a squint:

- **Refractive errors** - this is due to the eye's inability to focus correctly on an object. Conditions such as short sightedness, far sightedness, and astigmatism may cause one or both eyes to **turn inwards** (esotropia) or **outwards** (exotropia).
- Any condition that causes one or both eyes to have **poor vision**. Conditions such as **Congenital cataracts** or **damage** to the cornea, optic nerve or retina can adversely affect vision and therefore, the affected eye can no longer look forward, resulting in a squint
- Some squints only occur when the eyes are looking in **certain directions**. These are **eye movement disorders**, for example **Brown's syndrome** or **Duane's retraction syndrome**.

# Squints



Busamed Modderfontein Private Hospital Orthopaedic  
& Oncology Centre  
4 Cransley Crescent, Long Lake, Sandton, 2090  
Tel: 011 458 2027/8 or 0724674639

## When should a squint concern you?

### If in doubt, consult!

When your child is born their eyes and brains are still learning to work with one another. You may notice your baby's eyes appear to squint or move separately from each other now and again during those first few months of life. **This is absolutely normal.** It usually should get better by around **two months** and should be completely gone by the time they reach **four months**.



Any squint remaining after this time, must be fully assessed by an **ophthalmic specialist**.

## Different types of squints

Squints can be classified according to when they occur and or the direction in which the eye(s) deviate.

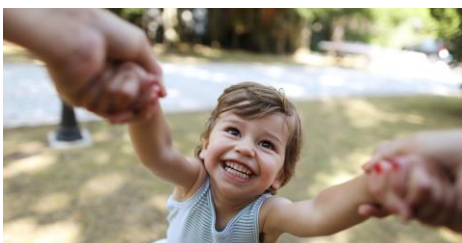
When they occur	The direction in which the eye(s) deviates
<ul style="list-style-type: none"><li>• Present all the time (constant) or</li><li>• Only occur occasionally, i.e. when a child is tired or ill (intermittent)</li></ul>	<ul style="list-style-type: none"><li>• Exotropic: The eye(s) is turned outwards</li><li>• Esotropic: The eye(s) is turned inwards</li></ul>
	<ul style="list-style-type: none"><li>• Hypertropic: The eye deviates upwards</li><li>• Hypotropic: The eye deviates downwards</li></ul>

## How is your child's vision affected by a squint? Can it affect their development?

### It can affect your child's vision and development in the following ways

There are two important effects that squints can have on your child's vision. The first is the development of a condition called amblyopia and the second is the loss of the ability to see in 3 dimensions and to perceive depth. Eyes that both look in the same direction see the same object. Images of this object are sent to the brain where it can then interpret what the object is. When a squint is present, it means that the eyes are looking in different directions and therefore seeing different objects. When the images of these different objects are sent to the brain, the brain becomes confused because it can't merge two different pictures into one. As the child's brain is rapidly developing, it is able to resolve this confusion by ignoring the image sent from the squint eye. It literally "switches off" or suppress the signals from that eye. If the squint eye is not treated quickly enough, the messages from this eye may become permanently switched off. This is known as amblyopia.

The second visual disturbance is the loss of 3-dimensional vision and depth perception. In our skulls our eyes are situated next to each other and not on top of one another. This means that the images each eye sees are not exactly the same. The difference between these two images is minute, so the brain is able to easily merge the two images to create one clear picture. The advantage of this is that this, "blending" of the images, enables us to see in 3 dimensions. If a squint is present, the difference between the two images sent to the brain is too great so the brain cannot create one clear picture. This means that if a squint is not treated timeously, the child will not develop 3D vision. The development of depth perception also requires the two eyes to work as a team. If this does not occur, it may limit the career options open to the child later on in life.



### Did you know?

Prematurity and a low birth weight are risk factors for developing a squint



# Squints

KiDS  
EYES

Busamed Modderfontein Private Hospital Orthopaedic  
& Oncology Centre  
4 Cransley Crescent, Long Lake, Sandton, 2090  
Tel: 011 458 2027/8 or 0724674639



## How do you notice a squint?

Large squints are easily detected by family, friends, and teachers. But more subtle squints are harder to notice. This is because children can easily adapt to using one eye, making it difficult or even impossible for those around them to realise that they are experiencing problems with their vision.

Therefore, having a child's vision tested regularly becomes imperative. This is to ensure that any "hidden" eye problems can be diagnosed and treated promptly.

These subtle squints require a full ocular examination by an eye specialist



## Managing a squint

Once a full ocular examination has been done by an eye specialist, a diagnosis can then be made, and a treatment pathway chosen which will be specific to the needs of the patient. A team of specialists, such as the ophthalmic surgeon, an orthoptist and an optometrist, all help in the treatment of a child's squint. This ensures the best results. There is a range of treatment options available, such as:

- Glasses
- Occlusion therapy
- Eye exercises
- Surgery
- Botox injections into the muscles of the eyes

## Long-term effects

The outcome in the majority of children is successful when diagnosed and treated early. Unfortunately, in late diagnosis, the child may suffer permanent vision loss with the associated loss of 3D and depth perception.

The loss of vision in one eye may affect future career choices, such as becoming a pilot or holding a heavy-duty vehicle licence. The loss of depth perception will affect actions such as navigating steps or catching a ball.

It is always in your child's best interest to have their vision assessed regularly, to ensure that any hidden condition can be treated promptly - giving your child the best outlook for the future.

## References:

- Oxford handbook of Ophthalmology Second Edition. By A.K.O. Denniston and P.I. Murray. Pages 654 - 671
- Ophthalmology Secrets Third Edition by J.F. Vander and J.A. Gault Pages 231 - 250
- Rushabeyehospital.com

## Did you know?

A lazy eye is the weaker one of the two eyes. Due to its weakness, it can stop looking in the same direction as the stronger eye.

