

## SQUINT / STRABISMUS

### What is a squint?

Squint or strabismus occurs when one eye is straight and the other eye turns away from the straight position.

A horizontal squint is convergent when the eye turns inwards (esotropia) or divergent when the eye turns outwards (exotropia). A vertical squint is when one eye turns up or down.

Squints can occur at any age. They can be constant or intermittent especially if the child is tired or unwell.

Rarely squints can indicate neurological disease and tumours of the brain and eye.



**All squints must be referred to an ophthalmologist for assessment. No child is too young to be examined.**

### How do the eyes work together?



With normal vision both eyes aim at the same spot. The brain then fuses the two pictures into a single 3-dimensional image. This 3-dimensional image gives us depth perception. When one eye turns, 2 different pictures are sent to the brain. In a young child, the brain suppresses the image from the misaligned eye and the child loses depth perception. Adults who develop squints have double vision because the brain cannot ignore vision from the misaligned eye.

### What causes strabismus?

The exact cause is not fully understood. All of the muscles of each eye must be balanced and working correctly in order for the eyes to align. The brain controls the eye muscles. Squints are especially common among children with cerebral palsy, Downs syndrome, hydrocephalus and brain tumours. A **cataract** or eye injury that affects vision can also cause strabismus.

### What are the symptoms?

Babies and young children cannot say if they can't see well. Older children may complain of double-vision (diplopia). Some children adopt an abnormal head posture; others tend to close one eye in the sun.

### How is it diagnosed?

It is recommended that all children have their eyes checked before their 4th birthday. Some babies seem to have a squint as they have a wide flat nose and a fold of skin at the inner eyelid; this is called pseudostrabismus. It is important to ask a doctor to differentiate between true and pseudostrabismus.



### How is it treated?

Treatment aims to

- preserve vision
- straighten the eyes
- restore binocular (two-eyed) vision

Not all children who have squints require surgery. First the amblyopia or lazy eye is treated. The child may require spectacles.

#### Surgery

The eyeball is never removed from the socket. The ophthalmologist makes a small incision in the tissue covering the eye to reach the eye muscles. Some of the muscles are re-positioned during surgery. A general anaesthetic is required for children although local anaesthesia is an option for adults.

Recovery time is rapid, and patients are usually able to resume normal activities within a few days.

After surgery, glasses or prisms may be useful. In many instances, further surgery is needed at a later stage.

Early surgery offers the best chances for the eyes to be co-ordinated together. As with any surgery, there are risks. These include infection, bleeding and excessive scarring.

The surgery is usually safe but does need to be performed together with glasses and **amblyopia** therapy.

#### Injections

Botox is an alternative to eye muscle surgery for some individuals. Although the effects of the drug wear off after several weeks, the misalignment may be permanently corrected.

