When to seek surgery?

The timing of the surgery would depend on the type of squint, age of the child and the presence of amblyopia or lazy eye. The advantage of operating early is restoration of good binocularity/3-D vision.

Some surgeons prefer to operate at a later age when consistent measurements are obtained.

The decision of timing of surgery is best taken by the surgeon. Adults may undergo squint surgery at any age. Some of them may regain/retain good binocularity when treated early especially if squint is intermittent in nature.

Pre-surgery Appearance



Post-surgery Appearance



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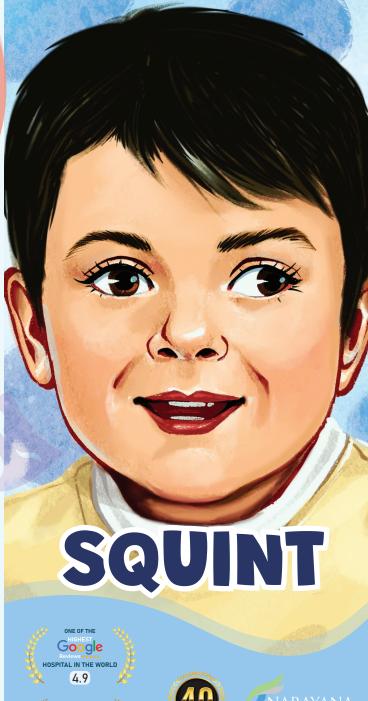
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What is Strabismus or Squint?

Strabismus or squint is a term used to describe the eyes that are not properly aligned, with one eye being straight and the other having turned away from the straight ahead position. it is also known as misaligned eyes, crossed eyes.

The eye can be turned either outwards (Divergent squint), inwards (convergent squint), upwards or downwards (vertical squint). It may be present all the time (constant) or seen only at times (intermittent) like when the child is tired or while reading or looking at a distance as in watching television or when the child looks at brighter light.

Exotropia (divergent squint)



Esotropia (convergent squint)



At what age do you develop strabismus?

At birth, an infant's eyes cannot always focus directly on objects. The eyes appear to move quite independently at first, sometimes crossing and sometimes wandering outwards and so newborn babies may have some degree of squinting of the eyes. By the third or fourth months of age, an infant's eyes should have developed the ability to focus on small objects and the eyes should appear straight. But any squinting beyond this age is not normal and calls for immediate attention. By the sixth month, an infant should be able to focus on both distant and near objects.

Strabismus may be present from birth or may develop later in childhood or even adulthood. It may also run in the family.

What causes the misalignment?

Normally the movement of the eyes are controlled by certain muscles attached to the eye and are called the extraocular muscles. There are six muscles in each eye, which are required for movement in different directions. The muscles are connected via nerves to the brain which controls and co-ordinates the eye movement and encourages the muscles of both the eyes to work together and focus on a single object. Any imbalance of these control mechanisms results in squinting of the eyes. The exact reason why it occurs may not be known all the time.

Adults may develop squinting due to multiple causes, which leads to weakness of muscles or nerves, e.g- diabetes, hypertension, hyperchlolesterolemia, myasthenia or any neurological causes.

Why is it important to detect squint early and in childhood?

It is critical that this condition be diagnosed and corrected at an early age (before 5-6 yrs at the most) since in children:

- 1) The ability to appreciate depth perception can get lost especially if the squint is constant and long-standing.
- 2) The squinting eye may go on to develop lazy eye or amblyopia, which is a permanent loss of vision if left untreated.
- 3) Sometimes squint may be sign of other problems in the eye like cataract, high spectacle power, retinal diseases etc.

How do we detect/pick-up squint?

A child with strabismus usually has no symptoms but some children may tend to squint in bright light. It is usually the parents who notice that the eyes are not straight. Some of them may tilt or turn the head while watching television. Adults with strabismus may see double images especially when it is sudden in onset.

What are the consequences of strabismus?

Normally when the eyes are straight, images from both the eyes reach the brain, and the brain then fuses these two images into a three dimensional picture ('binocular vision'). This ability to perceive a 3-D image is called 'stereopsis'. If one of the eyes is crossed and not properly aligned, the two eyes are focused on different objects leading to double vision which the brain cannot fuse.

Hence in a child the brain suppresses the weaker image coming from the squinting eye and continues to see with only the straight eye. But since in a child the eye is not fully mature, the neglect of the image from the squinting eye will result in lazy eye or Amblyopia, and there will be permanent reduction in vision. The child will also not be able to appreciate the 3D effect. In adults, however, squinting of the eye will cause persistent double vision.

What is false or pseudo squint?



Certain children may appear to have strabismus when, in fact they do not. This is particularly common in Asian babies especially Chinese, children with Downs' syndrome, etc. Presence of an extra fold of skin over the inner canthus, a broad flat nose, wide separation between the nose may give the impression of a pseudostrabismus/ false strabismus which usually disappears as the child's face grows. If no obvious squint is detected after a thorough examination, a true squint is ruled out and no treatment is required. All the parents need is just a reassurance.

What treatment is available for strabismus?

The main goal of treatment in children is to restore vision, straighten the eyes and attempt to restore binocular vision and stereopsis. This treatment needs to be followed in a stepwise manner. First step is to treat the lazy eye, if present. This would be done by either patching the good eye or by blurring the vision of good eye (atropine eye drops, high plus powered glasses), which forces the use of the lazy eye.

As a second step, the alignment is corrected. This is done usually once the vision in the lazy eye is restored to normal. Good alignment would allow development of binocular vision or 3-D vision. Hence, the earlier the treatment better are the results.

Squint may be treated in some individual with glasses/ exercises. Some kinds of squint may not be amenable to non-surgical treatment or may have crossed the stage where glasses/ exercises can help. Hence, may need squint surgery.