SQUINT

(STRABISMUS)

AN OVERVIEW

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What is squint (strabismus)?

Squint (strabismus) is a misalignment of the two eyes so that both the eyes are not looking in the same direction. This misalignment may be constant, being present throughout the day or it may appear sometimes and the rest of the time the eyes may be straight. It is a common condition among children; however, it may also occur in adults.

Medical term	**Definition of term**	**Common term**
		
Esotropia (convergent squint)	Eye turned in	Cross-eyed Boss-eyed
		
Exotropia (divergent squint)	Eye turned out	Wall eyes
		
Hypertropia (vertical up)	Eye turned up	

Hypotropia (vertical down) Eye turned down

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What causes squint?

The exact cause of squint is not really known. The movement of each eye is controlled by six muscles. Each of these muscle acts along with its counterpart in the other eye to keep both the eyes aligned properly. A loss of coordination between the muscles of the two eyes leads to misalignment. This misalignment may be the same in all directions of gaze, or in some conditions the misalignment may be more in one direction of gaze (e.g., in squint due to nerve palsy).

Sometimes a refractive error hypermetropia (long sight) may lead to inward deviation of the eye. Poor vision in an eye because of some other eye disease like cataract, or glaucoma, etc, may also cause the eye to deviate.

What is binocular vision?

Under normal circumstances, when both the eyes have good vision and they are aligned properly, they focus on the same object. Each of the eyes transmits a picture of the same object, viewed from slightly different angles. These two images reach the brain, where they are fused into a single three-dimensional picture with depth perception. This is known as 'binocular single vision'.

(Picture right - Adult with squint)

Squint or Strabismus, is a problem caused by one or more improperly functioning eye muscles, resulting in a misalignment of the eyes. Normally, each eye focuses on the same spot but sends a slightly different message to the brain. The brain superimposes the two images, giving vision depth and dimension.

Here's an easy way to see how the eyes work together: hold your finger at arm's length. While looking at your finger, close one eye, then the other. Notice how your finger changes position. Even though the images are slightly different, the brain interprets them as one.

What are the problems with squint?

When the eyes are not aligned properly, each of the eyes focuses on a different object and sends corresponding signals to the brain. However, these two different images reaching the brain lead to confusion and may have either of the following two effects:

1) A child would ignore the image coming from the deviated eye, and thus sees only one image. But in the process, they lose the depth perception. This suppression of the image, from the deviating eye, results in poor development of vision in this eye, which is known as amblyopia.

2) An adult cannot ignore the image from either eye, and therefore has double vision. This can be very annoying and may interfere with work.

What are the symptoms of squint?

In a child, the deviation of the eyes may be noticed. It is important to remember that the eyes of a newborn are rarely aligned at birth. Most babies establish alignment at 3 - 4 weeks of age. Therefore squint in any child who is more than one month old must be taken seriously and should be evaluated.

Adults may notice double vision, or misalignment of the eyes.

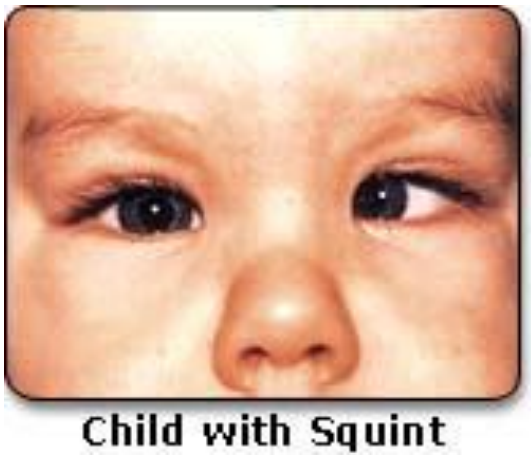
How is squint diagnosed?

The squint is typically diagnosed by an ophthalmologist. They would conduct special tests to confirm the squint, to try and find out the cause, and to quantify the amount of deviation. In some cases, there may be a false appearance of squint because of a broad nasal bridge in a child.

What is the treatment for squint?

The aims of treatment of squint in order of importance are:

- Preserve or restore vision
- Straighten the eyes
- Restore binocular vision


Child with Squint

First of all, the eyes are checked to see if they have any refractive error that may be responsible for squint. If there is any significant refractive error present, it is treated first. In some cases (accommodative squint) a correction of refractive error is all that may be required to treat squint.

Next the eyes are checked for presence of amblyopia. It is important to treat the amblyopia before the surgery for squint.

The squint is then treated by surgery of either one or both of the eyes. The surgery involves weakening or strengthening of the relevant muscles to restore balance and to achieve good coordination. In some cases with double vision, prisms may be added in the glasses to ease the symptoms.


Same Child After Surgery

When should the squint be treated?

In a child, the treatment of squint and any associated amblyopia should be effected as soon as possible. Generally speaking, the younger the age at which amblyopia is treated; the better is the chance of recovery of vision. Remember that the child would never grow out of squint. Consequently, a delay in treatment may decrease the chances of getting a good alignment and correct vision.

Are glasses necessary?

Yes. Surgery cannot replace the need for glasses. If the child has significant refractive error, glasses are a must. In some cases wearing glasses may correct squint. In other cases, wearing glasses help the eyes to see clearly. This clear vision is very important for the treatment of amblyopia, and also for maintaining the coordination of eyes, once they have been aligned by surgery.

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