

Southern Ophthalmology

What is Adult Strabismus (squint)?

Strabismus or squint is a condition in which the two eyes are not pointing in the same direction. Most commonly one eye either turns in or out. Occasionally one eye may sit higher or lower than the other. Sometimes the two eyes may not be moving together in coordination.

What causes adult strabismus?

Many adults with strabismus have had the condition since childhood. Some already have had treatment yet the eye remains turned.

In other adults, a squint can develop later in life. This may be caused by medical conditions, such as stroke, diabetes, thyroid disease, head trauma or other neurological diseases.

Occasionally adult strabismus can occur after cataract or retinal surgery.

What are the symptoms?

If the eyes are not looking in the same direction, then different signals are being sent to the brain from each eye and this can cause *double vision*. Double vision may affect your ability to drive.

Sometimes the double vision is only present when looking into certain directions. The person may then adopt an *abnormal head posture* (e.g. turning the face or tilting the head) to avoid the double vision and maintain single vision. A longstanding abnormal head posture can put stress on the neck muscles.

Many adults are self-conscious about the eyes not being aligned in the same direction and this may influence *psychosocial functioning* in these patients. For example, the persons may experience problems with eye contact that may influence their social interaction.

Some adults with a squint may experience overlapped or blurred images, reduced depth perception, reduced visual fields (in the case where the eyes are significantly turned in towards the nose), eye strain, headaches and reading difficulties.

Why is it important?

As mentioned above, a squint developed in adulthood may be associated with an *underlying medical condition* such as stroke, diabetes or other neurological disease. It is therefore important to see your ophthalmologist for a review.

How is it treated?

Adult strabismus may be treated with eye muscle exercises, glasses containing prisms, botulinum toxin (Botox) injections and eye muscle surgery. You will need to be assessed by your ophthalmologist to decide which is the best treatment option for your squint.

1. Eye muscle exercise may be useful in adults who have weak convergence. This occurs when the eyes have difficulty focusing inward aligning themselves for near work or reading. These exercises may strengthen your eye muscles so that they may focus inward together.
2. Prisms which are incorporated into your glasses can be used to correct double vision, especially when the squint is relatively small. Temporary prisms (Fresnel) are useful if the squint is variable as the strength of the prisms can be adjusted easily.
3. Botox injection is an effective treatment in certain types of adult squint, for example patients who have had multiple squint surgery. This can be done in the ophthalmologist's office. The eye is numbed with anaesthetic eyedrops, Botox is then injected into the overactive eye muscle using a small needle. It is generally safe and well tolerated by patients.
4. Strabismus surgery involves either loosening or tightening the muscles that attach to the eyeball. The surgery is done as a day only procedure in operating theatre. This usually only involves minor discomfort post-operatively. Eye drops are needed for a few weeks to prevent swelling and infection after surgery.

What is adjustable squint surgery?

Adjustable sutures may be used to achieve more accurate results in squint surgery, especially for adult patients who had previous surgery.

This is done in two stages. The first stage is performed while the patient is asleep under general anaesthetic. The suture is tied in a bow at the end of the operation.

When the patient is awake, the ophthalmologist will then check the eye alignment to decide whether adjustment is needed. The second stage is performed using anaesthetic eye drops with the patient awake. The sutures are untied and adjusted to fine-tune the position of the eye. This is not painful but some patients can experience mild discomfort during the adjustment.

Not all adult strabismus are suitable for adjustable sutures, your ophthalmologist will advise you whether it is suitable.

What are the risks of strabismus surgery?

Most patients who have had squint surgery are happy with the results. Squint surgery is generally safe, but like all procedures in medicine there is always a small risk involved. Some of the risks are listed below, if any of these occur, further treatment or surgery may be needed:

- Risk of general anaesthetics.
- The risk of over or under correction of the squint, ie the operated eye may still turn in the same direction or turn too far in the opposite direction.

- The risk of causing double vision, this usually settles after a few weeks.
- There is a very small chance of damaging the vision if the needle passes too deep into the eye, causing perforation into the eyeball.
- Very rarely, the eye muscle may retract back during the operation and cannot be found. This can cause significant turn in the eye with very limited eye movements
- The white of the eye may be red after surgery and this may persist for months.
- Sometimes the wound over the white of the eye may separate and require suturing again.

It is never too late to treat strabismus

Adults do not need to put up with the problems associated with a squint. Treatment can improve symptoms in most cases and most patients are happy with the results. Age is not a limiting factor for treatment so it is never too late to treat adult strabismus. If you are an adult suffering from strabismus you should talk to your ophthalmologist about your treatment options.

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