



# Squint

**Your Questions Answered**

**Patient Information Leaflet**

# What is a Squint?

A squint, or strabismus, occurs when the eyes are misaligned and are no longer working as a pair. It is common in childhood, affecting 2-3% of the population.

The most common types of squint occur when one eye turns inwards (a convergent squint, or esotropia), or outwards (known as a divergent squint, or exotropia). However, it is also possible to have a vertical squint (hyper- or hypotropia) or even a torsional squint, where the eye is rotated inwards or outwards. Squints in childhood should be treated early to avoid amblyopia (see below) and to try to preserve binocular vision.

## What causes a squint?

There are many different types of squint. Childhood squints are often caused by a need for glasses. Convergent squints are the most common type and these are usually caused by hyperopia, or long-sightedness, where the effort required by the child to over-focus the eyes eventually causes one of them to turn in. The hyperopia is present since birth, but the squint usually develops between the ages of 18 months to 3 years.



**Esotropia in the left eye. When the long-sightedness is corrected, the eyes become straight**

Childhood squints can be hereditary. They often start off intermittently, especially when the child is tired or unwell. They never go away on their own, but they do often improve with time. Occasionally, they require surgery.

Rarely, squints can be caused by defects at the back, or behind the eye. This is why it is so important for the child to be seen by an ophthalmologist as quickly as possible, so that a dilated examination can be carried out.

## **What to do if your child has a squint**

Attend your GP, who will assess your child and refer you to the hospital, or local eye clinic, if appropriate. There, you will be seen by the eye-care team:

After checking in, you will most likely first be seen by the orthoptist, who will measure or assess your child's vision, and examine the child to see if they have a squint.

Following this, the nurse will dilate the pupils of the eyes using dilating drops, usually Cyclopentolate, which may sting momentarily. This is necessary in order to examine the inside of the eye, and to see if glasses are required. Dilating the pupils takes at least 30 minutes. The child may notice blurred vision afterwards and may be sensitive to light.

When the pupils are dilated, you and your child will be seen by the ophthalmologist, who will examine the health of the eyes and prescribe glasses if indicated. The glasses are then dispensed by your local optician.

A follow-up appointment with the orthoptist and/or ophthalmologist is usually arranged before you leave the hospital. Children with squints and amblyopia are usually reviewed every few months.

## **Children and glasses**

Glasses are provided by your local optician / optometrist, who will also fit the frames correctly. This is particularly important in children, who often have flat nasal bridges. It should also be remembered that they tend to look up a lot, so it is important to ensure that the frames are large enough so that they're looking through them properly. Rounder frames are often best.

The test for glasses is called a refraction, and is usually repeated every year in children.

## **What is the treatment for Strabismus?**

This depends on the type of squint. The orthoptist will carry out assessments regularly to determine the type of squint and then a decision will then be made on how to manage it.



**Bifocal glasses can be used to treat a convergence excess esotropia**

Some squints respond well to eye exercises and prisms. In most cases, the patient will need to be monitored regularly. This is particularly important to rule out amblyopia (see below).

If there is still a noticeable squint, or if the control of the squint is deteriorating, surgery is considered.



**This child has an intermittent divergent squint in the right eye**

## **What is Amblyopia?**

Amblyopia is the medical term for 'lazy eye', where vision is blurred, even when glasses are worn. It occurs in childhood, when one or both the eyes are not stimulated properly.

The earlier that amblyopia is identified and treated, the more effective the treatment. It is usually treated with a combination of glasses, if required, and patching the good eye to improve the sight in the amblyopic eye.

Sometimes Atropine eye drops are used to treat amblyopia, where a drop is instilled into the good eye, causing the vision to be blurred, and therefore encouraging the amblyopic eye to be used.

## **Patching**

Children with strabismus often have reduced or blurred vision in the squinting eye, even with their glasses on. This is called amblyopia (often referred to as a 'lazy eye'). It happens because, in order for the sight to develop properly in childhood, the brain must see a clear image. In these circumstances, you may be asked to do some patching, where the child wears a patch on their good eye to promote the vision in the bad eye. If amblyopia is not treated early, there may be permanent loss of vision.

The orthoptist will advise on how much patching needs to be done, and will check your child's progress regularly. The amount of patching will depend on the vision of the child, their age, and the cause of the amblyopia.



### **Coloured patches are available**

Patching a small child is never easy, but it can help to use reward charts. Doing distracting and visually detailed activity can also help, for example, reading, colouring, TV, or even computer games.

Patching is done to improve vision, not eliminate the squint.

### **Pseudosquint**

Pseudosquint occurs when there is a false appearance of squint. It's usually seen in babies, where the bridge of the nose has yet to develop fully, and therefore gives an appearance of asymmetry.



**This baby looks like his right eye is turning in, but in fact the eyes are straight.**

Pseudosquint does not need treatment and usually its appearance improves with time. However, it is important to differentiate between pseudosquint and a true squint, which can lead to permanent loss of vision if not treated early.

### **Adult Squints**

Squints that develop later in childhood or adulthood often occur with double vision (diplopia). This can be caused by general health problems, and may require further tests to identify the cause.

Diplopia can usually be treated with prisms, which are fitted to glasses, or, if persistent, squint surgery.

Sometimes, squints that are present since childhood can become more obvious as a person gets older. Surgery can be considered in most cases, even if it's been done before.

### **Strabismus Surgery**

There are 6 muscles around each eye. These are called the extra-ocular muscles and are responsible for moving the eyes. They are underneath the conjunctiva (the thin transparent layer that covers the white part of the eye).

When squint surgery is performed, the surgeon weakens or strengthens one or more of these muscles, which adjusts the

position of the eyes to make them look straighter. The conjunctiva is then sewn back in place using dissolvable stitches. The area over these muscles will be a little red and may feel tender or gritty following the surgery.

Squints can usually be operated on at any age but, depending on the squint, there may be a preferred age for the operation. The surgery is done under general anaesthetic. However, it is often done as a day-case procedure, with the patient allowed home later in the day if they are comfortable. Eye pads are not usually used post-operatively, and the eye-sight is not normally affected. Antibiotic/steroid drops are given before going home, and these must be instilled at home to help with healing and prevent infection. Physical over-exertion should be avoided for 2 weeks and the patient must stay out of swimming pools for 3 weeks. It should be possible to return to work/school the following week. An outpatient appointment is arranged for 2 weeks after the surgery.

Adults sometimes have squint surgery using 'adjustable sutures'. This follows standard squint surgery, but during the procedure, an adjustable suture is used. This can then be moved when the patient is awake (using local anaesthetic drops), usually within 24 hours of the surgery, allowing the result to be fine-tuned. Another option, mainly used in adults, is the use of botulinum, toxin, or Botox. This has been used for many years in the treatment of strabismus, and works by temporarily weakening an over-acting muscle. It is administered by injection, under local anaesthetic, by your ophthalmologist, with the effect wearing off after 3-4 months.



## **What can go wrong?**

Fortunately, squint surgery is generally considered a safe procedure, although, as with all surgical procedures, there are always risks, which the surgeon will be happy to discuss with you.

Visual loss is a very rare occurrence. The most common problem following surgery is residual squint, although most patients see a significant improvement afterwards. There may be continued improvement with time. However, additional surgery may be required at a later stage.

Some people, mainly adults, experience double vision (diplopia) following squint surgery, though this is usually temporary. If persistent, it may be possible to correct it with prisms.

## **Need to Know More?**

If you have any further queries about squint, just ask your orthoptist or ophthalmologist at your next visit.

Useful websites:

[www.orthoptics.ie](http://www.orthoptics.ie)

[www.eyedoctors.ie](http://www.eyedoctors.ie)

[www.rcophth.ac.uk](http://www.rcophth.ac.uk)

[www.squintclinic.com](http://www.squintclinic.com)

Thanks to the American Academy of Paediatric Ophthalmology and Strabismus ([www.aapos.org](http://www.aapos.org)) for the use of some of their illustrations, and a big thanks to the patients of the orthoptic department for agreeing to be photographed.

We hope that this information is helpful to you. If anything is unclear or you have any other questions you would like to ask, then please do ask the nurse/doctor/orthoptist before procedures.

## **Royal Victoria Eye and Ear Hospital 01 6644600**

### Revision History

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