

## EXOTROPIA

### What is Exotropia?

Exotropia is a misalignment of the two eyes such that one eye points outward. It is different to esotropia when one eye points inward towards the nose. It is one example of strabismus or squint.

Exotropia is often an intermittent phenomenon. It is also called divergent squint.

### Are there different forms of Exotropia?

Yes. The most common form affects children as young as 2 years of age and is intermittent, at least in the early stages. This is usually called **intermittent exotropia** or **intermittent distance exotropia** or **intermittent divergent squint**.

**Infantile Exotropia** is rare and affects children in the first 6 months of life. It is usually constant and usually requires surgical correction.

**Consecutive Exotropia** occurs in the situation where surgery has been performed already for an esotropia (eye turning in towards the nose) and the eye has now overcorrected and turned outward.

**Sensory Exotropia** occurs as a result of a poorly sighted eye. This can happen at any age but the exotropia commonly occurs in adulthood. Treatment is surgery usually.

### How common is Intermittent Exotropia

Squint or Strabismus affects up to 4% of the population. However, exotropia contributes only 10% of all cases of strabismus in childhood. Therefore it affects approximately one child in 200 in the UK.

### Tell me more about Intermittent Exotropia?

Intermittent exotropia is the commonest form of exotropia affecting children. Most cases are observed initially before the age of 5 and often before 2 years of age. Girls and Boys are affected equally. The typical appearance is a child whose eye drifts out when tired or not concentrating. The child will usually be untroubled by this. In fact a child who

complained of double vision would be very unusual. If the child is told by their parent or carer that the eye has drifted, the child will usually be able to bring the eye back in, back to normal. Some children close the affected eye in bright sunlight. Usually the child has good vision in both eyes. Usually the condition is rarely seen when looking at objects close by (for example less than 2 meters). Usually binocular vision (the ability for the two eyes to integrate the vision) is good.

### **What Causes Intermittent Exotropia?**

The short answer is that we do not know. One possibility is that the natural resting position of the eyes is deviated outwards. One other possibility is that there is an active mechanism pushing the eyes outwards. This is more speculative. We are not sure if such a mechanism exists. One of the difficulties is that the lack of understanding makes rationalisation of treatment difficult.

### **How does Intermittent Exotropia Affect People?**

In the short term it doesn't appear to matter a great deal. In small children we worry about their normal visual development being interrupted. This could mean they develop a lazy eye (meaning one eye does not see well) or that they lose the ability to use the two eyes together (binocular vision). It seems that neither of these two adverse outcomes is particularly common – but we need to find out more. In some children the deviation is noticed more frequently and can be present for longer periods.

As far as we know, the child's normal development and school work is unaffected.

### **How is Intermittent Exotropia Treated?**

The first thing to do is carry out a full assessment, which would include a measurement of the vision in each eye, an assessment of binocular vision (the quality of the vision with both eyes open) and an assessment of control of the deviation. An examination is carried out to look for any other condition, which might be presenting as intermittent exotropia. This might include a need for glasses. If so glasses may be prescribed, although this is not usually the case.

Further information is often sought from the parent or carer. We will be interested in how often the eye deviates and important observations can be made at home.

It is often useful to think of three groups:-

**Group 1** consists of children in whom the eye drifts only when looking in the distance for short periods, usually when tired or not concentrating.

**Group 2** is when the deviation is still only present when looking in the distance, but is present for longer periods – for example up to half of the waking hours.

**Group 3** is present when the eye drifts outwards for looking nearby as well as in the distance.

Alternate patching or part time patching the non-deviating eye can be tried to improve the control. The mechanism of improved control is not understood. Any improvement may be temporary but may delay the need for surgery.

In some instances the control of the deviation is poor and consideration is given to carrying out an operation. The timing of surgical intervention can be difficult, but is based on a combination of parent/carer observation and an assessment of control carried out in the clinic. Other factors that are important include reducing vision and loss of binocular vision.

Surgical correction carries a risk. The commonest problem is that the alignment is not perfect following the operation. Further surgery may be required in up to 10% of cases for either over corrections or under corrections. Very rare surgical complications that may threaten the integrity of the eye or the vision can occur. These may be as rare as one in 30,000 operations.

### **The Good News**

Most children with intermittent exotropia do well. Most do not need glasses. Most children do not need surgery and they do not seem to be all that bothered by the eye turning outward.