

Infantile Esotropia

What is infantile esotropia?

[Esotropia](#) is an inward turning of one or both eyes. Infantile esotropia begins at birth or during the first year of life. Infantile esotropia is also called congenital esotropia [See figure 1].



Fig. 1: Child with infantile esotropia.

Why does infantile esotropia occur?

The cause of infantile esotropia is unknown. We know there is an inability to use the two eyes together. Hypotheses include both sensory and/or motor dysfunction.

Is infantile esotropia associated with vision loss?

Usually patients with infantile esotropia have equal visual acuity. If one eye is turned more frequently than the other, there is increased risk for the development of amblyopia in the eye that crosses more often. [Amblyopia](#) is poor vision in an eye that is structurally normal. It occurs because the brain ignores input from an eye. When an infant looks with either eye an equal amount of time, the risk of amblyopia is less.

What issues are related to a higher risk for developing infantile esotropia?

Prematurity, hydrocephalus, seizure disorders, developmental delay, intraventricular hemorrhage and a family history of strabismus are among the risk factors for the development of infantile



esotropia. All children with these or other risk factors should be evaluated by an ophthalmologist.

What is cross fixation?

Cross fixation is the use of the right eye to view the left visual field and the use of the left eye to view the right visual field. This behavior is very common in children with infantile esotropia. Cross fixation often causes the appearance of not looking directly at a target and parents often wonder if vision is reduced.

Do infants with infantile esotropia need glasses?

Children with infantile esotropia are usually not more nearsighted or farsighted than those without crossing. However, if farsighted, spectacles may be prescribed.

How is infantile esotropia treated?

Infantile esotropia is usually treated with strabismus surgery (eye muscle surgery). Recently, botulinum toxin has been used in select cases.

At what age should surgery for infantile esotropia be done?

Surgery is performed when any associated amblyopia has been treated and the amount of esotropia is stable. Surgery performed prior to 2 years of age has been found to give better visual prognosis.

Will more than one surgery be required?

The reoperation rate is variable. In the scientific literature it has been reported to be as low as 11% and as high as 69%. The discrepancy may relate in part to varying follow-up time (time since surgery). Re-operation may be required months or years after the initial surgery.

Will my baby have good depth perception when older?

Most children with infantile esotropia demonstrate a deficit of depth perception when old enough to be tested reliably. If esotropia is corrected before 2 years of age, there is a better chance of developing the ability to use both eyes together, which is referred to as binocularity.

Are other eye alignment problems associated with infantile esotropia?

Yes. Many develop some degree of dissociated vertical divergence (DVD). DVD is an upward drifting of the eyes that is usually most prominent in one eye. Some children become significantly farsighted as they grow and develop accommodative esotropia. Fortunately, [accommodative esotropia](#) can usually be treated with spectacles. Some children develop a slowly



increasing outward drift of the eyes called exotropia. There are surgical and nonsurgical treatments available for exotropia. Latent [nystagmus](#) may be present. This is a small, rhythmic, horizontal movement of the eyes when one eye is closed or covered. Unilateral vision may be decreased by the nystagmus but bilateral vision (vision with both eyes open) is typically not affected. Occasionally a vertical acting eye muscle (inferior oblique) may overact which may cause the eye to move up when looking to the side. For example, the right eye moves up when it looks toward the nose. In certain circumstances, eye muscle surgery may be indicated to correct the problem.

More technical information may be found on the [EyeWiki Site](#).

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