

Infantile Esotropia

WHAT IS INFANTILE ESOTROPIA?

[Esotropia](#) is an inward turning of one or both eyes. Infantile esotropia is seen in the first year of life. Infantile esotropia is also called congenital esotropia, but the term infantile is preferred because the condition is usually not observed immediately after birth [See figure 1].



Fig. 1: Child with infantile esotropia.

WHY DOES INFANTILE ESOTROPIA OCCUR?

The cause of infantile esotropia is incompletely understood. We know that these children have difficulty using the two eyes together, but with early surgery these children can learn to use both eyes together..

IS INFANTILE ESOTROPIA ASSOCIATED WITH VISION LOSS?

Patients with infantile esotropia usually have equal visual acuity. If one eye is turned in 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, cerebral palsy and a family history of strabismus are among the risk factors for the development of infantile esotropia.

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.

DO INFANTS WITH INFANTILE ESOTROPIA NEED GLASSES?

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

HOW IS INFANTILE ESOTROPIA TREATED?

Infantile esotropia is usually treated with strabismus surgery (eye muscle surgery). Botulinum toxin may also be used alone or in combination with eye muscle surgery.

AT WHAT AGE SHOULD SURGERY FOR INFANTILE ESOTROPIA BE DONE?

Although surgery may be delayed for some reasons in specific cases, surgery performed prior to 2 years of age has been found to give better visual prognosis for infantile esotropia.

WILL MORE THAN ONE SURGERY BE REQUIRED?

Sometimes a secondary surgery is required shortly after the first surgery if the initial surgery is not sufficient to align the eyes. Some individuals with infantile esotropia do require further strabismus surgery as older children or adults.

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. 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, this inferior oblique overaction or DVD may be addressed during the eye muscle surgery.

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

Updated 04/2021