

# Esotropia

## WHAT IS ESOTROPIA?

Esotropia is a form of strabismus (eye movement problem) where one or both of the eyes turn inwards toward the nose [See figure 1]. It may come and go or it may be there all the time. Esotropia may show up when focusing close up or far away, or both. The crossing may occur mostly with one eye or may switch back and forth between eyes. Esotropia may show up at any age and is the opposite of exotropia (outward eye turn towards the ear).



**Fig. 1:** Photo showing esotropia, in-turning of one or both eyes. In this photo the right eye of the child on the left side of the photo is turned in toward the nose.

## IS ESOTROPIA EVER 'NORMAL'?

Esotropia in infants less than 20 weeks (about 4-5 months) old is common and generally goes away on its own, especially when the eye movement problem is small and comes and goes (intermittent). However, constant eye crossing at ANY age is worrisome and that child should be seen by a pediatric ophthalmologist. Concerns about eye crossing should be shared with your pediatrician. Any eye crossing (constant or intermittent) beyond 4 months of age should be checked out.

## WHAT ARE THE DIFFERENT TYPES OF ESOTROPIA?

Esotropia can come in different forms. Some forms of esotropia start very young (congenital/infantile) while others start later in life (acquired). Some forms of esotropia come and go (intermittent) while others have an eye turn that is present all the time (constant). Some forms get better with glasses (accommodative) while others do not (nonaccommodative). For more specific



information, see [infantile esotropia](#) and [accommodative esotropia](#). Esotropia can also be caused by other problems. Poor vision can cause eye crossing. Different brain problems (hydrocephalus, stroke, etc.) can cause an eye to turn inward. A number of other medical problems can also cause esotropia (examples: [thyroid eye disease](#), [Duane syndrome](#)).

## WHAT PROBLEMS CAN ESOTROPIA CAUSE WITH VISION?

The effect of esotropia on vision depends on the how often the eye crossing happens, how bad the eye crossing is and the age of the person with crossing. Eye crossing makes it hard for the eyes to work together. Older children and adults with a new esotropia often have diplopia (double vision) and/or a problem with peripheral vision (side vision). Children can lose stereopsis (3-D vision) and binocularity (ability to use both eyes together at the same time) in addition to blurry vision or weak vision in the crossing eye ([amblyopia](#)).

## DOES ESOTROPIA RUN IN FAMILIES?

Eye movement problems or misalignment of the eyes ([Strabismus](#)) can run in families. However, affected family members do not always have the same type and/or severity of strabismus. Many times, strabismus happens for people without a family history.

## ARE THERE CONDITIONS THAT INCREASE THE CHANCES OF GETTING ESOTROPIA?

Prematurity, a family history, high hyperopia ([far sightedness](#)) and different brain and genetic problems increase the risk of eye movement problems. Also, some other medical problems can have eye movement issues (like hyperthyroidism and diabetes).

## DO CHILDREN EVER LOOK CROSS-EYED BUT ACTUALLY HAVE STRAIGHT EYES?

Sometimes children may appear to have esotropia without signs of true crossing on an eye exam. This is usually due to the shape of the eyelids and/or bridge of the eyes [See figure 2]. This problem is called [pseudostabismus](#). Any child though to have eye movement problems should have a full exam by a pediatric ophthalmologist. Some children can

have both pseudostrabismus and an actual eye movement problem. Therefore, pseudostrabismus by itself does not rule out the possibility of true eye crossing.



**Fig. 2:** Pseudostrabismus is the appearance of, but not truly misaligned eyes. The photo shows a baby with a wide bridge of the nose which makes it look like the eyes are crossed even when they are straight.

## HOW DOES A PEDIATRIC OPHTHALMOLOGIST LOOK FOR POSSIBLE ESOTROPIA?

After taking a careful history, the ophthalmologist will check vision and make sure the vision is good and the same in both eyes. Eye movements will be checked and measured for problems. The general health of the eye, as well as whether or not the eyes need glasses to focus (for example: farsightedness, nearsightedness, astigmatism) is checked. Signs of brain problems or tumors, are also ruled out.

## WHAT TREATMENTS ARE THERE FOR ESOTROPIA?

Treatment of esotropia is based on specific goals:

- getting the eyes to be as straight as possible
- getting the most binocular vision or use of both eyes together at the same time
- Improving double vision
- Treatment of amblyopia (weak vision)

Treatments used to make the eyes straight include glasses (sometimes with prism or bifocal), patching, strabismus surgery (eye muscle surgery), and botulinum toxin/Botox (less commonly) or a combination of the above.



For more scientific information about esotropia  
see: <https://eyewiki.org/Esotropia>

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