

Abnormal Head Position

WHAT IS AN ABNORMAL HEAD POSTURE?

An abnormal or compensatory head posture occurs when the head is deviated out of the normal primary straight head position. Abnormal head positions can include chin up, chin down, tilting of the head to the right or left, face turns to the right or left, or a combination of any of these abnormal head positions. The abnormal position of the head can be due to an ocular or a non-ocular problem.

WHAT ARE SOME OF THE OCULAR CAUSES OF AN ABNORMAL HEAD POSITION?

1) **Eye misalignment:** Sometimes when a person has a crossed eye, the amount of eye misalignment varies with different gaze positions. The person will typically place his or her head in a position where the eyes are best aligned. This will help to eliminate double vision and/or relieve eye strain.

For example, if a superior oblique muscle is weak ([fourth nerve palsy](#)) a person will tilt the head away from the affected eye because the eyes are most straight in this position. Similarly, a [sixth nerve palsy](#) results in a weakened lateral rectus and a face turn toward the affected eye. Sometimes the eyes are straighter in up or down gaze and a person will tilt the head up or down depending on where the eyes are best aligned. Other causes of abnormal head posture from strabismus include [Duane's syndrome](#), [Brown's syndrome](#), orbital wall fractures, and restricted eye movement associated with thyroid eye disease.

2) **Nystagmus:** Some patients with nystagmus (jerky eye movements) will acquire a head turn or tilt if the nystagmus slows down with a certain head position. The head position where the nystagmus is slowest, or even stopped, is called the null point. Decreased nystagmus allows for better vision, and thus the head postures should not be discouraged in these children.

3) **Difference in vision between the eyes:** sometimes a child will turn the head to place an eye with better vision closer to the target.

4) **Ptosis:** A child with ptosis (or a droopy eyelid) will usually elevate the chin to help the eye or eyes see "beneath" the droopy eyelid.

5) **Refractive errors:** At times a child may turn their head to the side if they have a significant refractive error, particularly [astigmatism](#). It is thought that the head turn allows the patient to see better since they are looking through the narrowed opening of the eyelids, which may simulate a “squinting” mechanism.

CAN MY CHILD SEE WHEN THE HEAD IS IN AN ABNORMAL POSITION?

Yes, most children adopt a head posture to improve their vision if the head turn is from an ocular cause.

CAN A LONGSTANDING HEAD TURN LEAD TO ANY PERMANENT PROBLEMS?

Yes, a significant abnormal head posture could cause permanent tightening of neck muscles that can lead to chronic neck ache or headache. An abnormal head posture may also cause the facial bones to grow abnormally leading to facial asymmetry.

WHAT ARE SOME OF THE NON-OCULAR CAUSES OF AN ABNORMAL HEAD POSITION?

Congenital shortening of the neck muscles (sternocleidomastoid) can cause a head tilt. This is typically called congenital torticollis. A patch test in the office can confirm this diagnosis. If the head tilt is due to tight neck muscles, then the tilt will remain the same with the patch on. If the head tilt is from an ocular cause such as strabismus, then the tilt should get better when the patch is on.

Other non-ocular causes of an abnormal head position include cerebral palsy, bony abnormalities, occipitocervical synostosis and unilateral hearing loss.

ARE THERE ANY TREATMENTS FOR ABNORMAL HEAD POSTURES?

Yes. Abnormal head postures can usually be improved. Surgical procedures are available for treatment of head postures related to [strabismus](#), nystagmus and ptosis. Glasses for refractive errors and patching therapy for an eye with weaker vision ([amblyopia](#)) are other treatment alternatives.

Physical therapy often helps congenital torticollis from tight neck muscles.