

# Nethra Arogyam

## Headache

Related to Eye Conditions in  
Children



**EYE CARE WITH CARE**

# Headache

## Related to Eye Conditions in Children



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Eye-related causes such as convergence insufficiency, accommodative issues, migraines, strabismus, refractive errors, and increased intracranial pressure can contribute to headaches. Identifying the root cause is crucial, especially in children aged 2 to 19, where migraines and eye-related headaches are relatively prevalent.

A headache is often perceived as a common discomfort, but in children, it might be more than just a passing ache. While typically not dangerous, a headache in children can signal underlying eye-related issues or, in rare cases, neurological concerns.

### Who gets a headache?

Children aged 2 to 19, with an average age of 10, commonly experience headaches. Migraine occurs in 2.7% of children by age 7 and in 10.9% by age 14.

### Specific Conditions

**Convergence insufficiency** - Difficulty converging both eyes simultaneously for reading. School-aged children with chronic headaches, will face difficulty to read, and will have blurry vision. Child may hold reading

material close to the face in an attempt to overcome the blurry vision. The problem may occur several times a week. The child may complain of double vision or may be seen closing or covering one eye, presumably to avoid double vision.

**Accommodative insufficiency** - Difficulty focusing one eye at a time for reading, often requiring reading glasses. Similar symptoms to convergence insufficiency, including blurry vision or headaches after reading. Sometimes diagnosed as accommodative spasm.

**Migraine** - Periodic attacks of a vascular headache.

### Types of Migraine in Children

- **Migraine with Aura (Classic Migraine):**  
It begins with focal neurologic symptoms



like limb numbness or one-sided facial paralysis. Visual symptoms usually last from 4 to 60 minutes, presenting as jagged lines of light around a central blind spot, expanding into the peripheral visual field. Children might describe visual disturbances as colorful, bright, flickering, turning, or kaleidoscope-like effects. Encouraging younger children to draw these findings can aid in diagnosis. Followed by an intense, pounding headache on one side of the head lasting two to four hours. The child often seeks rest in a quiet, dark room.

- **Migraine without Aura (Common Migraine):** Not preceded by visual symptoms but by poorly defined behavioral or gastrointestinal disturbances hours to days before the headache attack. Headache starts on one side but may spread to the entire head, lasting hours to several days. Nausea, vomiting, sensitivity to light (photophobia), and sensitivity to sound (phonophobia) are more common than in migraine with aura.
- **Complicated Migraine:** Associated with other neurological phenomena like ophthalmoplegic migraine, causing temporary eye movement restriction. Ophthalmoplegic migraine involves periodic episodes of eye muscle weakness, occurring during the headache peak and affecting all oculomotor nerve functions. Headache typically orbits around the eye and may last several weeks after the headache resolves.
- **Unusual Forms of Complicated Migraine:** Alice in Wonderland syndrome is an atypical form characterized by alterations in time perception, body image, and visual distortions (shrinking, enlargement, inversion, elongation).

**Strabismus:** Misalignment of the eyes. This condition can manifest as: **Esotropia** - Eyes crossing inward, **Exotropia** - Eyes turning

outward, **Hypertropia** - Vertical deviation of the eyes. Strabismus may lead to headaches, exhibiting signs similar to convergence insufficiency. Parents might observe their child covering or squinting one eye while reading or engaging in distance activities, possibly to avoid double vision. Specific incidents like head trauma can sometimes result in nerve palsy affecting the nerves (cranial nerves III, IV, and VI) responsible for moving the eye muscles.

**Refractive errors:** Result in blurred vision, which can be corrected with glasses - nearsighted (myopic), farsighted (hyperopic), or astigmatism. The two main types of refractive errors are:

**Astigmatism:** Occurs when the front surface of the eye is more like an egg than a sphere, causing distortion in one meridian. It can lead to focusing problems, fatigue, and subsequent headaches in children.

**Farsightedness (Hyperopia):** It happens when the eye is too short for the focusing system, requiring excessive lens focusing (accommodation) to bring images into focus on the retina. Excessive focusing efforts, especially during long periods of reading or school days, can result in headaches.

**Headache Patterns** - Children may complain of headaches specifically on school days or after prolonged reading sessions, when focusing efforts are at their peak. Children with



significant astigmatism may hold reading material too close due to blurry vision, leading to increased accommodation and convergence efforts. Prolonged close reading can strain accommodative and convergence abilities, resulting in discomfort.

**Increased Intracranial Pressure:** Pressure around the brain due to neurological conditions. A child experiencing a headache that is caused by a brain tumor is quite significant. Headaches waking the child at night, accompanied by nausea, vomiting, and rapidly worsening symptoms over a short period are major symptoms. Recurring morning headaches might be indicative, but this can also relate to sinus disease. Additional Complaints - Double vision (diplopia), jiggling vision (oscillopsia), or blurry vision might be reported by the child. Pseudotumor cerebri – is an elevated head pressure, but not linked to anatomical causes like brain tumors or

hydrocephalus. It occurs in children with prior head trauma, those using medications like Accutane or prednisone (e.g., as part of a chemotherapy), or sometimes without identifiable reasons in teenagers.

**Special Conditions and Unusual Diagnoses** - Conditions like albinism or nystagmus that often lead to focusing problems.

**Albinism:** Specific ocular disorder due to reduced body pigment affecting the skin and eyes. Vision is impaired because of a deficiency of retinal cells. Children with albinism might complain of headaches due to eyestrain from holding reading material close due to poor vision.

**Nystagmus:** it is characterized by involuntary “jiggling eyes” caused by poor vision or congenital motor instability. Reading material may be held close by children with nystagmus to reduce jiggling and enlarge the print, regardless of the underlying cause.

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### ABHISHEK NETHRADHAMA

Speciality Eye Hospital

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FACILITIES AVAILABLE

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