



Nystagmus

Nystagmus is a complex eye condition characterized by uncontrolled movement of the eyes. The movement can be from side to side, up and down or in a circular motion. It's kind of like the pendulum in a grandfather clock.



“Nystagmus is the term used to describe abnormal eye movements”

What does Nystagmus look like?

The eyes may move in a smooth, pendular fashion, or in a "jerky", erratic way.

They may have this abnormal movement from side-to-side in the horizontal plane, up and down in the vertical plane or move in circles (torsional). It can occur in just one eye or both eyes.



You may notice that your child holds their head or chin at a specific angle when they focus on something.

These different patterns will aid your specialist in finding the cause of the abnormal movement.

What causes this condition?

“Did you know, children with nystagmus can have perfect vision?”



There are several conditions that can cause nystagmus in **infants** and in **children**.

Congenital Nystagmus

This is the most common form. This condition may be inherited and is usually evident by **2 months** of age. A **squint** occurs commonly, but fortunately the **effect on vision** is usually **mild**.

Retinal Conditions

The second type occurs when the child is suffering from a retinal condition. Here, the damage to the retina at the back of the eye means that the light from the outside world is **being poorly transmitted to the brain**. This in turn means that the child **does not see well**. Their eyes move in an **erratic**, roving way as though they were **looking for something**.

Latent or manifest latent nystagmus

When one eye is covered, **abnormal eye** movements suddenly appear, or if they are already present, they become **more pronounced**. This condition is often associated with **both eyes** turning **inwards** at the **same time** (*esotropia*).



Facts about Nystagmus



- Children with Nystagmus sometimes **turn their heads** to use their null point. This is a position where the movement is least, and they can focus better. They are often not aware of this posture.
- They **cannot see their own eyes move**
- Because the brain adapts to the movement of the eyes, they will **see a still image**. Oscillopsia (a constantly moving visual image) may be experienced by someone with acquired Nystagmus as the brain is not able to adapt to the movement of the eyes.
- **Distance vision** is often reduced and cannot be corrected by glasses or contact lenses. If they wear glasses or contact lenses, it is to correct other vision problems such as astigmatism
- **Near vision** is usually good, but they **need to get very close** to what they are looking at.
- **Vision varies** during the day, and will get worse when they are tired, frustrated, under pressure or in an unfamiliar environment.
- **Colour vision** is not affected but may occur due to other eye problems.
- They may **need more time to read** as it takes more time and effort to focus on writing. **Large print** or **visual aids** such as a magnifier may be helpful.
- **Depth perception** is often significantly reduced
- **Balance** may be affected
- Getting around in **busy, unfamiliar surroundings** can be more difficult
- It may be difficult to **recognize a familiar person in a crowd**





Should I worry if I notice it in my child? Who can I ask for help?

You need to have your child assessed by a doctor specializing in the eyes (ophthalmologist). They will examine your child carefully and be able to assess which type of nystagmus your child has and how to progress further.

There are certain **genetic conditions** which can be associated with nystagmus, such as **albinism**, and these will be identified too if present. The ophthalmologist will also check which **medications** your child is on as **some drugs can cause** nystagmus. If your child is on any medication, remember to bring the **labeled containers** with you to the appointment.

Your ophthalmologist will carefully **test** how well your child **can see** and identify if **astigmatism** is present. The **retina and nerve** at the back of your child's eyes, will also be examined carefully to establish if a **retinal or nerve lesion** could be the cause of the nystagmus.

In rare cases, your ophthalmologist may want to exclude **brain pathology** and therefore order an **MRI scan** to be done.





What treatment can I expect my child to receive and how successful is it?

Nystagmus cannot be cured, however, there are many things that can be done to minimise the effect it has on a person's daily living. This includes correcting other issues with the visual system and reducing symptoms that may occur (such as light sensitivity).

The visual acuity in children with nystagmus can range from 20/20 to legally blind.

After a thorough examination, your ophthalmologist will prescribe the most effective treatment for your child's age, function and needs.

If your child has a refractive error, spectacles will be prescribed. If the child has a mild headtilt or chin-tilt, prisms can be added to the prescription.

Contact lenses are also helpful.

It is important to attend all follow-up appointments as your child grows. The degree of refractive error will change as they age, and so they will need new prescriptive lenses to cope with the alterations in their developing eyes.

Depending on the degree of correction that is needed, children with nystagmus can read well. They may read more slowly than their classmates, but comprehension is usually good.

If your child still has reading difficulties after their vision has been assessed and corrected by an ophthalmologist, causes other than the nystagmus need to be looked for.



In children with poor vision, low vision aids need to be employed. These can range from using large print books or increasing the font size on their tablets, to using specialized magnifying devices. Specific accommodations need to be made for them in their school environment to optimize their scholastic performance.

Surgery can be performed for patients who have an abnormal head-tilt, or in those in whom it would improve visual acuity, but this is usually done after the age of 7 years.

The use of medication in children has not been found to be very effective.

In rare cases, the nystagmus may resolve spontaneously. But in most patients, no treatment can completely stop it.

This means that the psychosocial effects need to be addressed too. Nystagmus is an easily identifiable condition, which can open your child up to teasing and ridicule. Education and support both at school and within in the home are vital for building your child's self-esteem.

Once diagnosed and treated correctly, children with nystagmus can go on to become fully functional adults who positively contribute to the world around them.

References:

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