CONDITION

Nystagmus

Nystagmus is an involuntary, repeated movement of the eyes that may affect vision.

WHAT IT IS
Involuntary, repeated movement of the eyes

BODY SYSTEM
Eyes and nervous system

MAIN SYMPTOMS
Moving eyes, blurred vision, moving surroundings, unusual head position

WHAT CAUSES IT
Early development, eye conditions, neurological problems, medicines, or inheritance

HOW IT IS DIAGNOSED
Eye movement assessment and comprehensive eye examination

MAIN TREATMENT
Vision correction, treating the cause, medicines, or eye surgery

CAN IT BE CURED?
Sometimes - treatable causes may resolve

IS IT AN EMERGENCY?
Sometimes - sudden onset with neurological symptoms

LONG-TERM OUTLOOK
Often lifelong but manageable; acquired forms may improve

Overview

Nystagmus is a repeated, uncontrolled movement of the eyes. The eyes may move from side to side, up and down, or in a rotating pattern. The movement can be steady or may change when you look in different directions.

Nystagmus is a condition rather than a single disease. It can begin in infancy, develop because the eyes did not form or see normally, or appear later because of a problem affecting the brain, balance system, medicines, or substances such as alcohol.

Some people have reduced vision because the moving eyes make it harder to keep an image steady on the retina, the light-sensitive layer at the back of the eye. Others mainly notice an unusual head position or difficulty seeing fine detail. People who develop nystagmus later may feel as if their surroundings are moving. This sensation is called oscillopsia .

Nystagmus that begins in early infancy is often lifelong. It does not usually mean that vision will continue to worsen. However, its cause and effect on vision need to be assessed, especially in babies and young children. New nystagmus in an adult requires medical evaluation because it may have an underlying neurological, balance-related, or medicine-related cause.

A brief jerking movement when looking as far to one side as possible can occur normally. Persistent nystagmus in an ordinary gaze position is different and should be assessed.

Symptoms

The eye movement may be too subtle for you to notice yourself. A family member, teacher, optometrist, or other healthcare professional may notice it first.

Possible features include:

Some people have a direction of gaze where the eye movement becomes slower. This is called a null point . Turning or tilting the head may place the eyes near this point and make vision clearer. The head position is usually an attempt to improve vision rather than a habit.

Oscillopsia is more common when nystagmus starts later in life. People with nystagmus from infancy often do not see the world moving because the developing brain adapts to the eye movement.

Symptoms may also come from the underlying cause. These can include light sensitivity, poor night vision, crossed or misaligned eyes, problems with balance, dizziness, hearing changes, weakness, or poor coordination.

- Repeated movement of one or both eyes
- Blurred or reduced vision, especially for fine detail
- Surroundings that seem to shake, jump, or move
- Difficulty recognising faces or reading signs at a distance
- An unusual head turn, tilt, or chin position
- Greater difficulty seeing when tired, stressed, or unwell

Causes and risk factors

Infantile nystagmus syndrome usually appears during the first few months of life. It may occur on its own, including through inherited gene changes. Sometimes no specific cause is found.

Nystagmus can also develop when a young child's visual system receives an unclear or

incomplete image. Associated eye conditions include congenital cataracts, albinism, problems with the optic nerves, and disorders of the retina. The retina detects light and sends visual information toward the brain.

Another early form is linked with childhood squint, also called strabismus , where the eyes do not point in the same direction. The movement may become more noticeable when one eye is covered.

Nystagmus that begins later is called acquired nystagmus . Possible causes include:

A medicine-related cause does not mean that the medicine was used incorrectly. Do not stop a prescribed medicine suddenly without advice, because some medicines need to be reduced gradually.

Family history can increase the likelihood of inherited forms. However, a child can have nystagmus without anyone else in the family having it.

- Conditions affecting the brain or brainstem, including stroke or multiple sclerosis
- Head injury
- Inner-ear or balance-system disorders
- Certain medicines
- Alcohol or other substances
- Rare nutritional or metabolic problems

Diagnosis

Nystagmus is identified by examining the pattern of eye movement. The assessment also aims to find its cause and measure how it affects vision.

You may be asked when the movement began, whether it is constant, and whether your surroundings appear to move. Family history, balance symptoms, previous eye conditions, and medicines are also relevant.

A comprehensive eye examination may include:

Young children can be assessed with pictures, lights, or other age-appropriate methods. They do not need to be able to read an eye chart.

Additional tests are chosen according to the findings. Optical coherence tomography, or OCT , produces detailed images of the retina and optic nerve. An electroretinogram measures electrical responses from the retina. Eye movement recordings can describe the movement precisely, although they are not required in every case.

Brain imaging, usually an MRI scan, may be needed when nystagmus starts suddenly, has an unusual pattern, or occurs with neurological symptoms. Blood tests or genetic testing may be considered when a specific inherited, nutritional, or metabolic cause is suspected. Genetic testing does not identify the cause in everyone.

- Testing vision in each eye
- Checking whether glasses or contact lenses could improve focus
- Assessing eye alignment and movement in different directions
- Examining the front and back of each eye
- Looking for a null point or an unusual head position

Treatment and management

Treatment is based on the type of nystagmus, its cause, and how much it affects daily life. Nystagmus itself does not always need treatment, but correctable vision problems should be addressed.

Glasses or contact lenses can provide the clearest possible image. They do not usually stop the movement, but sharper focus may improve useful vision. Tinted or light-filtering lenses may help when an associated eye condition causes light sensitivity.

Children may need treatment for amblyopia , sometimes called lazy eye. Amblyopia occurs when vision does not develop normally in one eye. Treatment may include glasses or supervised use of a patch over the stronger eye.

Practical support can be important. This may include larger print, electronic magnification, extra time for visual tasks, seating that allows a child to use their best viewing position, and low-vision services.

Some forms of acquired nystagmus improve when the underlying cause is treated or a contributing medicine is changed. Medicine can reduce particular types of nystagmus, but it does not work for every form and may cause side effects. Selection and monitoring require a specialist familiar with eye movement disorders.

Eye-muscle surgery may be considered when a marked head turn is needed to reach the null point. Surgery changes the position where the eye movement is least troublesome. It does not usually remove nystagmus completely. In selected cases, it may improve head posture and visual function.

Botulinum toxin injections are used only in particular situations. Their effects are temporary, and they may cause double vision or a drooping eyelid.

Complications

The main long-term issue is reduced vision. Its severity is influenced both by the nystagmus and by any underlying eye condition.

A persistent head turn or tilt can cause neck discomfort. Difficulty seeing facial expressions, signs, screens, or classroom material can affect learning, work, and social confidence. Adjustments and vision rehabilitation can reduce these effects.

Nystagmus itself does not usually lead to total blindness. However, an associated retinal, optic-nerve, or neurological condition may have its own effect on vision and health.

Driving eligibility is based on measured vision and visual fields, not simply on the presence of nystagmus. Legal standards differ by location.

Prevention

Most nystagmus beginning in infancy cannot be prevented. This includes inherited forms and nystagmus caused by differences in early visual development.

Some acquired cases relate to injuries, alcohol, other substances, or medicine effects, but not every cause is preventable. Use prescribed medicines as directed and discuss new visual or balance symptoms rather than changing treatment yourself.

Early assessment does not always prevent nystagmus. It can identify treatable eye conditions, support visual development, and help arrange appropriate learning or workplace support.

Living with it and what to expect

Infantile nystagmus usually remains present throughout life. The movement may become less noticeable to other people, but it does not always disappear. Vision is often relatively stable unless an associated eye condition changes.

Tiredness, stress, illness, or intense concentration can make the movement more obvious. This does not usually mean that the eyes are being damaged or that the condition is permanently worsening.

Children may move closer to books, screens, or the television because this makes detail easier to see. A preferred head position can also help them use their clearest area of vision. Regular eye follow-up checks visual development, glasses needs, eye alignment, and head posture.

Most people adapt their routines around their vision. Helpful measures may include good

lighting, adjustable screens, magnification, sitting where the preferred viewing direction is comfortable, and allowing more time for visually detailed work. Many people attend mainstream education, work, use digital devices, and live independently, although the level of support needed is individual.

The course of acquired nystagmus is tied to its cause. It may improve when a medicine is changed or an underlying illness is treated. In other cases, it persists and requires symptom management and rehabilitation. Oscillopsia can be particularly disruptive, but specialist treatment and practical adaptations may help.

Routine follow-up is appropriate for known, stable nystagmus. Arrange an earlier review if vision changes, a head posture becomes uncomfortable, school or work tasks become harder, or new balance or neurological symptoms develop.

When to get medical help

Arrange a routine eye assessment if you notice repeated eye movements, even when they are painless. Babies and children should be assessed promptly because vision is still developing and an underlying eye condition may need treatment.

Seek urgent medical advice for newly developed nystagmus, new oscillopsia, worsening balance, or a clear change in an established eye-movement pattern. If symptoms began after starting or changing a medicine, contact the prescribing service promptly. Do not stop the medicine abruptly unless instructed.

Seek emergency care if sudden nystagmus occurs with:

These combinations can occur with stroke, serious injury, or another acute neurological problem. Sudden neurological symptoms should not wait for a routine eye appointment.

- Facial drooping, arm or leg weakness, or speech difficulty
- Severe trouble walking, collapse, or loss of coordination
- Sudden double vision or loss of vision
- A new, severe headache
- Confusion, fainting, or repeated vomiting
- A significant head injury

Common questions

Can nystagmus go away?

Nystagmus beginning in infancy is often lifelong, although it may become less noticeable. Acquired nystagmus may improve if its cause can be treated. Some forms remain even after the original problem has stabilised.

Does nystagmus make you blind?

Nystagmus alone does not usually cause total blindness. Vision can range from near normal to severely reduced. The underlying eye or neurological condition often has a greater effect on vision than the movement itself.

Why does my nystagmus look worse when I am tired?

Fatigue, stress, illness, and concentration can increase the movement or make control more difficult. A temporary increase does not usually mean that the condition is getting permanently worse.

Can screens damage eyes with nystagmus?

Screens do not cause or permanently worsen nystagmus. They can lead to eye strain, especially when text is small or contrast is poor. Larger text, suitable lighting, reduced glare, and regular breaks may make screen use more comfortable.

Can I drive if I have nystagmus?

Some people can drive and others do not meet the required vision standard. The decision is based on visual sharpness, visual fields, and local licensing rules. An eye examination can document these measurements.

Will my child inherit nystagmus from me?

Some forms are inherited, but others are not. The likelihood depends on the specific cause and inheritance pattern. Genetic assessment may clarify the cause and provide more useful information for a family.

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