CONDITION

Nearsightedness

Nearsightedness is a focusing condition that makes distant objects look blurry while nearby objects remain clearer.

WHAT IT IS
Difficulty focusing clearly on distant objects

BODY SYSTEM
Eyes and vision

MAIN SYMPTOMS
Blurry distance vision, squinting, eyestrain, headaches

WHAT CAUSES IT
Eye overgrowth, inherited tendency, environmental factors

HOW IT IS DIAGNOSED
Visual acuity testing and refraction during an eye examination

MAIN TREATMENT
Glasses, contact lenses, or refractive surgery

CAN IT BE CURED?
No - correction does not shorten the eye

IS IT AN EMERGENCY?
Sometimes - sudden flashes, floaters, or a vision curtain

LONG-TERM OUTLOOK
Usually manageable, though high myopia raises eye disease risks

Overview

Nearsightedness, also called myopia, is a common focusing condition. It makes distant objects look blurry. Nearby objects may remain clear, especially when you are young.

Normally, the eye bends light so it focuses on the retina, the light-sensitive layer at the back of the eye. With myopia, light focuses in front of the retina instead. This usually happens because the eyeball has grown too long from front to back. A cornea-the clear front surface of the eye-that is too curved can also contribute.

Myopia often starts during childhood and may increase as the eyes grow. Progression commonly slows in the late teenage years or early adulthood, but it can continue or change later.

Glasses and contact lenses can provide clear vision while you wear them. Refractive surgery can reduce some adults' need for lenses by changing the shape of the cornea. These treatments correct how light is focused, but they do not shorten an elongated eyeball.

This matters because stronger myopia, especially when caused by substantial eye elongation, increases the lifetime risk of several eye conditions. Regular eye examinations can check both your prescription and the health of your eyes.

Symptoms

The main symptom is difficulty seeing at a distance. Road signs, classroom boards, television subtitles, faces across a room, or sports action may look blurred.

Other possible symptoms include:

Children may not realize that their vision is blurry. They may move closer to see, lose interest in activities that require distance vision, or struggle to copy information from a classroom board. These signs can have many explanations, so an eye examination is needed rather than assuming myopia is the cause.

Myopia itself does not usually cause eye pain, redness, sudden flashes of light, or a dark curtain in the vision. Those symptoms need separate assessment.

- Squinting to see distant details
- Headaches or tired eyes after visual tasks
- Sitting unusually close to screens or classroom boards
- Holding objects close to the face
- Difficulty driving, especially at night

Causes and risk factors

Myopia usually develops through a combination of eye growth, inherited tendency, and environmental influences.

Family history matters. A child is more likely to become nearsighted when one or both parents have myopia, although children without a family history can also develop it.

Spending less time outdoors during childhood is associated with a greater chance of developing myopia. More time spent on close work, such as reading or using handheld devices, is also associated with myopia in children. The relationship is complex: reading, studying, or

using a screen does not guarantee that someone will become nearsighted.

Myopia can progress while a child's eyes are growing. Earlier onset can allow more years for progression, which may lead to a stronger prescription.

Temporary changes in focusing can sometimes occur because of blood sugar changes, medicines, or other eye conditions. These are not necessarily the same as ordinary childhood or adult myopia. A noticeable or rapid prescription change should be assessed.

Diagnosis

Myopia is diagnosed during an eye examination. You will usually read letters or symbols on a vision chart while each eye is tested separately.

Refraction is the part of the examination that measures the focusing error. The examiner places different lenses in front of your eyes and asks which gives clearer vision. An automated instrument may provide an initial measurement, but it does not replace the full assessment.

In children and some adults, dilating eye drops may be used to temporarily relax the eye's focusing muscles. This is called cycloplegic refraction. It can provide a more accurate measurement when the natural focusing system might otherwise affect the result.

A prescription for myopia is written with a minus sign and measured in diopters, such as −2.00 D. A larger negative number generally means stronger myopia. The number alone does not describe the health of the retina or the length of the eye.

An eye examination may also include checks of eye movement, coordination, pressure, and the structures inside the eye. Dilating the pupils allows a better view of the retina and optic nerve. Vision screening can identify possible blur, but it is not the same as a complete eye examination.

Treatment and management

Glasses are the simplest way to correct myopia. They move the focus of light back onto the retina. Some people wear them all day, while others mainly need them for driving, school, work, or seeing presentations.

Contact lenses can also provide clear distance vision. They may be useful for sports or when glasses are inconvenient. Safe handling is important because contact lenses can cause corneal infection. This includes following replacement instructions, cleaning reusable lenses correctly, avoiding water exposure, and not sleeping in lenses unless they are specifically intended for

that use.

Adults with a stable prescription may consider refractive surgery, such as LASIK or PRK. These procedures reshape the cornea. Suitability depends on factors including prescription stability, corneal measurements, eye health, age, and expectations. Surgery can reduce dependence on glasses, but it does not prevent normal age-related reading difficulty or remove the retinal risks linked with an elongated eye.

For children whose myopia is progressing, management may include treatments intended to slow further eye growth. Options can include specially designed spectacle lenses, multifocal soft contact lenses, overnight corneal-reshaping lenses called orthokeratology, or low-dose atropine eye drops.

These approaches have different benefits, uncertainties, costs, and safety considerations. Availability and regulatory approval differ by country. Orthokeratology and other contact lenses require careful hygiene because of infection risk. Atropine may cause light sensitivity or near-vision symptoms and is used in different ways across clinical settings.

Myopia-control treatment aims to slow progression. It cannot reliably reverse eye elongation or guarantee that the prescription will stop changing. Follow-up usually includes repeated prescription measurements and may include measuring the length of the eye.

Complications

Most people with mild or moderate myopia see well with appropriate correction. The main daily problem is blurred vision when glasses or contact lenses are not being worn.

Stronger myopia is associated with a higher lifetime risk of:

These problems are not inevitable. However, correcting vision with glasses, contact lenses, or surgery does not remove risks caused by the eye's physical length.

Contact lenses have their own possible complications, including irritation, inflammation, and corneal infection. A painful, red, light-sensitive eye while wearing contact lenses needs prompt assessment. Remove the lens and do not put it back in while waiting for care.

Refractive surgery can cause complications such as dry eye, glare, halos, undercorrection, or overcorrection. Rarely, more serious vision problems can occur. A detailed preoperative assessment is needed before deciding whether surgery is appropriate.

- Retinal tears or retinal detachment
- Damage to the central retina, called myopic macular degeneration

- Glaucoma, which damages the optic nerve
- Cataracts, which cloud the eye's natural lens

Prevention

Myopia cannot always be prevented. Inherited tendency and natural eye growth cannot be fully controlled.

For children, spending regular time outdoors is associated with a lower chance of developing myopia. Outdoor time may be helpful even when a child also reads, studies, or uses digital devices. It does not reverse myopia that is already present.

Comfortable reading distance, good lighting, and breaks from close work may reduce eyestrain. Looking away from a near task periodically can help the focusing muscles relax. However, screen breaks and blue-light filters have not been shown to cure myopia.

When childhood myopia is already progressing, myopia-control treatment may reduce how quickly it worsens. It is management rather than guaranteed prevention.

Living with it and what to expect

Myopia is usually a long-term condition. Your vision can be clear with the correct glasses or contact lenses, but distance blur returns when the correction is removed.

During childhood and adolescence, prescriptions may need updating as the eyes grow. Changes often slow in early adulthood, although there is no exact age when everyone's prescription becomes stable. Some adults continue to have changes, particularly during intensive close work, pregnancy, blood sugar fluctuations, or changes in eye health.

Later in life, myopia does not protect against presbyopia. Presbyopia is the normal age-related loss of near focusing ability. A person who is nearsighted may remove their distance glasses to read, but they may still need bifocals, progressive lenses, reading glasses, or adjusted contact lenses.

Regular examinations remain important even after refractive surgery or when vision feels stable. An examination can identify retinal, optic nerve, or lens changes that may not cause early symptoms. The timing of routine follow-up is based on your age, prescription, treatment, eye health, and other health conditions.

Most people with myopia study, work, drive, exercise, and take part in everyday activities normally with suitable vision correction. Strong myopia may require closer long-term

monitoring, but it does not mean that serious complications will occur.

When to get medical help

Arrange a routine eye examination if distance vision is becoming blurry, you are squinting more often, headaches occur during visual tasks, or your current glasses no longer seem clear. A child who sits very close to screens, cannot see classroom material, or frequently squints should also have their vision checked.

Seek prompt assessment if your prescription changes quickly, vision becomes distorted, or one eye is noticeably worse than the other. These changes are not usually an emergency, but they should not be left until a distant routine appointment.

Get urgent, same-day eye care for:

These symptoms can indicate a retinal tear, retinal detachment, infection, or another eye problem requiring rapid treatment.

Severe eye pain with nausea, a very red eye, chemical exposure, or a major eye injury requires emergency assessment. After chemical exposure, rinse the eye immediately with plenty of clean, lukewarm water while arranging emergency help.

- A sudden increase in floaters, which look like dots or threads
- Flashes of light that are new or increasing
- A shadow, curtain, or missing area in your vision
- Sudden unexplained loss or severe blurring of vision
- A painful, red, light-sensitive eye, especially with contact lens use

Common questions

Can nearsightedness go away on its own?

Established myopia usually does not go away. The prescription may stabilize, but the eye generally remains nearsighted. Glasses and contact lenses correct the focus while they are worn. Surgery changes the cornea's focusing power but does not shorten the eye.

Does wearing glasses make my eyes weaker?

No. Glasses do not weaken the eyes or make myopia progress. A child may become more aware of blur after experiencing clear vision with glasses, but that does not mean the glasses caused the change.

Can I improve myopia with eye exercises?

Eye exercises do not correct myopia caused by an elongated eyeball. Exercises may help certain eye-coordination problems, but they do not replace glasses, contact lenses, or evidence-based myopia-control treatment.

Do phones and computers cause nearsightedness?

Heavy close work and less outdoor time are associated with childhood myopia, but no single device is the sole cause. Screens can also contribute to dry or tired eyes. Taking breaks and using a comfortable viewing distance may improve comfort, while outdoor time appears more relevant to reducing childhood onset.

Is LASIK a permanent cure for myopia?

LASIK can provide long-lasting correction, but it is not a cure for eye elongation. Vision can change later, and reading glasses are commonly needed with age. Retinal risks related to strong myopia remain after surgery.

Can I drive if I am nearsighted?

Many people can drive safely with the correct glasses or contact lenses. You must meet the legal vision standard where you live and use any correction listed on your licence. Avoid driving if your vision is suddenly blurred or you cannot see road signs clearly.

Sources

- National Eye Institute. "Nearsightedness (Myopia)."
- American Academy of Ophthalmology. "Myopia Control in Children."
- American Association for Pediatric Ophthalmology and Strabismus. "Myopia and Treatment of Myopia in Children."
- International Myopia Institute. "IMI Defining and Classifying Myopia: A Proposed Set of Standards for Clinical and Epidemiologic Studies." Investigative Ophthalmology & Visual Science , 2019.
- International Myopia Institute. "IMI Clinical Management Guidelines Report." Investigative Ophthalmology & Visual Science , 2019.
- U.S. Food and Drug Administration. "LASIK Surgery Checklist."