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**MYOPIA;**

Near-sightedness, also known as short-sightedness and myopia, is an [eye](https://en.m.wikipedia.org/wiki/Eye) disorder where light focuses in front of, instead of on, the [retina](https://en.m.wikipedia.org/wiki/Retina).[[1]](https://en.m.wikipedia.org/wiki/Near-sightedness#cite_note-NIH2010-1)[[2]](https://en.m.wikipedia.org/wiki/Near-sightedness#cite_note-Fos2014-2) This causes distant objects to be [blurry](https://en.m.wikipedia.org/wiki/Blurred_vision) while close objects appear normal.[[1]](https://en.m.wikipedia.org/wiki/Near-sightedness#cite_note-NIH2010-1) Other symptoms may include [headaches](https://en.m.wikipedia.org/wiki/Headache) and [eye strain](https://en.m.wikipedia.org/wiki/Eye_strain).[[1]](https://en.m.wikipedia.org/wiki/Near-sightedness#cite_note-NIH2010-1) Severe near-sightedness is associated with an increased risk of [retinal detachment](https://en.m.wikipedia.org/wiki/Retinal_detachment), [cataracts](https://en.m.wikipedia.org/wiki/Cataract), and [glaucoma](https://en.m.wikipedia.org/wiki/Glaucoma).[[2]](https://en.m.wikipedia.org/wiki/Near-sightedness#cite_note-Fos2014-2)

The structure of your [eye](https://www.webmd.com/eye-health/ss/slideshow-eye-conditions-overview) is to blame. When your eyeball is too long or the cornea -- the protective outer layer of your eye -- is too curved, the light that enters your eye won’t focus correctly. Images focus in front of the retina, the light-sensitive part of your eye, instead of directly on the retina. This causes blurred [vision](https://www.webmd.com/eye-health/default.htm). Doctors call this a refractive error.

* High [myopia](https://www.webmd.com/eye-health/healthy-vision-as-you-age-14/quiz-checklist/default.htm): It’s a more serious form of the condition, where the eyeball grows more than it is supposed to and becomes very long front to back. Besides making it hard to see things at a distance, it can also raise your chance of having other conditions like a [detached retina](https://www.webmd.com/eye-health/eye-health-retinal-detachment), [cataracts](https://www.webmd.com/eye-health/cataracts/), and [glaucoma](https://www.webmd.com/eye-health/glaucoma-eyes).
* Degenerative myopia: Also called pathological or malignant myopia, it is a rare type you usually inherit from your parents. Your eyeball gets longer very quickly and causes severe myopia, usually by the teenage or early adult years. This type of myopia can get worse far into adulthood. Besides making it hard to see things at a distance, you may have a higher chance of having a detached retina, abnormal [blood](https://www.webmd.com/heart/anatomy-picture-of-blood) vessel growth in the eye (choroid neovascularization), and [glaucoma](https://www.webmd.com/eye-health/video/glaucoma).

## Symptoms

Chances are the only symptom is that more distant objects are blurred. You may also notice:

* [Headaches](https://www.webmd.com/migraines-headaches/default.htm)
* Squinting
* Eye strain
* [Eye fatigue](https://www.webmd.com/eye-health/eye-fatigue-causes-symptoms-treatment) when you try to see objects more than a few feet away
* Children with myopia often have trouble reading the blackboard at school.

## Diagnosis and Treatment

An [eye exam](https://www.webmd.com/eye-health/eye-tests-exams) can show you if you’re myopic. Glasses, contacts, or refractive surgery can usually correct the problem.

When you have myopia, your prescription for glasses or [contact lenses](https://www.webmd.com/eye-health/contact-lenses-colored-soft-hard-toric-bifocal) will be a negative number. The more negative the number, the stronger your lenses will be. For example, -3.00 is stronger than -2.50.

Your prescription helps the eye focus light on your retina. That clears up your [vision](https://www.webmd.com/eye-health/ss/slideshow-healthier-eyes).

Eye surgery can improve your vision so much you may no longer need to wear glasses or contacts. The most common procedures for myopia are:

* **Photorefractive keratectomy:** Also called PRK, this surgery uses a laser to sculpt the middle layer of your cornea. That flattens the cornea’s curve and lets light rays focus closer to or on your retina.
* [LASIK](https://www.webmd.com/eye-health/lasik-laser-eye-surgery) **:** This is the most common surgery for myopia. The surgeon uses a laser or another tool to create a thin flap on the top layer of your cornea. He sculpts the cornea with another laser and moves the flap back into place.

In the case of high myopia, special contacts or atropine eye drops have been found to be effective in slowing the progression. In some cases, your doctor may suggest cataract or clear lens replacement surgery.

**ASTIGMATISM;**

Astigmatism is a common vision problem caused by an error in the shape of the [cornea](https://www.healthline.com/human-body-maps/cornea). With astigmatism, the lens of the eye or the cornea, which is the front surface of the eye, has an irregular curve. This can change the way light passes, or refracts, to your [retina](https://www.healthline.com/human-body-maps/retina). This causes blurry, fuzzy, or distorted vision. The two main types of astigmatism are corneal and lenticular. A corneal astigmatism happens when your cornea is misshapen. A lenticular astigmatism happens when your lens is misshapen. It’s not known what causes astigmatism, but genetics is a big factor. It’s often present at birth, but it may develop later in life. It may also occur as a result of an injury to the eye or after eye surgery. Astigmatism often occurs with nearsightedness or farsightedness. Astigmatism can occur in children and adults. Your risk of developing astigmatism may be higher if you have any of the following:

* a family history of astigmatism or other eye disorders, such as keratoconus (degeneration of the cornea)
* scarring or thinning of your cornea
* excessive nearsightedness, which creates blurry vision at a distance
* excessive farsightedness, which creates blurry close-up vision
* a history of certain types of eye surgery, such as [cataract](https://www.healthline.com/health/cataract) surgery (surgical removal of a clouded lens)

## Symptoms;

The symptoms of astigmatism may differ in each person. Some people don’t have any symptoms at all. The symptoms of astigmatism include:

* blurry, distorted, or fuzzy vision at all distances (up close and far away)
* difficulty seeing at night
* eyestrain
* squinting
* eye irritation
* headaches
* An optometrist or ophthalmologist diagnoses astigmatism through a comprehensive eye examination. An optometrist is a doctor who diagnoses vision problems and eye diseases. An ophthalmologist is a doctor who provides medical and surgical treatment of vision problems and eye diseases. There are several tests optometrists and ophthalmologists may use during your eye examination to diagnose astigmatism.

### Diagnosis;

* During a [visual acuity assessment test](https://www.healthline.com/health/visual-acuity-test), your doctor will ask you to read letters from a chart at a specific distance to determine how well you can see the letters.

### Refraction test

* A [refraction test](https://www.healthline.com/health/refraction-test) uses a machine called an optical refractor. The machine has multiple corrective glass lenses of different strengths. Your doctor will ask you to read a chart while looking through lenses that are different strengths on the optical refractor. They’ll eventually find a lens that appropriately corrects your vision.

### Keratometry

* Keratometry is a way for your doctor to measure the curvature of your cornea. They will do this by looking at your eye through a keratometer.

## Treatment;

* Mild cases of astigmatism may not require treatment. Your doctor may treat astigmatism that causes vision problems by using one of the following methods.

### Corrective lenses

* Corrective eyeglasses and contact lenses prescribed by a doctor are the most common and least invasive treatments for astigmatism.

### Orthokeratology (Ortho-K)

* Orthokeratology (Ortho-K) is a treatment that uses rigid contact lenses to temporarily correct the irregular curvature of your cornea. You’ll wear rigid contact lenses for limited periods of time. You may wear them during sleep and then remove them during the day. Some people have clear vision during the day without corrective lenses when undergoing Ortho-K. The benefits of Ortho-K are only present when using it. Your vision will return to its previous state after stopping Ortho-K.

### Surgery

* Your doctor may recommend refractive surgery if you have a severe case. This type of surgery involves using lasers or small knives to reshape your cornea. This will permanently correct your astigmatism. The three common surgeries for astigmatism are laser in situ keratomileusis (LASIK), photorefractive keratectomy (PRK), and radial keratotomy (RK). All surgeries carry some risks. Talk to your doctor about the risks and benefits before getting surgery for astigmatism.
* A [lazy eye](https://www.healthline.com/symptom/lazy-eye) can occur if astigmatism in one eye isn’t corrected. Lazy eye is also called amblyopia.
* Corrective lenses or surgery can usually restore your vision to normal. There’s no known way to prevent astigmatism from developing.