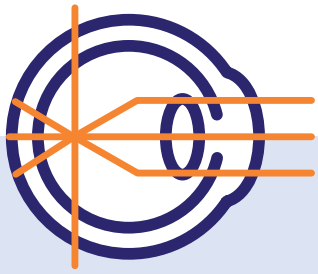
Lions Eye Institute

FACT SHEET

What is myopia?



Myopia, also known as near-sightedness or short-sightedness, is a common condition where objects that are near are clear, but distant objects appear blurry.

Myopia typically begins in childhood and adolescence and usually gets worse until early adulthood. It is the **most common cause of impaired vision in people aged under 40 years**. The worldwide prevalence of myopia is increasing, and it is expected that nearly half of the world's population will be near-sighted by 2050.

What causes myopia?

Myopia occurs when the shape of your eye causes light rays to refract (bend) incorrectly, focusing images in front of your retina instead of on your retina.

It occurs because the eye is too long (axial myopia), or has a cornea (the clear front surface of your eye that passes light to the retina) that is too steep.

Genetics play a role in the incidence of myopia and more than 150 myopia-prone genes have been identified. People who carry several of these genes have a higher risk of becoming near-sighted.

Myopia and these genetic markers can be passed from generation to generation. Children have a higher risk of developing the condition if one or both of their parents are near-sighted.

What are the symptoms of myopia?

- **Blurry vision** when looking at distant objects
- **Needing to squint** or **partially close your eyelids** to see clearly
- **Headaches** caused by eyestrain
- **Difficulty seeing** while driving a vehicle, especially at night (night myopia)

Near-sightedness is often detected in childhood and is commonly diagnosed between the early school years through the teens. A child with near-sightedness may:

- **Persistently squint**
- Need to **sit closer** to the television, movie screen or the front of the classroom
- Seem to be **unaware of distant objects**
- **Blink excessively**
- **Rub** his or her eyes frequently.

Myopia in children will usually progress with the eye prescription needing to increase each year until late-teens/early adulthood.

How is myopia diagnosed?

Myopia is diagnosed by a **basic eye exam**, which includes a refraction assessment and an eye health exam.

What other eye conditions are associated with myopia?

Myopia is associated with an increased risk of potentially blinding eye conditions in adulthood including retinal detachment, macular disease, cataract and glaucoma.

The risk of these conditions increases with the severity of myopia. Myopia can also be caused by other eye diseases including retinopathy of prematurity, childhood glaucoma, and inherited vitreoretinal diseases. These should be excluded before a diagnosis of simple myopia is made.

How is myopia treated?

The goal of myopia treatment is to compensate for the inability of your eyes to focus on distant objects and, in children, to slow the progression of myopia.

Managing myopia also includes monitoring for possible complications of the condition such as glaucoma, cataracts, retinal tears and detachments, and damage to central retinal areas.

Glasses and contact lenses have a variety of prescriptions which cover a range of distances and can accommodate differences in vision between your eyes. These can be provided by your optometrist.

Refractive surgery reduces the need for glasses or contact lenses. Laser refractive surgery can reshape your cornea to eliminate your near-sightedness prescription. If you are not suitable for laser surgery, another option may be implantable lenses that are placed inside your eye. Refractive surgery is not suitable for children because their eyes are still growing and the prescription is still changing.

The treatment of myopia in children has changed significantly in recent years with an emphasis on treatments to slow progression. You should discuss these treatment options with your ophthalmologist to assess which of them is best for you.

Options for myopia correction include:

- Glasses
- Contact lenses
- Refractive surgery.

Need to know more?

Please contact the Lions Eye Institute to make an appointment with one of our ophthalmologists.
Phone: (08) 9381 0777; email: carecentre@lei.org.au; or see our website: lei.org.au