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Myopia 101: What, why, and how to control it



What is Myopia?

Myopia or nearsightedness, usually occurs when the eye grows too long, or if the cornea and/or lens is too curved for the eye. When this occurs, images are focused in front of the retina, instead of focusing images onto the retina. This causes things far away to become blurry and unclear.

Why is this becoming a problem?

In the past 50 years, the percentage of Americans who are myopic has jumped from 25% to 42%. Projections also predict that almost half of the world population will be nearsighted by 2050, and a billion people worldwide will have high myopia. High myopia increases the risk of cataracts, glaucoma and retinal detachments.

What are the causes?

Myopia usually begins developing in childhood. While genetics have been shown to contribute to the risk of developing myopia, many recent studies have actually found that both the lack of time spent outdoors in the natural sunlight and the increase of time spent doing near work, such as reading, use of computers and other handheld electronic devices, have played a bigger role in the current drastic rise in myopia. So, remember to go outside and play!

What can we do to correct for it?

The most common way is with corrective glasses and contact lenses, which refocus light onto the retina. Once the prescription is stabilized, refractive surgery options can also be considered. The most common types of refractive surgery are LASIK and PRK, both of which permanently change the shape of the cornea to better focus light onto the retina.

What can we do to prevent it from getting worse?

Orthokeratology is one of the most popular ways to slow myopia progression. Orthokeratology is a non-surgical procedure in which custom-designed rigid gas permeable contact lenses are worn overnight during sleep to reshape the cornea. Upon removal of the the lenses in the morning, vision is clear without any help from glasses or contact lenses. The long term use of these special lenses has been shown by studies to reduce the progression of myopia by as much as 43%.

