



# How well **do** you see?

## About Myopia, also known as Nearsightedness

### What is nearsightedness?

Nearsightedness, or myopia, is a refractive error in which objects at a distance appear blurry, while objects up close are seen clearly.<sup>1,2</sup> It is a very common vision condition and is often discovered in children between the ages of eight and 12. It can become worse during the teenage years, when the body grows rapidly.<sup>2</sup> There is typically little change in vision between the ages of 20 and 40, but it can occur in adults.<sup>2</sup>

The degree of nearsightedness affects the ability to focus on distant objects.<sup>3</sup> Mild nearsightedness is called low myopia, while severe myopia is known as high myopia.<sup>2</sup> High myopia can lead to holes or tears in the retina because the eyeball stretches and becomes too long. In some cases, it can cause retinal detachment.<sup>4</sup>

### What causes nearsightedness?

Nearsightedness occurs when the light entering the eye focuses in front of the retina instead of on it.<sup>2</sup> The eye relies on two critical parts to focus on an image: the cornea, which is the clear front surface of the eye, and the crystalline lens, a clear structure inside the eye that changes shape in order to focus on objects.<sup>3</sup>

In an eye without refractive error, these focusing elements have a smooth curvature, much like the surface of a smooth rubber ball, and bends incoming light to make a sharply focused image on the retina.<sup>3</sup> If the cornea is not smoothly curved, like in the case of people with farsightedness, the light does not properly bend, and this results in a refractive error.<sup>3</sup>

Children whose parents have nearsightedness have an increased chance to have it as well.<sup>1</sup> While the exact cause is unknown, the two primary factors responsible for its development are hereditary and visual stress.<sup>1</sup> Development of nearsightedness can also be attributed to how a person uses their eyes. So a person may be more likely to develop nearsightedness if they spend considerable time reading, working at a computer or doing other close up work.<sup>1</sup>

### What are the symptoms of nearsightedness?

Signs and symptoms of nearsightedness can include:<sup>2,3,4</sup>

- Eyestrain
- Headaches
- Squinting
- Difficulty seeing objects at a distance



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- Excessive blinking
- The need to sit close to the television or hold a book close while reading
- Frequent eye rubbing

## How is it corrected?

Nearsightedness can be corrected with eye glasses, contact lenses or refractive surgery.<sup>3</sup> Patients should discuss all options with their eye care professional (ECP) to determine what's most appropriate based on their eyes and lifestyle.<sup>2</sup>

1. American Optometric Association, Myopia (Nearsightedness). <http://www.aoa.org/patients-and-public/eye-and-vision-problems/glossary-of-eye-and-vision-conditions/myopia?sso=y> [Accessed June 27, 2014]
2. EyeSmart, Nearsightedness: What is Myopia? <http://www.geteyesmart.org/eyesmart/diseases/myopia-nearsightedness/index.cfm> [Accessed June 27, 2014]



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3. Mayo Clinic, Diseases and Conditions, Nearsightedness. <http://www.mayoclinic.org/diseases-conditions/nearsightedness/basics/definition/con-20027548> [Accessed June 27, 2014]
4. National Eye Institute, Facts About Myopia. <https://www.nei.nih.gov/health/errors/myopia.asp> [Accessed June 27, 2014]



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