

# Myopia - Nearsightedness

If you can see objects nearby with no problem, but reading road signs or making out the writing on the board at school is more difficult, you may be near- or short-sighted.

Your eye care professional may refer to the condition as myopia, a term that comes from a Greek word meaning "closed eyes." Use of the word "myopia" for this condition may have grown out of one of the main indications of nearsightedness: Squinting to see distant objects clearly.

Myopia is not a disease, nor does it mean that you have "bad eyes." It simply refers to a variation in the shape of your eyeball. The degree of variation determines whether you will need corrective eyewear.

## **What causes nearsightedness?**

Myopia most often occurs because the eyeball is too long, rather than the normal, more rounded shape. Another less frequent cause of myopia is that the cornea, the eye's clear outer window, is too curved. There is some evidence that nearsightedness may also be caused by too much close vision work.

## **How does myopia affect sight?**

Our ability to "see" starts when light enters the eye through the cornea. The shape of the cornea, lens and eyeball help bend (refract) light rays in such a manner that light is focused into a point precisely on the retina. In contrast, if you are nearsighted, the light rays from a distant point are focused at a place in front of the retina. As the light will only be focused in that one place, by the time it reaches the retina it will have "defocused" again, forming a blurred image.

## **Who is affected by nearsightedness?**

Myopia usually occurs between the ages of 8 to 12 years. Since the eyes continue to grow during childhood, nearsightedness usually occurs before the age of 20. Often the degree of myopia increases as the body grows rapidly, then levels off in adulthood.

During the years of rapid growth, frequent changes in prescription eyewear may be needed to maintain clear vision.

## **How is myopia diagnosed?**

Myopia is often suspected when a teacher notices a child squinting to see a

# Factsheet

The Eyecare Trust is a registered charity that exists to promote awareness of all aspects of eye health. For more information call our public information line on 0845 129 5001 or log on to [www.eyecaretrust.org.uk](http://www.eyecaretrust.org.uk)



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blackboard or a child performs poorly during a routine eye screening. Further examination will reveal the degree of the problem. A comprehensive eye health examination will detect myopia. Periodic examinations should follow after myopia has been discovered to determine whether the condition is changing, and whether a change in prescriptive eyewear is needed. Eye exams also help to ensure that vision impairments do not interfere with daily activities.

## How is myopia treated?

Corrective concave lenses are prescribed to help focus light more precisely on the retina, where a clear image will be formed. Depending on the degree of myopia, glasses or contact lenses may be needed all of the time for clear vision. If the degree of impairment is slight, corrective lenses may be needed only for activities that require distance vision, such as driving, watching TV or in sports requiring fine vision.

## How will nearsightedness affect my lifestyle?

If glasses or contact lenses are prescribed, it may take you a few days to adjust to them. After that, nearsightedness will probably not significantly affect your lifestyle. However, more severely nearsighted individuals may find the condition limits their choice of occupation in some cases.

## Nearsightedness in children

School age children may have vision problems ranging from mild to severe. When problems are suspected, it is important that the child have a comprehensive eye health examination to determine the nature of the problem and to rule out serious eye diseases. When vision conditions are treated properly, the child will enjoy the best possible sight.

## To help a child cope with nearsightedness

- Avoid referring to the child's eyes as "bad eyes;" instead tell the child that his or her eyes just bend light differently and corrective lenses are needed to help focus light rays.
- Use illustrations and simple explanations to help the child understand how a differently-shaped eyeball may result in his or her being nearsighted.

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- Make the occasion of selecting new frames for lenses a fun time.
- Consider contact lenses as an option.
- Do not restrict the child's activities because of poor vision.
- Include the child in discussions about his or her eyesight.

Encourage the child to verbalise concerns about the adjustment to rapidly changing vision.

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