

MYOPIA (NEARSIGHTEDNESS)

Patients diagnosed as having myopia are considered “nearsighted” because they see things more clearly up close than far away. The causes of and treatments for myopia are complex.

Clinical science has established that there are at least three forms of myopia. Type I myopia is present at birth or develops shortly thereafter in one or both eyes. This is typically a more severe form of myopia and less influenced by how we use our eyes. Type II myopia is acquired or functional myopia. When acquired at a young age, this myopia may be due to heredity, but its development depends on environmental influences. Type III myopia, associated with disease conditions such as diabetes, is rare and transient. It is often due to swelling of the major optical elements of the eye - the cornea or the lens.

Research has shown that the degree of Type II (functional) myopia experienced by some patients is a result of their response to visual demands. Extended periods of reading or viewing computer screens for sustained periods of time, with little physical activity, encourages the progression of nearsightedness at virtually any age. Over time the eyes focusing mechanism shifts inward, sacrificing distance clarity for near clarity.

Functional myopia usually develops gradually. Initially it may be noticed as a temporary blurring when shifting focus from near to far distances. Then the blur becomes prominent at the end of a school or work day. This cycle repeats itself until the blur at distance is constant. Children will have trouble copying from the board; adults will be aware of blurred road signs when driving home.

A comprehensive vision evaluation and appropriate supplementary testing are needed to determine which form of treatment for your nearsightedness is most appropriate. The prescribing of compensatory spectacle or contact lenses solely to make distance vision sharper treats the symptom rather than the cause of the problem. Although this may be appropriate in some cases, developmental or rehabilitative lenses may be indicated to address the underlying causes. These spectacle or contact lenses may incorporate prism, bifocal, or progressive addition lenses.

Appropriate counseling regarding visual hygiene can be helpful for many patients. Optometric vision therapy, sometimes called visual training or orthoptics, may be prescribed for patients of any age who are experiencing nearsighted tendencies of a functional origin. This is an active treatment program that usually combines in-office visual activities with home therapy procedures.

Contact lenses may be valuable in the overall treatment approach to myopia control. Research and clinical experience has shown that rigid contact lenses can slow the progression of nearsightedness. Your optometrist may recommend the programmed application of contact lenses known as orthokeratology that changes the shape of the cornea without surgery. Changing the shape of your cornea may also be accomplished through refractive surgery.

There are many considerations when it comes to treating myopia. Members of the College of Optometrists in Vision Development (COVD) are optometrists who have a special interest in all aspects of myopia. Fellows of the College have been certified in the area of vision development. For further information, contact COVD or consult with an optometrist who is a member of COVD.

This informational paper was produced by the College of Optometrists in Vision Development, which board certifies qualified optometric physicians in vision therapy. For further information, see our website, www.covd.org. WP4 Rev 1/2/08 ©2008