















Myopia and Your Child's Vision: What to Know



Myopia (short-sightedness) is a condition where an individual can't see clearly at a distance but can see objects up close. The myopia is caused by family history (kids with one or two parents with myopia are more likely to develop myopia¹), modern lifestyles (spending more time on close-up activities like reading or digital devices coupled with less time outdoors increases the likelihood of developing myopia²), or both. It usually starts in childhood and gets progressively worse until the child stops growing.

Despite being corrected with contact lenses or spectacles in most cases, it's become one of the biggest public health issues, with an estimated 339.4 million children suffering worldwide. The prevalence and severity of myopia is growing; it's expected to affect more than 50% of the world's population (almost five billion people) by 2050³.



How does Myopia Affect Children?

Myopia tends to present and worsen during childhood and adolescence⁴. As myopia worsens, it can impact the quality of a child's life (including feeling self-confident and making friends). If the child has myopia, he or she may find it challenging to read notes that the teacher writes on a whiteboard or smartboard or clearly see any visual presentations in the classroom that may, in turn, affect school performance. The longer a child goes without correction and myopia management solutions, the greater the impact on school performance or social development. Moreover, there is now an increasing recognition that myopia can lead to sight-threatening conditions later in life, such as cataracts, glaucoma, retinal detachment, and macular degeneration⁵.

How Can We Manage Myopia?

Unfortunately, myopia is not yet curable. Spectacles and contact lenses are most commonly used in the management of myopia; in some cases, refractive surgery is also an option. The best option, however, is prevention. It has been found that children who spend time outdoors for at least two (2) hours per day may be protected from developing myopia⁶. For those children who have existing myopia, the clear challenge is keeping myopia levels low to avoid its progression and the complications of high myopia.

The following current interventions have been successful in slowing the progression of myopia:

- Myopia control spectacles
- Myopia control contact lenses
- Atropine drops

How Should Parents Respond?

- Ensure that your child has an eye exam early in life so any necessary treatment is begun as soon as possible.
 Kids should have their first comprehensive eye exam at age 3. Unless their eye care professional suggests otherwise, they should continue to have eye exams every two years if no vision correction is required.
- Look for symptoms such as squinting eyes, holding books too closely, sitting too near the TV, rubbing eyes, a lot of blinking, complaints of headaches or 'tired eyes', poor participation in sports, and decreased performance at school.
- Let children play outside enough (at least two hours a day), and don't allow them to use their eyes only close up for too much and for too long at a time.
- Choose an optometrist or ophthalmologist who is qualified to examine children. Children need an exam that uses dilation drops in order to get the most precise prescription.

The good news: myopia can be preventable for some. And, for those who develop myopia, technology has advanced to the extent that it can effectively slow its progression. We can collectively help to reduce myopia's progression by ensuring our children see an eye care professional regularly and are presented with the appropriate prevention and treatment options.



- 1. Huang HM, Chang DS, Wu PC. The Association between Near Work Activities and Myopia in Children-A Systematic Review and Meta-Analysis. PLoS One. 2015;10(10):e0140419. Published 2015 Oct 20.
- 2. Mutti DO, Mitchell GL, Moeschberger ML, Jones LA, Zadnik K. Parental myopia, near work, school achievement, and children's refractive error. Invest Ophthalmol Vis Sci. 2002;43(12):3633-3640.
- 3. Holden BA, Fricke TR, Wilson DA, Jong M, Naidoo KS, Sankaridurg P, Wong TY, Naduvilath TJ, Resnikoff S, Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050, Ophthalmology, May 2016 Volume 123, Issue 5, Pages 1036–104.
- 4. Hou W, Norton TT, Hyman L, Gwiazda J; COMET Group. Axial Elongation in Myopic Children and its Association With Myopia Progression in the Correction of Myopia Evaluation Trial. Eye Contact Lens. 2018 Jul;44(4):248-259.
- 5. Flitcroft DI. The complex interactions of retinal, optical and environmental factors in myopia aetiology. Prog Retin Eye Res. 2012;31:622-60.
- 6. Xiong S, Sankaridurg P, Naduvilath T, Zang J, Zou H, Zhu J, Lv M, He X, Xu X. Time spent in outdoor activities in relation to myopia prevention and control: a meta-analysis and systematic review. Acta Ophthalmol. 2017 Sep;95(6):551-566.