# **Why Myopia** Management **Matters**

#### What is Myopia?

Myopia, also called nearsightedness or shortsightedness, is a disease in which a person experiences blurry distance vision, usually caused by the eyeball growing longer than expected.1

High myopia is diagnosed when myopia reaches a significant level, typically due to continued eye growth, which increases the risk of sight-threatening conditions later in life.1



#### How prevalent is myopia?

Myopia rates have been rapidly increasing, with studies showing a sharp rise in cases among children worldwide. By 2050, it's estimated that half of the world's population will have myopia.2

#### Why should we be concerned?

Poor vision can have a negative impact on academic performance and reading abilities. As myopia worsens, children tend to rely more on vision correction, which can limit their participation in physical activities such as sports. Additionally, it can affect a child's emotional and

social well-being.3

- Myopia leads to an increased risk of serious sight-threatening conditions. Even children with low levels of myopia are at risk of developing these conditions in adulthood.4
  - Retinal detachement
  - Myopic macular degeneration
  - Glaucoma
  - Cataracts

Condition	Risk Increase
Glaucoma	1.6x
Cataracts	2.1x
Retina Detachment	3.5x
Myopic Macular Degeneration	102x

#### What are the risk factors for myopia?

Did you know that the following risk factors increase your child's risk of developing myopia?

#### **Genetic Factors**



Children with 1 myopic parent



Children with 2 myopic parents

Children of myopic parents are also at risk of developing myopia at an earlier age.

Children with South Asian ancestry

African Caribbean ancestry

Children of these ethnicities are at increased risk of developing myopia.6

#### **Environmental Factors**



Extended close-up activity time



Performing close-up work activities at a distance less than 30cm

Working in low-light environments at home.5

Daily outdoor time is less than 2 hours.5

# Why is early intervention important?

- Reduces the likelihood of developing high myopia and its associated risks.<sup>7</sup>
- Myopia may impact your child's quality of life if not addressed.





# **Eyeglasses**

Special eyeglasses designed to slow the worsening of myopia. These eyeglasses are different from regular eyeglasses that simply correct blurred vision.7

- Advantage: Easy to use.
- Consideration: Some children may have active lifestyles that require alternative treatment.

# **Lifestyle Modifications**

Lifestyle changes can help delay or slow down the worsening of myopia.

# **Outdoor Play**

- Encourage at least 2 hours of outdoor play daily.7
- Recommended activities:
  - Visit the park or beach.
  - Engage in outdoor sports like football, swimming, hockey, and ice skating.
  - Go on nature walks and hikes.
  - Play backyard games like tag, hide and seek, or frisbee.

# Close-Up Activity

- Reduce screen time and time spent on other close-up activities.8
- Tips:
  - Keep a log of time spent outdoors and
  - performing close-up activities. Use timers to remind them to take breaks.
  - Ensure that screens and close-up activities are viewed at least elbow distance away.

# **Contact Lenses**

Special contact lenses that can slow the worsening of myopia. Options include soft contact lenses for daytime wear or orthokeratology lenses that your child can wear overnight for lens-free days.7

- Advantage: Contact lens wear is suitable for active lifestyles and is likely to improve a child's self-esteem.
- Consideration: Proper hygiene is required to minimize the risk of eye infections.

# **Eye Drops**

Atropine eye drops are applied at bedtime to slow myopia worsening.<sup>7</sup>

- Advantage: Parents can help ensure that the treatment plan is being followed.
- Consideration: Temporary side effects include light sensitivity and blurred vision. Atropine does not correct a child's blurry vision, so eyeglasses or contact lenses will still be required.

#### Stay Informed and Engaged

Contact your eye care provider with questions and support to manage your child's myopia.

Together, we can effectively manage myopia and ensure a bright future.

Our priority is your child's eye health.





- Biswas, S., El Kareh, A., Qureshi, M. et al. The influence of the environment and lifestyle on myopia. J Physiol Anthropol 43, 7 (2024). https://doi.org/10.1186/s40101-024-00354-7
- Holden BA, Fricke TR, Wilson DA, et al. Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. Ophthalmology. 2016;123(5):1036-1042. doi:10.1016/j.ophtha.2016.01.006 Sankaridurg P, Tahhan N, Kandel H, Naduvilath T, Zou H, Frick KD, et al. IMI impact of myopia. Invest Ophthalmol Vis Sci. 2021;62(5):2. https://doi.org/10.1167/jovs.62.5.2.

  Haarman AEG, Enthoven CA, Tideman JWL, Tedja MS, Verhoeven VJM, Klaver CCW. The Complications of Myopia: A Review and Meta-Analysis. Invest Ophthalmol Vis Sci. 2020;61(4):49. doi:10.1167/jovs.61.4.49

  Martínez-Albert N, Bueno-Gimeno I, Gené-Sampedro A. Risk factors for myopia: A Review. Journal of Clinical Medicine. 2023;12(18):6062. doi:10.3390/jcm12186062

Rudnicka AR, Owen CG, Nightingale CM, Cook DG, Whincup PH. Ethnic differences in the prevalence of myopia and ocular biometry in 10- and 11-year-old children: the Child Heart and Health Study in England (CHASE). Invest Ophthalmol Vis Sci. 2010;51(12):6270-6276. doi:10.1167/iovs.10-5528

Eppenberger LS, Grzybowski A, Schmetterer L, Ang M. Myopia Control: Are We Ready for an Evidence Based Approach?. Ophthalmol Ther. 2024;13(6):1453-1477. doi:10.1007/s40123-024-00951-w

Philipp, D., Vogel, M., Brandt, M. et al. The relationship between myopia and near work, time outdoors, and socioeconomic status in children and adolescents. BMC Public Health 22, 2058 (2022). https://doi.org/10.1186/s12889-022-14377-1