CooperVision®

# When Children Can't See Far:
## A Discussion About Myopia in Children

**DEFINING MYOPIA:**

Myopia – a primary symptom of which is nearsightedness – a common eye health condition in which the eyeball elongates, causing light rays to focus incorrectly in the eye, thus making distance vision blurry.

**THE INCREASING PREVALENCE AND SEVERITY OF MYOPIA IN CHILDREN:**

More than 40 percent of Americans have myopia and that number is increasing at an alarming rate, especially among school-age children.[1]

One in four parents have a child with myopia and about three-quarters of children with myopia were diagnosed between the ages of 3 and 12.[2]

Two-thirds of Eye Care Practitioners (ECPs) say the presence of myopia among children in their practice has increased over the past 5-10 years, and 81% of ECPs recognize it as one of the biggest problems impacting children's eyesight today.[3]

**CAUSES OF MYOPIA:**

Myopia typically occurs during childhood when the eyeball develops a longer shape, meaning the distance between the front of the eye and the retina at the back of the eye is longer than an eye without myopia. Blurry vision due to myopia is the result of light rays focusing at a point in front of the retina rather than directly on its surface.[6]

However, the upward incidence of myopia can be attributed to different factors, and is occasionally the result of a combination of these factors:

- **Genetics** – Family history plays a role in a child's risk of myopia. If neither parent has myopia, the chance the child will develop myopia is relatively low. But if one parent has myopia, it increases the child's chance of developing myopia by 3x – doubling to 6x if both parents have myopia.[7]
- **Environment** – Environment – Exposure to sunlight, vitamin D levels, dopamine levels and the amount of time a child spends outdoors may have an impact on the likelihood of myopia development. Research shows spending more time outdoors lowers the risk of developing childhood myopia.[8]

**MYOPIA LEVELS:**

Myopia usually starts in childhood at mild levels and often progresses.[4] It may increase in severity to moderate and high levels without any interventions. Each level of myopia is defined by a specific diopter (D) range. A diopter is the unit used to measure the correction, or focusing power, of the lens the eye requires to see clearly.

**Mild Myopia:** -0.50 to -2.75 D[5]

**Moderate Myopia:** -3.00 to -4.75 D[5]

**High Myopia:** -5.00 or higher[5]


1 Cooper, Y. (2019, May 1). With Childhood Myopia Rates on the Rise, the American Optometric Association Highlights the Importance of Early Intervention through Annual Eye Exams. Retrieved from https://www.aoa.org/newsroom/myopia-rates-on-the-rise-syvm
2 Myopia: 2018 American Eye-Q Research. (2018, December 20). Retrieved October 2, 2019, from https://www.aoa.org/patients-and-public/eye-and-vision-problems/glossary-of-eye-and-vision-conditions/myopia/myopia-research.
3 CVI data on file 2019. Myopia Awareness, The Harris Poll online survey of n= 1,005 parents (with child age 8-15) and n=313 ECPs (who see at least 1 child age 8-15 with myopia each month) in U.S.
4 Donovan L, Sankaridurg P, Ho A, Naduvilath T, Smith EL 3rd, Holden BA. Myopia progression rates in urban children wearing single-vision spectacles. Optom Vis Sci. 2012 Jan;89(1):27-32.
5 Flitcroft DI. The complex interactions of retinal, optical and environmental factors in myopia aetiology. Prog Retin Eye Res. 2012 Nov;31(6):622-60. doi: 10.1016/j.preteyeres.2012.06.004. Epub 2012 Jul 4. PMID: 22772022.
6 Mayo Clinic. Nearsightedness. Retrieved October 30, 2019 from: https://www.mayoclinic.org/diseases-conditions/nearsightedness/symptoms-causes/syc-20375556.
7 Gifford, P., & Gifford, K. L. (2016). The Future of Myopia Control Contact Lenses. *OptomVis Sci.* 93(4): 336-343.
8 Xiong S, Sankaridurg P, Naduvilath T, et al. Time spent in outdoor activities in relation to myopia prevention and control: a meta-analysis and systematic review. Acta Ophthalmol. 2017;95(6):551-566. doi:10.1111/aos.13403.

## LONG-TERM OCULAR HEALTH IMPACTS:

As the eye continues to grow and the amount of myopia increases, ocular tissues change in response to the eye growth, resulting in eye health risks that are not as evident in a non-myopic eye. The more nearsighted a child is, the greater these risks become[5], and these risks increase exponentially as myopia progresses.[5]

Leaving myopia untreated may contribute to more severe eye health complications later in life,[5] including:

- **Cataracts** – a clouding of the lens of the eye that can cause changes in vision. Though cataracts can affect everyone as they age, they often develop sooner in those who have myopia.[5]
- **Glaucoma** – a condition, usually linked to high pressure inside the eye, that causes damage to the eye's optic nerve, potentially causing irreversible vision loss and blindness. Studies show myopic people have a 2-3x greater risk of developing glaucoma.[5]
- **Retinal detachment** – occurs when the retina, a thin layer of tissue that surrounds the entire inside the eye, pulls away from supportive layers of blood vessels that provide its necessary oxygen and nourishment.[5]
- **Myopic Maculopathy** – caused by the deterioration of the central portion of the retina, and is a leading cause of severe, irreversible vision loss.[5]

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## MANAGING MYOPIA:

The earlier myopia management starts, the better the outcomes for the child's near- and long-term eye health. In the U.S., 71% of ECPs say it is absolutely essential to slow the progression of myopia among children ages 8 – 15 years old.[3]

Managing myopia progression by even 1 diopter[10]:

- Reduces risk of myopic maculopathy by 40%
- Reduces risk of open-angle glaucoma by 20%
- Reduces risk of visual impairment by 20%
- Saves between 0.5 and 0.9 years of visual impairment


Managing myopia starts with regular comprehensive eye exams so ECPs can determine progression and treatment.

CooperVision's MiSight® 1 day is the first and only contact lens approved by the FDA* to slow the progression of myopia in children (8-12 years of age at the initiation of treatment).[10] The FDA-approved* lens is available as part of a comprehensive myopia management approach offered by CooperVision and participating eye care practitioners.

To learn more about the MiSight® 1 day myopia management approach please visit **www.coopervision.com.**

9 Bullimore MA. The Safety of Soft Contact Lenses in Children. Optom Vis Sci. 2017;94:638–46
10 Chamberlain P, et al. A 3-year randomized clinical trial of MiSight® lenses for myopia control. Optom Vis Sci. 2019; 96(8):556–567.

***Indications for use:** MiSight® 1 day (omafilcon A) soft (hydrophiliv) contact lenses for daily wear are indicated for the correction of myopic ametropia and for slowing the progression of myopia in children with non-diseased eyes, who at the initiation of treatment are 8-12 years of age and have a refraction of -0.75 to -4.00 diopters (spherical equivalent) with ≤ 0.75 diopters of astigmatism. The lens is to be discarded after each removal.

**Did you know:**
**More than 40% of Americans have myopia (nearsightedness),** and that number is increasing at an alarming rate, especially among school-aged children.[1]

Myopia in children often goes undetected and gets worse as the children grow. Before school begins, schedule your child a comprehensive eye exam to see if they are nearsighted.

As a certified prescriber of the Brilliant Futures™ Myopia Management Program featuring MiSight® 1 day* soft contact lenses, I can help your age-appropriate child see clearly[2†] while slowing down the progression of their myopia[3‡]. Contact lenses are a great way to support your child's full and active lifestyle.

BRILLIANT FUTURES™
WITH MiSIGHT® 1 day

**Don't wait.**
**Call our office today to schedule a comprehensive eye exam!**

Eye Care and Surgery
540-772-7171
eyes@eyecaresurgery.com

*** U.S. Indications for Use:** MiSight® 1 Day (omafilcon A) Soft (Hydrophilic) Contact Lenses for daily wear are indicated for the correction of myopic ametropia and for slowing the progression of myopia in children with non-diseased eyes, who at the initiation of treatment are 8-12 years of age and have a refraction of -0.75 to -4.00 diopters (spherical equivalent) with ≤ 0.75 diopters of astigmatism. The lens is to be discarded after each removal.

† From 1 week through 3 year visits.

‡ Over a 3 year period, MiSight® 1 day reduced myopia progression on average by 59% compared to a single vision contact lens. Children aged 8-12 at the initiation of treatment.

1. Cooper, Y. (2019, May 1). With Childhood Myopia Rates on the Rise, the American Optometric Association Highlights the Importance of Early Intervention through Annual Eye Exams. Retrieved from https://www.aoa.org/newsroom/myopia-rates-on-the-risesyvm

2. Sulley A et al, Wearer experience and subjective responses with dual focus compared to spherical, single vision soft contact lenses in children during a 3-year clinical trial. AAO 2019 Poster Presentation.

3. Chamberlain P, et al. A 3-year randomized clinical trial of MiSight® lenses for myopia control. *Optom Vis Sci.* 2019; 96(8):556-567.

CooperVision®

# MiSight® 1 day: first and only soft contact lens FDA-approved* to slow the progression of myopia in children, aged 8-12 at the initiation of treatment[1]

## OVERVIEW:

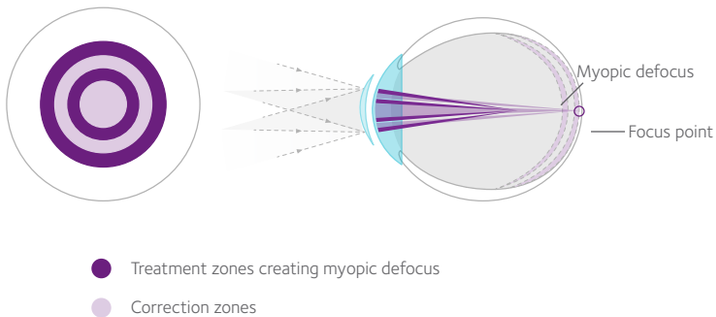
CooperVision's MiSight® 1 day is the *first and only* contact lens FDA-approved* to slow the progression of myopia in children aged 8-12 at the initiation of treatment[1]. Children can apply the soft, daily wear, single use contact lenses to their eyes in the morning, wear them for at least 10 hours during the day, then dispose of them in the evening.

**The FDA-approved* lens is available as part of a comprehensive myopia management approach offered by CooperVision and participating eye care practitioners.**

## HOW IT WORKS:

MiSight® 1 day is an award-winning[2,3,4] dual-focus soft contact lens that uses ActivControl™ Technology to slow the elongation of the eyeball[1]. **The ActivControl™ Technology in MiSight® 1 day utilizes an optic zone concentric ring design with alternating vision correction and treatment zones.** Two zones are vision correction zones with the label power of the contact lens, and the alternating two zones are treatment zones with 2 diopters of defocus to slow the progression of myopia.

This design allows the child to see clearly while benefiting from the treatment effect.




***Indications for Use:** MiSight® 1 day (omafilcon A) soft (hydrophilic) contact lenses for daily wear are indicated for the correction of myopic ametropia and for slowing the progression of myopia in children with non-diseased eyes, who at the initiation of treatment are 8-12 years of age and have a refraction of -0.75 to -4.00 diopters (spherical equivalent) with ≤ 0.75 diopters of astigmatism. The lens is to be discarded after each removal.

**References: 1.** Compared to a single vision 1 day lens over a 3 year period. Chamberlain P, et al. A 3-year randomized clinical trial of MiSight® lenses for myopia control. *Optom Vis Sci.* 2019; 96(8): 556-567. **2.** British Contact Lens Association (BCLA) (2019, May 17). Retrieved October 2, 2019, from https://www.bcla.org.uk/Public/News/Press_Release/Finalists-unveiled-for-2019-BCLA-Awards.aspx. **3.** La liste des nominés aux 26e SILMO d'Or. (2019, September 25). Retrieved October 2, 2019, from https://en.silmoparis.com/Silmo-d-Or-Awards/Nominees-2019. **4.** Optician. (2018, April 4). Optician Awards 2018: Black ties and glittering prizes. Retrieved October 2, 2019, from https://www.opticianonline.net/news/optician-awards-2018-black-ties-and-glittering-prizes.

## CLINICALLY PROVEN – FIVE YEARS OF DATA:

CooperVision undertook a rigorous, multi-year, multi-country study to track how the MiSight® 1 day contact lens affected myopia progression in children aged 8–12 at the initiation of treatment5. After three years, the study concluded the lens effectively **slowed myopia progression by an average of 59% and slowed the rate at which the eye lengthens by an average of 52%** compared to children in the control group wearing a single-vision 1-day lens.[5] Results presented after the five-year mark continued to demonstrate safety and efficacy.[6]

> "After three years, the study concluded the lens effectively **slowed myopia progression by an average of 59% and slowed the rate at which the eye lengthens by an average of 52%** compared to children in the control group wearing a single-vision 1-day lens.[5]"

## EASE OF FITTING, WEAR, AND CARE:

Incorporating this technology into a 1-day disposable lens was based on the safety profile of lenses that are discarded after one day of use, as well as children's ease of use and parental peace of mind. For children and parents, a multi-center study found:

**90%**

of children in the study **preferred wearing MiSight® 1 day lenses** over wearing eyeglasses[5,6].

**90%**

of children could apply and remove the MiSight® 1 day lenses on their own[5,7].

**90%**

of **parents reported their children were happy with their experience** wearing contact lenses. They noted the comfort, vision, ease of use, and freedom from eyeglasses as top benefits[1,8].

## PROGRAM COSTS:

The cost of the program varies by region, ask your eye care professional for details.

**References: 5.** Compared to a single vision 1 day lens. Chamberlain P, et al. A 3-year randomized clinical trial of MiSight® lenses for myopia control. *Optom Vis Sci.* 2019; 96(8): 556-567. **6.** CooperVision data on file 2019. How much do you like wearing your contact lenses? 87/97 (90%) Top box 'I like contact lenses the best' Subjective response @60M. **7.** As reported by parents. **8.** CooperVision data on file 2018. Overall experience as defined as children's comfort, vision, lens handling, and freedom from spectacles. Children aged 8-15 years. 3-year study report.