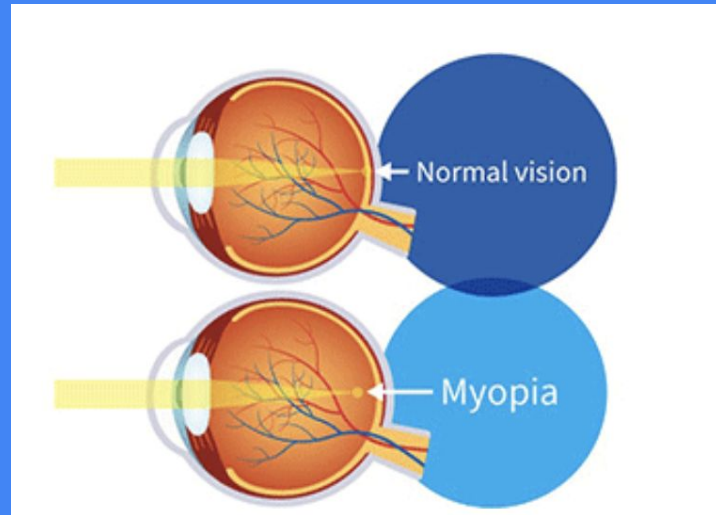


Myopia Management 101 & Implementation

Inna Lazar, OD



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Is myopia a simple refractive error or a disease?

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Do you currently treat Myopia?

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How do you treat Myopia?

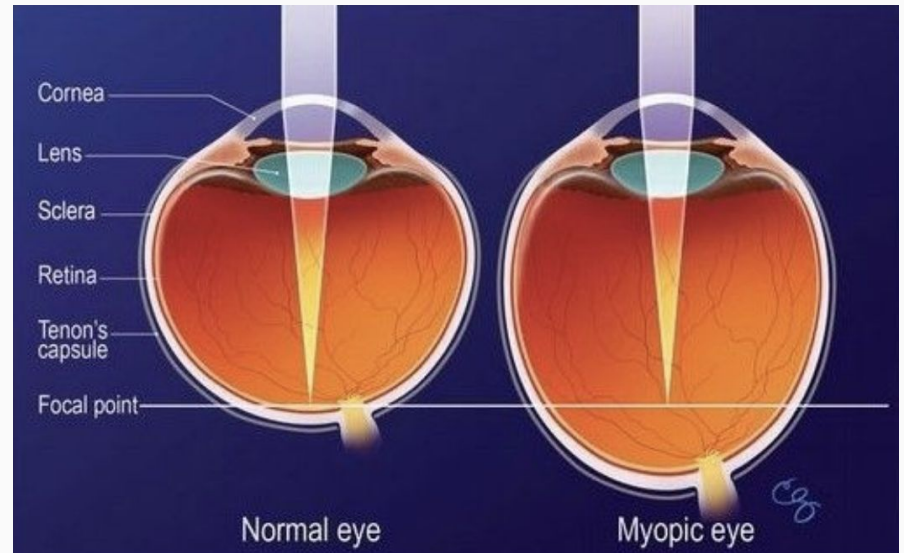
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Is myopia a simple refractive error or a disease?

This is an important question because the answer will influence our approach to managing myopia.

Myopic Progression

- Clinical trials and animal models support axial elongation as the primary factor behind myopic progression.
- Refractive myopia, where corneal and/or lens optical power is high in normally sized eyes, does occur.
- Refractive myopia is notably less common compared to axial myopia.



Myopic Progression

- Clear relationship between intervention impact and changes in refraction and axial length when evaluating myopic progression interventions.
- Ocular morbidity escalates with each diopter change and millimeter increase in axial length, heightening the risk of severe, sight-threatening complications.



1. Huang J, Wen D, Wang Q, et al. Efficacy comparison of 16 interventions for myopia control in children: a network meta-analysis. *Ophthalmology*. 2016; 123: 697–708.

Myopic Progression

Eye Disease	-2.00D	-4.00D	-6.00D	-8.00D
myopic maculopathy ³	2.2 X higher	9.7 X higher	40.6 X higher	126.8 X higher
retinal detachment ⁴	3.1 X higher	9.0 X higher	21.5 X higher	44.2 X higher
PSC cataract ⁵	1.6 X higher	3.2 X higher	5.4 X higher	12.3 X higher
glaucoma ⁶	1.7 X higher	2.5 X higher	2.5 X higher	N/A

Myopic Progression

- A one-diopter increase in nearsightedness (myopia) leads to a 67 percent higher chance of developing myopic maculopathy.
- Slowing down myopia by one diopter decreases the risk of a patient developing myopic maculopathy by 40 percent.
- This benefit from treatment applies regardless of how nearsighted a person is.

1. Bullimore, M. A., & Brennan, N. A. (2019). Myopia control: why each diopter matters. *Optometry and Vision Science*, 96(6), 463-465.

Myopic Progression

Based on these data, I believe myopia should be considered as a **disease** rather than merely a refractive error.

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Are you convinced yet?

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Those who said No or Maybe!

Please share your thoughts?

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Please share your thoughts?

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Factors That Contribute To Myopia Onset And Progression

- Genetics: Family History Of Myopia
- Age Of Myopia Onset
- Lack Of Outdoor Time
- Increased Screen Time?

Chicken of the egg?



Leaders | What to do about myopia

Short-sightedness has become an epidemic

To fight it, schools should send their students outside

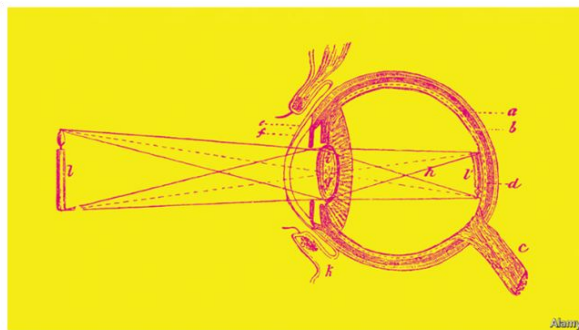


Science & technology | Ophthalmology

Short-sightedness was rare. In Asia, it is becoming ubiquitous

That is storing up problems for the future

Jun 9th 2022



Alamy

The Atlantic

October 2022 Issue

Two photographs of children wearing glasses. The left photo shows a close-up of a child's face with glasses. The right photo shows a child sitting on a couch, looking down at something in their hands, also wearing glasses.

THE MYOPIA GENERATION

Why do so many kids need glasses now?

By Sarah Zhang

Ukraine Defiant



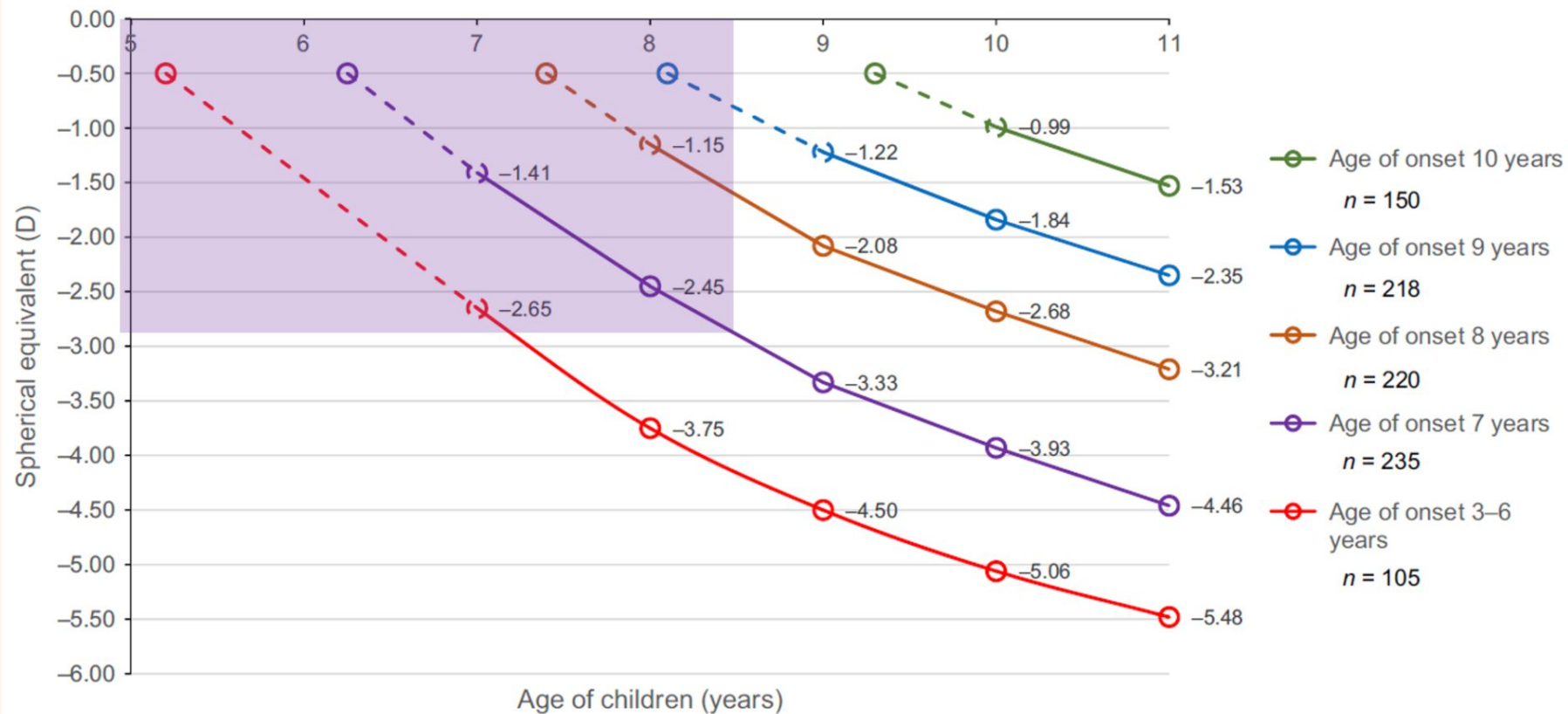


Figure 2. Yearly changes in spherical equivalent (D) of myopic children from age 7–11 years, stratified by age of myopia onset ($n = 928$). D, dioptres.

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What is the average age at which you would feel comfortable beginning myopia management?

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OPTOMETRISTS (N = 316)

**What is the average
age you would feel
comfortable beginning
myopia management?**

8.78

YEARS OLD
AVERAGE

Myopia Progression

The younger the kids are the faster they progress



Global Prevalence of Myopia

- The global prevalence of myopia is predicted to increase significantly.
- In 2010: 27% of the world's population affected.
- By 2050: Estimated to rise to 52% (1, 2, 3).
- That's a staggering 5 billion people.



1. Nouraeinejad A. Iran: Noruzi Publication; 2017. Differential diagnosis in optometry and ophthalmology. 2nd ed.
2. Nouraeinejad A. [Lecture] Moorfields Eye Hospital. London: 2020. Aug 18, A warning message from 2020 to 2050: More than half of the world population will be myopic by 2050.
3. Holden BA, Fricke TR, Wilson DA, Jong M, Naidoo KS, Sankaridurg P, et al. Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050. *Ophthalmology*. 2016;123:1036–42.

Global Prevalence of Myopia

- As the number of people with myopia grows
- The age of onset of myopia is decreasing (1, 2).
- This trend suggests a need for proactive management and prevention strategies.



1. Nouraeinejad A. Iran: Noruzi Publication; 2017. Differential diagnosis in optometry and ophthalmology. 2nd ed.
2. Nouraeinejad A. [Lecture] Moorfields Eye Hospital. London: 2020. Aug 18, A warning message from 2020 to 2050: More than half of the world population will be myopic by 2050.

GLOBAL SNAPSHOT

- The hot spots of myopia are East and South East Asia
- prevalence of myopia 80 to 90 %



Myopia in the USA

Myopia prevalence is rising, and the USA has reported a prevalence of 42%, almost doubling in three decades.¹



1. Vitale S, Sperduto RD, Ferris FL, 3rd. Increased prevalence of myopia in the United States between 1971-1972 and 1999-2004. Archives of ophthalmology 2009;127:1632-9

Key Points

Estimated:

- Almost 5 billion myopes by 2050
- Almost 1 billion high myopes by 2050
- Myopia to become a leading cause of permanent blindness worldwide
- Significant implications for planning comprehensive eye care services globally



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 1036–1042.

Myopia Management

- If you are not practicing myopia management, you are not alone.
- Approximately 64% of myopic children worldwide are still treated with single-vision options.¹
- If you are part of the majority prescribing single-vision lenses to young myopes and planning to see them again in a year, consider if you are truly benefiting your patients.
- It's essential to reevaluate your approach to ensure the best care for myopic patients.



1. Wolffsohn JS, Calossi A, Cho P, et al. Global trends in myopia management attitudes and strategies in clinical practice - 2019 update. *Cont Lens Anterior Eye*. 2020;43(1):9-17.

If you are not treating Myopia yet?



Treatment Options

Atropine

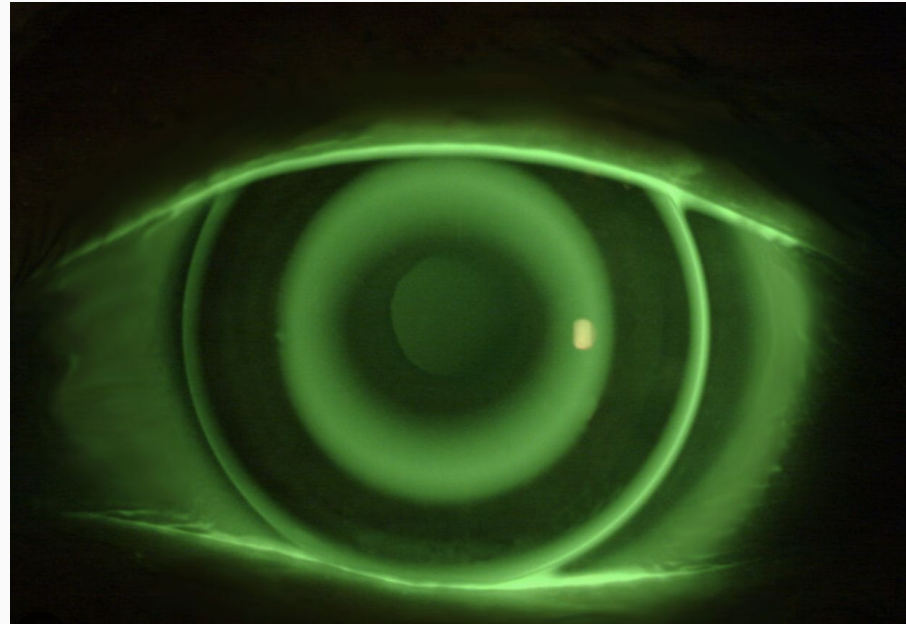
- Compounded in various concentrations.
- Dosing: QHS OU
- Side effects: Light sensitivity, focusing issues, rare occurrences.



Treatment Options

Orthokeratology

Ability, CRT, Elucid, Eyespace



Treatment Options

MiSight (daily contact lenses)



Best Candidate for the Best Treatment

- Atropine (compounded various concentrations)
- Ortho-k (Ability FDA-approved for Myopia Management)
- Misight (FDA approved for Myopia Control)



Best Candidate for the Best Treatment

Atropine: children under 5 years old/ add on treatment

Ortho-k: watersports/patient request

Misight: everyone else

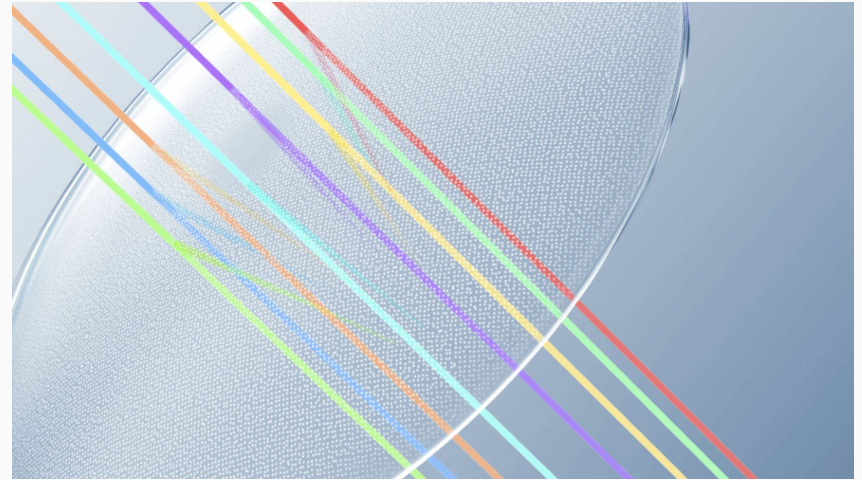


Future

Sight Glasses

Our lenses manage contrast by softly scattering light

- Before it hits the retina
- Before the retina detects artificial contrast and signals the eye to elongate



Myopia Management Implementation

- Explain myopia management options clearly.
- Work as a team with your staff.
- Create a structured myopia management program.
- Help young myopic patients.
- Your efforts will lead to success and growth for your practice.



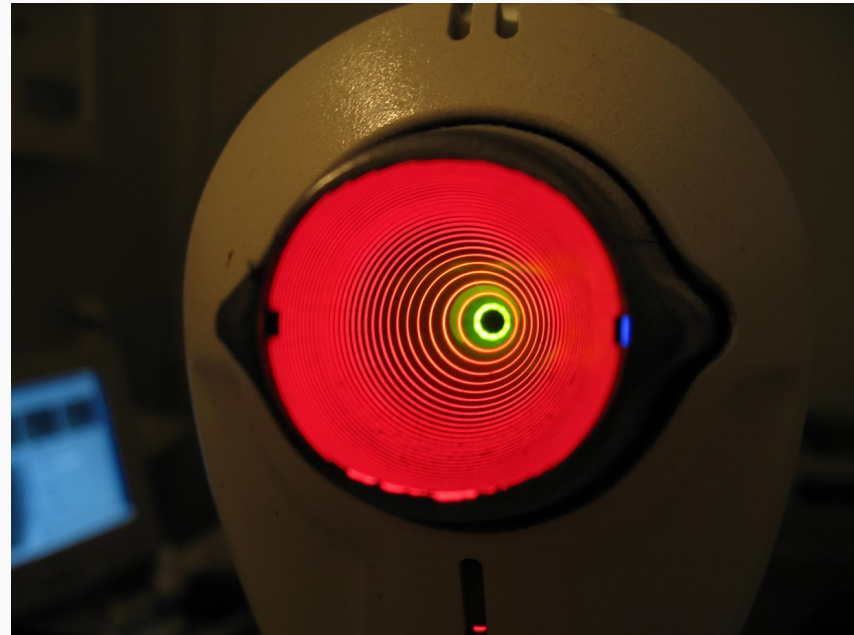
5 Steps to Start Myopia Management

Step 1

Education and Training:

Ensure that you and your staff are well-informed about myopia management techniques, the latest research, and available treatment options. Consider attending relevant courses or workshops.

Vision By Design (bootcamp) is a great start



5 Steps to Start Myopia Management

Step 2

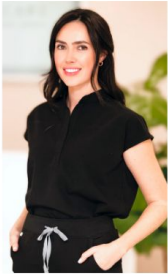
Patient Education:

Develop materials and strategies to educate your patients and their parents or guardians about myopia, its progression, and the benefits of myopia management. This includes explaining the available treatment options and their potential outcomes.



In office marketing materials

MEET THE DOCTORS



Dr. Inna Lazar

Dr. Inna Lazar is an expert in primary eye health and dry eye disease treatment. She earned her Doctor of Optometry Degree from the Pennsylvania College of Optometry (Salus University) and founded Greenwich Eye Care and the Dry Eye Institute, which specializes in advanced treatments for dry eye. Dr. Lazar has received numerous awards and recognitions, including being named one of “America’s Best Eye Doctors” by Newsweek in 2022 and receiving an “Ambassador of Sight” award from the National Lions Team. She uses her social media platforms and podcast to educate her followers on non-traditional eye health topics, and she is a frequent speaker, consultant, and advisor in the eye care industry.



Dr. Sarah Lechanski

Dr. Sarah Lechanski is an experienced optometrist specializing in family eye care. She values building trust with her patients and treating them like family, providing personalized treatment plans that deliver high-quality and efficient eye care. Dr. Lechanski offers comprehensive eye exams, medical eye care, ocular disease diagnosis and treatment, emergency eye care, contact lens fittings, LASIK consultations, and surgical co-management. She obtained her doctorate from The Pennsylvania College of Optometry at Salus University and has volunteered her expertise in providing eye care in Guatemala. Dr. Lechanski is originally from Buffalo, NY, and now lives in Connecticut with her husband and two children. She enjoys reading, baking, and outdoor activities in her leisure time.

MYOPIA

Myopia, or nearsightedness, is a growing concern for children’s vision and future. It significantly increases the risk of serious eye conditions like glaucoma, cataracts, and retinal detachment later in life. The rise in childhood myopia is due to factors such as increased screen time, decreased outdoor activities, and genetics. Fortunately, myopia is treatable and its progression can be slowed down or prevented. With proper treatment, children’s myopia can be effectively managed and their vision protected.

MiSight Daily Disposable Contact Lenses

MiSight lenses have emerged as an FDA-approved revolutionary tool for managing myopia in children. They are contact lenses specifically designed to slow down the progression of myopia, and studies have shown them to be both effective and safe for daily wear. With the correct usage and regular monitoring, MiSight lenses represent a significant advancement in maintaining and protecting your child’s vision.

Orthokeratology (Ortho-K, Night Lenses)

Orthokeratology, commonly known as Ortho-K, is a non-surgical approach that uses specially custom-designed contact lenses to reshape the surface of the eye to improve vision. This method is primarily used for correcting myopia or nearsightedness in children and is worn during sleep to provide clear, glasses-free vision throughout the day. Importantly, Ortho-K has been proven highly effective for myopia management, as evidenced by extensive research and studies.

Atropine Drop Therapy

Atropine has been demonstrated in numerous studies to have significant efficacy in managing myopia in children. The treatment involves administering atropine eye drops of varying strengths - 0.01%, 0.025%, or 0.05% - usually applied in the evening before bedtime. The strength can be adjusted depending on the patient’s needs and response to the treatment. While atropine is generally safe, it’s important to note that some side effects, such as light sensitivity or blurry near vision, can occur, but these are typically manageable with appropriate precautions.

5 Steps to Start Myopia Management

Step 3

Clinical Protocols:

Establish clear clinical protocols for identifying myopia, measuring its progression, and determining the appropriate treatment for each patient. Ensure that these protocols are consistently followed in your practice.



Measuring Myopia

Topography

- Medmont

AXL measuring device

- Topcon Aladdin myah
- Oculus myopia master
- Haag streit lenstar myopia



5 Steps to Start Myopia Management

Step 4

Invest in Necessary Equipment:

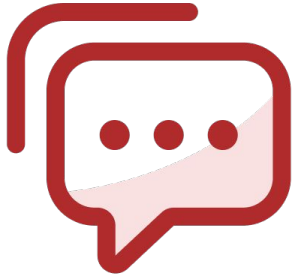
Invest in the equipment and technology needed for myopia management, orthokeratology lenses fitting set, topography, AXL measuring device.

5 Steps to Start Myopia Management

Step 5

Determine your fee schedule

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Audience Q&A Session

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