

Modern Myopia Intervention Strategies

the Latest Advances in Myopia Intervention

By

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Course Description

Technological advancements and innovative solutions have enabled eye care professionals to utilize a range of intervention strategies for myopia. The most recent progress in myopia management has focused on addressing the underlying mechanisms of myopia progression, identifying key risk factors, and emphasizing the significance of early intervention. The most recent treatment approaches, including spectacle lenses, contact lenses, and atropine therapy, will be explored.

Learning Objectives

Upon completion of the course, students should be able to:

1. Analyze current trends in myopia prevalence, the underlying pathophysiology, and the primary risk factors contributing to myopia progression.
2. Explain the design and mechanism of spectacle lenses developed to slow the progression of myopia.
3. Evaluate the effectiveness of contact lens treatments, including orthokeratology (a method using specially designed rigid contact lenses to temporarily reshape the cornea), and low-dose atropine therapy (the use of low concentrations of atropine eye drops to reduce myopia progression), as intervention strategies for myopia management.

Time Course Outline

I. Introduction (5 min)

- A. Definition and prevalence of myopia
- B. Importance of myopia control strategies
- C. Why myopia control matters

II. Understanding Myopia (5 min)

- A. Definition
- B. Etiology
- C. Impact of myopia on visual health and quality of life.
- D. Risk factors and genetics associated with myopia development.

III. Myopia Control Strategies (20 min)

A. Optical Intervention

1. Eyeglasses with myopia management lenses
 - i. Stellest - FDA Approved in late 2025
 - ii. HALT technology
 - a. Clear SV center
 - b. Defocus periphery +3.00 D.
 - c. Volume of myopic defocus
 - iii. Fitting parameters (monocular PD, OC and POW measurements)
 - iv. Lens parameters (power and substrate)
 - v. Prescription notation
2. Multifocal contact lenses
3. Orthokeratology (Ortho-K) lenses
4. Peripheral defocus modifying contact lenses

- B. Pharmacological Medication Intervention
 - 1. Atropine eye drops
 - 2. Low-dose atropine therapy
- C. Environmental and Lifestyle Modifications
 - 1. Outdoor activities and natural lighting
 - 2. Reducing near work activities and screen time
 - 3. Proper visual ergonomics

IV. Contact Lens Selection and Fitting Process for Myopia Control (10 min)

- A. Comprehensive eye examination for myopia control
 - a. Refractometry
 - b. Corneal Topography / Tomography
 - c. Biometry
- B. Evaluating patient suitability for different contact lens options.
- C. Determining the appropriate lens parameters and design.
- D. Education and training for patients and parents regarding lens insertion, removal, and care.

V. Addressing Patient Concerns and Expectations (5 min)

- A. Managing patient expectations regarding myopia control outcomes
- B. Addressing concerns related to comfort, handling, and compliance with contact lenses.
- C. Providing support and guidance for successful myopia management journey.
- D. Clarifying the importance of regular follow-up visits to monitor eye health and treatment progress.

E. Discussing financial considerations and available resources to help families manage the costs of myopia control options.

VI. Conclusion and Q &A (10 min)

A. Summary of myopia control strategies, with a focus on contact lenses.

B. Emphasizing the importance of early intervention and collaboration between eye care professionals and patients.

C. Highlighting the value of patient education, including proper lens handling, maintenance, and the need for consistent follow-up visits to ensure both safety and effectiveness of myopia control treatments. Reinforcing these educational efforts can help improve patient compliance and long-term outcomes.

D. Addressing the role of ongoing support and open communication in overcoming challenges related to comfort, adaptation, or concerns about contact lens wear. Encouraging families to share their experiences and questions can foster a more positive and successful myopia management journey.

E. Discussing financial considerations and available resources, such as insurance coverage, payment plans, or community programs, to help families manage the cost of myopia control options. Ensuring transparency around expenses can support informed decision-making and greater access to care.