

Course Title:**Ortho-K Workshop****Speakers:**

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Course Description:

This two-hour highly interactive course will allow participants to experience a variety of orthokeratology fittings. Case history, corneal tomography, and anterior segment imaging will be presented for each case. Participants will have the opportunity to select initial diagnostic lenses and 'perform' the fitting from beginning to end, while troubleshooting along the way. For cases presented, several designs may be an appropriate option, and pros and cons of each lens will be highlighted, along with troubleshooting techniques to maximize success.

Learning Objectives:

1. Understand how to select an initial diagnostic lens based on case history, tomography, ocular health findings.
2. Understand how to prescribe orthokeratology as a myopia management option based on case history, topography, tomography, and ocular health findings.
3. Review different instrumentation and lens designs that can be utilized for maximizing success.
4. Determine suitability of individual patients for custom lens designs.
5. Understand how to utilize corneal topography/tomography to enhance troubleshooting.

Course Outline:

1. What is Myopia Management?
2. The prevalence of myopia and high myopia is rising rapidly
 1. Increased prevalence of myopia is an issue not only among East Asian populations
 2. Myopia prevalence in American children

3. Myopia increases the risk of severe and sight-threatening complications
 1. Educational materials improve parental & patient understanding and adherence
 2. Why each diopter matters
 1. Slowing myopia by one diopter should reduce the likelihood of a patient developing myopic maculopathy by 40%. This treatment benefit accrues regardless of the level of myopia.
 4. Challenges to myopia management
 1. Who to treat?
 2. When to treat?
 3. How to treat?
 4. When to taper/stop?
 5. What & how to communicate?
 5. Who to treat?
 1. Determine the risk profile
 2. Recommend treatment for all myopic children with greater than or equal to -0.50D of myopia
 3. Aggressively treat children at risk of developing high myopia
 1. Onset less than eight years old
 2. Less than 1.5 hours outdoors per day
 3. East Asian ancestry
 4. Reside in an urban environment
 5. More than 2.5 hours per day spent on near work
 6. More myopia than age normal and progression greater than 0.75D per year
 7. Greater than 75th percentile in age/axial length growth charts
 6. When to treat?
 1. Start treatment as early as possible
 2. Ages 6 to 12 years old myopia progresses the most
 3. CDC pediatric growth charts have been used by pediatricians, nurses, and parents to track the growth of infants, children, and adolescents in the United States since 1977.
 4. Examples of axial length growth charts for 6-, 9-, and 15-year-old European and Chinese children from peer-review papers
 7. How to treat?
 1. Lifestyle counseling... discuss with all children at every visit
 2. Avoid less than 12 inches (30 cm) reading distance and greater than 30 minutes of continuous near work
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3. 20-20-2 rule
4. Minimum 120 minutes of intermittent outdoor light exposure per day, including recess time, physical education time, and additional outdoor time after school
 1. Outdoor light exposure reduces both the incidence and progression of myopia
5. Single Vision Spectacles
6. Orthokeratology
 1. Very popular choice because of its efficacy, and the patient is spectacle free during the day
 2. Most prescribed myopia intervention globally
 3. Prescribed off-label in the U.S. for myopia control
 4. Multiple RCT clinical trials have shown Ortho-K to be effective in controlling myopia progression: 30-57% reduction in the progression of SER and axial length
8. Brief introduction to orthokeratology (orthoK)
9. Myopia Management with OrthoK
 - a. Discuss differences in utilizing orthoK for myopia management in the pediatric population vs myopia correction in young adults and adults
 - b. Review candidates for orthoK and who are not candidates
 - c. Discuss FDA indications
 - d. Understand when to prescribe orthoK for treatment compared to other treatment options via evidence-based literature
 - i. Efficacy of orthoK
 - ii. Safety of orthoK
 - iii. Combination therapy
 - iv. Quality of life issues
 - v. Consider when to continue to monitor and when therapy be changed
 - e. Replacement schedule
 - f. Care and handling of orthoK
10. Contact Lens Consultation and Follow Up
 - a. Consultation – review testing and equipment needed
 - b. Establishing expectations - For the patient and the doctor
 - i. Vision-related
 - ii. Myopia progression-related
 - c. Follow-up schedule
 - i. Discuss what testing is done at each follow up visit and why
 1. Corneal topography/tomography

- 2. Biometry
 - 3. Unaided visual acuity
- d. How to monitor myopia progression
 - i. What instruments are utilized
 - ii. How often should patients be monitored
- 11. Case 1: Discuss latest innovations in toric orthoK lens designs
 - a. When to prescribe
 - b. Pros/cons
 - c. Troubleshooting via utilization of corneal topography
 - d. Common complications associated with orthoK and management options
- 12. Case 2: Small optic zone orthoK design
 - a. When to prescribe
 - b. Pros/cons
 - c. Troubleshooting via utilization of corneal topography
- 13. Case 3: Software-guided orthoK design
 - a. When to utilize
 - b. Pros/cons
 - c. Troubleshooting via utilization of corneal topography and software
- 14. Case 4: Empiric fitting – case of 2 sisters
 - a. How to design
 - b. Pros/cons
 - c. Troubleshooting via utilization
 - d. Discuss how to re-start if discontinued
- 15. Case 5: Combination therapy- orthoK and low dose atropine
 - a. When to prescribe
 - b. Pros/cons
 - c. Troubleshooting
 - d. How to select dosage of atropine based on evidenced based literature
- 16. Discuss when to discontinue orthoK and rebound effect
- 17. For each case presented, patient history, ocular condition and potential complications will be reviewed.
- 18. Anterior segment photography, videography and corneal tomography will be shown to highlight unique features of each case to assist with initial contact lens selection.
 - 1. Frequency of follow-ups

19. For each case presented, participants will have the opportunity to fit contact lenses and troubleshoot via polling software.

1. Myopia Management

1. Considerations when beginning myopia management
2. What additional measurements should be taken
 1. Axial length
 2. Cycloplegic examination
 3. Accommodative testing
4. Considerations when selecting treatment option
 1. Compliance
 2. Patient and parent motivation
2. Discuss why a practitioner might select one option over another
3. Fitting process highlighted for fitting:
 1. What is ideal
 2. What is shown
4. Troubleshooting
5. Follow up schedule