

Course Title: Utilizing Soft Lenses in Keratoconus

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Course Category: Contact Lenses

Course Credits 1.0 Hour

Course Format: Online Synchronous

Course Description

Soft lenses, selected and designed for corneal ectasia, are an excellent modality for managing early to moderate corneal irregularity in keratoconus. This course will guide attendees through proper patient selection, contact lens design, and current product options to enhance clinical outcomes.

Course Objectives

This course will enable participants to

1. Detect and recognize the early signs of keratoconus.
2. Conduct a proper anterior segment evaluation prior to undertaking contact lens fitting.
3. Evaluate and communicate the options for effective contact lens management.
4. Understand the basics of custom soft lens design.
5. Appropriately select, prescribe, monitor, and troubleshoot patients in a clinical setting.

Course Outline

- I. Update on keratoconus epidemiology **(5 min)**
 - a. Historical estimates of prevalence
 - b. Current estimates of prevalence
 - c. Risk Factors
- II. Detection of KNC **(10 min)**
 - a. Importance of early detection
 - b. Clinical Sign and Symptoms
 - i. Refractive
 1. Objective
 2. Subjective
 - ii. Anatomical
 1. Biomicroscopy
 2. Topography
 - a. Maps
 - b. indices
 3. Tomography
 - a. Anterior corneal evaluation
 - b. Posterior corneal evaluation
- III. Corneal Collagen Cross-Linking **(5 min)**
 - a. Benefits
 - b. Risks
 - c. When to Refer

- d. When to Begin Contact Lens Fitting
 - i. Before or After
 - ii. Epi on vs. Epi off
 - 1. Depends on CL Modality
 - a. Soft KCN CL considerations
- IV. Soft Lens Patient Selection in KCN **(10 min)**
 - a. Refractive considerations
 - b. Topographical considerations
 - c. Patient lifestyle and systemic health
 - i. Dexterity
 - ii. Wearing goals
 - iii. Ocular Surface Status
 - iv. Convenience
 - d. Alternative Modalities
 - i. RGP
 - ii. Hybrid
 - iii. Piggyback
 - iv. Scleral
- V. Pre-Fitting Clinical Examination **(7 min)**
 - a. Topography/Tomography]
 - i. Utilizing Placido Disk Image
 - b. HVID
 - c. Slit Lamp
 - i. Lids, Lashes, Blink
 - ii. Tear film
 - 1. Quantity
 - 2. Quality
 - iii. Cornea and Conjunctiva
 - 1. With and without vital dye
 - 2. Palpebral conjunctiva
 - 3. Corneal scarring
 - 4. Limbus
 - a. Neovascularization
- VI. Soft Custom Keratoconus Lens Design **(3 min)**
 - a. Base Curve/Fitting Curve
 - b. Diameter
 - c. Optic zone radius
 - d. Toric stabilization
 - e. Lens Thickness
 - f. Edge Design
 - g. Materials
 - i. HEMA
 - ii. Silicone Hydrogel
- VII. Case Examples **(10 min)**

- a. Differential selection of lens design
- b. Patient education
- c. Troubleshooting
 - i. "Custom non-KCN design" soft lens fitting
 - ii. "Custom KCN design soft lens" fitting