

Scleral Lens Education Society: Basics of Scleral Lens Fitting It's As Easy As 1-2-3

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Course Description

This two and a half hour presentation is an interactive, workshop format where basic principles of large diameter, rigid, scleral contact lenses are discussed. A didactic portion is followed by hands-on practice with insertion, removal, and fitting of scleral lenses. Instructors who are Fellows of the Scleral Lens Education Society will provide hands on fitting experience using scleral lenses from several different lens companies.

Course Learning Objectives

To provide participants with knowledge and training of scleral contact lens fitting and management of a wide range of medical conditions. Fitting guidelines and problem solving tips can be applied to the practice of participants. Even practitioners who have never fit a scleral lens should feel comfortable starting a scleral lens practice after the workshop.

Outline

- I. **History of Scleral Contact Lenses**
 - A. Blown glass lenses
 - B. Molded plastic lenses
 - C. Modern gas permeable lenses
- II. **Scleral Lens Terminology and Design**
 - A. Size classifications
 - B. Lens designs and parameters
 - C. Sagittal depth
 - D. A Guide to Scleral Lens Fitting

III. Scleral Lens Fitting Principles

A. Fitting Process

1. Completely bridge over the cornea
 - a. Apical clearance
 - b. Apical touch
 - c. Tear reservoir
2. Tears over the Limbal region
 - a. Limbal clearance
 - b. Limbal compression
3. Provide an adequate “landing” on the sclera
 - a. Scleral alignment
 - b. Vascular impingement
 - c. Vascular compression
4. Ensure adequate tear flow under the lens
 - a. Tight periphery
 - b. Loose periphery

B. Fitting Pitfalls - Don't Do This

1. Steep lens
2. Flat lens
3. Tight limbal area
4. Excess limbal sag
5. Loose edge
6. Tight edge

C. Reasons For Scleral Lens Use

1. Decentered keratoconus
2. Discomfort with other lens designs
3. Dislodgement of corneal rigid gas permeable lens
4. Advanced corneal disease and ectasia
5. Protection of cornea

IV. **Case Histories/Patients**

Several photographic histories and patients will be presented and will be selected from a large collection of cases including keratoconus, penetrating keratoplasty, corneal scarring, trauma, severe dry eye, lost refractive complicationsIV, etc.

V. **Hands-On Training**

- A. Cleaning and disinfection of scleral lenses
- B. Selection of base curve/vault
- C. Insertion with plunger vs finger technique
- D. Assessing fit in free space and with a slit lamp
 - 1. Bubble formation
 - 2. Vault and fluorescein evaluation
 - 3. Assessing peripheral fit (landing)
 - 4. Assessment of limbal zone
 - 5. Measuring tear flow
- E. Removal technique
 - 1. Plunger
 - 2. Hands / finger
- F. Solutions
 - 1. Insertion solutions
 - a. non-preserved 0.9% sodium chloride solution (non-FDA approved)
 - b. Menicon LacriPure (FDA approved)
 - 2. Disinfection solutions
 - 3. Additional cleaners

VI. Optical Coherence Tomography

May be used to demonstrate the fitting relationship of the scleral lens to cornea. Hands-on training of assessment of the scleral lens using optical coherence tomography on volunteer patients may be performed during the workshop.

VII. Complications of Scleral Lens Wear

An opportunity for discussion of complications of scleral lens wear will be offered at this workshop.