
CORNEAL AND SCLERAL G.P. MULTIFOCAL FITTING WORKSHOP

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Abstract

GP multifocal contact lenses provide our presbyopic patients with excellent vision. However, the learning curve can be steep for both practitioner and patient. That especially includes combining the challenge of scleral contact lens fitting with presbyopia. This workshop will provide fitting pearls from experienced practitioners and allow the participant to obtain hands-on experience in fitting these specialty contact lenses.

Learning Objectives

1. To learn how to increase success with G.P. multifocal corneal and scleral contact lenses by properly screening potential candidates.
2. To learn how to properly educate G.P. multifocal contact lens patients, which will in turn enhance success.
3. To understand the characteristics of each design category of corneal and scleral rigid multifocal contact lenses and how to select the correct design for each patient.
4. To learn how to troubleshoot to improve the vision and fit with corneal and scleral rigid multifocal contact lenses.

Outline

1. Why Fit Multifocals
 - Current bifocal market
 - Future bifocal market
 - This segment of the population is growing in number
 - Many are current or former contact lens wearers
 - The technology is improving
2. Choose Your Patients Wisely
 - Personal characteristics

- Physical characteristics
 - Reduced tear quantity and quality
 - Reduced lid tonicity
 - Pupil size
 - Lid position
3. Educate Your Patients before, during, and after the fitting
- Explain the drawbacks and limitations of the lenses
 - Describe the presbyopic condition
 - Describe lens modalities
 - Describe your fee schedule
4. Choose the Right Lens for the Patient
- GP Alternating (Translating)
 - GP Aspheric (Corneal or Scleral)
 - Front
 - Back
 - Soft Aspheric
 - Center Near
 - Center Distance
 - Soft Concentric
 - Center Near
 - Center Distance
 - Soft Diffractive
5. All Multifocals:
- New refraction
 - Determine dominant eye
 - Use diagnostic contact lenses
- * Perform overrefraction at distance
Place in trial frame and Test near VA
1. Add plus power for better distance/near compromise
 2. Increase add if possible for better near VA
6. Simultaneous Designs: Center Near Corneal and Scleral
- *Lens must center well*
(Scleral easier but sometimes slightly inferior temporal → use toric PCs; also see which clearance recommended by each lens design)
 - For some back surface corneal aspherics, need to fit 1.25-5.0 D steeper than K

Best conditions:

- * Ability to accept visual compromise
- * Low to moderate adds
- * Work in a stable lighted environment
- * Modified monovision: the key to success

7. Simultaneous Designs: Center Distance Corneal

- Lid attachment: fits just like a spherical GP
 - Ensures viewing through distance portion of lens
 - Some translation, allows for easier utilization of mid-periphery for near
 - in general, can utilize higher add and less “simultaneous” vision than center near design
- For some back surface corneal aspherics, need to fit 1.25-5.0 D steeper than K

Best conditions for simultaneous vision lenses

- Pupil size:
 1. Annular - large to utilize all of the optics
 2. Aspheric - for CD lens, better distance vision with small pupils, better near vision with large pupils (vice versa for CN lens)
- Patient’s ability to accept visual compromise
- Low to moderate adds
- Patient should work in a stable lighted environment
- Lenses must center well

8. Alternating Designs

- Top distance, bottom near
- When fitted properly, lower lid pushes up lens to utilize near portion of the lens
- Can be less comfortable initially

Parameters

- Overall diameter (9.0 - 10.5 mm)
- Optic zone diameter (7.5 - 8.5 mm)

- Prism (1 - 3 pd)
- Seg height (below pupil center to at lower pupillary margin)
- Truncation (0.3 -0.5 mm difference)

Fitting procedures

- Trial bifocal lenses or sphere prism lenses
- Determine proper base curve (fit on flat K)
- Evaluate stability/ need to increase prism
- Evaluate segment height
- Evaluate lens base rotation / need to compensate for rotation in lens seg axis order
- Determine need for truncation (if lens rotates too much on downgaze)

Best conditions for alternating vision lenses

- Motivated patient
- Lower lid at or above limbus
- Rigid eyelids
- Low corneal cylinder (0.5 - 1.5 D)
- Small to medium-sized pupils

9. Helpful Hints in Fitting Multifocals

- Use the trial frame
- Subjective evaluations
- Be as real-life as possible
- Manage patient expectations
- Modified monovision

10. Troubleshooting

- Simultaneous
 - Poor distance acuity
 - Poor near acuity
 - Poor distance and near acuities
- Alternating
 - Preventative maintenance: trial lens fitting
 - Poor distance acuity
 - Poor near acuity
 - Flare at night
 - Poor rotational stability
 - Lens base rotation

- Lens slides under lower lid

11. New Multifocals on the Market