Secrets of a CL multifocal fitter

Milton M. Hom, OD, FAAO, FACAAI(Sc).
eyemage@mminternet.com

Disclosures
Last 12 months (alphabetical order):
Allergan
AMO
Bausch/İsta

CL Multifocals
- Monovision
- Multifocals
- Bias/dominance
- Algorithm

Monovision
- Best monovision patient is Emmetrope
- 85% rule: (CL considered successful 85%)
- Supplemental Specs (NV or DV)
- Multifocals should be first option
- New definition of monovision

Rules
Three Rules:
Communicate
Communicate and
Communicate

Not All Presbyopes Are Alike

It’s all about vision
Monovision: $3.3 \pm 1.0$ lenses
Multifocal: $3.3 \pm 0.8$ lenses

Primary Multifocal Design Options:
- PureVision Multifocal (B&L)
- Air Optix Multifocal (Alcon/Ciba)
- Oasys for Presbyopia (Vistakon)
- Proclear EP, PC, PCToric, Biofinity Multifocals (Cooper)
- Custom Multifocal Soft
- Custom Multifocal GP
- Hybrid Multifocals

PureVision Multifocal
Front Surface Aspheric Design (near center)
(Balafilcon A)
Adds:
Low up to +1.80D
High +1.75 to +2.50D

Air Optix Aqua Multifocal
(Ciba Fitting Nomogram)
86% success
In early presbyopes

“Unlike many other multifocal contact lenses, the Air Optix Aqua Multifocal lens’ Enhanced Vision Guide does not advise us to address distance problems by putting on a single-vision lens on one eye.”

“It is almost always possible to achieve good distance vision by changing to a lower ADD in moderate to advanced presbyopes”

“It is so rare that distance vision is compromised with the LO ADD that no recommendation is offered for improving distance vision in these patients”

“It is so rare that distance vision is compromised with the LO ADD that no recommendation is offered for improving distance vision in these patients”

Oasys for Presbyopia

“Multizone Aspheric” Design

- Material: Senofilcon A (OA8Y8™)
- Base Curve: 8.4mm
- Diameter: 14.3mm
- Dk/t: 147

74% success
In 2 visits

Cooper Vision Multifocals
Balanced Progressive Technologies

- Proclear EP
- Proclear Multifocal and XR Multifocal
- Proclear Toric Multifocal
- Biofinity Multifocal
- +++ (more coming!)

Proclear EP

- +1.00 Add
- Center distance
- Excellent for early presbyopia
- Excellent for modified monovision ("enhanced mono")

Proclear Multifocal

D = Distance center lens
N = Near center lens
Four adds: +1.00, +1.50, +2.00, +2.50 + XR

The lens is a double slab off back toric with markings at 3 & 9 o'clock

Biofinity Multifocal

- Built upon Biofinity lens material (comfilcon A)
- Available in a full range of spherical powers

<table>
<thead>
<tr>
<th>Product specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biofinity multifocal lens</td>
</tr>
<tr>
<td>Sphere power: +6.00 to –6.00 D</td>
</tr>
<tr>
<td>ADD power: +0.50, +1.00, +1.50, +2.00</td>
</tr>
<tr>
<td>Lens design: D lens, N lens</td>
</tr>
<tr>
<td>Material: comfilcon A</td>
</tr>
<tr>
<td>Water content: 48%</td>
</tr>
<tr>
<td>Base curve: 8.6 mm</td>
</tr>
<tr>
<td>Diameter: 14.0 mm</td>
</tr>
<tr>
<td>Dk: 128</td>
</tr>
<tr>
<td>Handling tint: Soflente™ visibility tint</td>
</tr>
</tbody>
</table>

Biofinity® multifocal lens

Simple steps to increase success at the initial multifocal lens fitting visit

Initial visit

1. Start with a new refraction and verification of eye dominance (shaping technique)

Clinical tips

- Power for maximum gain power for distance vision
- Choose the new ADD power when possible (not necessarily to accommodate the ADD power)
- Test patient’s near functional vision with their first choice
- Check visual acuity with near glasses

Step 1

Select the distance prescription based on spherical equivalent corrected for the vertex distance. Choose D or N lens design based on needed ADD power:

<table>
<thead>
<tr>
<th>AOD</th>
<th>D lens</th>
<th>N lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>+1.00 D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>+1.50 D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>+2.00 D</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>+2.50 D</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Step 2

- Allow patients to adjust to lens for 15 minutes before assessing vision
- To improve distance vision wear 0.00 to the dominant eye
- To improve near vision wear +2.00 D to non-dominant eye

Future expansion of the Biofinity Mfl. Line to include torics
Custom Hydrogel Multifocals

- Sphere, Cyl. (±/- 0.12D), Axis (1 degree)
- BC, TD, FC, CT, OZ (fitting nomograms based on corneal sagittal height)
- Designs: Aspheric (ant vs. post), Concentric (distance vs. near center), Translating, Combination designs, control over “zone sizes”
- Materials: hydrogels and now SiHy’s

Gas Permeable Multifocal CL’s

- Reclaim HD (Blanchard)
  - Anterior aspheric
  - Anterior distance zone
- Renovation (Art)
  - Posterior aspheric
- Essential (Blanchard)
  - Posterior aspheric
- Boston MultiVision (B+L)
  - Posterior aspheric
- Tangent Streak series (Fused)
  - Translating
- Solution & Essential Solution (X-Cel)
  - Translating
- Golden Eye AFM (Valley Contax)
  - Anterior aspheric
- Magniclear & Renovations (Art)
  - Anterior aspheric

GP Multifocals

<table>
<thead>
<tr>
<th>Bias</th>
<th>Low Spect Add</th>
<th>High Spect Add</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+1.00 +1.50</td>
<td>+1.75 +2.50</td>
</tr>
<tr>
<td>Distance</td>
<td>Anterior aspheric</td>
<td>Translating</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Anterior aspheric</td>
<td>Posterior aspheric</td>
</tr>
<tr>
<td>Near</td>
<td>Posterior aspheric</td>
<td>Translating</td>
</tr>
<tr>
<td>Toric</td>
<td>Add back toric to design</td>
<td>Add back toric to design</td>
</tr>
</tbody>
</table>

Gas Permeable Multifocal CL’s

- Premier Optics
- Proprietary and Custom Designs
- Aspheric (ant/post), Concentric, Translating*, Combination designs
- Ability to fit on irregular corneas (keratoconus, post surgical, etc.)

Hybrid & Combination Multifocals

- SynergEyes M
- SynergEyes Duette M
- Piggyback GP/disposable systems
- Recessed Pillow Lens System (*“RPLS” – Fusion and EyeVis Technologies *)

Fitting Multifocals

STEP #1 – PATIENT SELECTION

- Identify patient’s expectation
- Match visual needs and personal disposition
- Occupation / Avocation / Vision Demands
- Refractive Error considerations
- Ocular Surface & Tear film status
- Systemic and ocular health & medications
Establish Bias if needed:
“Mono-Plus/Mono-Minus”
(one eye bias distance one eye bias near)

Often you have to: Establish Dominance

Robboy MW, Cox IA, Erickson P. Effects of sighting and sensory dominance on monovision high and low contrast acuity. ICLC 1990;17:289-301.

Gromacki S. Monovision and bifocal CL. In: M. Hom A. Bruce eds. Manual CL Prescribing and Fitting Se 2006;Elsevier

Rules

“Switching eye function can relieve...even the vaguest of symptoms”

Gromacki S. Monovision and bifocal CL. In: M. Hom A. Bruce eds. Manual CL Prescribing and Fitting Se 2006;Elsevier

Rules

Golden rule

“If patients experience good distance vision, they will wear their lenses in.
If they don’t, they will carry their lenses in.”

SynergEyes Multifocal Practitioner Training

Rules

Four days

At 4 days: Differences stereopsis and near range of clear vision
Satisfaction, comfort, visual quality
Ghosting, halos decreased


Procedure

Over-refraction
Auto-refractor
Push plus
Dist/near/intermediate vision
Sit in front of computer
Change room illumination
Use loose trial lenses to refine
Dispense lenses
Follow-up 4 days

Fitting matrix

<table>
<thead>
<tr>
<th>Resultant</th>
<th>Air Optix MF</th>
<th>Oasys Freshtopia</th>
<th>PureVision MF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Distance</td>
<td>1. Over-refraction 2. Lower Add</td>
<td>Lo-SV (dist) 3. Hi-Lower Add (dist)</td>
<td>Add minus (dist)</td>
</tr>
<tr>
<td>Poor Near</td>
<td>1. Add plus (near) 2. Increase Add</td>
<td>Increase Add (near)</td>
<td>Increase Add (near)</td>
</tr>
<tr>
<td>Poor Dist &amp; Near</td>
<td>Over-refraction</td>
<td>N/A</td>
<td>Over-refraction</td>
</tr>
</tbody>
</table>

Algorithm 2

Bias

Low Spect Add +1.00 +1.50
High Spect Add +1.75 +2.50

Distance

1. Proclear EP
2. Oasys
Air Optix MF
Freq 55/Proclear

Intermediate

PureVision MF
Any aspheric MF
PureVision MF
Any aspheric MF

Near

1. PureVision MF
2. Freq 55/Proclear
Air Optix MF (High Add)

Toric

1. Proclear toric MF
2. Custom designs
3. Monovision (MV)
4. Modified MV
GP MF
Custom designs
SynergEyes

12/2011
Tips
- CLMFL's work for 75-80% of the time
- Over glasses sometimes needed
- 0.25 D change can be significant
- Don't over-minus
- Bias low add
- Use mixed adds

Keys To Success With Multifocal Contact Lenses
- "Have the tools"
  - Lenses to maximize vision
  - Lenses to maximize "comfort"
- Patient selection - motivation and realistic expectations
- Design combinations & unilateral fits
- "Mono-plus" & "Mono-minus" (modified "stereovision")


Davis RL. Eiden SB. A rational approach to fitting multifocal lenses. CL Spectrum 2010 Feb 36-43.

Rules
- "Have the tools"
- Lenses to maximize vision
- Lenses to maximize "comfort"
- Patient selection - motivation and realistic expectations
- Design combinations & unilateral fits
- "Mono-plus" & "Mono-minus" (modified "stereovision")

Thank you!
Milton M. Hom, OD, FAAO
Azusa, CA
eyemage@mminternet.com

Thank you!