

prescribing for presbyopia

A New Simultaneous GP Design May Improve Multifocal Fitting

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Patient CP was a successful simultaneous multifocal GP lens wearer for many years until she became a mature presbyope. She could easily see distance and intermediate, but didn't have clear and distinct near vision. She's a schoolteacher who has many hours of computer and near work, but also requires excellent distance acuity. I steepened the base curve and added eccentricity to improve her near vision, allowing her to see well at all distances, but we found that CP could no longer transition to her glasses in the evening. She developed spectacle blur from corneal warpage secondary to long wear time in a posterior aspheric lens.

CP was interested and motivated in continuing contact lens wear. She had enjoyed years of carefree GP lens wear with excellent vision and had no desire to return to glasses.

CP understood what was happening to her vision and was willing to try new ideas and products. She had easily adapted to simultaneous vision GP lenses.

Considering a New Design

I discontinued contact lens use for a few weeks until CP's refraction and topography stabilized. I then refit her with the Renovation lens by Art Optical. Several features of this GP design made CP an excellent candidate.

Although Renovation is a simultaneous GP design, two features make it a better choice for this patient. The first feature is a flexible, front-surface eccentricity control platform that allows you to fit patients on flat K. Rather than using a fairly steep fit with posterior asphericity, you can use an on-K approach as you would for a traditional spherical GP fit, eliminating the corneal molding and spectacle blur that CP experienced. Another benefit of this design is the reduction of spherical aberration when patients transition into the near zone. Although it's a simultaneous lens design, some translation is required to fully access the near zone. CP can access the near zone without optical distortion.

The second feature is controlled lens mass, which minimizes lens mass with higher add powers and controls centration.

Renovation also offers the additional feature of an adjustable distance zone diameter, which accommodates patients who have large or small pupils or an inordinate amount of near or distance tasks. The standard zone is 7.9mm or 3.95mm out from the center, which works well for most patients. However, you can reduce the distance/intermediate zone to 3.5mm to enhance near vision for patients who have small pupils or expand it to 4.25mm for patients who have large pupils to reduce flare and glare experienced with other designs.

Fitting CP

CP's refraction stabilized at OD $-1.75 -0.50 \times 050$ 20/20, OS $-0.75 -0.75 \times 149$ 20/20, +2.25D OU Jaeger 1. Her K readings from topography were OD 44.87/46.12, OS 44.25/45.12. Her pupils measured 3.5mm in ambient light.

My initial lens order was OD 7.48mm base curve, 9.6mm diameter, -1.75D, Boston EO (Bausch & Lomb) standard distance zone and OS 7.58mm BC, 9.6mm diameter -0.75D Boston EO, standard distance zone.

At her scheduled two-week follow up, CP's chief complaint was that near vision was better but not perfect. Over-refraction was plano OU. I ordered the same parameters, but with the reduced distance zone OU.

The new lenses demonstrated an even fluorescein pattern OU, and CP was thrilled with the 20/20 distance and near vision OU. Her refraction was stable and topography was also stable at OD 44.50/45.62 and OS 44.37/45.75.

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