Using the aforementioned example: Paragon HDS material with an index of refraction of 1.449. The index of refraction of tears is 1.33.

$$\frac{1.449 - 1.33}{0.0078} = 15.26\ D$$

$$\frac{1.449 - 1.33}{0.00852} = 13.97D$$

The difference yielding a potential add of: 1.29D.

The same parameters, except using a material of higher index of refraction (1.475) will produce a 1.57 D add.

Troubleshooting

When troubleshooting the aspheric design multifocal remember first and foremost: the lens must center.

*If the near acuity is poor and the lens centers, design more add power into either the front or back of the lens.

> "...remember first and foremost: the lens must center."

*If near acuity is poor and the lens positions low, first determine if the powers are appropriate by moving the lens to a centered position and evaluate the near acuity. If centering the lens provides adequate near vision, you may need a lenticular flange to enable the lid to lift the lens. If you cannot move the lens up easily, it will be necessary to flatten the lens to allow for free movement.

*If distance acuity is poor and the lens does not center, get the lens to center! If you cannot get the lens to center, you can add minus power to improve distance acuity, but this will result in a reduction of the add power.

One of the most difficult things to do, when you first fit this design, is to fit the lens steep enough. Do not be bashful about fitting the lens 2.00 or 3.00 D steeper that flat K. The eccentricity causes such a high amount of flattening, the resulting lens will fit similar to an "on K" design sphere.

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Dr. Rinehart is earned his BS (1972) and OD (1974) degree from Pacific University College of Optometry. He is currently in private practice in Peoria, Arizona. He received his fellowship in the IOS in 1996 and is currently the Chairman of the IOS Board of Advisors. Dr. Rinehart specializes in Orthokeratology and RGP Contact lenses.