McGuire Fitting Guide™

The McGuire™ Keratoconus System

Trial Sets

There are three trial set designs, Early (Regular), Moderate (Steep) and Advanced (Nipple). Each is categorised by the rate of flattening of the peripheral areas and the relevant diameters.

- The early set has a significantly lower rate of peripheral flattening to cater for the relationship between the radii of the cone and the adjoining areas of the cornea in early Keratoconus.
- The moderate set would be used where the differences between the radii of the cone and peripheral areas are indicative of moderate Keratoconus.
- The advanced set would be used where the difference between the radii of the cone and peripheral areas are indicative of advanced Keratoconus.

Fitting Guidelines

The following should be considered when fitting McGuire™ Keratoconus lenses;

- The diameter and severity of the cone
- The curvatures of the cone as best established by keratometry or topography.

The initial trial lens selection from the appropriate trial set is decided after estimating the mean keratometry reading.

For example, keratometer readings 6.30 / 5.70 = mean K 6.00mm

The 6.00mm trial lens should be placed on the cornea and evaluated with fluorescein. The ideal fluorescein pattern should exhibit a 'doughnut' appearance with 2mm of light touch at the apex of the cornea.

Typically, an advanced Keratoconic has an area of rapid flattening at the base of the cone, and due to this topography, bubbles may appear behind the lens around the base of the cone in the paracentral region of the cornea. These bubbles must be eliminated by either flattening the base curve of the lens or by decreasing the back optic zone diameter.

Fitting Steps

In summary, it is important to evaluate three aspects of the trial lens in relation to the cornea.

1. The relationship between the cone diameter and the back optic diameter of the trial lens
2. Adjustment of the back curve to allow 2mm of light apical touch as evaluated by fluorescein
3. The relationship between the peripheral curves of the lens and the peripheral cornea as evaluated by fluorescein
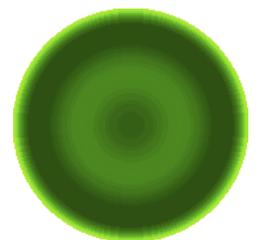
Ideal Fit

Centrally: Light cone touch/alignment.

Circum-cone: Pooling of tears.

Mid periphery: Alignment.

Edge: Optimal clearance.

Action: Allow to settle, recheck fit, then over-refract.
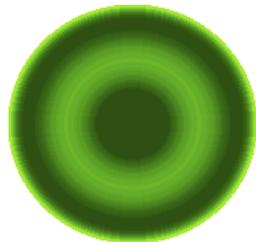
Flat Fit

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Centrally: Heavy cone bearing.

Circum-cone: Pooling of tears, may extend to mid periphery.

Mid periphery: Areas of alignment and pooling, due to lens rocking.

Edge: Excessive, may stand off due to lens rocking.

Action: Try steeper (BOZR).

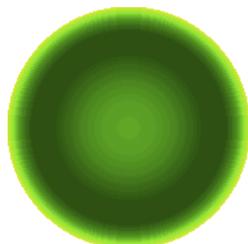## Steep Fit

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Centrally: Cone and circum-cone clearance, may trap an air bubble.

Mid periphery: Alignment/bearing.

Edge: May be minimal or acceptable.

Action: Try flatter (BOZR).

Material selection:
UltraVision carries most RGP materials that are available. However we would suggest that the McGuire™ be manufactured from our Optimum Extra DK 100 material, which exhibits good wetting and stability characteristics. For patients prone to dry-eye and wetting problems, we suggest the Optimum Comfort material.

Clinical Support

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If you have any technical queries or fitting problems, please call our Clinical Services Advisors on 0800 585115.

UltraVision recommend all system lenses are ordered with a full 90-day exchange and fitting warranty (optional).

FOR FURTHER DETAILS CALL **0800 585115** (FREEPHONE) OR EMAIL **ORDERS@ULTRAVISION.CO.UK**

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