OrthoFocus,
Fitting Tips

from

Progressive Vision Technologies

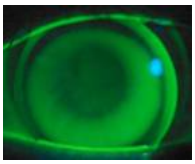
Procedure for fitting from k reading, refraction and topography

Accurate temporal reading at 4 millimeters is absolutely essential for proper lens design. The reverse curve lands 3.7 millimeters from the center of the lens that is slightly more than 4 millimeters from the optical axis, which is always displaced nasally. Nasal peripheral reading is of little, if any, value because of the optical center displacement. When astigmatism exists on the cornea, an inferior reading of 3.7 millimeters must be no more than 1 diopter steeper than the temporal reading. When this reading exceeds 1 diopter, the anchor curve will fail to exert pressure on the cornea which will result in an increase in with-the-rule astigmatism. When this condition exists, non-symmetrical reverse and anchor curves will achieve the desired results. The result with a symmetrical design will be that the cornea will change on the horizontal axis and stay relatively constant on the vertical axis which produces additional astigmatism. Fortunately almost all corneas change at a greater rate vertically than horizontally and astigmatism is therefore reduced with a symmetrical lens design. Another important consideration is the central curvature that must be similar to the K reading or over correction of prescription will result. When the central reading is significantly steeper, as in many soft lens wearers, the lens must be calculated to correct this abnormality. A normal cornea will flatten between .75 and 1.25 diopters temporally. When the temporal reading falls outside of this normal range, the reverse curve and the anchor curve must be adjusted accordingly

TROUBLESHOOTING

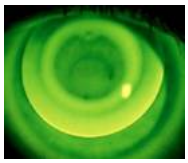
Low-Riding Lenses

Low-riding lenses have three primary causes: too steep, too flat, or too heavy. A lens that is too steep will go low immediately and will adhere. This can be prevented when lenses are designed from topography or trial lenses are used. Lenses that are too flat will get picked up with the blink and drop rapidly. These lenses will also often adhere. A lens that is just too heavy will get picked up with the blink and dropped more slowly. This can be easily be remedied with a thinner lens with double geometry to alter the center of gravity.


Low-Riding

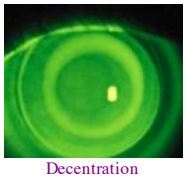
High-Riding Lenses

High-riding lenses are either too flat or improperly weighted. A lens that fits properly and rides high can be remedied with the use of a thicker lens with double geometry and a plus edge. This lowers the center of gravity and is very effective.


High-Riding

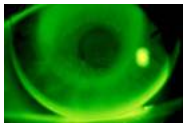
Nasal or Lateral Decentration

Lenses can adhere nasally or temporally if they are too flat. A lens that fits properly and rides nasally or temporally can only be remedied by a larger lens. When a properly fitting lens decenters during the trial lens procedure, it is recommended that the patient be discontinued.


Decentration

Adhesion

Decentered lenses cause almost all adhesion. The most common misconception is that lenses adhere because they are too tight. Actually lenses that adhere because they are too tight are very rare. Almost all lenses that adhere because they are too tight will adhere either centrally or inferiorly. Lenses that adhere superiorly are usually too flat in the reverse zone and/or anchor zone. Lenses that adhere nasally or temporally are often also too flat in the reverse zone and anchor zone. The best way to prevent adhesion is to make sure that the lens is fitting properly, because you can be assured that a lens that decenters will adhere regardless of the cause of the decentration. Any lens that continues to adhere will create a corneal shape similar to the lens design in the position where it has adhered.


Adhesion

This "nest" will attract any lens of a similar design. The nest can be removed only by discontinuing lens wear. Once the corneal shape has returned to normal, the lens should be placed on the eye and evaluated to determine the cause of the adhesion before a new lens can be ordered. Keep in mind that lenses that fit either too flat or too steep, either too heavy or too light, or possibly too small can cause adhesion.

Bubbles

It is not unusual for large bubbles to appear in a reverse zone. This is usually caused due to an inadequate amount of wetting solution, or a wetting solution that is too viscous. When this occurs, the patient should remove and fill the lens with a low viscous wetting or a rewetting solution and insert the lens with the head facing downward. When a large number of small bubbles appear in the reverse zone, it is usually an indication of a lens that is too tight. The lens must be made flatter in the reverse zone and usually also the anchor zone ¾ in this case to prevent dimple veiling.

Bubbles