

AN ANALYSIS OF THE SATURN I CONTACT LENS

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## Introduction

The Saturn II contact lens was designed to provide the optics of a rigid lens and the comfort of a soft lens. It has an overall diameter of 13mm. The rigid center has a diameter of 6.5mm and is suspended above the corneal apex. The lens comes in base curves ranging from 7.20mm to 8.20mm in 0.10mm steps. The soft skirt has a base curve of approximately 6 to 7D flatter than the rigid center.

## Recommended Trial Fitting

The manufacturer recommends using a base curve equal to the flattest curve of the cornea for those corneas manifesting up to 1.25D of corneal astigmatism. Corneas with astigmatism of 1.50D and above could be steepened by 0.10mm. If there is not enough movement, the manufacturer recommends fitting the lens 0.10mm steeper.

To avoid air bubbles under the elevated rigid center, a drop of saline should be instilled onto the lens before insertion.

The best way to remove the lens is to use a suction cup, slide the lens onto the sclera, and remove it from there.

## Analysis

The Saturn II lens was analyzed on five different corneas with a minimum of 1.75D of corneal toricity. The lenses were on-K

0.10mm steeper than K, and 0.10mm flatter than K. All patients reported at least 20/20 visual acuity with all lenses fit even though the average flexure to corneal toricity ratio was 0.55. The flexure was quite random irregardless of base curve and ranged from zero to 1.07 times the corneal toricity. Overrefractions averaged 0.60D of astigmatism with most patients reporting 20/15 visual acuity even though the average amount of flexure was 1.12D.

## Conclusion

The most interesting finding of this study was the fact that none of the patients considered the lenses very comfortable. This is an astounding discovery since four of the five eyes wore gas permeable lenses. The lenses were also somewhat difficult to remove. I have talked to numerous eye care practitioners who have found the same to be true. If the lens is not as comfortable as a gas permeable lens, then I see <sup>LIMITED use for it.</sup> ~~no use for it.~~