### **OPTION: 5**

Corneal Transplant Surgery involves surgically removing the central part of the diseased cornea and replacing it with healthy donated cornea.

Corneal transplant surgery is the treatment of last resort because some of the risks of this procedure include:

- $\cdot$  Slow healing: It can take a year or longer for the graft to stabilize before the visual result is known.
- · Uneven healing: This often causes the graft to become wrapped thereby preventing adequate vision correction with glasses. These eyes can be challenging to fit with corneal RGP contact lenses and some may need the BSLPD to achieve good vision.
- · Rejection: The risk of this complication is increased in young people.
- · Graft failure: This results in a loss of graft clarity and requires repeat surgery.
- · Reduced strength: This complication of the grafted cornea makes it more vulnerable to being ruptured by injury.

Corneal specialists agree that it is best to exhaust all non-surgical options before undergoing corneal transplant surgery, especially for younger patients.



# The Treatment Option

RGP

BSI PD

Intacs



# for people with KERATOCONUS

The cornea is the transparent dome-shaped front part of the eye and its most important focusing lens. The surface of the cornea must be exquisitely smooth and appropriately shaped to function properly. The central cornea in keratoconus becomes thinner, which can cause it to balloon outward and impair vision.



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### **TREATMENT OPTION: 1**

### Eyeglasses

Glasses are often the best method for correcting vision in mild, non-progressive



---When glasses are not effective---

### **TREATMENT OPTION: 2**

Rigid Gas Permeable Corneal Lenses RGP CORNEAL LENSES: (NOT SOFT) improve vision by covering the distorted corneal surface with a smooth layer of tears. The best results are achieved by experienced fitters using specially designed keratoconus contact lenses.

THE PIGGYBACK SYSTEM: (RGP LENS worn over a soft contact lens) can provide better wearing comfort and good vision correction in some patients.

THE HYBRID LENS: has a hard centre and soft skirt and may be better tolerated initially by some eyes, but they are rarely a long-term

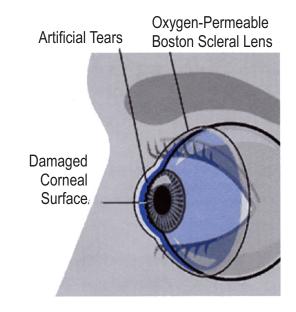
### **TREATMENT OPTION: 3**

### Intacs

Intacs are plastic rings that are surgically implanted into the cornea to improve the spectacle vision or contact lens wearing in early keratoconus. They are reported to offer little benefit to eyes with advanced

### **TREATMENT OPTION: 4**

Boston Scleral Lens Prothetic Device The BSLPD has been worn with all-day wearing comfort in over 90% of keratoconic eyes that were intolerant of well-fitted RGP corneal lenses.



### Qualifications for the BSPD:

- · Doctor referral
- Inadequate vision correction with glasses in the better eye
- failure to tolerate well-fitted corneal RGP contact lenses
- Satisfactory vision correction with the BSLPD as determined during the consultation examination

### The difference is that the BSLPD

- · rests entirely on the sclera (the tough, relatively and insensitive white tissue of the eye) and avoids all contact with the sensitive cornea. In contrast, RGP corneal contact lenses rest on the cornea, the most sensitive tissue of the human body
- · submerges the corneal surface in a pool of artificial tears. The lens is worn comfortably on dry eyes. Corneal contact lenses need to be cushioned with a normal layer of tears and are not tolerated by dry eyes or sensitive diseased corneas
- never decenters, traps dust particles or becomes dislodged
- · provides stable vision that is not affected by blinking

### The BSLPD Limitations:

- · Vision correction: In some eyes, not all of the optical aberrations caused by keratoconus can be corrected with rigid contact lenses. New developments utilizing wavefront technology are being pursued at the BFS to address this.
- $\cdot$  The custom fitting : The fitting process in costly, time-consuming and skill-intensive.
- · Insertion/Removal : The larger BSLPD is more awkward and challenging to handle than conventional smaller contact lenses.
- $\cdot$  Care system : Maintenance is more time consuming and costly than that for RGP

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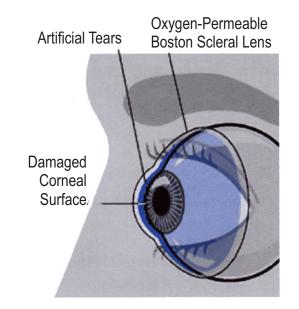
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