



## A Review of Corneal Transplantation

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### Abstract

Corneal transplantation, also known as keratoplasty, is a surgical procedure in which a damaged or diseased cornea is replaced with a healthy cornea from a donor. This procedure is performed to restore vision in patients who have suffered corneal damage due to various reasons such as infection, a

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surgical technique used depends on the type of corneal transplantation being performed.

During a PK procedure, the damaged cornea is removed first. A circular incision is made in the center of the donor cornea to match the size of the recipient's cornea [7]. The donor cornea is then placed onto the recipient's eye and sutured into place. In a DALK procedure, only the diseased or damaged outer layers of the cornea are removed using a microkeratome or a femtosecond laser. The donor cornea is then sutured onto the recipient's eye. During an EK procedure, the diseased or damaged endothelial layer is removed, and the donor endothelial graft is inserted through a small incision in the cornea using a specialized instrument. The graft is then positioned over the Descemet's membrane and gently pushed into place [8].

### Outcome

Corneal transplantation has a high success rate, with most patients achieving improved vision and quality of life. The success of the procedure depends on several factors, including the indication for surgery [9], the type of corneal transplantation performed, and the age and overall health of the patient. Complications such as graft rejection, infection, and glaucoma may occur in some cases. The risk of rejection

- Deep anterior lamellar keratoplasty (DALK): In this technique, only the diseased or damaged layers of the cornea are removed and replaced with a donor cornea. The recipient's healthy endothelial layer is preserved, reducing the risk of rejection [5].

- Endothelial keratoplasty (EK): This technique involves the replacement of only the affected endothelial layer of the cornea with a donor graft. EK is further classified into two types: Descemet's stripping endothelial keratoplasty (DSEK) and Descemet's membrane endothelial keratoplasty (DMEK) [6].

### Surgical technique

Corneal transplantation is typically performed under local anesthesia, although general anesthesia may be used in some cases. The

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