



## Sharper Vision through Radial Keratotomy: Procedure and its Postsurgical Healing

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### Description

Radial Keratotomy, also known as RK, is a surgical procedure that was developed in the 1970s to correct nearsightedness. Although it has largely been replaced by newer procedures such as Laser-Assisted *In Situ* Keratomileusis (LASIK) and Photo Refractive Keratectomy (PRK), Radial Keratectomy RK was once upon a time popular treatment option for those with refractive errors. In the latter part of the 20th century, radial keratotomy correction for refractive error was a surgical technique that was often used. Several linear incisions are made in the anterior cornea with this kind of corneal surgery, flattening the centre cornea and lessening its focusing strength. The irregularity brought on by the incisions can be eliminated by laser corneal reconstruction employing topographic guided ablation. Although the incisions are permanent, the issues they create can be greatly reduced.

### Procedure

The procedure involves making a series of radial incisions in the cornea, which flatten the central portion of the cornea and reduce its refractive power. The number of incisions and their length and depth are carefully calculated based on the individual's prescription and other factors such as corneal thickness and curvature.

RK is typically performed under local anesthesia, and the incisions are made using a specialized diamond blade. The procedure typically takes less than an hour to complete, and most patients can return to their normal activities within a few days.

One of the advantages of RK is that it is a relatively simple and straightforward procedure. It also has a relatively low rate of complications compared to

some other refractive surgeries. However, there are some potential risks associated with RK, including undercorrection, overcorrection, and irregular astigmatism.

In addition, RK is not always suitable for everyone. It is generally not recommended for people with high degrees of myopia or hyperopia, or for those with thin or irregular corneas. Patients who have had previous eye surgery or who have certain medical conditions may also not be good candidates for RK.

Despite these limitations, RK was a popular treatment option for many years and helped to pave the way for newer and more advanced refractive surgeries. Today, most people who are interested in vision correction choose procedures like LASIK, PRK, or Small Incision Lenticule Extraction (SMILE), which are often more precise and customizable than RK.

In conclusion, radial keratotomy was an important milestone in the development of refractive surgery. While it is no longer the most popular treatment option, it played an important role in advancing our understanding of the eye and how it can be corrected. For those who underwent RK in the past, it remains a reminder of how far we've come in the field of vision correction.

### Postsurgical healing

The fibroblastic cells, uneven fibrous connective tissue, and newly abutting corneal stroma make up the healing corneal wounds. The epithelial plug, a bed of cells that normally make up the corneal epithelium and have fallen into the wound, is located closer to the wound surface. This clog frequently extends three to four times deeper than the layer of normal corneal epithelium. A portion of the cells that migrate from the plug's depth to its surface and die before doing so cause breaches in the otherwise healthy epithelial

layer. As a result, the cornea is now more vulnerable to infections. Estimated risk ranges from 0.2% to 0.7%. Even years after surgery, the healing of the RK wounds is frequently inconsistent and extremely delayed. Sim-

ilarly, infection of these chronic wounds can also occur years after surgery, with 53% of ocular infections being late in onset.