Radial Keratotomy (RK)

Until recently, if you were one of the millions of people with nearsightedness (myopia), eyeglasses and contact lenses were the only options for correcting vision. But with the arrival of refractive surgery, some people with myopia, hyperopia (farsightedness) and astigmatism (a cornea with unequal curves) may have their vision corrected through surgery. Radial keratotomy (RK) is surgery that can reduce myopia by changing the curvature of the cornea.

Using a microscope, microsurgical instruments and a diamond blade, the surgeon makes several deep incisions (keratotomies) in the cornea in a radial or spoke-like pattern. People with myopia have difficulty with distance vision because the cornea has too much power and focuses light rays in front of the retina. RK weakens the support of the cornea, flattening it and reducing its power. This allows the light rays to focus directly on the retina.

RK takes fifteen minutes and may be performed with the patient awake. Eyedrops anesthetize the cornea, eliminating pain during the procedure. Following surgery, people are moderately uncomfortable and often require oral pain medication. Antibiotic eyedrops need to be taken for approximately one week. Clear vision can be present the day following surgery.

Postoperative complications include glare, halos, undercorrection, overcorrection and astigmatism that may not be able to be corrected with glasses. The major disadvantage of RK compared to laser procedures is it permanently weakens the cornea. Radial keratotomy is currently being used to correct low levels of myopia.