RANZCO The Royal Australian and New Zealand College of Ophthalmologists
THE LEADERS IN COLLABORATIVE EYE CARE

# REFRACTIVE SURGERY

ONLINE PATIENT ADVISORY

This leaflet is intended to provide you with general information. It is not a substitute for advice from your ophthalmologist. You are encouraged to discuss the benefits and risks of treatment with your ophthalmologist. This is an abridged version of the RANZCO patient education pamphlet: Refractive surgery – a guide for patients. The complete six-page full-colour pamphlet is available from your ophthalmologist.

The aim of refractive surgery is to reduce a person's dependence on glasses and contact lenses. This is achieved by treating nearsightedness (myopia), farsightedness (hyperopia), and/or astigmatism.

Most refractive surgery techniques rely on altering the shape of the cornea, the transparent outer layer on the front of the eye. The cornea serves as a fixed-focus lens. As the cornea is responsible for about two-thirds of the eye's focusing power, vision can be improved by permanent reshaping of the cornea. The kind of reshaping depends on the eye condition being treated.

Refractive surgery does not enable perfect vision for every patient. Some patients may still need weak prescription glasses or contact lenses. In some cases, results can be modified by further treatment.

## Your medical history

Your ophthalmologist needs to know your medical history to plan the best treatment for you. Tell your ophthalmologist about any health problems you have. Some may interfere with surgery, anaesthesia, recovery and medical treatment following recovery.

## A decision about surgery

As you make a decision whether to have refractive surgery, make sure that you understand its risks, benefits and limitations. Only you can decide if surgery is right for you. If you have any questions, ask your ophthalmologist.

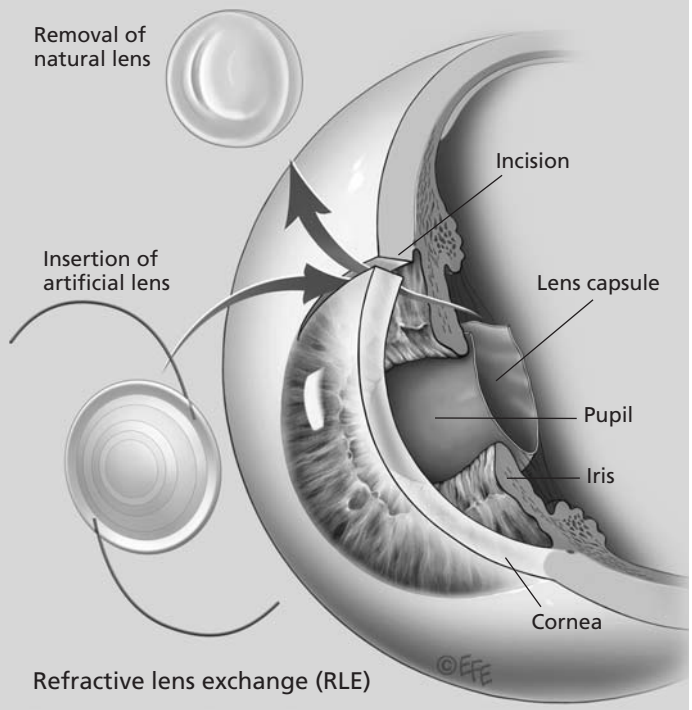
## Anaesthesia

Refractive surgery may be performed under local or general anaesthesia.

## Refractive surgery using the excimer laser

The excimer laser uses ultraviolet light and energy pulses to reshape the cornea. Procedures include:

- LASIK (Laser in situ keratomileusis) – the surgeon partially separates the top layer of cornea, and the corneal flap is folded back. The excimer laser then reshapes the cornea. The corneal flap is put back into position.
- Advanced surface laser ablation (ASLA) – as ASLA makes a thinner flap than LASIK, it may be suitable for people with thin corneas; also referred to as LASEK.



Refractive lens exchange (RLE)

- PRK (Photorefractive keratectomy) – no corneal flap is made. The excimer laser removes tissue from the cornea's outer layer.
- Presby-LASIK: a laser contours the cornea so it has different power zones for vision at varying distances to help with reading.

## Other surgical techniques

Other surgical options include:

- SMILE (Small incision lenticule extraction): a laser creates a disk within the cornea, which is then removed through a small incision.
- Intraocular lens implants (phakic): an intraocular contact lens or ICL (phakic) is inserted into the eye; no corneal tissue is removed.
- Refractive lens exchange (RLE): the natural lens is replaced with an artificial intraocular lens (IOL) using similar techniques to cataract surgery.
- RLE with multifocal intraocular lenses: the natural lens may be replaced with a multifocal intraocular lens that is a bifocal, trifocal or accommodative lens implant.
- Corneal inlays: These are implanted into the central cornea through a tunnel made directly to the mid-cornea or under a LASIK-type of corneal flap, for example, Kamra lens.

## Possible risks and complications

Refractive surgery is safe and effective, but does have risks of complications. These are more fully outlined in the complete RANZCO patient education pamphlet and should be discussed with your ophthalmologist.

Edition number: 2 21February2019 Mi-tec Medical Publishing © telephone: +61 3 9888 6262 fax: +61 3 9888 6465 e-mail: orders@mitec.com.au online orders: www.mitec.com.au