



*Modern technology solves an old problem with a painless, outpatient, safe and effective surgical method. The Cuban health center experience has had more than 10,000 satisfactory cases since 2005.*

# Refractive Surgery

## *Means Farewell to Eyeglasses*

*By Pedro Quiroga Jiménez / Photos: Eduardo Cabrera*

**F**or anyone who suffers vision impairment, the use of glasses or contact lenses can be a headache. Many people reject eyeglasses for purely aesthetic reasons, wanting to retain a positive appearance of youth and beauty while, although contact lenses resolve that problem, the lenses have their own difficulties involving intolerance or poor adaptation.

Modern technology has solved this long-standing problem with an alternative method of refractive surgery to correct refractive errors (problems in the ability of the eye to bend light so that an image is focused on the retina, such as nearsightedness, farsightedness or prebyopia, and astigmatism).

This new 15 to 20 minute laser surgical procedure was introduced in Cuba in 2003, but most have reaped the rewards of the method since 2005,

when the practice began at the Ramón Pando Ferrer Cuban Institute of Ophthalmology (ICO), about eight kilometres northwest of downtown Havana.

One of the specialists of ICO, Dr. Elizabeth Lantigua, told Cubaplus that to date, more than 10,000 patients have benefited from the method, which has already spread to all provinces and five other hospitals in the capital.

### **Laser techniques**

According to Dr. Lantigua, laser surgery is applied to the cornea to correct refractive error.

Where appropriate, two basic techniques are applied: LASIK and LASEK.

LASIK creates a corneal flap with a femtosecond laser microkeratome rather than with a mechanical microkeratome, which uses a steel blade.

*LASIK and LASEK are the two most commonly used techniques for laser refractive surgery in the world. They are safe and effective for outpatient use, elective and painless, requiring only local anaesthesia with antiseptic drops. Both are practiced to eliminate the use of glasses and contact lenses. The surgery, 15 to 20 minutes, produces little postoperative discomfort and has rapid visual recovery. The incidence of adverse effects is minimal.*



In LASEK the epithelium is removed, the refractive error is corrected on the corneal surface and a sterile dressing is placed on the lens until the growth of the epithelium is complete.

LASEK surgery is recommended for ages when refractive errors are stable and do not increase, especially myopia. It can be done from the age of 22 until the patient has a minimal change in the lens and, when physicians are certain that after surgery, corneal thickness will not develop any ectatic corneal disease or for those who by their profession may not have a corneal scar for life.

"Usually, patients between 45 and 50 years of age begin to experience changes in the lens. They need another type of surgery rather than a laser treatment on the cornea, which involves a short period to rest before implantation of an intraocular lens," the surgeon explained.

In both techniques the patient's recovery is very rapid. With LASIK, total restoration is noticeable three or four hours after the surgery. LASEK patients feel improvement beginning 72 hours after surgery and until the sixth day when the lens is removed.

Post-operative care, although simple, should be strictly observed: avoid hitting or handling the eyes, and protect them from the sun's ultraviolet rays.

#### **Selection Is the Key to Success**

Dr Lantigua stresses that laser refractive surgery is definitely not for any patient.

"I believe that success lies in the correct selection of the method. Our results are based on the careful selection of each case," she says.

The eye surgeon indicates that candidates must meet certain pre-operative requirements, including a series of tests to establish the patient's refractive error, the anatomical characteristics of the eye, and corneal thickness and curvature, among other elements essential for proper selection.

"The ICO also has an evaluator that permits early diagnosis of any corneal changes," the specialist concluded.

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