

# الكلية التقنية الهندسية قسم هندسة تقنيات الأجهزة الطبية



## Laser-Assisted in Situ Keratomileusis (LASIK)

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#### INTRODUCTION:

Laser-Assisted in Situ Keratomileusis (LASIK) means modifying the shape of the cornea by using a laser. A precise instrument called a microkeratome is used to remove a thin layer from the surface of the cornea, except for a small part of it that keeps it attached to the eye and is moved back. The inner corneal tissue (estimated according to the type and degree of the visual defect) and then, the surface layer of the cornea is returned to its normal position to fuse without the need for any surgical stitches.



#### LASIK OPERATION:

During LASIK surgery, a special type of cutting laser is used to precisely change the shape of the dome-shaped clear tissue at the front of your eye (cornea) to improve vision. In eyes with normal vision, the cornea bends (refracts) light precisely onto the retina at the back of the eye. But with nearsightedness (myopia), farsightedness (hyperopia), or astigmatism, the light is bent incorrectly, resulting in blurred vision. Glasses or contact lenses can correct vision, but reshaping the cornea itself also will provide the necessary refraction.

## LASIK COMPONENTS:

- 1- Excimer Laser
- 2- Slit Lamp
- 3- Microscope
- 4- Switches
- 5- Patient Table
- 6- Control Unit
- 7- Power Supply
- 8- Fluence Detector
- 9- Screen

### LASIK USES:

- 1. Correction of myopia
- 2. Correction of hyperopia
- 3. Actual cure for astigmatism











