

TAKE GOOD CARE OF YOURSELF AND LOVED ONES

# OPH- TALMO- LOGY





## Refractive Laser Surgery

In myopia, the anterior-to-posterior diameter of an eye is longer than the breakage power of the eye, so beams coming into the eye focus on a point before the retina. People with myopia see close-range clearly, while they cannot see the far images clearly.

In hyperopia, the anterior-to-posterior diameter of an eye is shorter than the breakage power of the eye, so beams coming into the eye focus on a point at the back of the retina. People with lower hyperopia tire easily when they deal with close-range work and they cannot see close-range clearly. People with higher hyperopia experience vision problems both at close and long distance. Hyperopia increases with advanced age since progression in the accommodation power of the eye decreases. In hyperopia, the patient can see neither close nor long distance, whereas patients with myopia can see close distance at any age. Therefore, a patient with hyperopia should be treated for both close and long distance since the eye has lost its accommodation power.

Astigmatism is the condition where the rate of light refraction in vertical and horizontal meridians in the cornea is not the same. It may be detected by such symptoms as blurred vision at both close and long distance, double vision, shadowy vision, pain in the eye and head, frequent hordeolums, and inflammation at the eyelash-base.

Presbyopia is the difficulty in seeing close distance due to advanced age. Since the lens in the eye is flexible in young people, it has a shape-shifting structure. Thanks to this special ability, the lens can swell to see close objects, thus accommodating close vision. After the age of 40, the eye starts to lose this ability.



## Treatments

Any surgery carried out to eliminate or reduce refraction defects are called refractive surgery. The purpose of these operations consisting of different techniques is to minimize, even to eliminate, the need for glasses or contact lens. The patient's personality, expectation limits, age, refraction defect and degree, corneal structure, condition of the lens, and the nature of the retina define the suitability for surgery and the surgery type. Each method has its own risks and advantages. The appropriate technique is determined by a detailed examination.

Depending on the need, excimer laser (lasik, photorefractive keratectomy, lasek), refractive lens surgery (monofocal, multifocal, lens exchange), intracorneal ring, radial keratotomy and astigmatic keratotomy can be chosen.

Lasik is the operation in which the cornea is reshaped by applying excimer laser to the surface obtained by lifting a piece of tissue at the rate of  $\frac{1}{4}$  in the cornea with special techniques according to the need of refraction defect and then the lifted piece of tissue is closed again. This method can be applied to patients with myopia up to number 10, patients with hyperopia up to number 5 and patients with astigmatism if the exterior thickness and retina of their eyes are suitable and patients with no other visual diseases and patients who have not had any change in their number within the last two years. Patients who decide to undergo the operation should come to examination without their contact lenses for one month before the conformity assessment.

In photorefractive keratectomy (PRK), different from the lasik technique, the laser directly starts from the exterior surface without lifting any tissues from the cornea. At the end of the surgery, contact lenses are used for a few days in order for the irritated surface to heal better and reduce the ailment.

Similar to PRK, lasek is the method where only the surface treatment before laser is different.

Refractive lens surgery can be applied to people over 40 with myopia or hyperopia which cannot be fixed via laser. It is carried out in a similar way to cataract surgery. In refractive lens exchange technique, the patient's own lens is replaced with an artificial lens.

Astigmatic keratotomy is used to rectify astigmatism in the appropriate eye structures and degrees. Deep cuts (but not too deep to puncture the cornea) of different lengths are made in the more vertical axis of the eye with astigmatism depending on 1 or 2 astigmatism degrees. There are two common types: limbal relaxing cuts made in the border between the transparent cornea and the white part or astigmatic keratotomy made closer to the middle of the transparent cornea.

Intracorneal ring is the operation in which specially developed rings are placed into the cornea in order to fix the peak formation resulting from keratoconus disease.



## **Our Eye Treatments**

- Rehabilitation of Low Vision People
- Photodynamic Therapy
- Gas Buffer
- Glaucoma Treatment
- Intraocular Drug Injections
- Eyelid Surgery
- Tear Duct Obstruction
- Cataract Treatment
- Laser Tractorloplasty
- Premature Retinopathy (ROP)
- Pterygium Surgery
- Refractive Laser Treatment
- Retinal Diseases and Treatment
- Silicone Oil Buffer
- Strabismus
- Vitrectomy Surgery



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been created as  
an answer to your  
questions.

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