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Lasik Laser for **Myopia**



Why do you need to wear spectacles and contact lenses ?

The human eye is in many ways similar to a camera. Like the camera, the eye too has lenses to focus image on the retina. The eye has two lenses: the Cornea and the "Lens". The Cornea, which is the first element in the visual pathway, provides about 2/3 rd of the focusing power of the eye.

Sometimes when there is a mismatch between the cornea, the lens and the length of the eye, the eye focuses images ahead of or behind the retina. This results in unclear vision, eyestrain and headaches. To eliminate this mismatch, spectacles or contact lenses need to be worn.

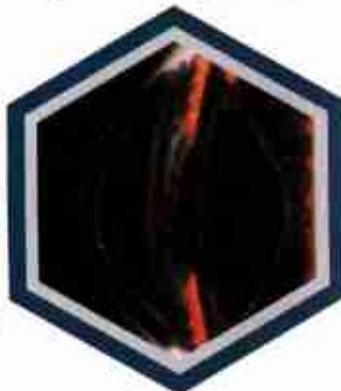


More light on the Cornea

Through the cornea appears black or brown (according to the eye colour) to the layman, it is actually transparent. Only half a millimeter thick, the cornea consists of several layers. Laser Refractive Surgery is generally concerned with two layers: the Epithelium, the top layer which has the capacity of re-growth, while the Stroma, the middle layer forming the bulk of the cornea has a very limited regenerative capacity,

How does the laser work ?

The laser, a state-of-the-art shaping device, is used to reshape the cornea with an accuracy of 1/2000th of a mm. For reshaping the cornea, the corneal surface is polished with the help of a pre-programmed excimer laser. This changes the refractive power of the cornea. And appropriate reshaping helps eliminate the refractive error of the eye.



One of the most attractive features of this technology is the long lasting nature of the refractive correction as it is done on the Stroma.

The excimer laser is used for a variety of corneal surgical purposes, of which the most common is corneal reshaping for the correction of refractive errors. It is also successfully used to treat corneal diseases and has helped the partially blind recover their sight.

The excimer laser, thus has the potential to change the landscape of ophthalmology, especially in terms of refractive corrections.

What is treatment procedure ?

The treatment procedure generally followed is called LASIK or Laser In Situ Keratomileusis.

In this procedure, besides the laser another mechanical instrument called the Microkeratome is used. This device is used to make a horizontal cut on the cornea to fashion a hinged flap (see Fig 1). The flap is then lifted and the reshaping with the laser is carried out (see Fig 2). The flap is replaced back on the corneal bed, where it sticks to the reshaped cornea (see Fig 3)



How Safe is the treatment ?

Extremely safe. If the doctor and the patient co-operate during the course of the treatment, then there is hardly any chance for complications to arise.



Fig. 1

Is there a chance of the refractive error coming back in the long run ?

No. The healing process is over approximately six months after the treatment. Thereafter there is little chance of getting the refractive error again.

How long is the treatment ? It is painful ?

The entire process takes less than ten minutes in which the laser treatment itself takes only a minute or two. The treatment is not painful. No injections are necessary. However, for about one day after the treatment the patient might experience some pain.



Fig. 2

Does the patient have to stay at the hospital ?

No, the patient can go home immediately. Things that irritate the eye should, however, be avoided for 2-3 weeks. For instance, in bright light or sun, the patient may need to wear sunglasses.

The patient needs to put eye-drops for a few weeks after treatment.

Who can undergo this treatment ?

Anybody who wears spectacles or contact lenses can undergo the treatment. But it is not advisable for persons whose number has changed significantly in the past year or is likely to change again in future. The treatment is recommended for persons above 18. We can treat Long-sightedness, Short-sightedness and Astigmatism. Patient should not be pregnant & should not have any other major eye diseases like cataract, glaucoma, major retinal diseases, etc.

See well, look better !

The results of the procedure are highly reliable and lasting, as proved by more than 10 years of international experience. Over 95% of the people undergoing the procedure achieve 6/9 vision with residual power less than 0.5D variation around zero. That means that they could comfortably drive, watch TV and do all activities without glasses or lenses! Several million people, the world over, who have undergone this procedure are already enjoying the benefits of this technology.



Fig. 3