



Wavefront-Guided Laser Surgery

Laser-assisted in situ keratomileusis, or **LASIK**, is an outpatient surgical procedure that uses an **excimer laser** to reshape the eye's cornea (the clear window in the front of the eye) to correct refractive errors. Refractive errors are problems with the way the eye focuses light, which cause nearsightedness (myopia), farsightedness (hyperopia), or astigmatism. LASIK is used to surgically correct refractive errors, rather than using eyeglasses or contact lenses.

Wavefront-guided LASIK is an enhanced version of LASIK. It uses a special device to precisely measure the eye's unique irregularities and variations as well as your need for corrective lenses. This procedure has been compared to taking a fingerprint of the eye. You may benefit from this customized approach.

Wavefront measuring devices, called "analyzers" or "**aberrometers**," create a precise map of the eye. It is very detailed and records subtle distortions in your eye's visual system. Using this map, the excimer laser can be programmed to correct for these measured distortions, giving you clearer vision than was possible before with conventional treatments.

With your chin resting on the aberrometer, you will be asked to stare past what is called a target light. A targeted beam of light will be sent through your eyes and will focus on the retina. A sensor will measure the irregularities in the wavefront pattern of the light as it emerges from your eye. Using wavefront technology before performing LASIK can help your ophthalmologist (Eye M.D.) enhance the outcome of your surgery by correcting the unique visual distortions present in your eye.