



Laser Vision Correction

horizoneye.com

Always
Thinking
VISION™

Laser Vision Correction

The Alcon WaveLight® EX500 Excimer Laser is able to correct very low to very high amounts of nearsightedness, farsightedness and astigmatism.

Topography-Guided Treatment

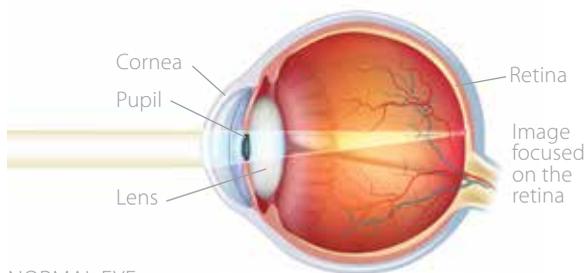
Topography-guided treatments (Contoura® Vision) allow your surgeon to treat measurable imperfections that are unique to your eyes. This one-of-a-kind, fingerprint-like measurement of a patient's eyes is used by the WaveLight® EX500 Excimer Laser to give you your best possible, personalized visual outcome in an effort to remove the need for glasses and contacts. Today's laser vision correction advances strive to improve vision quality while reducing or eliminating some of the possible effects associated with conventional laser vision correction.



How Laser Vision Correction Works

Normal Eye

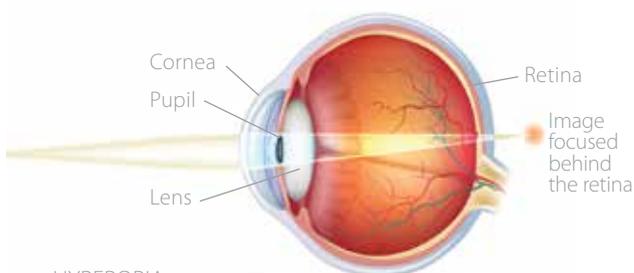
The cornea is a curved surface that acts like a lens and begins to focus the light. The light then goes through the pupil of your eye and is further focused by the lens so that a clear, sharp image can be formed on the retina at the back of the eye.



NORMAL EYE

Farsighted

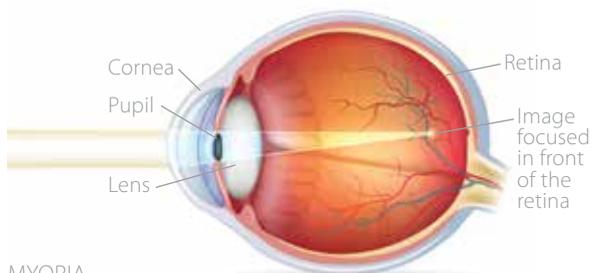
If the cornea is too flat or the eye is too short, the images closest to you are out of focus while being clearer at a distance. To correct this, the laser is programmed to alter the outer rim of the cornea and make it steeper in the center. This moves the point of focus on the retina to allow you to see the clearest image at both distances.



HYPEROPIA
(farsightedness)

Nearsighted

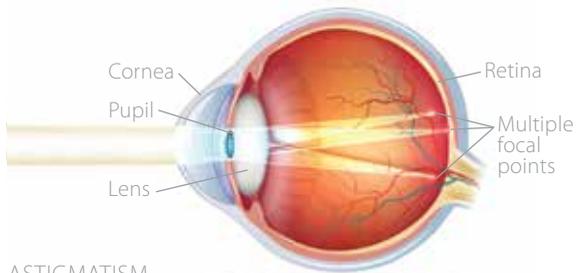
If the cornea is too steep or the eye is too long, the images closest to you are clearer while being out of focus at a distance. To correct this, the laser is programmed to alter the center of the cornea and slightly flatten it. This moves the point of focus on the retina to allow you to see the clearest image at both distances.



MYOPIA
(nearsightedness)

Astigmatism

If the cornea has an irregular surface, the images you see are distorted. The laser is programmed to smooth the irregularities and create a more evenly rounded surface to allow the image to focus on the retina in such a way that the image is not distorted.



ASTIGMATISM

Photo Refractive Keratectomy (PRK)

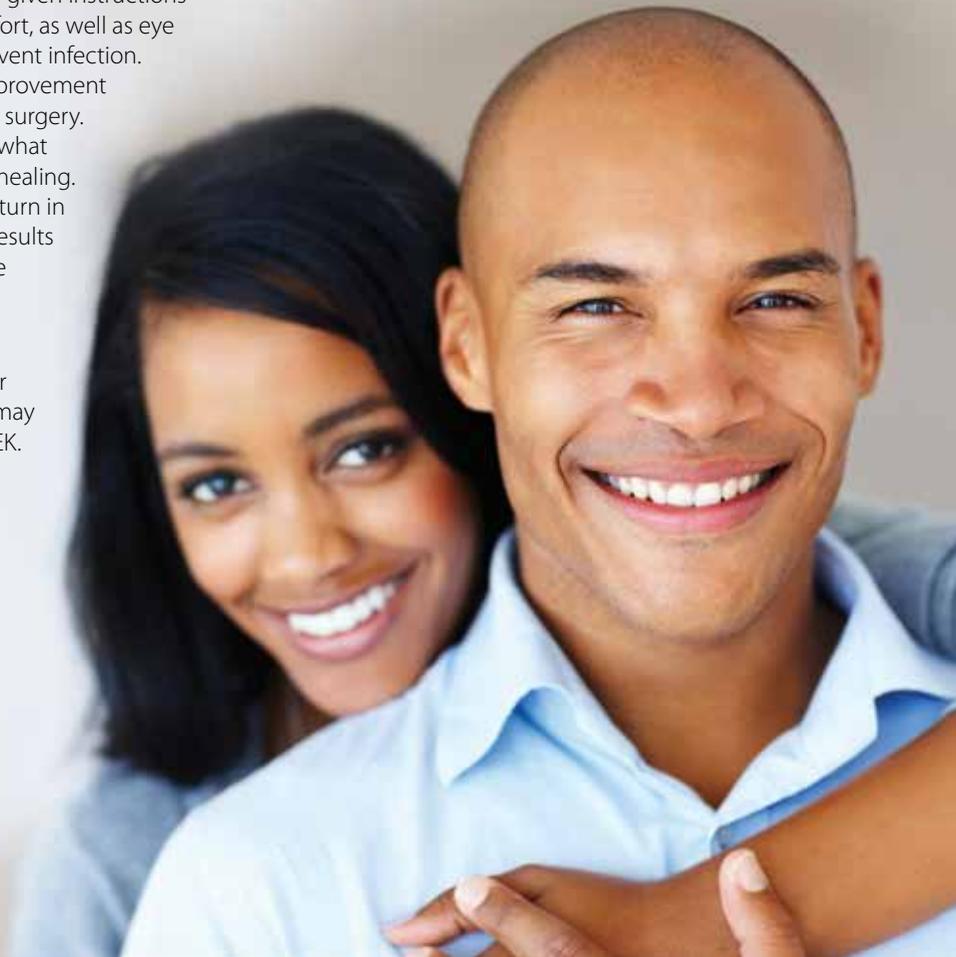
PRK treats the surface of the cornea. It does not require the use of a microkeratome or a femtosecond laser to make a flap, as does LASIK. For this reason, it can be considered the safest form of laser vision correction. We start by using numbing drops for the patient's comfort. Once they have taken effect, the protective skin (epithelium) that covers the cornea is removed or pushed aside. Then the WaveLight® EX500 Excimer Laser reshapes the surface, removing microscopic layers of the cornea with accuracy up to 0.25 microns. The amount of refractive power determines how much will be removed.

You should expect some moderate discomfort for the first 24-72 hours. You will be given instructions on how to manage the discomfort, as well as eye drops to speed healing and prevent infection. Most PRK patients notice an improvement in their vision immediately after surgery. However, vision usually is somewhat blurred while the epithelium is healing. Your functional vision should return in three to seven days. Full visual results may not be recognized for three weeks to three months.

PRK may be performed if the patient's corneas are too thin for the amount of correction they may need. PRK is also known as LASEK.

Laser In-Situ Keratomileusis (LASIK)

LASIK is actually two procedures in one. First, a thin flap is created by a femtosecond laser. The flap is then lifted to expose the treatment area. The WaveLight® EX500 Excimer Laser reshapes the cornea as programmed by the doctor and technician. Once treatment is completed, the flap is repositioned by the surgeon. This procedure usually takes about 15 minutes for both eyes. Also, LASIK patients recover quickly, and most experience little to no discomfort. Most patients can drive the next day without the use of glasses or contact lenses and return to work in one to two days, depending on the patient's occupation.





Call for a free consultation
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