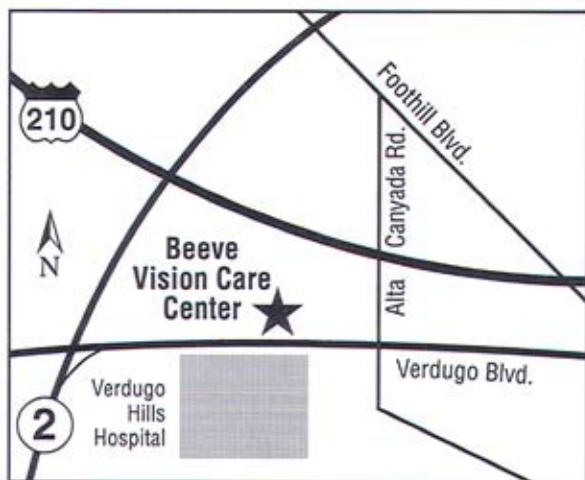




**Scott W. Beeve, M.D.**  
*Board Certified Ophthalmologist*



*Across from Verdugo Hills Hospital*

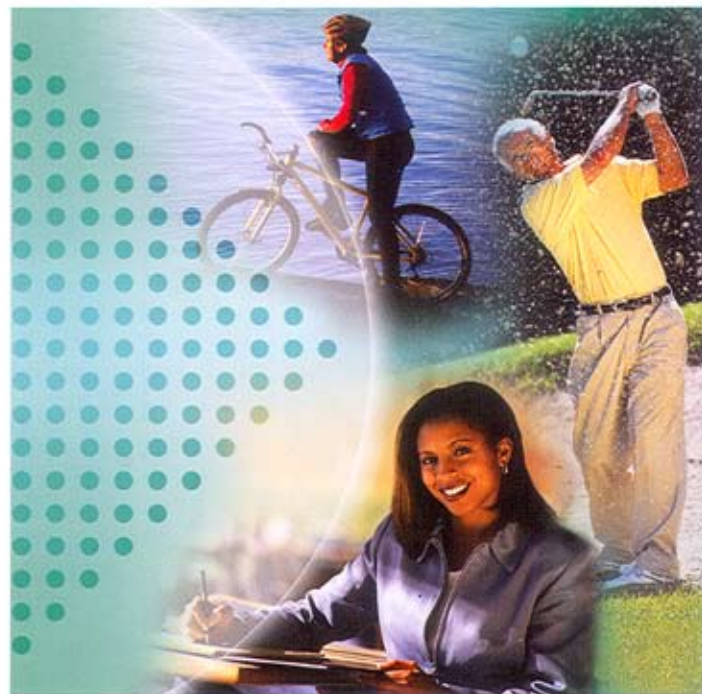
## **BEEVE VISION CARE CENTER**

1809 Verdugo Blvd., Suite 150  
Glendale, CA 91208

**818-790-8001**

[www.drbeeve.com](http://www.drbeeve.com)

# *INTRALASE*<sup>®</sup> And CUSTOM LASIK



All Laser, No Blade, Uniquely Safe and  
Precise, Predictably Better Vision

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# Custom IntraLase® LASIK

## Matching your Visual Fingerprint

Leading ophthalmic surgeons have combined two new technologies, IntraLase® flap creation and Custom LASIK, to create a vision correction procedure that is very safe, more precise and predictable. The new procedure combines the excellent vision correction characteristics of Custom LASIK with the added safety and predictability of the No Blade, IntraLase® technique. Advancing the first step in LASIK (flap creation) with IntraLase® dramatically improves predictability, reduces the risk of complication and makes LASIK available to an even wider range of patients.

Since the late 1970's when eye doctors first began to routinely treat nearsightedness, farsightedness and astigmatism with refractive surgery, the State-Of-The-Art has constantly improved. Now, as shown in one clinical study, 98% of those treated could see 20/20 or better. 100% of the patients were able to pass a driver's license test without corrective lenses and a full 70% were able to see better than 20/20. Many patients report that both day and night vision improved compared to wearing glasses or contacts before their surgery.

## Wavefront Technology

Until recently, laser vision correction was "one-size-fits-all." Using measurements developed for glasses or contacts, surgeons could only identify and correct "lower order aberrations" such as nearsightedness, farsightedness, and astigmatism. But just as no two people are the same, no two people share the same eye irregularities.

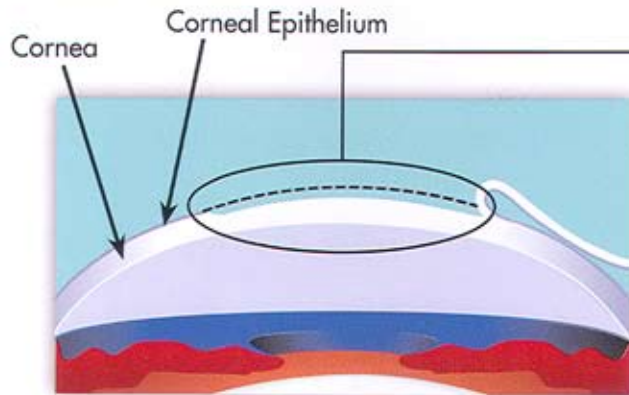
Human eyes have the potential of seeing 20/10 or better. However, most people can not see any better than 20/20 with or without corrective lenses due to subtle imperfections (higher order aberrations). Wavefront technology evolved from research by NASA to fix the imperfections of the Hubble Space Telescope, which was launched with faulty optics. NASA scientists spent millions of dollars to develop a way to measure and correct all of these imperfections—resulting in an image sharp enough to focus on galaxies light-years away!

## Custom LASIK

Custom LASIK, using Wavefront technology, measures and then treats your eye's individual imperfections, including "higher order aberrations." The Wavefront information is a fingerprint of your eye, including each tiny imperfection, captured and used by the computer to guide the laser, precisely applying greater treatment where your eye needs more, and less where it needs less. Eyeglasses or contact lenses are only made to +/- 0.25 D of prescription and only correct for "lower order aberrations". Custom LASIK is more precise (25 times more accurate, within +/- 0.01 D) and corrects for both higher and lower order aberrations. As a result, many people after Custom LASIK (without glasses) have better vision than they had with their glasses before surgery.

## IntraLase® All Laser Flap V

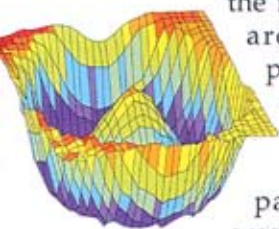
Creating the corneal flap is the first step in all LASIK surgery. Traditionally the microkeratome has been used by surgeons. This hand-held device with oscillating blades has created LASIK flaps with outcomes that have been considered good. It is now understood that LASIK surgery is safer by creating a more accurate flap.



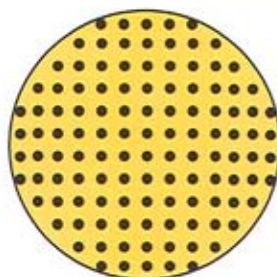
IntraLase® has brought ultra-fast laser technology to the field of ophthalmology with the use of the femtosecond laser. It generates light pulses as short as one-quadrillionth of a second. This infrared laser creates today's most accurate corneal flaps.

## Wavefront Analysis

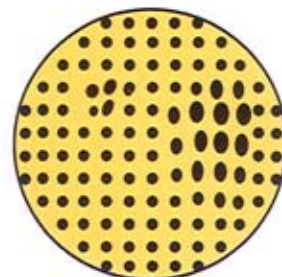
Using a sophisticated computer and mapping software, wavefront analysis essentially involves projecting a grid pattern into the eye and analyzing the integrity of its returned image for areas of displacement. As the projected image moves through the eye, it must pass through the cornea, the lens of the eye and be reflected back off the retina. If the pattern is returned exactly as it was sent, and in the predicted position, all aspects of the eye's refractive apparatus are functioning perfectly. However, if there is an aberration affecting refraction anywhere in the eye's visual system, it will show up in the returned image.



## Simplified Simulated Analysis



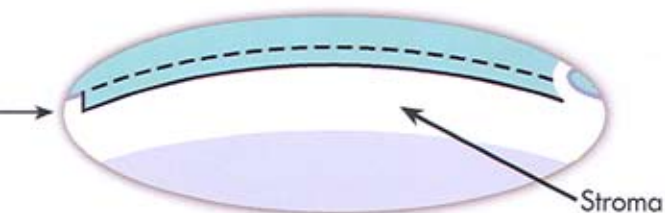
Projected Image



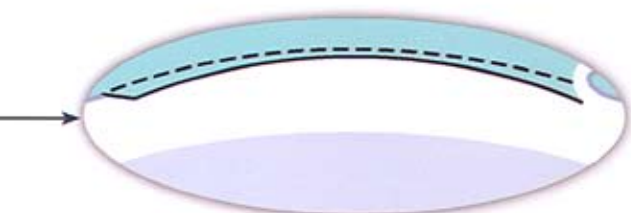
Reflected Image Showing Defects

Hundreds of points within the central visual zone are analyzed. If areas are found where the pattern is out of position, distorted, incomplete or fuzzy, specific correction can be targeted to that corresponding location on the surface of the cornea.

## 5 a Microkeratome Blade



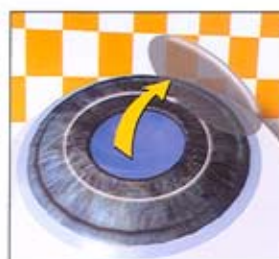
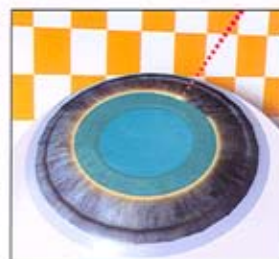
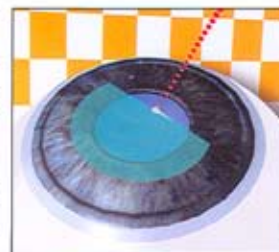
**IntraLase®** – Flap thickness is uniform and the precision of the laser allows surgeons to accurately adjust the depth of cut. Patient to patient variations can be taken into account and matched to a more accurate Custom LASIK solution. Safety is improved and flap complications are minimized.



**Microkeratome** – Flap thickness varies from edge to edge. Lack of consistency and precision increase the chance of flap complications and allows minimal adjustment for variations from one eye to another.

## The IntraLase® Custom Flap Creation Procedure

The First Step – The eye is numbed using eye drop anesthesia for painless surgery. Then, using an inside-out process, the IntraLase® laser beam passes through the cornea at 60,000 pulses per second and focuses inside the corneal stroma in an exact programmed location. There is no impact to the surrounding tissue. A tiny bubble of gas and water (2-3 microns) is created with each pulse. Thousands of these bubbles are created in precise locations within the cornea to create a raster pattern that defines the diameter, depth, hinge location and the side cut architecture of the flap. By stacking the bubbles at the edge, the flap is separated from the cornea and folded back out of the way.

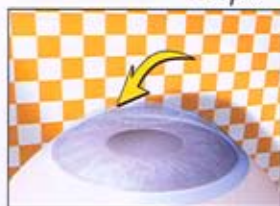


## The Custom LASIK Procedure

After the IntraLase® procedure is completed eye tracking is initiated to synchronize the laser with eye movement and the laser begins reshaping the cornea.

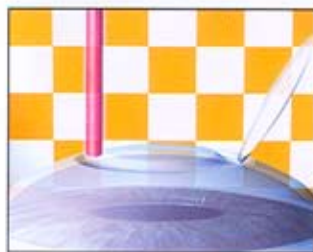


Step 2



Step 3

The Custom LASIK computer, programmed with the Wavefront data for each person's own correction factors, controls the laser and the sculpting of the cornea. In treating myopia, as shown at right, the laser segment of the procedure begins. As the laser moves across the surface, a concave lens is created over the visual axis. Next, the corneal flap is replaced (without stitches) and the LASIK procedure is complete. With hyperopia (below left), the shape of the cornea is essentially steepened to allow images to correctly focus on the retina. For astigmatism (below right), the laser beam scans back and forth along the cylindrical axis to reshape the eye.



## After LASIK

The procedure itself usually takes less than one minute and is essentially painless, although you may need to take Tylenol®, Motrin®, or Advil® for a few days afterwards until your light sensitivity, "foreign-body-sensation," and tearing subside. You will be able to see the clock right after your Custom LASIK! It will then take several days for you to fully recover, and you will continue to appreciate slight improvements in your vision for as long as six months afterwards!

## Custom IntraLase® LASIK Even Better than Standard LASIK

- More people obtain 20/20 vision
- More people achieve better than 20/20 vision
- No Blade, All Laser procedure
- Safe and more predictable
- Reduced possibility for contrast sensitivity problems or night vision glare.
- Millions of people have eliminated or reduced their dependence on glasses or contact lenses with LASIK surgery.

## Are you a Good Candidate for Custom LASIK?

If you are at least 21 years of age, have generally healthy eyes, and wear corrective glasses or contact lenses for nearsightedness, farsightedness, and/or astigmatism, you may be a good candidate for Custom LASIK! But before you get started, you'll need to meet with your eye surgeon to determine the potential benefits and risks. Glasses are the safest way to correct refractive errors, but they can be unsightly and annoying. Contacts can also be used, but are not without risk, as thousands of people have permanently lost vision from wearing contacts overnight, wearing them for too many hours, or not cleaning them properly. In addition, contacts can be uncomfortable, particularly for patients with dry eyes or allergies, and patients over 40. Laser Vision Correction has been FDA approved since the 1990's, and millions of people worldwide have this treatment successfully—in fact, over 1 million Americans are choosing the laser over contacts or glasses each and every year! Your surgeon will have you read and sign a detailed consent form, explaining the risks and benefits, and discuss these with you before your Custom LASIK—make sure you have all your questions answered before the procedure! Congratulations on considering a life without glasses or contacts using Laser Vision Correction and Custom LASIK! You will be glad you did!