



# The Consumer's Guide to LASIK



**Pacific Laser**  
EYE CENTER  
MEDICAL GROUP, INC.

## Thinking About LASIK?

LASIK is the most commonly performed elective procedure in the United States today which has freed millions of people worldwide from the daily hassle and limitations of glasses and contact lenses. LASIK technology, which has improved dramatically since the 90s, is now universally considered as a safe, effective and proven method of reducing or eliminating the need for corrective lenses. Have you been thinking about LASIK for yourself or someone you know?

## Think About This...

In about 22 percent of people who need vision correction, LASIK may not be the best choice. How do you decide? Where can you turn to get straight talk about how LASIK works? Are you a good candidate for LASIK? What's best for you and what should you expect for your eyes? If you're thinking about LASIK and have questions like these, The Consumer's Guide to LASIK was written just for you.



## In These Pages You Will Learn About:

### The Miracle Of Eyesight

### 20/20 Vision

### Different Types Of LASIK

### Lifestyle Factors That Play A Role In Decisions About LASIK

### Questions To Ask Your Eye Doctor

### The Importance Of Advanced Diagnostic Testing

### Some Of The Risks Associated With LASIK

### Wavefront Laser Technology

### The Myth Of \$299 LASIK

### How Your Eye Heals After Surgery

## Nearly half of the U.S. population requires vision correction.

Each year more than a million people escape the inconvenience of glasses and contact lenses, achieving visual freedom with LASIK. If you are thinking about LASIK, the first and most important thing you can do is to get all of the information you need to make the right decision about your eyesight and your unique vision correction needs.

### First, the Good News:

First the good news: Laser vision correction has been performed on more than 17 million people worldwide (Source: Market Scope 2007), and, according to the American Academy of Ophthalmology, the overwhelming majority of these individuals see between 20/40 and 20/20 without glasses following the procedure. Second, the news you probably will not hear from many sources: almost 22 percent of people who require glasses or contacts are not the best candidates for LASIK – in fact, they should not even consider LASIK.

This guide to understanding laser eye surgery will help you understand the optimal decision-making process surrounding LASIK and help you make an informed decision about LASIK.

Just as no two snowflakes are exactly alike, no two people have the same vision problems. For this reason, each person needs a unique vision correction plan. The first step in deciding if you are a good candidate for LASIK involves Advanced Diagnostic Testing. The results of these tests will indicate whether or not you are a good LASIK candidate. If results demonstrate or confirm that you are a good candidate for LASIK, then the next step involves creating a personalized vision correction plan to meet your specific needs. If you are not a good candidate for LASIK, other helpful vision correction options may be identified for you.

This guide is designed to help you make the right decision about your eyesight. The decision-making process involving your LASIK candidacy is complex, and your review of this guide is an important first step in assessing whether or not LASIK is right for you.

### You are not alone...

We're here to help you through the LASIK process. You can call any Pacific Laser Eye Center office to ask questions and get more information. You will be asked if you've already had Advanced Diagnostic Testing, explained later in this guide. Before you decide about LASIK, schedule your Advanced Diagnostic Testing to get the assurance that your eyes are suited for LASIK.

**Are you already curious to find out if your eyes are right for LASIK?**

*If so, call the number below for your Advanced Diagnostic Testing (explained later in this guide). These eye tests are the best indicators to know that LASIK is a good choice for you, and you will be able to see your customized vision plan. The tests are easy, painless and free.*

## What is 20/20 Vision?

*20/20 vision is considered normal vision. Most doctors use the familiar chart topped by the large letter "E" to measure your visual acuity, or your ability to see. If your doctor says that your visual acuity is 20/20, it means that you see from a distance of 20 feet what a person without vision problems sees at 20 feet. This measurement is traditionally considered the baseline, and any (deviations) from it is used by your doctor to evaluate your vision. Accordingly, if you have 20/40 vision, you see at 20 feet what a person with 20/20 vision sees at 40 feet. If you're one of the lucky few (someone with 20/15 vision, for example), you see at 20 feet what others would see at 15 feet.*

*Our eyes are complex instruments designed to deliver a clear picture of the world around us – communicating the simplest of colors, shapes and textures. Of the five senses – hearing, sight, taste, smell and touch, the gift of sight is considered the most precious.*

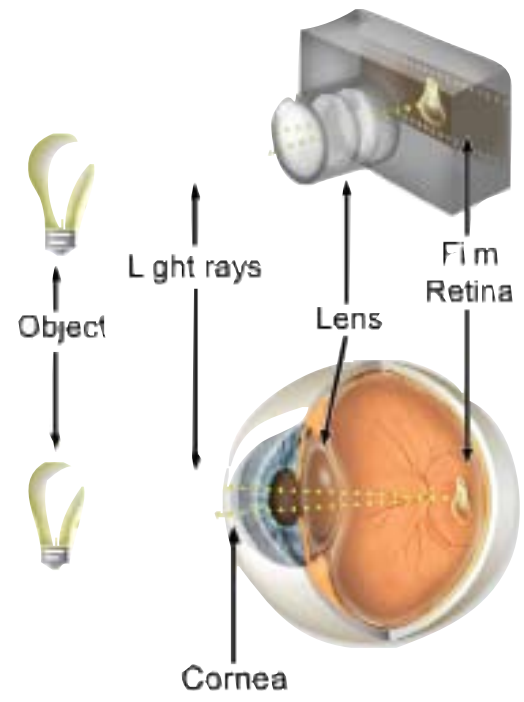
### The Role of the Cornea

The cornea is the clear, dome-shaped covering on the surface of the eye. It is smooth and clear like glass, but also strong and durable. Your cornea is critical to your vision in several ways:

- It acts as a window to focus the entry of light into the eye. The cornea contributes 65 – 75 percent of the eye's total focusing power. The remainder of the focusing task is performed by the crystalline lens.
- It shields the eye from germs, dust, and other harmful matter. The cornea shares this protective task with the eyelids, the eye socket, your tears and the sclera, or the white part of the eye
- It serves as a filter, screening out some of the most damaging ultraviolet (UV) rays in the sunlight. Without this protection, the eye would be highly susceptible to injury from UV radiation.



Eyesight...  
It's an Amazing Thing



When light strikes the cornea it bends, or "refracts," the incoming light onto the lens. The lens further refocuses that light onto the retina, a layer of light-sensing cells that line the back of the eye and begins the translation of light into vision. The image that your retina "sees" is then sent through the optic nerve to your brain, which creates a visual image.

In order to see clearly, light rays must be focused by the cornea and lens to fall precisely on the retina. The cornea and lens act together like a camera lens. The retina is similar to the film. When the image is not focused properly, a blurry image is processed by the film (or retina).

## Refractive Errors

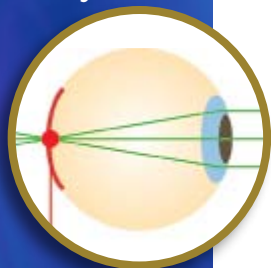
About 120 million people in the United States wear eyeglasses or contact lenses to correct nearsightedness, farsightedness, or astigmatism. These vision disorders – called refractive errors – occur when the curve of the cornea is incorrectly shaped (too steep or too flat) for the length of the eye. When the cornea has correct shape and curvature, it bends light into the retina with precise focus. However, when the curve of the cornea is not correct, it bends the light so it is not sharply focused on the retina, making images appear blurry. By placing corrective lenses, either glasses or contacts, in front of the cornea, the light is bent slightly to compensate for the refractive error of the cornea.

- **Myopia**, or nearsightedness, affects more than 25 percent of adult Americans. When the cornea is curved too steeply, or if the eye is too long, faraway objects appear blurry because they are focused in front of the retina.
- **Hyperopia**, or farsightedness, is the opposite of myopia, resulting from a cornea that is too flat or an eye that is too short. Distant objects are clearer, and up-close objects are blurry. With hyperopia, images would focus on a point behind the retina.
- **Astigmatism** is a condition in which the uneven curvature of the cornea blurs and distorts both distant and near objects. A normal cornea is round, with even curves from side to side and top to bottom. With astigmatism, the cornea is shaped more like the back end of a spoon, curved more in one meridian, causing light rays to have more than one focal point and to focus on two separate areas of the retina, distorting the visual image. Two-thirds of Americans with myopia or hyperopia also have astigmatism.
- **Presbyopia** commonly affects people as they enter their 40s, occurring as the lens inside the eye becomes less flexible and the muscles controlling the lens weaken. People with presbyopia may experience blurred vision when performing everyday “close-up” tasks, such as reading, sewing, or working at the computer. This is why some people with presbyopia need reading glasses or hold objects farther away to see them clearly. Although LASIK does not directly treat presbyopia, read the section regarding “Blended Vision” for more information on an option for people with presbyopia.

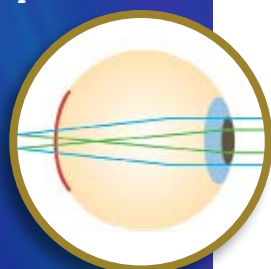
## Lower- and Higher-Order Aberrations

Just a few years ago, eye doctors could only measure and treat “lower-order” visual aberrations, such as nearsightedness, farsightedness, and astigmatism. These lower-order aberrations account for around 85% to 90% of the quality of your vision. However, there are also “higher-order” aberrations that can also affect the quality of your vision. Higher-order aberrations have been linked to night vision problems such as glare, star bursting, and halos and cannot be corrected by traditional eyeglasses, contact lenses, or older, conventional LASIK. Even without having LASIK surgery, people who wear glasses or contact lenses sometimes complain about the quality of their vision, such as not being able to see clearly in dim light.

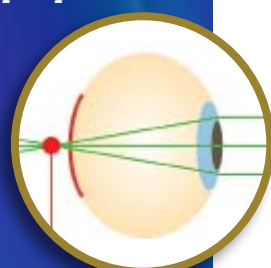
Normal Eye



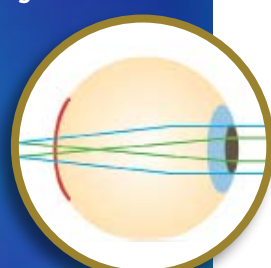
Myopia



Hyperopia



Astigmatism



Higher Order Aberrations



Without Higher Order Aberrations

Today, a new advancement called “Wavefront Technology” has made it possible for eye surgeons to measure and treat vision in ways that address both lower- and higher-order aberrations. Using the latest applications of this technology, modern LASIK is able to correct for nearsightedness, farsightedness, and astigmatism while maintaining visual quality to provide patients with clear, natural vision.

Wavefront technology enables the surgeon to improve overall vision quality better than ever before. An important series of Advanced Diagnostic Tests should be performed, in addition to the more standard prescreening tests, to accurately determine your LASIK candidacy and your personalized LASIK treatment. These tests measure your eyes thoroughly, and help identify subtle refractive impairments that should be addressed as your LASIK treatment plan is prepared.

## Eyeglasses and Contact Lenses

Glasses and contact lenses are designed to compensate for the refractive errors caused by myopia, hyperopia and astigmatism. Many people, however, want to reduce their dependency on glasses and contacts. The reasons people find eyeglasses or contact lenses inconvenient are diverse.

For some, their lifestyle is affected negatively by glasses because they can't freely do certain things such as swim or play water sports. Others are frustrated with distortions in their vision caused by glasses or by the glare sometimes caused by glasses or contacts. For others, glasses can actually pose an occupational hazard if, for example, a fireman loses his glasses while in the middle of a crisis situation. One of the most frequent complaints echoed by many people is that their glasses are “never there when they need them,” and as a result they might face uncommon problems when doing otherwise very common things such as surfing the web, cooking or trying to get out of the house in a hurry.

Similarly, people who wear contact lenses frequently complain about the nuisance associated with constantly cleaning and then fumbling to insert and remove contact lenses. Contact lenses also carry risks. Some contacts can scratch the cornea if the lens does not fit properly or if the lens is worn while sleeping. Contact lenses can slide off the cornea and become hidden under the lid. Rigid gas-permeable lenses and soft extended-wear contacts are the most likely to have protein build-up and cause lens-related allergies. People who wear any type of lens overnight have an increased chance of developing infections of the cornea. Corneal infections, although relatively infrequent, are the most serious complication of contact lens wear.

## The Next Step

*Advanced Diagnostic Testing is the next step to understanding if your eyes are right for LASIK.*

*Call 888.722.2020 to schedule the easy and painless eye tests, which will let you know if LASIK is a good option. There are always convenient appointments to fit your schedule.*

# Understand Your Options



*For people who are looking to reduce their dependency on glasses or contacts, surgical procedures are a tremendously effective option.*

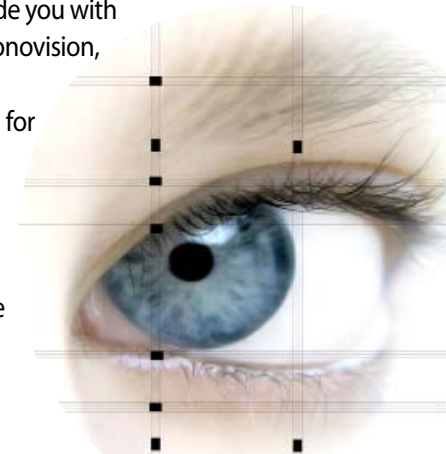
Surgical procedures that can improve the focusing power of the eye are called **refractive surgeries**. The refractive procedure commonly referred to as LASIK is the most technologically advanced way to correct vision, and it has helped millions of people worldwide reduce their dependency on glasses and contact lenses.

With LASIK, an excimer (cold beam) laser is used to reshape the cornea or alter the way light rays enter the eye to achieve focus, just as contacts or glasses alter the way light rays enter the eye. This corneal reshaping can be used to correct nearsightedness, farsightedness, and astigmatism.

LASIK is the most common term used to refer to laser vision correction procedures. All forms of laser vision correction use an excimer laser to reshape the cornea, but

there are variations in the procedure that can have different advantages. After you undergo Advanced Diagnostic Testing, your eye doctor will be able to discuss these options with you and determine which approach might be best for you.

- **LASIK (Laser-Assisted In Situ Keratomileusis)** sculpts the cornea through the use of an excimer laser. In traditional LASIK, an extraordinary thin flap is created in the top layer of the cornea with a device called a microkeratome and then gently folded back. The underlying layer is then re-shaped with the laser in matter of seconds to correct the refractive errors causing the vision impairment. The flap is then folded back across the cornea, which naturally adheres and begins to heal within minutes. Of all the laser vision correction procedures, LASIK provides the most comfortable and rapid healing process.
- **IntraLase® LASIK (All-laser LASIK)** uses a near-infrared laser to create the LASIK flap through a process known as photodisruption instead of a mechanical microkeratome. Once the flap is created, the excimer laser is used to reshape the cornea as in traditional LASIK. IntraLase LASIK is the first bladeless method of creating a flap and provides a more precise way of creating a LASIK flap while providing the comfort and rapid healing of traditional LASIK.
- **Advanced Surface Ablation (ASA)** refers to laser vision correction procedures that treat the surface of the cornea without the creation of a flap. PRK (Photorefractive Keratectomy) and Epi-LASIK are the two most common forms of ASA and refer to the methods of preparing the corneal surface just prior to using the laser. ASA is the safest form of laser vision correction. Because no blade is used and no flap made, it allows a wider range of patients to be treated who may not be able to undergo a traditional LASIK procedure due to thin corneas, job restrictions, or other visual issues. ASA is also considered by many to provide the chance for the sharpest and clearest vision, since there are no induced refractive errors associated with a corneal flap. ASA does have a disadvantage though in that it usually involves a few days of discomfort (treated with ibuprofen), and a slower visual recovery time that may range from a few days to a few weeks.
- **Blended Vision** is a LASIK technique you might want to consider if you wear reading glasses or are nearing the age when reading glasses may become necessary. As people get older, they frequently have trouble reading, particularly reading fine print. This is a natural part of the aging process associated with the lens inside the eye. When this happens, most people need reading glasses. If you use glasses to read prior to LASIK surgery or you remove your glasses to read, you may need to use glasses for reading after LASIK because LASIK does not treat the lens inside the eye. However, a Blended Vision procedure may provide you with suitable near and distance vision. Blended Vision, also called monovision, is a technique by which one eye (usually the dominant eye) is corrected for clear distance vision and the other eye is corrected for comfortable near vision. Blended Vision allows a person to see both close and distant objects clearly, but not necessarily quite as crisply as when both eyes are corrected for just one distance or the other. Many people who wear contacts use blended vision today and are very satisfied. Your doctor will demonstrate how this method works prior to your procedure and thereby help you determine if Blended Vision will work well for you.



*Your lifestyle is one of the most important factors to take into account as you consider whether LASIK is right for you.*

**Pacific Laser Eye Center** is trusted by more than 400 eye doctors in Northern California.

### **LASIK Expectations**

While LASIK cannot promise perfect vision, it does hold the promise of reducing one's dependence on contact lenses or glasses, which will allow many people to more freely pursue their hobbies, sports activities or career options.

### **Realistic Expectations**

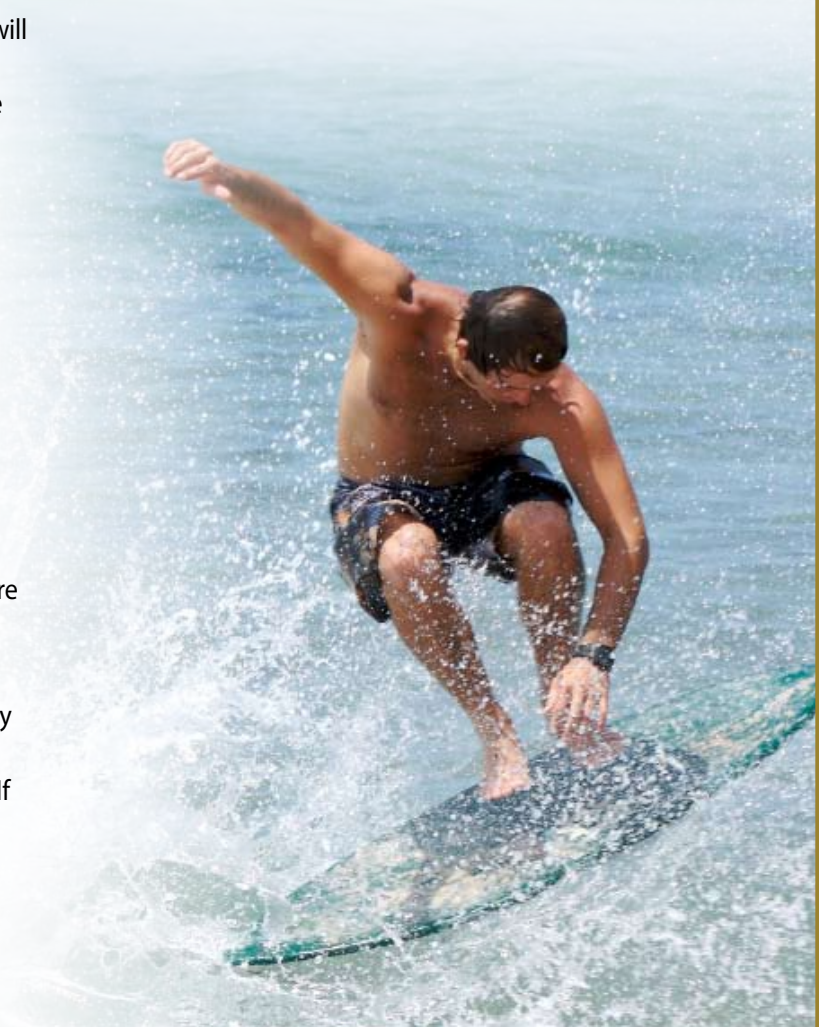
If you are considering LASIK, you also have to remember that this procedure is not for everyone. Some LASIK providers may knowingly offer you the procedure even when it is not the right choice for your long-term vision needs. To ensure that you meet the appropriate criteria for LASIK, you should obtain Advanced Diagnostic Testing to ensure that your eyes are right for LASIK. This would be followed by a discussion with your eye doctor about your eyesight, general health and lifestyle-related vision needs.

Some people think that LASIK will provide them with "perfect" vision. If your goal is to achieve "perfect" vision, then LASIK might not be right for you. While it is reasonable to expect greatly improved vision and a reduced dependency on glasses or contacts, it is not realistic to expect perfection. In general, the results of LASIK surgery—how well a person sees after the procedure—will usually be comparable to how well they were able to see before the procedure using glasses or contacts.

In the end, most people are very happy with the procedure and recommend it to their friends. If you have realistic expectations about laser vision correction then you are also likely to be very satisfied after LASIK.



Stop and Think...  
Is LASIK Right for Me?



## General Criteria For A Good LASIK Candidate

According to the U.S. Food & Drug Administration, you may be a good candidate for LASIK if you meet the following criteria:

- You are at least 18 years old.
- Your eyes are healthy and your prescription stable. If you are nearsighted, you should postpone LASIK until your refraction stabilizes as nearsightedness can still increase in some patients until their mid-to-late-20s.
- You are not pregnant or nursing as these conditions might change the measured refraction of the eye.
- You are not taking certain prescription medications such as Accutane® or oral prednisone.
- You are in generally good health. LASIK may not be recommended for patients with diabetes, rheumatoid arthritis, lupus, glaucoma, herpes infections in the eye, or cataracts.
- Understand what your expectations are for the procedure. Are they realistic?

## Most common reasons why LASIK may not be right

- Unrealistic expectations (not satisfied with anything less than “perfect” vision)
- Pupils too large
- Eye health issues
- General health
- Thin corneas
- Unstable prescription
- Pre-cataract
- Prescription too high (out of range) or too low

## The Myth of \$299\* LASIK

*Many LASIK facilities advertise \$299 LASIK, \$499 LASIK, or some seemingly attractive low-priced vision correction procedure. There is always some catch associated with these low-cost options. Look closely at these ads—you will see an asterisk attached to the advertised low price with some extraordinary fine print (usually about this size), and therein rests the catch. Don't be fooled by sensational advertisements promising “Low-Cost LASIK Miracles.” Thinly veiled promises such as these are just what they appear to be: Too good to be true. When you read the fine print you are likely to find that this price is only applicable for patients who require so little correction that they don't need LASIK. In addition, such discounts can frequently mean that substandard LASIK equipment is being used, some part of the intricate diagnostic and/or surgical process is being omitted or the physician is not very experienced in the procedure. Often some costs are being hidden, only to be sprung on you when you are baited into visiting them through their promise of cheap LASIK.*

## Vision is Priceless

The cost of your LASIK procedure is also something to discuss with your eye doctor. At the end of 2005, the average fee for all-laser, wavefront-guided LASIK surgery in the U.S. was between \$2,200 and \$2,400 per eye (Source: Market Scope). For many people, LASIK will cost less than the years of buying glasses and contacts. Nevertheless, you should not make your decision about LASIK based simply on cost. Most health insurance plans do not offer coverage of LASIK because it is an elective procedure. However, some plans do offer a LASIK benefit while some others provide discounts negotiated through various providers. Therefore, you should ask your LASIK provider if they honor your insurance plan when conducting your LASIK surgery cost evaluation.

Most laser vision correction centers accept credit cards and many offer financing so you can make low monthly payments or have no-interest payment options. There is usually no need to pay the entire LASIK surgery cost at once. Although elective procedures are not normally covered by insurance, there are some unique ways to pay for LASIK, including some help from the IRS.

Recent changes in tax laws now allow you to utilize medical flex spending dollars to pay for the procedure, and may save you as much as 40 percent, depending on your tax bracket. Flex spending accounts (FSA) and health savings accounts (HSA) are programs that allow you to pay for eligible medical expenses on a pre-tax basis. If your employer does not offer a FSA or HSA, LASIK qualifies as a medical expense tax deduction.

## Advanced Diagnostic Testing

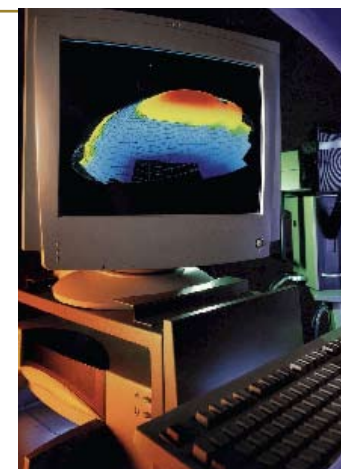
As the first step in the decision making process, Advanced Diagnostic Testing provides the objective measurements of your vision system that will determine if LASIK is an option for you. LASIK performed on someone who has not passed these tests could result in unexpected results.

**Corneal Topography/Orbscan.** Measures the smoothness and curvature of the cornea's surface and creates a “map” of the cornea. The map is used to discover any surface or internal irregularities, such as a cornea that is too steep, which would preclude surgery or lead to a poor result.

**Pupil Size or Pupilometry.** Pupil measurements are taken with an infrared camera in a dark room. The results are needed to design the appropriate treatment diameter that optimizes each person's vision and help reduce the potential risk of having nighttime glare or halos.

**Corneal Thickness or Pachymetry.** Corneal thickness is determined with an ultrasound device called a pachymeter. To be a candidate for LASIK, your cornea must have sufficient thickness in multiple locations for the amount of your visual error.

**Wavefront Analysis.** Measures the distortion in light as it passes through the eye from the corneal surface back to the retina of the eye. It provides a map of the lower- and higher-order visual distortions of your eye and is unique to each person.



## Sacramento

### H. Douglas Cooper, MD

Medical Director, PLEC Medical Group, Inc.  
Gold River, California Center



A native of Idaho, Dr. Cooper graduated Cum Laude in 1981 from Brigham Young University in Utah. During his undergraduate training, Dr. Cooper spent two years as a missionary in Venezuela, where he became fluent in Spanish. He graduated from Tulane University School of Medicine in 1985, and then completed a yearlong internship at Charity Hospital in New Orleans.

From 1986 to 1989, Dr. Cooper trained as an Ophthalmology Resident at Tulane University, where he received the prestigious "James Allen Excellence in Ophthalmology Award." He has also written and published numerous articles in professional publications such as "The American Journal of Ophthalmology" and "Archives of Ophthalmology." In 1989, Dr. Cooper settled in the Sacramento area and started a general ophthalmology practice specializing in refractive and cataract surgery. In 1996, Dr. Cooper became co-medical director and a founding partner of Pacific Laser Eye Center in Gold River. He holds a medical license in California and Nevada and in 1999 became medical director of Pacific Laser Eye Center in Reno. He is one of the most experienced LASIK surgeons in the Sacramento area, having performed over 10,000 LASIK procedures.

### Richard B. Meister, M.D.

Medical Director, PLEC Medical Group, Inc.  
Gold River, California Center



Dr. Meister graduated from the University of Oklahoma in 1971 with a B.S. in Zoology and Science Education degrees. Prior to medical school, Dr. Meister attended post-graduate courses at UC Berkeley while doing research in microsurgery at Mt. Zion Hospital in San Francisco as director of the experimental surgery lab. In 1978, he completed a Bachelor of Science degree in Medicine at the University of North Dakota. He graduated from medical school at UC Davis in 1980. In 1981, he completed his internal medicine internship at UCLA Harbor General Hospital in Torrance, CA. Dr. Meister completed his ophthalmology residency

at the prestigious Hermann Eye Center, University of Texas at Houston in 1984. He served as chief resident and was voted "Most Outstanding Resident" by his peers.

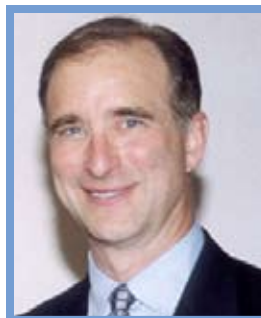
Dr. Meister has specialized in refractive surgery since establishing his Sacramento area practice in 1984. He is a true pioneer in the field of refractive surgery. In 1984, he was the first surgeon in Northern California to perform radial keratotomy using the Russian Technique. Seven years later, Dr. Meister introduced a new surgical technique to the area and became the first surgeon to perform ALK in Northern California. Prior to the FDA approval of excimer laser vision correction in the United States, he began traveling out of the country with his ALK keratome in 1993 to perform LASIK as it was being developed worldwide. Since FDA approval of the excimer laser in 1995, Dr. Meister has performed thousands of laser vision correction procedures in the United States. He was the first surgeon in Sacramento to perform laser vision correction on patients in December of 1995. In 1996, Dr. Meister became the co-medical director and a founding partner of Pacific Laser Eye Centers, where he performs laser vision correction and other refractive procedures in the Sacramento area. In 2003 he was appointed to the faculty of The Southern California College of Optometry at Fullerton where he taught students about and performed laser refractive surgeries.





## Santa Rosa

### Gary Barth, MD Santa Rosa, California Center



Dr. Barth is one of the North Bay's most experienced corneal surgeons. He attended medical school at USC and completed his Corneal Surgery Fellowship at UCSF and has been in private practice in Santa Rosa since 1983. He has lectured on corneal surgery nationally and internationally and has published chapters in four editions of Current Ocular Therapy, America's best selling ophthalmology reference publication.

Dr. Barth was an early adapter to Laser Vision Correction Surgery. Prior to FDA approval in the United States, he traveled to Canada and Mexico to study the procedure. He underwent LASIK Surgery himself in 1996 and has been performing the surgery ever since.

Dr. Barth has made a strong commitment to improving the quality of medical care in Sonoma County. He founded and was the Medical Director of the Eye Bank of Sonoma, as well as serving as the current Medical Director of 4th Street Laser and Surgery Center, Sonoma County's busiest ocular surgery center.

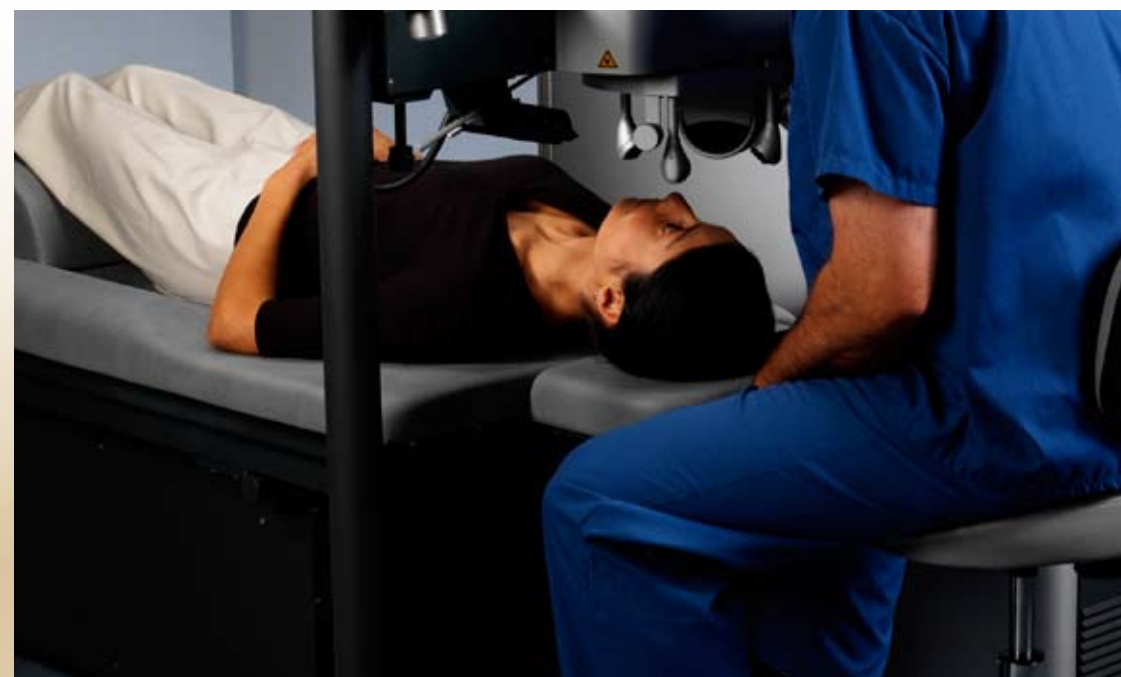
### Daniel Rich, MD Santa Rosa, California Center



Daniel Rich, M.D. is a Board Certified Comprehensive Ophthalmologist and Refractive Surgeon. He completed medical school and physician residency at the University of California, Davis and also studied at the University of Barcelona, Spain.

Since becoming an Ophthalmologist in 1991, Dr. Rich has distinguished himself in many ways. As a physician with Kaiser-Permanente, he not only maintained a thriving medical and surgical practice, but also became well known for his groundbreaking work as the National Medical Director for Laser

Vision Correction. Dr. Rich has become a progressive leader in the technology used in Laser Vision Correction. In 2006, Alcon Laboratories Inc., the world's largest ophthalmic company, appointed Dr. Rich as a Clinical Advisor of Refractive Surgery, only one of two in the nation. Dr. Rich also holds the prestigious position of Associate Board Examiner with the American Board of Ophthalmology. Dr. Rich's excellent medical and surgical skills and his sincere concern for patient welfare have earned him a reputation as a caring and dedicated physician. Dr. Rich is fluent in Spanish.



## Danville



### Todd Severin, MD

Todd D. Severin, M.D. is an internationally renowned, fellowship-trained ophthalmologist and Assistant Clinical Professor at the University of California, Berkeley. Dr. Severin also serves as Medical Director at Pacific Laser Eye Center Medical Group, Inc. at U.C. Berkeley.

A cum laude graduate of Pomona College, Dr. Severin completed his medical degree with honors and his ophthalmology residency at the

University of California, San Diego, where he also served as Chief Resident for the Department of Ophthalmology. He then completed a post-doctorate clinical fellowship at Baylor Medical Center in Houston, Texas.

Dr. Severin has authored numerous scientific papers and chapters in the medical literature and has been an invited lecturer at scientific meetings across America, Europe and Asia.



### Steven Gray Pascal, MD

As part of the ophthalmology group that takes care of the Golden State Warriors, members of the Oakland Raiders and Oakland Athletics, Dr. Pascal knows how much good vision impacts every facet of life. That's one of the reasons he's been so interested in laser vision correction and has been performing the procedure since 1996.

Since 1995 he has worked as the Chief or Assistant Chief of Ophthalmology at Summit Medical

Center in Oakland, and he has been teaching eye surgery as a Clinical Instructor through California Pacific Medical Center since 1992. He also works as a Medical Consultant for U.C. Berkeley's Tang Health Center.

Dr. Pascal's Ophthalmology training was through the University of Southern California at the Doheny Eye Institute. He is a Phi Beta Kappa graduate of Stanford University, and he attended medical school at the Tufts-New England Medical Center in Boston.

Dr. Pascal has been an invited lecturer on a local and statewide level on many topics including laser vision correction and recent developments in cataract surgery. In his time off, Dr. Pascal enjoys skiing, traveling, studying history, and spending time with his family.



### Andrew L. Sorenson, M.D.

Dr. Sorenson has been performing refractive surgery in the Bay Area since his Cornea and Refractive Surgery Fellowship at Duke University Eye Center in 1999. As a Fellow, he trained extensively in LASIK, PRK, and corneal transplantation, and was honored as Fellow of the Year with the Hornaday Award for Excellence in Clinical Care, Ethics and Research.

A third generation Bay Area surgeon, Dr. Sorenson is Chief of Cornea and External Disease at Alameda County Medical Center, Co-Director of the Laser Eye Center at the University of California Berkeley Eye Center, and Assistant Clinical Professor at the UC Berkeley School of Optometry. Dr. Sorenson's medical degree

is from the University of California, San Diego and his undergraduate degree is from Stanford University.

Dr. Sorenson is an avid outdoorsman and may be spotted backpacking with his family of five, fly fishing, cycling, running, gardening, or working with the Boy Scouts.



### Todd Auker, MD

Dr. Auker is a widely recognized, exceptional ophthalmic surgeon who specializes in refractive procedures as well as oculoplastic surgery. With over 20 years of experience, he has performed thousands of each of these surgeries utilizing the latest techniques and most advanced technologies. Dr. Auker was selected as one of the first surgeons nationally to provide the newest multi-focal refractive lens implants and has been providing the most advanced laser vision correction available since 1997.

His education includes receiving his medical degree from the University of California at San Francisco, internship at Stanford University Teaching

Hospitals, and his residency at Bethesda Eye Institute. Dr. Auker is Board Certified by the American Board of Ophthalmology and is a fellow of the American Academy of Ophthalmology.

Before Bioethics became an established undergraduate degree in many Universities around the country, Dr. Auker was perhaps the first person to major in Bioethics. Having designed his course of study independently at the University of California at Santa Barbara Scholar's Program, Dr. Auker also studied at the School of Public Health, University of California, Berkeley. Dr. Auker has participated on hospital ethics committees throughout his career and is currently the Chairman of the ethics committee at Valley Care Medical Center. Dr. Auker is passionate in practicing to the highest ethical standards clinically in providing the best possible medical care available.

As a lifelong athlete, Dr. Auker is an avid skier, occasional tri-athlete and elite cyclist. He recently finished high in the 2008 Tour of the California Alps, a 129 mile, 16,000 ft endurance race involving climbing 5 of the steepest passes in the Sierra. He even was the team Doctor for the 1988 and 1992 Olympic Water Polo Team. He enjoys scuba diving with his wife Karin and three children: Kirstin (an athlete/scholar at U.C. Berkeley), Julia and Ryan. Dr. Auker believes that staying active and fit enables him to maintain his physical skills and mental sharpness professionally.

# You Won't Know if You Don't Ask



*Your eye doctor can play an integral role in helping you determine if you are a good candidate for laser eye surgery, tailoring a vision correction plan to meet your unique needs, preparing you before the procedure, and evaluating your progress and long term vision needs after the procedure. As with any medical procedure you might face, trust is a key factor in your relationship with an eye doctor.*

As such, the selection of your eye doctor is very important, and you should be prepared to evaluate how your eye doctor can help you meet your unique vision correction needs. This includes working with a LASIK specialist your eye doctor knows and trusts. Ask your eye doctor whom they would recommend for their own eyes or their family member's eyes.

As you explore the possibility of LASIK for vision correction and discuss your particular situation and goals with your eye doctor, there are many questions to review to ensure that you obtain all the needed information, and that you get the best guidance and best procedure available.

## The questions below can help you evaluate and select a LASIK doctor:

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1. How long has the surgeon been involved with LASIK?
  2. Am I a good candidate for LASIK?
  3. Which LASIK procedure is best for me? Why?
  4. How do you verify my prescription before you permanently change my vision?
  5. How much experience do you have treating LASIK patients?
  6. How do you define success and what is your success rate?
  7. Do you perform Advanced Diagnostic Testing? If so, what tests do you perform? If not, why not?
  8. What is the chance for me (with my correction) to achieve 20/20 vision?
  9. How many of your patients have achieved 20/20 or 20/40 vision?
  10. What are my chances to be under-or-over-corrected?
  11. How do you determine if I should get an enhancement?
  12. What is your enhancement policy?
  13. What laser will be used for my surgery? Is it FDA approved?
  14. What is involved in after-surgery care?
  15. Who will handle after-surgery care?
  16. What complications have you had and how did you handle them?
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## It Takes Time

### *There is an overall process in achieving great vision.*

This process has several steps and, as such, one of the most important factors associated with LASIK is time. To accurately assess your candidacy, time will be required to conduct Advanced Diagnostic Testing, to undergo a comprehensive eye exam, and to have one or more pre-operative exams. You may also need to allow plenty of time prior to the procedure when you will not be able to wear contact lenses (yes, that means wearing glasses for a period of time).

The LASIK procedure itself will take less than 30 minutes with an experienced surgeon, but you will have several appointments with your eye doctor prior to surgery to confirm you are a good candidate for LASIK, to determine your unique vision correction prescription, and to prepare you for a successful procedure. You and your eye doctor can determine together how this process will unfold to best meet your needs, but understand that the time you invest in this process prior to surgery is essential for the most successful LASIK outcome.

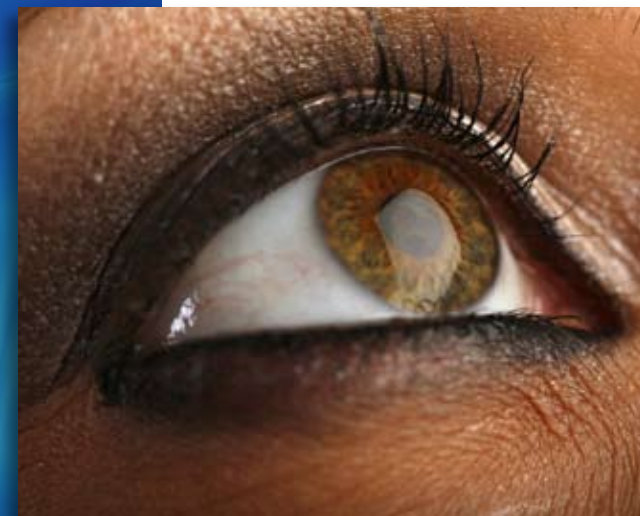
Finally, be sure to carefully follow each step of the after-surgery instructions given by your eye doctor and make sure to attend every post-operative appointment.

## LASIK Risks

### What If Something Doesn't Go Right?

The FDA has determined that LASIK surgery, when performed correctly on the appropriate candidates and under the right conditions, is proven effective and safe. The risks for LASIK are well documented because the U.S. government requires manufacturers to prove LASIK is a reliable and sound procedure. While the overwhelming majority of people who undergo LASIK are pleased with the results, some do experience complications.

Some complications occur because patients treated with LASIK were better candidates for ASA (see earlier chapter). Other complications occur when the pre-testing or preparation is rushed ("I want to have my new eyes for vacation next week"). Be aware of potential complications and discuss with your eye doctor how likely they are to occur in your case.



Risk of the following is minimal, but should be discussed with your eye doctor:

- Under-treatment or over-correction
- Corneal scarring, irregular astigmatism (permanent warping of the cornea), or inability to wear contact lenses
- Corneal infection
- Loss of best corrected visual acuity, or a situation in which you are not able to see as well after surgery (even with glasses or contacts) as you did with glasses or contacts before surgery
- A decrease in contrast sensitivity, "crispness," or sharpness
- Problems with night driving that may require glasses
- Complications with the corneal flap (Does not apply to ASA)

The following side effects are possible, but usually disappear over time:

- Discomfort or pain
- Hazy or blurry vision
- Scratchiness
- Dryness
- Glare
- Halos or starbursts around lights
- Light sensitivity

Any reputable laser vision correction professional will discuss these possible complications and side effects with you.

### Under-Treatment or Over-Treatment

Every eye heals and reacts to laser treatment slightly differently. Individual outcomes cannot be predicted with 100% certainty, and there will always be some patients whose initial laser treatments leave them slightly under or over corrected. These are people who may benefit from a touch-up or enhancement procedure, to achieve their optimal vision.

The good news is that at Pacific Laser Eye Center, the overwhelming majority of patients are very satisfied with their vision after just one procedure. Even better news—Pacific Laser Eye Center is committed to helping all patients obtain their optimal vision and will retreat those few patients needing it. It is comforting to know that virtually all patients who have re-treatments report it is even less stressful than the initial procedure.

Your doctor can evaluate and discuss with you what your chance of needing a re-treatment might be. The predominant factor is the severity of the initial prescription and initial refractive stability. For Pacific Laser Eye Center patients who are mildly to moderately nearsighted, with or without astigmatism, enhancement is needed about 8% of the time. For people who are highly nearsighted or moderately to severely farsighted, the expectation of a re-treatment is somewhat higher. Re-treatments are performed after the initial healing is complete and vision stabilizes, which occurs roughly three months after the initial treatment.

### Pacific Laser Eye Center Expertise

*At Pacific Laser Eye Center, we are supported by a team of more than 400 eye doctors, including 14 surgeons and corneal specialists who together have performed well over 100,000 vision correction procedures. Our surgeons are frequently called on to consult with patients from other laser centers that have experienced complications. Once you become a patient of Pacific Laser Eye Center, you can be assured you are in the best of hands.*



## How Important is Laser Technology?

*There are different laser systems used in laser vision correction procedures. The vision correction system used can make some important differences in the results achieved with laser eye surgery.*

Excimer lasers are specifically manufactured to perform LASIK. Although all FDA approved lasers meet the Agency's requirements for safety and effectiveness, different lasers may provide different results, and depending upon the required prescription, some patients may be better treated with one type of laser versus another.

### Custom LASIK

With the advent of wavefront diagnostic technology to measure higher-order refractive errors, many modern lasers now have the ability to use wavefront technology to guide the laser treatment. Custom LASIK, or wavefront-guided LASIK was hailed as a revolution in the field when it was first approved by the FDA in 2002.

The advantages of Custom LASIK rest largely with an even more exacting treatment addressing each eye's unique characteristics to provide a greater chance of realizing optimal quality of vision and reduced side effects, including decreasing the chance of night vision disturbances such as glare and halos. While traditional LASIK is known to induce higher order aberrations, Custom LASIK is far less likely to induce these aberrations and produces overall better visual quality and outcomes.

### Eye Tracking

Today, while many excimer lasers also have some system of eye tracking, most are not designed to compensate for saccadic eye movements which are the natural, small movements of the eye. Your eyes can move about 50 times per second without you even being aware of it. It is critically important that the excimer laser be able to keep pace with these eye movements, to ensure an accurate laser correction. The purpose of the most advanced eye tracking systems is to keep the laser beam on target, thereby providing patients with better outcomes.



## Pacific Laser Eye Center Laser Technology

At Pacific Laser Eye Center, we use the state-of-the-art Allegretto Wave excimer laser which was created by the German company WaveLight. Built with pioneering wavefront-optimization and unique PerfectPulse Technology, this refractive laser platform protects the quality of vision while providing a new level of safety for physician and patient. WaveLight laser systems apply PerfectPulse Technology to ensure safe and precise work at high speed. PerfectPulse Technology simply means that every laser pulse is completely controlled from its generation to the point where it contacts the cornea.

Each ultra-thin laser pulse is used to sculpt the corneal surface with the utmost precision. In order to further enhance the safety and precision of the treatment, PerfectPulse Technology uses advanced high-speed eyetracking to follow the eye's fastest movements and to ensure an accurate placement of each laser pulse on the cornea. Three independent infrared sources follow the eye's movements 200 times per second. The tracking system has the ability to react and adjust in just four to six milliseconds (ms) if the eye shifts even a fraction of a millimeter. This eliminates the chances of an errant laser pulse affecting the treatment.

The Allegretto Wave laser was built from the ground up with wavefront technology in mind. Its patented wavefront-optimized treatment automatically adjusts the treatment for each individual's unique pre-operative corneal shape. This process provides a treatment that not only is very effective at correcting for lower-order refractive errors like nearsightedness, farsightedness, and astigmatism, but is also able to maintain the cornea's natural shape during treatment and provide crisper, more natural vision.



# You Will Be Amazed



## *You will be amazed at the immediate improvement in your vision.*

Most patients are able to see the hands on a clock across the room as soon as they sit up following their LASIK procedure. Nevertheless, your vision will be a bit blurry or foggy for several hours, which is normal and to be expected as your eyes begin the rapid healing process.

After the procedure, most people are advised to keep their eyes closed as much as possible, or to simply go to sleep. You will also be advised to avoid reading or watching television the first day, as your corneas will heal best with the eyes closed. If you had an ASA procedure, you may experience some visual discomfort for the first few days. Some discomfort is not unusual following an ASA procedure and traditional LASIK patients experience little to no pain.

Your vision will improve considerably over the next day and should be very functional when you return to your eye doctor for your follow-up exam the next day. You will not be able to drive until cleared by your doctor. Within the first week following the procedure, 90 percent of your visual healing will be complete. The remaining 10 percent of your correction is reached within one to three months. You might notice that each eye heals at a different rate. This too is normal.

Your eye doctor will share some precautions and warnings, requiring that you refrain from some activities such as swimming, hot tubs, and avoiding dusty environments, for a short period following your procedure.

## Alternatives to LASIK

As you review your vision correction needs with your eye doctor, you might also want to discuss some alternatives to LASIK, including:

- **Implantable Lenses-Intraocular Lenses**, or IOLs, can correct common vision errors such as nearsightedness. These implants resemble contact lenses, but instead of sitting on the surface of the eye, IOLs are surgically implanted between the cornea and the iris or just behind the iris. Implantable lenses are a surgical alternative to LASIK, in that they do not require that tissue be removed from the eye. Instead, these IOLs are planted in the eye and work like glasses or contacts from within the eye.
- **Refractive Lens Exchange**, or RLE surgery, replaces your eye's natural lens with an artificial lens that helps you achieve sharper focus. This procedure is typically used for cataract patients. With the introduction of newer, more advanced artificial lenses, certain patients may find benefit with this procedure.
- **Glasses or Contact Lenses**

## Online Resources

A broad spectrum of information is available to aid in your advanced understanding of laser vision correction. Additional resources that you might want to refer to as you gather information about LASIK include:

- [The National Library of Medicine's LASIK Tutorial](#)
- [The FDA's LASIK Guidelines](#)
- [The National Eye Institute Facts About the Cornea](#)
- [The Official Patient's Source Book on Laser Surgery, edited by James N. Parker, MD, and Philip M. Parker, PhD.](#)

For links to these resources go to [www.paclaser.com](http://www.paclaser.com) and click on the **online resources tab**

## Do You Have Questions?

You may also contact the Pacific Laser Eye Center's panel of eye doctors at **888.722.2020** or [www.paclaser.com](http://www.paclaser.com)

## We Are Ready For You!

When you are ready, Pacific Laser Eye Center wants to welcome you to the excitement of considering if LASIK is right for you. The first step is Advanced Diagnostic Testing to see if your eyes are right for LASIK. One easy phone call will connect you with someone who will schedule a convenient appointment. There is no charge and never any obligation.

### Advanced Diagnostic Testing

- Pupillometry
- Topography
- Pachymetry
- Wavefront Analysis

### Take Care of Your Eyes

There are a few things you can do today to help prepare your eyes for LASIK and keep them healthy for many years.

#### Eat for your eye health

- Omega 3 fatty acids, such as those found in salmon, tuna and flaxseed oil, help reduce the symptoms of dry eye.
- Lutein is an antioxidant shown to prevent macular degeneration and cataracts. Eggs are a great source of this nutrient.
- Vitamins C & E help promote general eye health and healing.
- It's true what your mom said about carrots. Carrots and other foods that contain beta-carotenes and other antioxidants like tomatoes and spinach are truly good for your eyes.

#### Protect your eyes

Always wear 100 % UV blocking sunglasses when exposed to the sun for prolonged periods. Make sure your children wear them as well to protect their developing visual systems.

#### Eye checkups

The world around us is a wondrous place. Invest in your vision and see your eye doctor annually to protect your most precious sense—your vision.



## Five Convenient Locations to Serve You:



### Gold River

11220 Gold Express Drive, #405  
Gold River, CA 95670  
ph: 916.635.4878



### Danville

370 Diablo Road #105  
Danville, CA 94526  
ph: 925.820.0828



### Santa Rosa

130 Stony Point Road, #E  
Santa Rosa, CA 95401  
ph: 707.544.2020



### Stockton

3031 W. March Lane, #216W  
Stockton, CA 95219  
ph: 209.477.7700



### UC Berkeley

230 Minor Hall  
Berkeley, CA 84720  
ph: 510.643.3792

## Make Your Appointment Today!

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