



see your life
CLEARLY

LASER VISION CORRECTION

QUALITY PHYSICIANS

Our Ophthalmology Board Certified refractive surgeons have many years of experience. They have performed thousands of LASIK procedures on patients, including fellow physicians and employees.

MEDICAL EXPERIENCE

At Kaiser Permanente, we have been taking care of our members for 60 years and you can count on us to be here for a long time. Our doctors in California are supported by a nationwide program of medical groups who share information and updates on best medical practices.

Collectively, our refractive surgeons perform thousands of eye surgeries every year and have additional expertise ranging from cataract surgery to corneal transplantation.

COMPREHENSIVE CARE

At Kaiser Permanente, our laser vision correction service is comprehensive. You will not experience extra fees for post-operative or surgery care and will not have to worry about what is included.

You can trust the quoted price to include:

- Comprehensive clinical evaluation
- Skilled follow-up care by Kaiser Permanente refractive surgeons and optometrists as well as a full year of post-operative care and necessary enhancements
- Professional surgical fee
- Laser center fee

THE KAISER PERMANENTE DIFFERENCE

The decision to undergo laser vision correction is an important one. The choice of where to trust your eyes is just as important. With so many providers offering laser vision correction services, sometimes it is hard to know whom to trust.

SO, WHY CHOOSE KAISER PERMANENTE?

With Kaiser Permanente, you can feel confident knowing that you'll be treated by an organization familiar with your medical history and your unique needs. Your refractive surgeon will be with you from the initial consultation and will remain involved with your care even after your procedure. You'll be cared for by an excellent team of health care professionals dedicated to giving you the best possible outcome from your laser vision correction procedure.

Laser vision correction

Also known as refractive surgery, laser vision correction (LVC) refers to elective eye operations that use a laser to reshape the cornea and change the way light is focused or “refracted” by the eye. The goal is simple: to reduce your dependence on glasses or contacts. If you are nearsighted, farsighted, or have astigmatism and feel that glasses or contact lenses limit your activities, LVC may be the right choice for you.

How laser vision correction works

The most common LVC procedures are done with an excimer laser. The excimer laser is a computer-guided cool laser that corrects vision by reshaping the cornea to improve the way light is focused or refracted by the eye. Two major procedure types are available for treating low to moderate levels of nearsightedness, farsightedness, and astigmatism: Laser Assisted In-Situ Keratomileusis (LASIK) and surface ablation—including PhotoRefractive Keratectomy (PRK), LASEK, or epi-LASIK, a variation on PRK. In all of these procedures, the laser sculpts the cornea in about 30 to 60 seconds and the entire procedure takes approximately 15 minutes from start to finish.

The excimer laser

The excimer laser has been FDA approved for use in both surface ablation and LASIK. Because we contract with outside laser centers, we have access to a variety of lasers. This allows us to choose the laser best suited to treating your refractive error. Our lasers also employ an eye-tracking device, which provides an additional level of precision. This device allows the laser to continuously detect and compensate for eye movements, while guiding the laser beam to keep it centered over the treatment area.

Laser vision correction and presbyopia

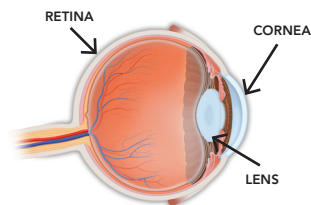
Once in our 40s and beyond, most of us need reading glasses or bifocals to read smaller print. This condition is called presbyopia, and it is caused by changes that occur in the lens inside the eye. LVC cannot correct presbyopia because refractive procedures alter the shape of the cornea, without changing the lens inside the eye. Symptoms of presbyopia can often be reduced with monovision.

Monovision

Monovision describes a situation where one eye is corrected to provide slight nearsightedness and one eye is corrected to provide good distance vision. For many people, the brain automatically adjusts to use the better eye for the appropriate visual task. The nearsighted eye focuses well on objects at arms-length and can be used for viewing a computer screen or similar activities. The distance-sighted eye can be used for driving, sports, or other activities requiring distance vision.

For someone who has presbyopia, monovision reduces your dependence on distance glasses and near glasses. While you may be able to read a dinner menu or computer screen, you may still need reading glasses for fine print and prolonged reading. Sometimes distance glasses may be required for night driving.

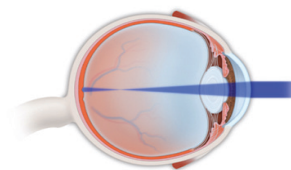
People who have successfully simulated monovision through contact lenses may want to consider the option of monovision for laser refractive surgery.



The normal eye (emmetropia)

The normal eye (emmetropia)

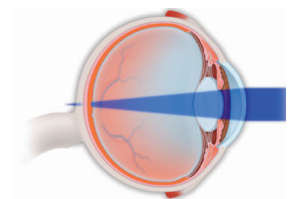
The term “refractive” refers to how light rays focus on the retina, the photosensitive layer that lines the inside of the back of the eye. A variety of factors determine how sharply an image is focused. The cornea provides most of this focusing power. In a normal eye, distant objects appear sharp and clear because they are focused directly on the retina.



The nearsighted eye (myopia)

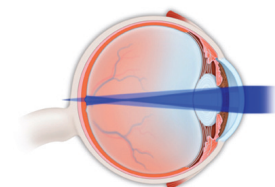
The nearsighted eye (myopia)

Myopia (nearsightedness) occurs when the cornea is too steep or the eye is too long, resulting in light focusing in front of the retina. Distant objects appear blurred or fuzzy. Near objects, viewed at the proper distance, can be seen clearly.



The farsighted eye (hyperopia)

Modern surgical techniques can change the shape of the cornea to correct or significantly reduce myopia. Laser Assisted In-Situ Keratomileusis (LASIK), PhotoRefractive Keratectomy (PRK), and Laser Assisted Sub-Epithelial Keratectomy (LASEK) are all used to correct myopia. These procedures reshape—or slightly flatten—the cornea, allowing images to be focused on the retina to improve clarity of vision.



Astigmatism (distorted vision)

The farsighted eye (hyperopia)

Hyperopia (farsightedness) occurs when the curvature of the cornea is too flat or the eye is too short, causing light rays to focus behind the retina. Both distant and near objects often appear blurred.

Laser vision correction reshapes the cornea, increasing the corneal curvature in hyperopes. This increases the power of the cornea and allows images to be clearly

focused on the retina. The goal of LASIK or surface ablation for the hyperopic patient is to allow images to be focused on the retina to improve clarity of vision.

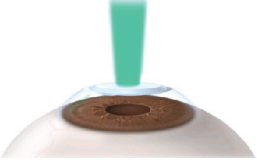
Astigmatism (distorted vision)

Astigmatism is usually caused by an uneven corneal curvature. In the normal eye, the surface of the cornea is round like a soccer ball (spherical). With astigmatism, the cornea is slightly oblong like a football. This causes light rays to focus at different places in the eye. Objects at all distances appear blurred. Both nearsighted and farsighted individuals may have astigmatism that further contributes to their poor vision. Laser vision correction can correct this oblong shape of the cornea, and thus eliminates the blurred vision caused by astigmatism.

Presbyopia

Presbyopia—which makes it difficult to focus on close objects—typically occurs around the age of 40 to 45 years. This develops because the lens inside the eye loses its ability to change shape. People compensate for presbyopia by using bifocals and reading glasses. Although there is no surgical cure for presbyopia, symptoms can be reduced with monovision. Please refer to the “Understanding LVC” insert for more information on monovision.

Surface ablation

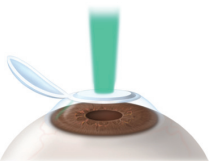


Surface ablation—PhotoRefractive Keratectomy (PRK), LASEK, and epi-LASIK

Surface ablation is recommended for patients who have low myopia and mild astigmatism. Utilizing the precision of the excimer laser, surface ablation changes the shape of the cornea to improve the way light is focused or “refracted” by the eye. After anesthesia is used to numb your eye, the epithelium (the outermost layer of the eye) is removed and ultraviolet high-energy pulses are used to reshape the outer cornea. Because there is no flap, there is less risk for trauma to the eye.

Immediately following the procedure, a bandage contact lens is placed over the eye for up to five days to protect the eye while it heals. Surface ablation has a lengthier healing process and more discomfort than LASIK. Patients may report some discomfort after the procedure until the outer portion of the cornea (epithelium) heals, usually within 48 to 72 hours. Patients with higher prescriptions before surgery often see a dramatic improvement in their vision within the first week, with the overall healing process continuing for the next few months.

LASIK



Flap created and laser applied

Laser Assisted In-Situ Keratomileusis (LASIK)

After a drop of anesthetic is applied to the eye, an instrument called a microkeratome glides across the cornea and creates a corneal flap. The surgeon carefully lifts the flap and, in less than one minute, ultraviolet high-energy pulses from an excimer laser reshape the internal cornea layers. By adjusting the pattern of the laser beam, the surgeon can treat nearsightedness, farsightedness, and astigmatism. The flap is then gently replaced to its original position.

Because of the cornea’s natural bonding qualities, healing is rapid and does not require stitches. Some patients report a slight postoperative discomfort that is usually

alleviated with eye drops. Many patients see a dramatic improvement in their vision within a day. For others, vision may fluctuate and continue to improve for several weeks.

Femtosecond LASIK

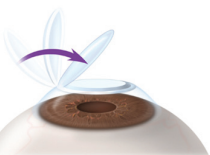
In the first step of the LASIK procedure, surgeons mechanically create a corneal flap, a mirror-thin flap of tissue on the outer layer of the cornea, using a mechanical device called a microkeratome. With femtosecond LASIK, the surgeon uses a computer-guided femtosecond laser to create the corneal flap.

The Femtosecond (FS) Laser uses tiny beams of laser light to safely and accurately create a layer of gas bubbles in the cornea. This allows the surgeon to perform “all laser LASIK,” using two different lasers for the two steps of the procedure: the femtosecond laser to make the flap, and the excimer laser to contour the cornea’s curvature, adjusting its focusing power. The process can be up to 100 times more accurate, resulting in fewer complications and allowing patients a higher degree of comfort.

The safety and accuracy of femtosecond LASIK allows treatment of a broader range of people, including those who were not good candidates for the traditional LASIK procedure due to the thickness of their cornea or to slightly dry eyes.

Wavefront

Wavefront is an advanced software technology for LVC that incorporates our understanding of complex optics in the visual system. Using this knowledge of fine imperfections has allowed LVC to be more accurate and to moderate glare and halos typically noticeable at night after LVC with traditional software. This also allows you to maintain quality vision in dim lighting.



Flap replacement

Services and fees

Kaiser Permanente offers the following laser vision correction (LVC) services:

- LASIK
- Surface ablation (including PRK, LASEK, and Epi-LASIK)
- Wavefront LASIK
- Wavefront Surface Ablation
- IntraLase
- Wavefront IntraLase

LVC procedure fees cover:

- Comprehensive clinical consultation including corneal topography, pachymetry, dilated and non-dilated refractions, eye pressure measurement and assessment of LVC candidacy
- Professional surgical fee
- Laser center fee
- Twelve months of post-operative care
- Peri-operative antibiotic and anti-inflammatory drops

Procedure fees **do not** cover:

- Any unscheduled visit or care for unrelated eye conditions
- Glasses for reading or night vision
- Outside second opinion

If you are having your LVC procedure performed outside of Kaiser Permanente, you can pay for post-operative care.

Methods of payment

LVC is a fee-for-service procedure and is not covered under Health Plan benefits.*

Payment for surgery must be received prior to your procedure. Kaiser Permanente accepts cash, money order, Visa, MasterCard, and American Express. Select locations also accept debit cards for payment.

You can use your employer-provided Flexible Spending Account (FSA) or Medical Savings Plan (MSP) to help pay for LVC.

Cancellation and refund policy

For cancellations made more than one week prior to the scheduled surgery date, payment will be refunded in full.

Cancellations made within one week of scheduled surgery date are subject to a 10% cancellation fee. This cancellation fee will be waived if the procedure is rescheduled and performed within 90 days.

If the surgeon cancels or if there is a clinical reason for the cancellation, no fee will be incurred.

No portion of the fee will be refunded after surgery is performed.

* Services described here are provided on a fee-for-service basis. These services are not provided or covered by Kaiser Foundation Health Plan, Inc., and you are financially responsible to pay for them. Clinical services are provided by providers or contractors of The Permanente Medical Group, Inc. Results of services vary among patients and cannot be guaranteed. Kaiser Foundation Health Plan, Inc., and Kaiser Foundation Hospitals may receive compensation for providing facilities and/or other support in connection with these services. For specific information about your health plan benefits, please see your *Evidence of Coverage*.

Clinical consultation

Your laser vision correction (LVC) procedure starts with a comprehensive clinical consultation. The primary goal of this evaluation is to determine whether you are a candidate for LVC and, if so, which procedure is the best for you.

During the evaluation, your eyes will be dilated and examined to ensure they are healthy. Advanced corneal imaging technology will be used to determine the contour of the front and back surface of the cornea. In addition, your tear function will be evaluated and the thickness of your cornea will be measured. A refractive surgeon will then review the results of the exam with you and discuss your LVC options.

An equally important goal of the consultation is to educate you regarding all aspects of LVC and help you understand what you can reasonably expect from your procedure.

Preparing for surgery

Prior to your LVC procedure, a refractive surgeon or specially trained optometrist will examine you in preparation for surgery.

If you wear contact lenses, plan to remove them **prior to this examination and again before the surgery itself** as noted below:

- **Soft contact lenses**—Remove at least one week before pre-operative exam.
- **Soft toric lenses**—Remove at least one week before your pre-operative exam.
- **Rigid gas-permeable or hard contact lenses**—Remove these lenses at least one week (preferably one month) before your initial pre-operative examination. Because these types of lenses can alter the natural shape of the cornea, you will need to switch to wearing soft contact lenses or glasses until a stable corneal curvature is achieved. Sometimes this process takes several months.

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The day of surgery

Your laser vision correction procedure will be performed in a modern laser suite. On the day of surgery, you will arrive at the laser center where the procedure and post-operative care will be reviewed with you.

After cleaning the area around your eyes, anesthetic drops will be applied to numb your eyes and you may be given a light sedative to help you relax. No general anesthesia is necessary.

The procedure begins with a surgeon using a small device that holds your eyelids open. You don't have to worry about blinking or closing your eye during the procedure. You will be asked to focus on a small blinking light. The typical procedure takes approximately 15 minutes from start to finish. The actual laser treatment lasts about one minute for each eye.

Recovery

The staff will review your post-operative instructions with you. Immediately after surgery, your eyes will be sensitive to light and your vision will still be blurred. You will not be able to drive safely, so you will need to arrange for a ride home. You will be given dark glasses to make your ride home more comfortable.

Plan to relax and keep your eyes closed as much as possible for the remainder of the day. This step is critical to ensure the best outcome from the surgery and to allow the flaps to permanently seal into good position. For a few hours after surgery, you may experience some discomfort and irritation in your eyes. You will be given eye drops to help relieve some of the discomfort and keep your eyes moist. For many patients, vision will start to approach the clarity of their prior vision with glasses or contacts on the very next day!

After the surgery

Fluctuation of vision—While your eye heals, you may notice fluctuations in your vision. This is normal and usually resolves within several weeks after the surgery, but in some cases may persist longer.

Post-operative care—Post-operative care is an important component of laser vision correction. The day after your surgery, your doctor will check your eyes to make sure they are healing properly. Most patients are able to return to work within a couple of days, some even the day after the surgery.

Enhancements—Sometimes, people with very strong prescriptions may require more than one treatment to achieve the full benefit of laser vision correction. These additional laser treatments are called "enhancements." Enhancements fine tune the visual results of the first laser procedure. Your surgeon will work with you to determine if enhancements are beneficial for you.

Redwood City

Ophthalmology Dept.
Eye Care Services
910 Maple Street, Suite 170
Redwood City, CA 94063
(650) 299-3789

Sacramento/Roseville

Ophthalmology Dept.
Eye Care Services
1680 East Roseville Parkway
Roseville, CA 95661
(916) 614-4350

San Francisco

Ophthalmology Dept.
Eye Care Services
1635 Divisadero Street
3rd Floor, Suite 360
San Francisco, CA 94115
(415) 833-2763

Santa Clara

Ophthalmology Dept.
Eye Care Services
710 Lawrence Expressway
Santa Clara, CA 95051
(408) 851-4030

Santa Rosa

Ophthalmology Dept.
Eye Care Services
3925 Old Redwood Highway
Suite 145
Santa Rosa, CA 95403
(707) 566-5905

Walnut Creek/Park Shadelands

Ophthalmology Dept.
Eye Care Services
Shasta Building
320 Lennon Lane
Walnut Creek, CA 94598
(925) 906-2550

Am I a good candidate for surgery?

In making the decision to undergo laser vision correction (LVC), there are some important things to consider, such as:

- The degree of refractive error—that is, how well your eyes can see without corrective lenses
- Your lifestyle, occupation, and leisure activities
- Your age and general health
- Your personal expectations of the procedure

One of our optometrists or refractive surgeons will give you a comprehensive eye exam to determine if you are a good candidate for surgery. To be eligible for surgery, you must:

- Be at least 18 years of age
- Have stable vision for at least one year prior to surgery
- Have healthy eyes with adequate tear film that are free of disease, scars, optic nerve problems, retinal disorders, and corneal abnormalities
- Have good general health
- Have no auto-immune systemic diseases
- Not be pregnant or nursing

Expectations

Most patients who undergo LVC significantly reduce their dependence on glasses or contact lenses. However, LVC does not guarantee 20/20 vision. Realistic expectations for LVC include:

- Less dependence on glasses or contacts
- Ability to function in an emergency without the use of glasses or contacts
- Freedom to engage in non-contact sports activities without the use of corrective lenses

What are the benefits?

- Better vision without glasses or contact lenses
- More freedom to engage in sports and recreational activities
- Wider scope of peripheral vision than with glasses
- No hassle of contact lens wear
- No more fears of being incapacitated from losing or damaging glasses or contacts
- Less reliance on eyewear and in some cases total freedom from glasses or contacts

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What are the risks?

As is true of any medical procedure, laser vision correction involves risks. It is important that you understand the risks of this procedure before deciding if it is right for you. Some of the potential risks include:

Night glare

With present technology, most LVC patients do not experience significant worsening of night vision or night glare. But, some patients may experience halos or star bursting following their procedure, especially if these are currently experienced with contact lens or glasses wear.

Dryness and fluctuating vision

After LASIK, your eyes often feel dry during the first month after surgery. These symptoms are usually relieved with the use of artificial tears. If you have a pre-existing dry eye condition, please discuss this with your refractive surgeon, as the symptoms may be more pronounced after the surgery. Generally, this resolves after several months, as the cornea fully recuperates from surgery.

Infection and corneal flap risks

The risk of eye infection is the greatest immediately following the procedure. Antibiotic drops help to minimize infection. Some patients may also develop problems following the LASIK procedure as the flap heals.

Please discuss all the benefits and potential risks with your Kaiser Permanente refractive surgeon. It is essential that you are well informed and have realistic expectations before proceeding with LVC.

