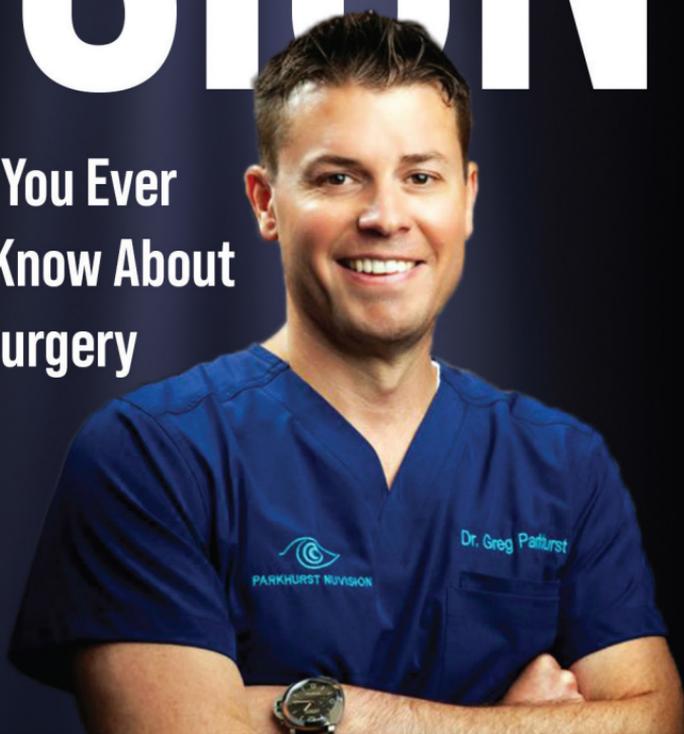


NEW VISION

Everything You Ever
Wanted to Know About
LASIK Eye Surgery



GREGORY PARKHURST, MD

**NEW
VISION**

NEW VISION

**EVERYTHING YOU
EVER WANTED TO
KNOW ABOUT
LASIK EYE SURGERY**

Gregory Parkhurst, MD

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Although every effort has been made to ensure accuracy and reliability, the ultimate responsibility for your health and well-being rests with you. Use this book as a starting point for discussions with your healthcare provider and make informed decisions based on professional advice and your own individual circumstances.

“

*People just want
to see young, like
they feel young.*

”

- Dr. Gregory Parkhurst

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To the unwavering courage and commitment of the military and all those who selflessly serve to safeguard the precious gift of freedom. Your sacrifice and dedication inspire us all to strive for a better world. Just as LASIK has brought a new clarity of vision to countless lives, you bring clarity to the path of liberty and justice.

Introduction

Welcome . . . to better vision!

If you are a part of the 76 percent of American adults who wear some type of corrective lens, then this treatment guide is especially for you.

LASIK seems to be the term that most people use when discussing vision correction. We, as professionals, know that to be a very specific procedure. However, the general population refers to LASIK as the catch-phrase for all vision correction surgeries. In reality, we can do about eight different procedures to correct vision (LASIK being one of them). The brand name LASIK, like Kleenex, has come to stand for a whole category. When people ask for a Kleenex, we know they mean a facial tissue—any brand of tissue—but we use the brand name Kleenex.

There are only a handful of practices in the country and around the world that have focused their attention specifically on vision correction surgery and our practice is one of them. Most ophthalmology practices handle all things vision. They focus on annual eye exams, diabetic eye care, macular degeneration, pediatrics, and vision correction. There are many different subspecialties within ophthalmology. Vision correction is just one line of service for most practices, but it is not their primary focus.

There are also LASIK chains, which are corporate centers that only focus on LASIK. Sometimes these chains might branch out and offer photorefractive keratectomy, or PRK. But that will be the extent of their vision correction offerings. We've focused our attention on correcting vision problems for those who want to see without glasses or contacts. That's a large group of patients using our services. As I said before, there are eight different procedures for vision correction, and we offer all of them.

One of the issues we've identified is a lack of centers where surgeons can get access to training for all of these different types of procedures. These procedures are generally not taught in ophthalmology residencies or training programs today. As a result of some of my unique life experiences, I was able to learn these procedures anyway. I picked up these techniques when I was a military service member and in my travels all over the world, where I visited centers with access to technologies not yet available in the United States. Because of this, my practice can offer more services than most. Our primary focus has been to offer the entire menu of procedures to our patients so our doctors can prescribe what will best meet their needs.

We've implemented training programs where we teach two fellows every year (a medical fellow is the name given to a doctor who is training to become a specialist in their chosen field) about all the comprehensive concepts needed to deliver the full spectrum of refractive surgeries.

There's growing momentum in places like ours that are focusing on this niche but also trying to train other surgeons so that they have this kind of complete skill set.

Due to my childhood experiences and the fact that I love what I do, I think it's imperative to approach the patient's vision correction needs from a *what's right for the patient* perspective. When it comes to practices only offering LASIK, as the saying goes, if the only tool you have is a hammer, everything starts to look like a nail. But reality is much more sophisticated than that. Many people have done well with LASIK—such as my mother, for instance. It is an excellent procedure, but it is not for everyone. Some people shouldn't get it and should choose something else. It's crucial to select the proper procedure for each patient.

So, educate yourself! Learn about the various treatment options available for you and your particular needs. And most important of all, learn how to select a proper doctor team —someone worth entrusting your health to.

I wrote this guide to LASIK (and vision correction procedures) to be just such a resource for you. Written in plain, easy-to-understand language—not medical jargon—it calls upon my years of experience as a surgeon performing complex procedures and my shared history of vision challenges, which allows me to understand my patients. I will also provide the answers to the most frequently-asked questions my own patients have brought to me through the years.

I hope that after reading this short book you'll have a greater understanding of your condition and the range of treatments available, a renewed sense of confidence about seeking treatment, and a roadmap to select the right vision correction specialist to improve your vision and help you lead a more comfortable life.

My story starts with poor eyesight, a challenge many of you have likely experienced too, and morphs into an unlikely path leading me to where I am today. Here's my unconventional story—and someday maybe you can tell me yours.

If you have any questions or comments, you are welcome to visit our website at **www.ReadNewVision.com**.

I wish you health, happiness, and great vision!

Warmest regards,
Dr. Greg Parkhurst, M.D.

PS: I've written this guide for you in plain English. I don't think medical research should be a mystery. Having said that, it's also helpful to know the right names for conditions, procedures, and the instruments we use. In addition to the explanations in this guide, you can learn even more in the glossary of terms at the end of this book. I hope you'll find it adds to your understanding of our work.

CHAPTER ONE

Who Once Had Four Eyes and Has Enhanced the Vision of Thousands of Our Nation's Strongest and Bravest Individuals?

Answer: This guy (me)!

One of the questions I get asked the most by my patients is, “What made you choose to become an ophthalmologist?”

It's a great question. As a child, I struggled with my eyesight. I was one of those children who could never go anywhere without his glasses. So, as a young person, I was already introduced to the world of vision issues, eye doctors, and vision correction.

Wearing Thick Glasses as a Child Helped Me See What I Wanted to Be

I come from a small farming community in Michigan. We had dirt roads, barns, and fields around our house. Many eye doctors were very visible in our community;

they sponsored little league baseball games and were very involved. I liked them and aspired to be like them.

I already had an interest in ophthalmology because of my experience with my doctors, and their contributions to our community left an impression on me when I was young. If you were to ask eight-year-old me, “What are you going to do when you grow up?” I was already saying, “I’m going to be an eye doctor.” I knew from childhood that this was what I wanted to do. Most kids say they want to be an astronaut or fireman, but I was going to be an eye doctor. Obviously, I didn’t stray from that idea.

I wasn’t allowed to get contact lenses until I got a little older, and I just hated my glasses. I didn’t like how they felt on my face. I didn’t like how they were heavy. I didn’t like how I looked in them. I didn’t like wearing them while playing sports. I might try to head the soccer ball, but it would hit me in the glasses, and my glasses would get bent, knocked off, scratched, or broken. I hated them. I played a lot of sports growing up. My glasses were the sports type with the elastic band around my head. I didn’t like how those looked. I got some spring-loaded wrap-around-your-ear ones that were supposed to hold them on my face better. But I hated those too. I was so self-conscious about my glasses, how I felt wearing them, how I looked in them, and how they limited me from doing some of the things I wanted to do.

One of the most frustrating and embarrassing moments in my vision journey was at a birthday party. To this day,

I remember it clearly. His name was Derek Feltman. Derek was one of the cool kids in my grade, and he had invited me and several other boys to come and go waterskiing at the lake with them. He had a boat, and they used to go to the lake all the time. I loved to be on the lake. Even to this day, I love being on the water. I was very excited because I hardly ever got to go waterskiing. I was invited to a popular boy's party, which was my chance to jump in. I think I was one of the last kids to take his turn. When I dove into the lake, I realized I had forgotten to remove my glasses. I remember trying to grab for them, hoping I could get them before they reached the lake's bottom. I felt them bounce off my hand a couple of times, but I couldn't grab them. It was devastating and embarrassing because I couldn't ski since I couldn't see. I couldn't enjoy the party. I just sat there, functionally blind, for the rest of the day.

Once my parents allowed me to get contact lenses, I thought maybe some of the issues would disappear. But the contact lenses posed their own set of problems. They would pop out on the basketball court, and as a normal (and gross) junior high kid, I would just lick them off and stick them back in my eye. How disgusting, right? Now, as an eye doctor, I'm not proud of the fact that I did that. But I was a fourteen-year-old just trying to keep up with people who did not have the same vision issues that I did. It was frustrating and made me realize even more what I wanted to do with my life.

Helping the Blind See, What Really Encouraged Me to Be Me

I went through a long educational journey to get here. Even as a college student, I knew that I was studying pre-med to get into med school, but I already had a keen interest in ophthalmology. So, I volunteered with an ophthalmologist in the town where I went to college. He took me on my first mission trip; we went to Mexico. I assisted him in performing cataract surgeries for blind people who needed it.

I saw the impact that a relatively straightforward procedure can have on someone's life and family. One of the most poignant examples that hooked me was seeing the older adults with cataracts. These were grandmas and grandpas in their sixties and seventies; in many cases, they had been blind for many years. Sometimes, they'd lived as long as twenty years unable to see—entirely dependent on their families to survive. When you are blind, you need assistance with preparing food, traveling, dressing, and all the basics in life that sighted people take for granted. Some of the people we treated had strings tied throughout their houses to help them navigate their living spaces.

In many cases, they'd never had the opportunity to see their grandchildren. They had held, spoken with, and touched their faces but hadn't ever actually seen them. So, the day after cataract surgery, when the patches came off, we witnessed them laying eyes on their grandchildren, sometimes for the first time.

These trips solidified my love for this work; this was what I wanted to do—I was going to be an ophthalmologist.

Basically Bionic

I was interested in serving my country, and I thought it would be an honorable thing to do. I went to med school through a military program. The program I joined is called the Health Professions Scholarship Program, which is like ROTC but for med school. It allowed me to access education at a top medical school and to serve my country—a win-win.

Joining the program was a fortunate step on my path to becoming a refractive surgeon. As it turns out, many vision correction or refractive surgeries are performed in the United States military. In fact, the military was instrumental in much of the early research that led to some of the FDA approvals and the eventual widespread use of refractive surgery. I matched into the ophthalmology program at the Walter Reed National Military Medical Center in Washington, D.C. and finished my training. I was then stationed at a high-volume refractive surgery center in Texas. It was one of the busiest vision correction surgery centers in the military. We completed more than 3,000 refractive surgeries per year for military service members. This opportunity gave me a lot of experience performing these procedures as a relatively young surgeon, which is atypical of those taking a more traditional medical education route. It's somewhat difficult for younger surgeons to break into this specialty, as refractive surgeries

are elective procedures that patients must pay for. They are typically not covered by insurance, so patients paying out-of-pocket get to choose where their procedures are done and which doctors perform them. Most people paying to have their vision corrected prefer to go to somebody with lots of experience.

How do you get experience if you haven't done something before?

The military allowed me to get thousands of surgeries under my belt, as well as experience that many of my peers did not have. I performed refractive surgery daily for four years. This allowed me to get a broad understanding of all the different available procedures. I also got to work on a wide variety of cases in a fast-paced environment, as I was working during the time of the Iraq and Afghanistan wars. A lot of service members were coming home and going back. There were several instances where we'd get a phone call from Iraq or Afghanistan from somebody who would say, "This is the last deployment I'm ever doing in my glasses." They would come home for a couple of months, make an appointment, and get their vision correction completed. We would hear stories from these men and women about the frustrations they experienced wearing glasses while deployed in combat. During combat zone deployment, these individuals are potentially exposed to things like blasts and injuries and made to do things like kick down doors or jump in and out of foxholes. If your glasses get

blown off in an environment like that, you can't protect yourself; you can't accomplish your mission or protect your comrades. You might say, "Well, why not just get contacts?" Again, being deployed in a combat zone, people don't have access to the hygiene necessary to care for contact lenses properly. For these reasons, it's a very popular thing to have vision correction done as a military member (the same goes for other first responders, too, such as firefighters, emergency medical technicians, and police).

Since I was a young guy in the military, it wasn't rare to find myself outranked by these patients, and I would sometimes have to tell them, "I'm sorry, you know, sir, 2-star general, sir, but you don't medically qualify for LASIK." This message was not always well received, because unfortunately not everyone is a safe candidate for LASIK. I somewhat feared for my own life when I had to give that message. Can you imagine telling your superior that you can do nothing for them because their prescription is too strong or their cornea is not shaped in a way that would permit them to have LASIK safely?

As I said before, these are people who are kicking down doors and jumping in and out of foxholes. They are used to figuring out how to get the mission completed. I experienced such resistance enough times that I realized I had to find another solution for these people. That is what led me to seek out another vision correction procedure that we do very frequently now.

It's a lens-based vision correction procedure called the Implantable Collamer Lens or ICL (there is a whole chapter about it later in the book). I traveled to the Dominican Republic to train with a surgeon who had done thousands of these. I brought that training back to Fort Hood, Texas, and implemented a program to start ICLs there. That expanded into a very successful and high-volume program we created. It shaped my philosophy around how we think about vision correction.

The Apple Doesn't Fall Far . . .

I finally had laser vision correction in 2003, over twenty years ago.

Unfortunately, being visually challenged is hereditary. My father was very nearsighted and had astigmatism. And my dad had a unique look, a big bushy mustache, and always wore glasses. Think of the glasses you can buy at the joke store, with bushy eyebrows and a mustache—that's my dad. He never wore contact lenses. When I became an eye surgeon, he asked me about the possibility of successful vision correction (he was in his late fifties). He was thinking about getting LASIK, which may have been an okay solution to correct his distance vision. Since he was in his fifties, however, he also had presbyopia (which is age-related farsightedness that affects us all as we get older). I told him to wait a couple of years so that we could take advantage of the new intraocular lenses. We could use a multifocal lens to correct both his distance

vision, as well as his near vision. So, he held off, and a few years ago, I performed a lens replacement surgery for him with multifocal lens implants. It has completely changed his visual experience. It also changed his appearance. He still had the bushy mustache but doesn't have the glasses anymore. So, he feels and looks like a younger man. It was such a great feeling to improve his self-esteem like that.

My mother had a slightly different need. She was far-sighted and had presbyopia. I performed a LASIK procedure for her that made it so she could optimize her distance vision and read without glasses.

This family experience shows that not everybody needs the same procedure. These two people, who were generally the same age, didn't have the same anatomy or vision problems. So, we recommended one procedure for her and a different approach for him. However, they both have vastly improved eyesight as a result.

It has been a dream of mine from a very young age to help people see better. I have helped thousands of people achieve vision correction—professional athletes, actors, other eye surgeons, and, most importantly, my parents. My experience with vision challenges has made this a personal mission for me. When people come into my office, I want them to know we understand what they are going through. We have the personal experience to understand their struggle and the education to find the solution. We will do everything possible to get them to a better place visually.

CHAPTER TWO

My Philosophy on Vision Correction

My philosophy on vision correction is simple: find the right custom procedure for each patient. It is this philosophy that has helped propel our practice to the top. Our patients are often referred by friends or family members and we pride ourselves on the fact that our practice has reached a level at which we receive so many referrals. I believe it speaks volumes for the work we do here.

In addition to friend/family referrals, we also receive many referrals from other eye doctors and medical professionals. These doctors refer us because they know our reputation or have had friends and family as our patients. Our office is a place you can trust and has the expertise to not only tell you which procedure will fit your eyes the best but also if you don't qualify at all. We are willing to give you the sometimes-hard truths about what we are able to do for your vision correction needs. We don't try to place our patients in a box or make a procedure fit them. We make sure that the procedure we recommend is exactly the right procedure for our patient.

Not only do we offer the best service, but we also make sure to emphasize the personal aspect of our work. I always remember those doctors I looked up to when I was a kid, and I want my patients to feel the same way about me. This culture sets us above our competition.

CHAPTER THREE

Dispelling the Myths: Here's What I Wish All Patients Knew about LASIK Eye Surgery

LASIK eye surgery is a popular elective procedure that corrects vision problems, including nearsightedness, farsightedness, and astigmatism. While this procedure has become increasingly safe and effective in recent years, there are still misconceptions and myths associated with it. As a result, there are key things that I wish all patients knew before undergoing LASIK eye surgery.

Firstly, LASIK eye surgery is not a guaranteed solution for perfect vision. While most patients achieve significant improvement in their vision after the procedure, there is still a chance of residual refractive errors or other complications. Patients should have realistic expectations and understand that the surgery may not provide perfect vision. For this reason, when a patient comes to our office, we make sure that all measures are taken (eye scans, examinations, and consultations with doctors) to ensure each patient is given the best options for successful vision correction.

Secondly, patients need to understand that LASIK eye surgery is a medical procedure that involves risks and potential complications. While complications with LASIK are exceedingly rare, they can include a sensation of the eyes feeling dry, glare, halos, and other vision problems. Our doctor team discusses these risks with each patient and educates them on any potential complications before the procedure.

Thirdly, patients need to be aware of the importance of following all post-op instructions before and after the procedure. Our patient care team is specifically trained to educate and assist all of our patients with any pre- and post-op care they may require. This includes avoiding contact lenses before surgery, taking prescribed eye drops, and avoiding certain activities, such as swimming, for a period of time after the procedure. Adhering to these instructions can help prevent complications and ensure the best possible outcomes.

Lastly, patients need to choose a qualified and experienced surgeon team. The success of LASIK eye procedures depends on the skill and experience of the surgeons performing the procedure. Patients should research potential surgeons and ask questions about their experience, training, and success rates. At our practice, we work with doctors all over the world to ensure our patients have the best experience possible. We have a team that is available to answer all of our patients' questions and calm their concerns. A reputable surgeon will be happy to answer

any questions and provide patients with information about their qualifications.

LASIK eye surgery can be life-changing for those with vision problems. With realistic expectations, adherence to pre- and post-op instructions, and the right surgeon, patients can enjoy the benefits of improved vision with LASIK eye surgery. I hope the following chapters will help you to research the right approach right for you and your vision needs.

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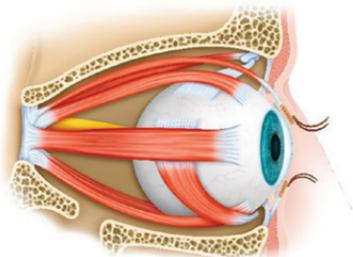
C T L Y N O W

CHAPTER FOUR

A Quick Review of the Eye's Anatomy (Because You Probably Haven't Taken Anatomy since High School)

Don't Roll Your Eyes at Me, It's a Short Review

Do you know why you can roll your eyes? Each eye rests in its own, strong socket, its *orbit*. Yet you can move your eyes far enough to see in a wide panorama of more than 180 degrees without even turning your head. Six *extraocular muscles* hold each eye securely. They move your eyes in unison with perfect aim, firmly attached to the white of your eye, the *sclera*.



Extraocular muscles control eye movements, each within a strong, bony socket.

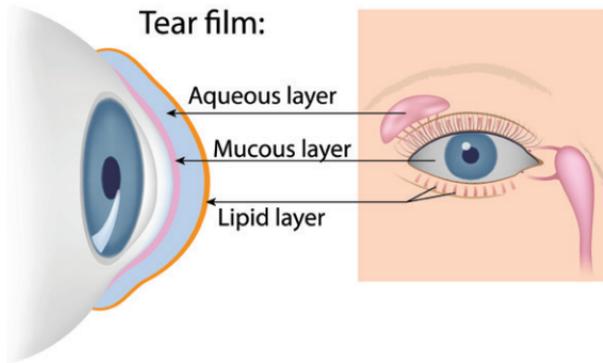
Your Eyes Are So Special, They Come with Their Own Bodyguard

Your eyes are extremely sensitive to irritants. They are armed with powerful reflexes, ready for the *levator muscles* in your eyelids to blink away any irritant in a mere tenth of a second and to lubricate themselves with extra tears on an instant's notice.

A normal *tear film* is continually generated. It has two sources, the *conjunctiva* and the *lacrimal gland*. The conjunctiva is a thin, clear *mucus membrane*. It covers the eye, the sclera, and the inner surface of the eyelids.

The lacrimal glands (tear glands) are located above each orbit. They continuously supply tear fluid that moistens and cleanses the eyeball every time you blink your eyes. Excess tear fluid drains through tear ducts into the back of your nose. Tears protect the conjunctiva from drying and from irritants. The conjunctiva coats itself with a thin, clear mucous layer. The lacrimal glands cover the mucus layer with the watery part of your tears. The outermost layer of the tear film is an oil that helps keep the water from evaporating. That oil is produced by the *meibomian glands* along the edge of the eyelids, opening at the base of the eyelashes.

Though thin and apparently delicate, the conjunctiva and tear film make up a remarkably robust part of your eyes' self-protective ability.

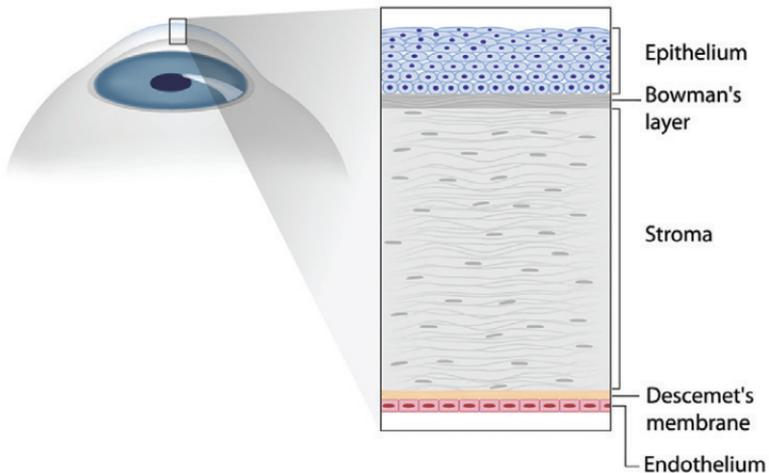


A protective tear film lubricates the front of your eye.

The Cornea - The Focus of LASIK Surgery

LASIK precisely reshapes the cornea, the transparent dome-shaped structure that forms the front of your eyeball.

Structure of the Cornea



Focusing Power

Light of every color can pass through your cornea, though it has some ability to block the most harmful kind of ultraviolet light, UV-A. The light then enters the *anterior chamber* filled with *aqueous humor*, a clear fluid continuously produced within your eye to maintain constant eye pressure, helping to maintain its shape. Excess fluid drains from the eye through the *drainage angle* located where the cornea blends into the sclera.

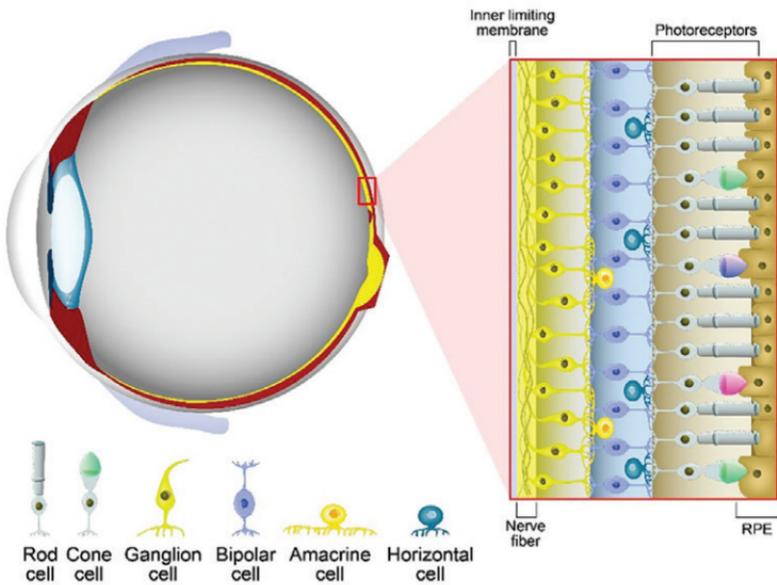
Behind the anterior chamber is the colored, circular part of your eye, the *iris*. The dark hole in the center of the iris is the *pupil*. Muscles in the iris widen (dilate) or narrow (constrict) the pupil to control the amount of light reaching the photosensitive nerve cells in the *retina* that lines the back and inside side surfaces of the eye.

Directly behind the pupil, the flexible *lens* focuses light onto the retina. The lens changes shape to adjust its focus depending on whether an object is near or far. The lens is held in place suspended from the eye walls by small fibers called *zonules* affixed to the *lens capsule*. During cataract surgery, the lens capsule is left in place to hold a new intraocular lens replacement for the old cataract-clouded one.

The shape and clarity of the cornea and lens play important roles in creating clear vision. In a healthy eye, the cornea provides about 70 percent of the eye's focusing power and the lens provides about 30 percent.

The Sights You See

RETINAL CELLS



The final destination for all the lights and colors, shapes and movements, faces and places that you see is the thin, light-sensitive layer of nerve cells lining your eyeball called the *retina*.

The light passes from the lens to the photoreceptive retina at the back of the eye through a transparent jelly-like substance, the *vitreous humor*, filling the globe of your eye.

The retina contains a small but very specialized region, the *macula*, that detects the finest of details in the very center

of our visual field. The part of the retina surrounding the macula, the *peripheral retina*—not as detail-sensitive, though retaining all the other retinal abilities—provides us with the equally important peripheral or side-vision.

The retina houses specialized nerve cells called *photoreceptors* that transform light into energy carried to the brain through the *optic nerves*. Among the photoreceptors are *rods* that see only black and white, enabling night vision, and *cones* that sense color and detailed central vision.

The optic nerve, a bundle containing millions of nerve fibers, carries the retinal nerve impulses to the brain region called the *visual cortex* situated at the back of the skull where your brain perceives the world in real time and in living color.

CHAPTER FIVE

The Three Major Players in Eyecare

Ophthalmologist - The Eye Surgeon

An ophthalmologist is a specialist, an MD or DO, who diagnoses and treats disorders, diseases, and injuries of the eyes and vision. The ophthalmologist completes a “comprehensive eye exam” that covers both vision testing and screening for eye diseases.

Treatment by an ophthalmologist includes corrective eye surgery and prescribing corrective contact lenses and eyeglasses. Many ophthalmologists also teach and carry out scientific research aimed at finding new diagnostic and therapeutic measures to keep advancing the fields of eye disease detection, prevention, and correction, in addition to treating vision disorders.

A general ophthalmologist completes four years of specialized postgraduate training after medical school. This advanced training includes at least a one-year internship followed by a three-year surgical residency in ophthalmology. This qualifies an ophthalmologist for a license to practice medicine and surgery for eyes.

Some ophthalmologists select a subspecialty by focusing on one specific aspect of medical or surgical eye care. A subspecialist usually completes a fellowship—a one- or two-year additional course of in-depth training in more complex or specific areas. These may focus on corneal correction such as LASIK surgery, the retina, neurology, glaucoma, plastic surgery, or any one of many other specialized areas. A subspecialty practice may also be limited to pediatric or adult patients.

Only an ophthalmologist specifically credentialed in the subspecialty of corneal surgery is permitted to perform LASIK surgery.

Optometrist - The Eye Doctor

An optometrist, an OD, is a healthcare professional who performs basic eye examinations and vision testing, which may include screening your eyes to detect the onset of eye diseases. Based on these exams, an optometrist will generate prescriptions to manage vision changes. Optometrists also offer non-surgical management of certain eye conditions.

In order to earn a Doctor of Optometry degree (OD), a practitioner must complete three or more years of college followed by a four-year optometry school program to obtain a license to practice as an optometrist.

Optician – The Eye Stylist

Opticians are skilled technicians who are trained in the design of eyeglasses, verification of vision correction, and fitting of eyeglass frames and lenses, contact lenses, sunglasses, and other vision correcting devices.

An optician's work is directed by prescriptions written by ophthalmologists or optometrists. The optician does not test vision, diagnose or treat eye diseases, write prescriptions for visual correction, or perform any medical services. Opticians, however, may recognize signs that call for the attention of an optometrist or ophthalmologist.

An optician's training begins after earning a high school diploma or equivalent, followed by specialized training during a typically two-year internship under an experienced optician, or completion of an optician-training program offered by a college or technical school. Such programs offer theoretical and practical job training, and teach the business of running an optician's store, including optics, the use of precision instruments, business management, and more.

The regulations and licensure requirements that specify an optician's training and practice vary by state and sometimes also vary according to local common practices.

CHAPTER SIX

What is LASIK Eye Surgery?

“My biggest obstacle was wearing contacts. I had to pack not just my contacts and glasses, but also had to make sure I had enough solution, eye drops, and extra contacts. There are no stores at sea, so I always had to be prepared.

When I decided to go ahead with the procedure, my vision went from 20/400 to 20/20 in just a few hours. It has changed my life. I have so much more freedom. Best of all, I can see the world more clearly now. It’s as beautiful as ever.”

– **Caitlyn B., Ocean Explorer,**
Parkhurst NuVision Patient

LASIK is a very common, time-tested, and permanent kind of corrective eye surgery used to treat nearsightedness, farsightedness, and astigmatism in a way that will minimize or entirely eliminate your need for eyeglasses or contact lenses.

LASIK surgery may be an option for you if you suffer from one of these vision problems:

- **Nearsightedness (myopia).** When your eyeball is slightly longer than normal or when the cornea curves

too sharply, light rays focus in front of the retina and blur distant vision. You can see objects that are close fairly clearly, but not those that are far away.

- **Farsightedness (hyperopia).** When you have a shorter than average eyeball or a cornea that is too flat, light focuses behind the retina instead of on it. This makes near vision, and sometimes distant vision, blurry.
- **Astigmatism.** When the cornea curves or flattens unevenly, the result is astigmatism, which disrupts focus of near and distant vision.

The procedure uses tiny beams of laser light to reshape the tissue inside your cornea where there are no blood vessels. This allows for a very quick and gentle healing process, quickly restoring normal vision. The laser correction is completed in fewer than five minutes for each eye.

LASIK is an acronym for “Laser-assisted in situ keratomileusis.” “*In situ*” means “in place,” and “*keratomileusis*” is a medical term that describes reshaping your cornea.

If you’re considering LASIK surgery, you probably already wear glasses or contact lenses. We will talk with you about whether LASIK surgery or another similar refractive procedure is an option that will work for you.

What Does LASIK Eye Surgery Involve?

“We were anxious about having the procedure, but then we walked into the office and saw all the names on the wall—George Strait and all the Spurs players—those guys could go anywhere and they chose to come here. We even heard that Dr. Parkhurst did LASIK surgery on his own mom, which to us speaks louder than George Strait or any famous person.”

– Eli and Tyson C., Texas Renegade band members,

Parkhurst NuVision Patients

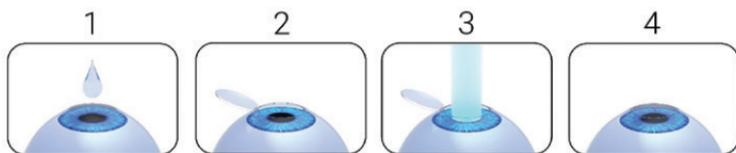
Pre-Surgery Prep

Preparation begins well before your procedure with a careful and precise measurement of your vision using several techniques. This gives you the opportunity to tell us which numbers—the degree of correction best suited to your work and your lifestyle—are best. This may depend, for example, on whether you prefer more closeup, mid-range, or distance vision for most things in your life, or if you have a different preference for each eye (a procedure called blended vision). In this way, your treatment will be individualized to your preferred vision.

If you wear contact lenses, your surgeon will probably ask you to stop wearing hard lenses for a few weeks before surgery and soft lenses for a few days. If your eyes aren't rested for a while, your lenses may leave your cornea in an altered shape in ways that can interfere with preoperative diagnostic eye tests.

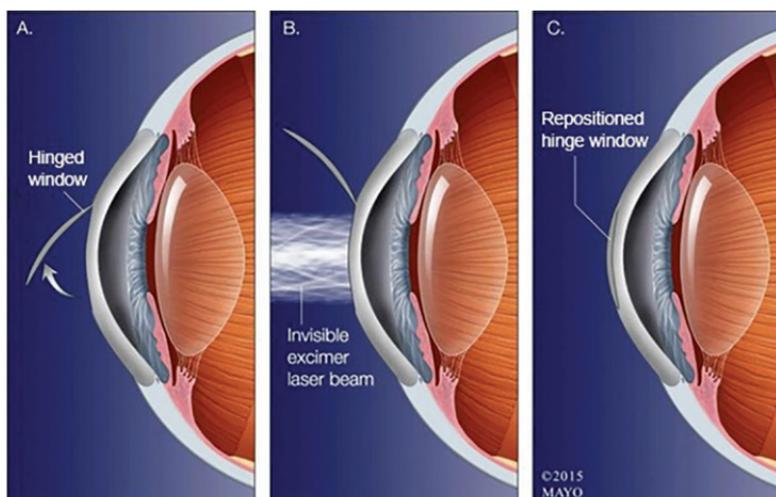
Avoid make-up, lotions, or perfume on both the day before and on the day of your procedure. This precaution is meant to eliminate debris around your eye and eyelashes, a potential source of infection, from entering the surgical field.

Your Procedure



After applying a numbing medication (step one) and stabilizing the position of your eye, your surgeon will create a small window atop your cornea. This is done with a precision “femtosecond” (one quadrillionth, or one millionth of one billionth, of a second laser) (step two). This portion of the procedure is not painful, producing nothing more than a very slight sense of pressure on your eye. This step lasts about fifteen seconds.

After the window is created, your surgeon will use a specialized surgical instrument to hold the corneal window open and can then reshape your cornea, using an excimer laser that produces an extremely small, precise beam (step three). There is some mild sensation in this part of the surgery, but though it may feel odd, patients typically say it is neither uncomfortable nor painful.



Completion!

Once the correction is complete, the corneal tissue is simply repositioned as it was, essentially sealing the original opening (step four). Natural forces, such as the surface tension in the tear film, hold the tissue in place and promote the onset of a rapid healing within hours.

The overwhelming majority of patients say that their LASIK surgery was far faster and more comfortable than they expected. A patient can walk into a procedure room and, in as few as eight minutes, walk out free from a lifetime of glasses or contact lenses.

Your Results

LASIK surgery does not guarantee 20/20 vision, though more than 96 percent of patients achieve that level or very close to it and are very pleased with the whole

process. Many people see even better than 20/20 on their very first day after the procedure. A small number achieve 20/10 vision, able to read two lines lower on the eye exam chart. However, even the best LASIK surgeons never promise that.

For patients over the age of forty who select correction for distance vision, reading glasses may still be useful in the future. In general, however, most people are delighted, especially if they were finally fed up with wearing glasses or contacts.

In a few, rare cases, no more than about 1 percent, the eye may under-respond or over-respond to the treatment. Those patients can usually return as candidates for a secondary procedure or enhancement—a “fine tuning.”

“I really cannot express how amazing it is. The ability to wake up and just see my world around me. I think the day that I said I’m actually going to do this is when I sat in his office. I did a lot of research. I’m one of those kind of people that when you go, I’m going to find not just the cheapest price, but I’m going to find the best value. I talked to a couple of other individuals, and some were very inexpensive and it sounded too good to be true. These are my eyes—I wanted something legitimate and Parkhurst NuVision felt legitimate.

After getting the procedure done, you can already see more clearly driving home. My wife kept telling me to hide my eyes. She said, “We just got your eyes fixed. Don’t look at things like that.” But I had to. It’s like someone whose been sheltered their whole life seeing technology for the first time. That’s what it felt like. I’m seeing for the first time.”

– Shane,

Parkhurst NuVision Patient

CHAPTER SEVEN

What Will I Feel During the LASIK Eye Procedure?

“NuVision is definitely the GREATEST choice I have made and trusted with my LASIK procedure and experience! I can’t not express my gratitude for this life changing experience.

The doctors’ and staffs’ ultimate priority is their patient and it showed. I suffer from severe anxiety. What should have been about a less than ten-minute procedure turned into almost a forty-five-minute procedure, because of how bad my anxiety was. I was panicking, overwhelmed with emotions to the point where I almost didn’t go through with it.

They did an amazing job in calming me, assessing my needs and reassuring me that everything was going to be more than ok! They gave me their undivided attention and asked, “How are you feeling?” “How can we help you?” Made their own suggestions in what I might need. Offered me weighted blankets, stress balls and simply listened to my concerns. They explained and broke down the entire procedure and shared their own LASIK experiences with me. They stated that they too felt anxious and expressed it was normal to feel that way.

They treated me with so much understanding, consideration, and compassion. In reality, if anyone who does suffer from anxiety knows how hard it is to find that emotional support and I found it here at NuVision!

They gave me the opportunity to think, decompress, and to recompose myself. Once I was calm and collected they checked in on me and asked if I was ready or needed some more time. By that time I was ready.

So, we then proceeded with the procedure and the process was so quick, painless, overall amazing! The whole process took less than ten minutes and I instantly saw clearly!

I cannot thank them enough for this wonderful experience, especially for their patience with me. This definitely has been one of the best life changing choices I have made for myself! If you are considering LASIK NuVision is, in my factual opinion and experience, your ONLY BEST option!”

- Priscilla L.,

Parkhurst NuVision Patient

For nearly everyone who has ever had it, LASIK eye surgery is not painful.

All you should feel during LASIK is a light touch, a mild stretch, and a little bit of pressure. You should not expect to feel anything sharp or painful during the procedure. And the reason is very simple. Before we start, we give you very strong numbing eye drops in both eyes. And if

you and your surgeon agree you're still a little anxious, you may be able to ask for a bit of mild calming medicine before you start.

Another possible source of discomfort is the fear that you will have the urge to blink during the surgery. Even a mild sensation in the eye can trigger a blink reflex. But there are two reasons not to worry. The first is the strong analgesic eye drops you will be given to take away any sensation that would stimulate a blink. And second, your surgeon will use a gentle eye holder that holds your eyelashes back for you. So, there's simply no need to worry about blinking, or even having the urge to blink.

And most of all, there's simply no time for discomfort. The actual time spent doing the procedure is usually as short as three to five minutes per eye. It's very fast. By the time you realize your doctor started, it's practically done.

Nearly every patient says their LASIK surgery was far quicker and far more comfortable than they expected.

CHAPTER EIGHT

Side Effects and Possible Complications You Should Know About

“Thank you Parkhurst NuVision in San Antonio!!! LASIK surgery was a success!!! I’m beyond happy that I no longer have to deal with my contacts shifting or irritating my eye and the hassle of having to wear glasses!! Best decision I’ve ever made! Surgery was only about five minutes long, which was even better! I thought I’d be nervous but I wasn’t even a bit. The staff at Parkhurst NuVision are the best at making you feel welcome and go step by step with you and answered every question I had.”

– Kelly M.,

Parkhurst NuVision Patient

Side Effects

The first side effect of laser correction to keep in mind is quite rare, probably less than 1 percent, but important to consider. This is the possibility of an over, under, or uneven correction. You may get a little more or a little less effect than you expected. These cases may qualify

for a second or enhancement procedure to complete or modify the initial correction, a possibility to discuss with your surgeon beforehand.

There is a myth that LASIK causes dry eyes. This simply is not true. After LASIK correction, there is a period of time when your eyes often feel drier than average. It's similar to what happens to a contact lens wearer after the first weeks or months of wearing contacts. But, as with contact lenses, it's almost always temporary. So, for the vast majority of patients, that dryness resolves somewhere between three and six months. Very rarely will it last longer than that. Is there anyone who's ever had more dryness after a LASIK procedure than they had before? Yes, absolutely. However, that doesn't mean that LASIK in aggregate causes dry eyes. There are multiple peer reviewed publications that demonstrate that LASIK is a solution for dry eye for more people than a new cause of dryness. The concept that LASIK causes dry eyes is a common myth. There is nuance though—it's not that you are at zero risk. You could have new dry eyes after LASIK. However, statistics show it's more likely that your dryness will be better than worse, because the contact lenses that were causing the dryness are now gone.

Before your LASIK procedure, your surgeon measures your tear production very carefully to make sure your eyes are not dry to begin with. If they are, the recommendation is to use your own tears after surgery. A simple, tiny punctal plug can be placed in your tear ducts

as a way to block tear drainage and retain the natural tears that you do make. So even if you make fewer tears, this will save more of them to help your eyes stay moist.

A side effect almost everybody experiences initially is a glare, halo, or “starburst” noticeable in dark situations with bright lights on dark backgrounds after the procedure. This is usually due to minor and harmless swelling, sometimes accompanied by tiny red veins or red patches in the whites of your eyes, and mild soreness.

Fortunately, on the first night after the procedure your eyes are closed when you go home and go to sleep. But if you drive very early the next morning, you’ll probably see that glare and halo around headlights on a dark road and streetlights on dark skies. These effects are normal, and they get better with time as your body quickly clears that swelling, especially when you’re young. Older folks may take a bit longer. Most of that effect is gone within a few days to a few weeks.

Patients selecting PRK, a sister and somewhat older treatment to LASIK, as described in Chapter Ten, will experience a similar set of side effects, with a few differences that may be of interest in selecting the best laser correction for you.

Tips to Treat Side Effects

If you experience the glare, halo, or starburst, it will be wise to consider less driving and avoiding bright lights and direct sunlight for a few days after the LASIK

procedure. Wear sunglasses and a brimmed hat to minimize exposure to harsh light.

Avoid dry, dusty, or smoky areas, especially second-hand tobacco smoke and nicotine-laden mist from vaping.

Keep liquid tears of a type recommended by your eye doctors on hand at all times. Be especially careful to avoid contact of the dispenser with your eye as this can cause both eye damage and infection.

Risks and Complications

With millions of successful LASIK procedures over more than two decades, eye surgeons have compiled a vast expertise in eliminating risks in laser eye correction. Nevertheless, all surgeries do come with risks. Complications and serious side effects from such surgeries, however, appear to occur in fewer than one half of one percent of cases. Fortunately, complications that result in a loss of vision are exceedingly rare.

Complications can include regression back toward your original prescription. Post-surgical infection is also possible, as well as damage to the cornea.

Some risks can be traced to preexisting health conditions that predispose patients to complications and a less predictable outcome. These can include patients with autoimmune or weakened immune system disorders, or other factors such as chemotherapy, hormonal changes, and infections.

“

*Make your
vision so clear
that your
fears become
irrelevant.*

”

- Anonymous

CHAPTER NINE

What to Expect after LASIK

“I am so glad I got my LASIK Surgery with NuVision. My eye doctor recommended them so I knew I was in good hands. From consultation to surgery it took less than a month. But it can be as quick as one week! The doctors at NuVision take numerous scans and make sure that everything is set before surgery. One of my favorite things about NuVision is the small details. They write you a handwritten note, always have water and snacks, play music during surgery, and put up a congratulatory sign after surgery with your name on it. Care instructions are clear and they are available overnight if you need anything. Everyone at NuVision is always available and knowledgeable to answer questions. I am so grateful to be able to wake up and see with 20/20. I was able to see 20/20 two to three hours after surgery. I definitely recommend NuVision to everyone! Even if you are not getting LASIK they offer other services! So make sure to check those out too.”

- Alessandra F.,

Parkhurst NuVision Patient

Immediate Results!

After your eye surgeon finishes your LASIK procedure, you'll rest for a few seconds with your eyes closed. You'll probably see better than you've ever seen in your life without glasses or contacts, even if there is a bit of fuzziness, as if your eyes are open underwater. And it only gets better from there.

Antibiotic, anti-inflammatory, or steroid eye drops may then be administered to complete the procedure, after which you'll be released to recover at home with a two- to four-hour nap, usually wearing eye shields for protection. This is the time when healing will begin for a very quick recovery. You will likely be ready to go back to work and just about all your other everyday activities the next day, with a few short-term cautions about strenuous activities.

Post-Surgical Discomfort?

The numbing eye drops will gradually wear off within a short time after your surgery, though some mild discomfort may linger for one or two days. Most people find they can tolerate it pretty well. Most often the sensations after LASIK are mild soreness, stinging, and a sense of grittiness, as if you have a bit of dust in your eyes.

In most cases, though, when you wake from your nap, the worst of the discomfort has passed. Any lingering soreness is easily managed with over-the-counter, oral pain relievers.

Full Recovery Time

That soreness or redness is generally gone in about a week. Most of your corneas' major healing takes place in the first two to four weeks after surgery. Full recovery, however, with continuing improvement and permanent stabilization of your vision, will take from three to six months.

CHAPTER TEN

LASIK versus Contact Lenses — Which Should I Choose?

“I had LASIK eye surgery done at Parkhurst NuVision yesterday and I am so glad that I did! I’ve been in glasses since I was five, so I have no memory of clear vision without glasses or contact lenses. I went in for my consultation and was given my options for refractive surgery. After careful consideration, I decided to schedule LASIK. I had a pre-op appointment where they checked my prescription and the health of my eyes. On the day of surgery, I went in and the amazing staff prepped me for the procedure. The whole procedure took less than fifteen minutes from start to finish. At my one-day post-op, I could already see 20/20 without any correction! I am so thrilled I chose to have LASIK at Parkhurst and I would highly recommend a consultation to anyone even thinking about getting out of glasses or contacts!”

– **Caroline O.,**

Parkhurst NuVision Patient

The Pros and Cons

LASIK surgery will likely restore your vision with a safe and permanent alternative to a lifetime of contact lenses—with the added advantages of comfort, convenience, safety, and cost.

Contact lenses, on the one hand, are a remarkable invention. They do improve the life of millions of people. Surgery, on the other hand, may be intimidating to some, and unsuited for others whose vision is beyond the reach of LASIK correction, or of a nature not involving the cornea. For those folks, corrective lenses seem to be an easy enough, convenient adjustment for their vision problems, especially if those lenses are reliably delivering clear, 20/20 vision.

Keep reading to find out if LASIK really is the better choice for you.

Comfort!

If you are a contact lens wearer, you may find that your eyes feel dry or irritated at the end of the day. That's because your eyes under contact lenses cannot absorb as much oxygen from the air as they normally would. By the end of a long day this can lead to an unpleasant sense of dryness and irritation. Your eyes will need a good rest before you're ready to start the next day.

As a result, over the course of many years of wearing contact lenses, many people discover that they are only able to wear their contacts comfortably for fewer and fewer hours every day.

LASIK, on the other hand, is a permanent, one-time procedure that leaves your eyes free of contact with foreign objects and their side effects. Years of putting your lenses in every day and taking them out every night, sometimes after wearing them too long, and an occasional cleaning mishap, can risk injury and infection. A one-time LASIK vision treatment is designed to eliminate those issues.

The Convenience of LASIK

If you enjoy the water—maybe a quick, refreshing jump in the pool after work, a water workout, competitive swimming, or surfing—you always have to consider that your contact lenses should not be exposed to water. You may have to choose between vision and recreation. An hour in the pool or day on the beach may force you to make some difficult choices.

Many other sports, especially where contact might be involved, can present a similar dilemma. During any physical exercise—a workout, yardwork, or even a bike ride on a bumpy road—your contacts might slip out of place, fall out, or get dirty and damaged when you retrieve them.

Contact lenses are also, quite literally, an on-and-off matter. Morning vision will be a blur until you put your contacts in, and just as unclear again after you take them out at night. Getting up at night can turn into an unwelcome adventure. Those low vision times can expose you to unseen hazards and unnecessary risks.

LASIK, on the other hand, is designed to permanently free you from those “sightless moments,” especially when you might need your vision most.

The recurring need to reorder lenses and supplies can also waste precious time. The convenience of a one-time LASIK procedure should free you from all those ongoing maintenance needs.

Nature Can Be Better

Contact lenses that suit your eye’s refractive error, and your eyes themselves, are both subject to change over time. They can absorb oils, warp, dry out, and succumb to what has been called “lens fatigue.” Those changes accumulate over time, gradually lowering the quality of the vision you first had when you started wearing them years ago. By the time you notice the difference, you may have tolerated a poorer quality of vision for a long time, maybe years. It’s simply not the same as having the right, laser-corrected shape on the front surface of your own natural corneas.

Also, though you may have adapted to contacts and now rarely feel them in place, they are still a foreign object in your eye. Contacts can break or damage your eye from external pressure if something unexpected hits your eye, as in sports or hazardous work. In addition, any sandy beach, dusty garage, or leaf-filled autumn breeze can lodge a sand grain or some other errant particle under your lens, risking a corneal scratch or erosion, or even introduce a source of infection to your eye.

These hazards can be made worse because your natural reflex will always be to rub an irritated eye, even if only once. Blinking will usually not help remove particles lodged under a contact lens.

Most contact lens wearers experience eye dryness because their eyes become somewhat desensitized, losing their natural reactivity to foreign objects. As a result, they produce less of their normal tear film. This can then become a chronic irritation, lead to engorged blood vessels, and leave you more prone to infections.

The natural, healthy surface of your eye—a lasting benefit of LASIK—can deploy its own natural defenses of tear-washing and blinking.

Affordability over Contacts

While LASIK's initial, one-time cost may seem high, over the long term, laser vision correction can be far more affordable.

The recurring replacement cost of contacts and supplies, along with the cost of frequent eye exams, will add up quickly. Over a lifetime of contact lens use, you should also expect those costs to continue rising or to change unpredictably.

LASIK, however, is a one-time cost that is often easily payable over time. In the long run, you may find LASIK to be the most practical financial decision you can make for your eyes. At our practice, while the upfront cost of having a procedure might be more than a patient would have spent on supplies this year, on average, they start accruing the benefit of not spending that amount every year. In about three to four years the patient will likely be saving money that they would have spent for the rest of their lifetime.

It is a matter of perspective; can I afford this? Our patients are often able to finance the procedure in parity with or equal to or sometimes even less than what they're spending on supplies on a monthly basis. With financing, you won't have the upfront cost so you can afford the procedure. Our surgery schedulers are trained in the logistics to make the procedure seamless, everything from scheduling, financing, and post-op care.

CHAPTER ELEVEN

Am I a Good Candidate for LASIK?

“As a doctor, LASIK has made it easier for me to do my job. I can serve my patients without any interruption. There is no reason not to have refractive surgery; whether it be LASIK, ICL, or PRK, there is a surgery for everyone.”

– **Dr. Vincent H.**, Optometrist,
Parkhurst NuVision Patient

The First Two Criteria

The ideal candidate for LASIK procedures is a person with healthy eyes. That’s priority one. Your eye surgeon will guide you through a lot of testing to verify that you meet the criteria for healthy eyes.

The second priority is to be sure you have vision that’s corrected well with glasses or contacts. If those lenses are old and not correcting your vision very well, retesting will be in order, both with and without your contacts or eyeglasses. Those tests will generate the numbers that your surgeons can use to give you your best possible LASIK-corrected vision.

Meeting these first two criteria alone goes a long way toward making you a good candidate for LASIK. There are only a small number more criteria to consider.

Six Other Factors

Age can be an important factor. LASIK surgery is performed on adults, but usually not on children. While children are growing, their eyes are still changing. This makes a lasting outcome unpredictable if LASIK is done too young. You should be over eighteen as a candidate for LASIK, though age-related vision changes may continue beyond that. Many eye surgeons prefer waiting until the early twenties. There is generally no upper age limit for LASIK candidates.

A good LASIK candidate will have a *stable vision* prescription for at least one year before considering surgery.

Chronically dry eyes might not be good candidates for LASIK surgery. However, all dry eyes are not the same. If you wear contacts, for example, you may develop dry eyes, but as soon as you stop wearing them, that dryness will probably correct itself soon and not prevent LASIK surgery. A diagnosis of *dry eye syndrome*, on the other hand, will need successful treatment before considering LASIK.

Good general health is important. Illness can make you vulnerable to infection and inhibit the healing process. Medical conditions that may contraindicate LASIK surgery include autoimmune disorders, diabetes, chronic pain

conditions such as migraines or fibromyalgia, rheumatoid arthritis, and depression. In these cases, a prescription for eyeglasses or contact lenses may be a better option.

Only *specific conditions and correction limits* can make you a good candidate for LASIK surgery. The most common conditions include nearsightedness (myopia), farsightedness (hyperopia, presbyopia), and distorted vision caused by a non-spherical shape of the cornea (astigmatism). The degree to which these can be corrected also sets limits for LASIK. A good farsighted candidate will need up to approximately +4.00 diopters of correction, a nearsighted candidate -8.00 diopters, and astigmatism 6.00 diopters. A patient beyond these limits is not likely to be a good LASIK candidate.

Your corneas must be thick enough. LASIK surgery ablates or “sculpts” your cornea with a laser. Surgery requires corneas that are thick enough to stay healthy and capable of supporting their new contour. If your cornea is much thinner than 500 μm (on average, a cornea measures between 540 μm and 560 μm in thickness), LASIK might not be effective and could risk permanent damage to the cornea.

A Healthy Exception

Current pregnancy often causes vision changes that go back to baseline once your baby is born. The hormone changes of pregnancy alter nearly every one of your body's

systems, including your eyes. LASIK surgery will become feasible once again after a few months of postpartum (post breast feeding) hormone re-stabilization.

The Best Candidate is Well-Informed

One of the most important keys to success for a LASIK candidate is information. A well-informed patient will select a good doctor team and can be confident—prepared for any side effects—with the knowledge that any discomforts should be mild, temporary, and easily treated, that their vision will be better than it was before, and that they can experience the freedom of life without dependency on eyeglasses and contact lenses.

When Is LASIK Not for Me?

You are probably NOT a good candidate for laser eye surgery if:

- **You are very concerned about medical risk.** Although LASIK is proven to be one of the lowest risk medical procedures available, there is still risk involved as with any medical procedure. Certain complications are unavoidable in a percentage of patients, and there are no long-term data available for current procedures.
- **It will jeopardize your specific career.** Some jobs (such as being a commercial airline pilot) prohibit certain refractive procedures. Be sure to check with

your employer/professional society/military service before undergoing any procedure.

- **Cost is an issue.** LASIK eye surgery is considered an elective, cosmetic procedure, not a medical necessity, therefore it is not typically covered by medical insurance plans.
- **Your contact lens or glasses prescription changed in the past year.** This is called refractive instability. Patients who are
 - In their early twenties or younger,
 - Whose vision is fluctuating due to disease such as diabetes,
 - Who are pregnant or breastfeeding,
 - Who are taking medications that may cause fluctuations in vision,
 - Who are more likely to have refractive instability should discuss the possible additional risks with their doctor.
- **You have a disease or are on medications that may affect wound healing.** Certain conditions, such as autoimmune diseases (e.g., lupus, rheumatoid arthritis), immunodeficiency states (e.g., HIV) and diabetes, and some medications (e.g., retinoic acid and steroids) may prevent proper healing after LASIK.
- **You play contact sports.** You participate in boxing, wrestling, martial arts, or other activities in which blows to the face and eyes are a normal occurrence.

- **You are not yet an adult.** Currently, no lasers are approved for LASIK to anyone under the age of eighteen.

Precautions

The safety and effectiveness of refractive procedures has not been determined in patients with some diseases. Discuss with your eye doctor if you have a history of any of the following:

- Herpes simplex or herpes zoster (shingles) involving the eye area.
- Glaucoma, glaucoma suspect, or ocular hypertension.
- Eye diseases, such as uveitis/iritis (inflammations of the eye).
- Eye injuries or previous eye surgeries.
- Keratoconus.

Other Risk Factors

Your eye doctor should also screen you for the following conditions or indicators of risk:

- **Blepharitis.** Inflammation of the eyelids with crusting of the eyelashes that may increase the risk of dryness, infection, or inflammation of the cornea after LASIK.

- **Large pupils.** Make sure this evaluation is done in a dark room. Although anyone may have large pupils, younger patients and patients on certain medications may be particularly prone to having large pupils under dim lighting conditions. This can cause symptoms such as glare, halos, starbursts, and ghost images (double vision) after surgery. In some patients these symptoms may be debilitating. For example, a patient may no longer be able to drive a car at night or in certain weather conditions, such as fog.
- **Thin corneas.** The cornea is the thin clear covering of the eye that is over the iris, the colored part of the eye. Most refractive procedures change the eye's focusing power by reshaping the cornea (for example, by removing tissue). Performing a refractive procedure on a cornea that is too thin may result in blinding complications.
- **Previous refractive surgery (e.g., RK, PRK, LASIK).** Additional refractive surgery may not be recommended. The decision to have additional refractive surgery must be made in consultation with your doctor after careful consideration of your unique situation.
- **Dry eyes.** LASIK surgery may tend to aggravate this condition, at least in the short term.

CHAPTER TWELVE

How Much Does LASIK Eye Surgery Cost? (In the Long Run, It's Less Expensive than You Think)

Factors to Consider

The cost of LASIK surgery can vary considerably, though on average it is usually between \$1,500 and \$4,000 per eye. In cases that call for more extreme correction and more complex procedures, costs may differ. Ultimately, however, the laser eye treatment that your surgeon recommends will be based on the specific vision corrections you choose and on achieving your best possible outcome.

It is important to note, however, that LASIK eye surgery is considered an elective, cosmetic procedure, not a medical necessity, therefore it is not typically covered by medical insurance plans. Medicare will also not cover the cost of LASIK surgery or of any similar laser eye care. Some Medicare Advantage plans, however, do offer such a provision.

As a result, it is important to understand factors affecting pricing and payment. These will become important talking points to discuss with a prospective medical office.

A complete breakdown of charges should include your ophthalmologist's fees; it should say whether or not the overall cost is inclusive of diagnostic testing charges, ancillary charges, pre-op testing and post-op care and follow up, and the possibility of enhancement procedures in the rare instance where they might be called for.

Your overall cost calculation should also include the location and region of the practice you choose. If you select a distant location to take advantage of a particular expertise or facility, the overall expense should also take travel and accommodations into account, too.

Vision Correction vs. Other Monthly Expenditures

	PRICE	USAGE
Cell Phone	\$90/mo	5 hrs/day
Gas	\$120/mo	2 hrs/day
Car Payment	\$399/mo	2 hrs/day
Daily Latte	\$80/mo	30 min/day
Modern LASIK	\$67/mo	Every Waking Moment

Payment Options

If an upfront payment in full is not your preferred option for LASIK surgery, be sure to ask if a partial payment or deposit is required. A number of alternatives have also been developed. They may, however, not all be available where you decide to have your surgery. Where available, plans may have considerable variability in payment amount, payment scheduling, and interest rate options.

Affordable and convenient options might include:

1. Plans for direct installment payments to the physician or practice, either by a standard plan or individually negotiated.
2. You might be able to take advantage of a workplace flexible spending account (FSA) or another defined contribution plan. This allows you to set money aside over time using pre-tax income sources. Such plans can allow you to make the required payment in full and up front.
3. Some patients find a loan with a finance company convenient. Many LASIK practices can supply a list of finance companies they work with, an arrangement designed to streamline the process for you.
4. A bank loan, credit union, or credit card plan may also be a convenient way to address your costs.

Some short-term loan plans charge no or low interest. Interest rates on longer-term payment plans, however, can vary widely, sometimes reaching the 20 percent range. Interest rates and deposits also usually depend on your personal credit rating.

You can avoid some expensive surprises by first asking for an itemized breakdown of the proposed procedures and associated costs before making your final decision.

And finally, please understand that when it comes to your vision, the best bargain is rarely the best choice. Be sure to first identify the very best surgeons and the most successful practices that you can, and only then begin to compare prices alongside their experience, skill level, and commitment to patient care.

“

NASA has spin-offs, and it's a huge and very impressive list, including accurate and affordable LASIK eye surgery. ”

- Neil deGrasse Tyson

CHAPTER THIRTEEN

What's the Difference between LASIK and PRK Eye Surgery?

If you're tired of eyeglasses or contact lenses and you're finally looking for something better, it might be time to consider the pros and cons of LASIK vs. PRK.

Both PRK and LASIK are designed to correct refractive errors in your vision, specifically nearsightedness (myopia), farsightedness (hyperopia), and astigmatism caused by a distortion in the shape of your cornea. Both also rely on at least fifty years of previous complex and largely overlapping research and clinical applications, though with a few differences in criteria for patient selection. Based on those, LASIK has largely supplanted PRK, though PRK remains a viable option for selected cases.

While PRK (Photo Refractive Keratectomy, FDA approved 1995), and LASIK (Laser-assisted in situ keratomileusis, FDA approved in 1999), can achieve similar results, their differences are based on surgical technique, recovery time, post-operative discomfort, side effects, complications, and cost. The outcomes also differ somewhat in their suitability for certain professions

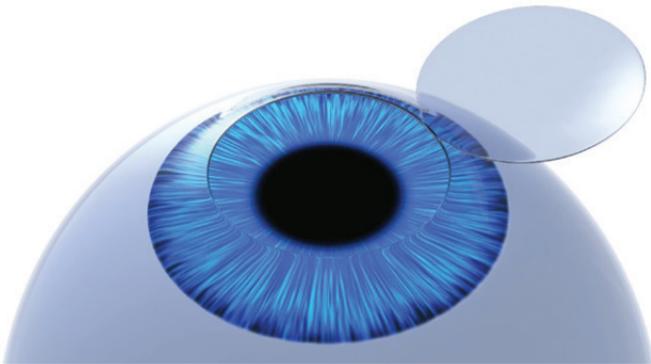
with specific outcome requirements such as in military applications, law enforcement, and for airline pilots.

Surgical Techniques

Both LASIK and PRK are outpatient procedures. Each generally requires no more than an hour from admission to release. Both begin with the surgeon placing anesthetic eye drops in your eyes and holding your eyelashes out of the way by placing a specially designed eyelid holder on your eye to prevent blinking during the surgery.

However, from this point on there are important differences in surgical technique between LASIK and PRK.

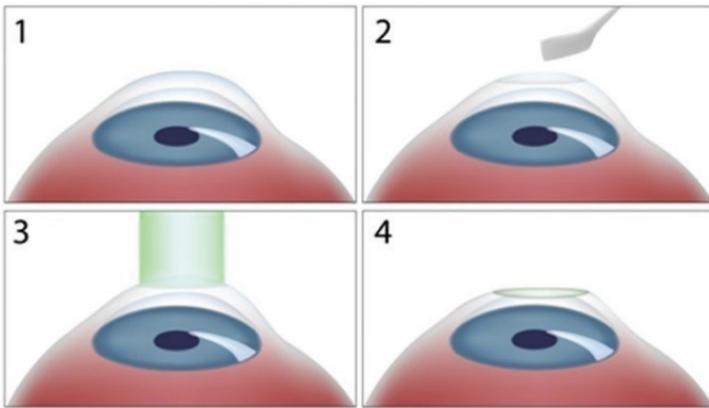
LASIK Surgery



In LASIK, your surgeon uses a laser to create a window on the surface of your cornea. The surgeon then accesses the cornea exposed and reshapes the cornea below it

to correct your vision. When complete, the surgeon places the tissue back in place to heal. This process takes only minutes.

PRK Surgery



Photorefractive Keratectomy (PRK)

PRK removes the topmost layer of corneal epithelium

In PRK, your surgeon dissolves the outer layer of the cornea (the regenerating epithelium) with a few drops of a specially formulated alcohol solution to expose and allow reshaping of the corneal body beneath. The epithelium grows back after surgery under a protective contact lens bandage to promote healing, usually within just a few days.

Both procedures, for the purpose of safety, require you to have someone drive you home. The degree to which

you can see more clearly immediately after surgery may be variable in the first few hours.

Recovery and Healing Time

Recovery from LASIK surgery is typically much shorter than PRK recovery. PRK usually takes about two to three days, while LASIK typically allows you to go back to work and your everyday activities the next day.

LASIK recovery usually proceeds with little to no pain. With PRK, many patients report “mild to moderate” pain or discomfort during the twenty-four to thirty-six hours following surgery. This pain is typically easy to manage with eye drops and OTC oral pain relievers.

PRK also requires more time—about a month—than LASIK surgery, which typically takes only a few hours to a few days before clear vision returns.

Because it can take longer for eyes to heal fully after PRK, some PRK surgeons recommend operating on one eye at a time to allow for full healing between procedures. LASIK surgeons, on the other hand, typically treat both eyes in a single session.

Candidate Selection for LASIK vs. PRK

The criteria to approve candidates for laser vision correction are similar for both LASIK and PRK, though there are also a few important differences.

PRK is often considered a better choice for people who have thinner corneas, and for those who have physically very active lifestyles—such as mixed martial arts fighters.

LASIK on the other hand can be more appropriate for younger patients, people who have none of the eye issues better treated by PRK, and for those who prefer less downtime.

In addition to PRK, patients who have thinner than average corneas may also be candidates for a procedure called epi-LASIK surgery, similar to LASIK, and another option called LASEK, which combines techniques from both LASIK and PRK. These are also worth discussing with your eye surgeon.

Outcomes

In general, experience has not shown a difference in positive long-term outcomes between LASIK and PRK for patients with low to moderate nearsightedness or farsightedness. However, in some cases there are significant differences.

With LASIK, a corneal window, or “flap,” still remains on the cornea and quick healing ensures that it remains in place. This provides a virtually instantaneous return to clear, highly improved vision. Nevertheless, a slight risk remains that blunt trauma might dislodge the flap in the future. In those rare cases a simple surgical procedure can often quickly reposition it.

PRK allows the cornea to regrow its surface, firmly and permanently in place. As a result, some patients favor PRK if they lead very active lifestyles or work in professions involving high impact activities such as contact sports, some kinds of construction work, law enforcement, and the like.

For Military Personnel, Pilots, and Law Enforcement Officers

Certain career fields demand excellent eyesight in challenging circumstances. This presents special considerations in deciding whether to get LASIK or PRK laser vision correction. For military personnel, having continuous, clear vision is key; glasses or contact lenses can hinder or interrupt performance in certain scenarios. This often makes PRK the procedure of choice in the face of possible job-related trauma.

LASIK's advantages over PRK for members of the military, however, include a much faster recovery time that allows return to duty as soon as six weeks after laser vision correction while PRK recovery requires three months.

It is also important to note that any kind of laser vision correction may make one ineligible for particular roles in certain military branches.

LASIK may offer some advantages for pilots over PRK in that, according to some reports, LASIK may result in minimal "central haziness" and achieves 20/20 vision more quickly. Pilots are advised to carefully consider all

possible downsides to laser vision correction, including possible night vision changes.

PRK may be more appropriate than LASIK for law enforcement officers when it comes to the potential risks of physical training or physical contact on the job. Pepper spray or other irritants can require special attention to use of protective eyewear. These considerations should be weighed against the longer recovery time and delayed return to work imposed by the PRK procedure.

It is unlikely, though also possible, that laser vision correction may not meet required vision standards of their profession. This will be an important consideration to discuss with both your surgeon and your employer.

In Summary – Choosing LASIK or PRK

Reduced to a few essentials, your choice can begin with the basic differences between LASIK and PRK.

LASIK offers the ability to achieve fast results with little to no pain after surgery and a return to normal activities only one day after the procedure.

On the other hand, PRK may be more appropriate for patients who have thinner corneas or are frequently exposed to any sort of face trauma, or work in certain riskier professions.

Your final decision, of course, should be made in consultation with the eye surgeon of your choice. You'll be in good hands.

CHAPTER FOURTEEN

What is SMILE Eye Surgery?

SMILE, a minimally invasive surgery for correcting your vision, is another option to consider.

SMILE stands for “Small Incision Lenticule Extraction.” This is the most recently developed type of laser eye surgery, FDA approved in 2016 based on decades of previous research into laser vision correction. It is a minimally invasive procedure created to correct vision impairments such as nearsightedness (myopia) and astigmatism, but it does not treat farsightedness (hyperopia) or patients with thin corneas. It has quickly become a popular option in selected cases, now practiced worldwide.

How Does SMILE Work?

SMILE uses a femtosecond laser **to make a microscopic opening** in the cornea and then reshape it from within. This tiny incision has earned SMILE the title of “*key-hole surgery*.” It is similar to the laparoscopic surgery performed on joints and blood vessels. A femtosecond laser-pulse is extremely quick, taking up a mere one-quadrillionth of a second. Your surgeon then applies the invisible,

near-infrared laser's high peak intensity beam through the corneal surface for only a few femtoseconds. This creates a single, micro-precision hole with bubbles that quickly combine in a specific sublayer of your cornea (the stroma), reshaping the corneal tissue while leaving the surrounding tissues entirely untouched.

The full laser process takes fewer than thirty seconds. It creates a small, lens-shaped piece of corneal tissue (a lenticule) of a predetermined size within the stroma. The surgeon can then remove the lenticule through the previously made 4mm opening, instantly reshaping your cornea by just the right amount, thus precisely correcting the refractive error of your eye. The tiny incision quickly heals itself.

The procedure is quick, almost silent, and odorless, and allows you to comfortably stay in the same position from start to finish.

Benefits

Femtosecond lasers pass through the upper layers of the cornea without harming either the cornea or nearby tissues. It does not have to make a window or remove the outer layer of the cornea the way LASIK and PRK do. In this way, corneal stability is maximized by leaving the entire upper layers of the cornea virtually unaffected.

Nerves in the cornea that stimulate your tear glands are also less affected and remain able to continue lubricating

your eye. As a result, side effects such as temporary dryness are rare after a SMILE procedure.

SMILE surgery is a very accurate form of laser vision correction, with fewer than 0.5 percent of SMILE patients needing further laser correction or enhancement.

Preoperative and Postoperative Preparations

Preparation for your surgery will generally include the same pre-operative and initial operative preparations as for both LASIK and PRK procedures.

Smile recovery, however, is more like the LASIK post operative experience. SMILE produces little discomfort during the healing process. Typically, you can drive to work, wear make-up, and participate in sports within a few days after the treatment.

Side effects and complications are also similar to those typical of LASIK or PRK.

CHAPTER FIFTEEN

The New Kid on the Block, EVO ICL

“I didn’t even know that ICL was a thing. I didn’t know it existed until I came here for my consultation. Dr. Parkhurst told me that not a lot of people know, but this has been around the same amount of time as LASIK. I was just amazed because my eyesight has been so bad. For so long, that was the excuse, my eyesight is so bad I don’t think LASIK will work for me. But this is something completely different and it does work. It’s amazing. I’ve got 20/20 in one eye and better than 20/20 in the other eye. That hasn’t been the case since third grade. I’m so excited to wake up tomorrow and not have to fumble around for the glasses. Every single person I’ve met here is a total professional. Everyone compliments the other. I’ve been in maybe ten different rooms since I started this procedure, and all of the plaques on the walls and all of the certificates. I mean it’s very clear I’m in good hands, very clear.”

– Laura M.,

Parkhurst NuVision Patient

ICL stands for Implantable Collamer Lens. Collamer is the material that the lens is made of and it is a Collagen Copolymer, or Collamer. We have collagen everywhere in our body, including our eyes. Which means your eyes will not see Collamer as foreign material. Using the implantable lens, we are able to insert a lens that the body sees as natural in order to produce vision correction.

If you remember from back in high school physics, because of the way light rays enter a lens system, the rays can be bent by a lens. They can either focus toward a point or they can focus away from a point. The eye has two lenses. The first one is the cornea, the front of the eye, which is where we do laser vision correction. The second lens is inside behind the colored part of the eye.

Most people don't realize we have the second lens, but we do, and it is the size and shape of an M&M candy. Together with the focusing lens on the cornea, that produces our vision prescription.

We can correct vision at the first lens (the cornea) or the second lens, the inside lens, to produce vision without glasses and contacts. When we're doing the ICL surgery, we're actually helping the inside lens focus better by implanting the ICL.

This procedure is usually performed instead of LASIK. There are many reasons why a patient might choose ICL over LASIK. However, the goal of both procedures is the same, to see without glasses and contacts.

The techniques, however, are completely different. With laser eye surgery, we use a laser to reshape and remold the cornea, the first lens. With the ICL, instead of removing, reshaping, and remolding tissue with a laser, we implant additional material into the eye to help the lens focus better.

The procedure is fairly similar to LASIK—it takes approximately ten minutes, is pain free, and involves a quick recovery. Most people work and drive the next day after each procedure. Patients usually choose to have both eyes done on the same day. The amount of sedation is also very similar. It involves a sedative by mouth, typically valium. It is typically a painless procedure, and valium is often sufficient so that patients don't have to be under any more complicated anesthesia.

Milestones of Eye Development

In our lifetimes, humans will encounter three milestones of vision development. The first occurs when we're full-grown adults and our bodies and eyes have stopped growing. At the same age when our shoe size stops getting bigger every year, our glasses powers also stop changing. For most, that's around about age twenty, and that is the age at which we can have our nearsightedness corrected permanently with a procedure like either LASIK or ICL or any of these other different procedures that we can do.

Just like we expect LASIK to be a long-term fix for myopia (near-sightedness) starting at about that age, the same thing goes for ICL.

The second milestone we reach is in our mid-forties, where we start noticing something called Presbyopia. This is the stage at which we can't see close up (versus when we were nearsighted and couldn't see far away).

Neither LASIK nor ICL will prevent that aging issue. It's something we'll have to deal with either way. ICL and LASIK will both continue to work for distance vision. However, at this stage we will have to address this secondary issue, the aging of the natural lens in our eyes. Our eyes no longer zoom or focus like they used to and so we will need reading glasses or something similar to help us see things up close.

The third milestone typically starts in our sixties and older. A lens that was stiff in middle age ultimately goes cloudy; this is what it means to have a cataract.

One of the advantages of ICL in this context is, because it adds a lens to the eye and does not remove or reshape anything, you haven't permanently changed anything about the eye's anatomy. So that maximizes the options you'll have to address milestones two and three.

For example, today we use ICLs to treat myopia and astigmatism. There are lenses available outside of the U.S. and likely to come to the U.S. in the near future that can also address presbyopia. So theoretically, you can have ICL at age twenty to correct your myopia. When

you get to be age forty-five, you could have it swapped out for a new lens that also addresses your presbyopia.

Then, when you're sixty-five and old enough to get cataracts, you can have those addressed, too. The ICL just comes out and cataract surgery is performed.

These are things to think about when compared to laser vision correction, which is permanently reshaping the cornea. In certain instances, this reshaping can somewhat limit what options you have to address these other vision needs. With ICL, on the other hand, you are leaving open the possibility for procedures that have not yet been invented.

What Is the Perfect Age to Have ICL?

The best age to start thinking about ICL and getting baseline measurements is generally in the teenage years. You likely will not have the procedure done until you reach adulthood but, from a benefit perspective, the best age to have this done is the youngest age at which you are eligible. You will receive the longest benefit and the economic advantages start accruing sooner.

As a teenager, we can establish a baseline, determine when stability occurs (milestone one), and get you the procedure when it is most advantageous. Usually, this is around eighteen to twenty years old.

Am I Too Old for This Procedure?

There is no cutoff point for having an eye correction procedure; however, it is important to understand that as you age, other factors come into play (namely, cataracts). Thankfully, there's a way to cure cataracts and permanently correct someone's vision.

“

A successful surgeon should be a man who, when asked to name the three best surgeons in the world, would have difficulty deciding the other two.

”

- Denton Cooley

CHAPTER SIXTEEN

How to Choose the Best LASIK Eye Surgeon

“It was worth the twenty-two-hour drive. This was the right surgeon for me. My life has completely changed. From the minute they asked me to sit up after the procedure, I was able to see better. They asked if I could see my wife, who was outside watching the surgery, and I could see her perfectly. To go from not being able to tell she was standing there to seeing her so clearly, every detail on her face and her smile, it was worth it. It was amazing!”

– **Daniel R.**, Aspiring Navy Seal who drove from California to Texas for LASIK treatment at Parkhurst NuVision

Qualifications

What should you look for when you’re choosing a LASIK or vision correction surgeon? This is one of the most important choices you will make in the process. Fortunately, there are some simple, common-sense guidelines that will set you on the right track.

If you know little or nothing about LASIK and LASIK surgeons, start by looking at their results, not for their ads and promotions.

Get referrals from your friends and family members who have had the procedure. Ask them about their experiences. Your personal physician and your optometrist may also provide insightful input and perhaps a referral based on their own experience.

After you get those suggestions, look for information on the practitioners and the specific procedures they specialize in through internet sources connected to major universities and medical schools. Ads for large-scale commercial practices should not be taken as a reliable guide to quality. Also, contact your local chamber of commerce and look for information published, probably online, by organizations such as the American Academy of Ophthalmology and the World College of Refractive Surgery and Visual Sciences.

On a personal level, be sure you are comfortable with your doctors. They should be pleased to answer all of your questions and help you learn everything you need in order to make an informed decision. Be especially sure to ask about their record of complications.

Look for a surgeon with significant experience in laser vision correction. Some LASIK surgeons have treated 10,000, 20,000, 50,000 patients, or more (as I have). A

high level of experience can help assure you that your surgeon is highly skilled and competent.

The right surgeon for you must also meet industry standards in selecting patients and screening out those who are not good candidates for LASIK surgery. Because LASIK is not appropriate for everyone, good LASIK surgeons often screen out as many as 15 to 25 percent of inquiries.

A LASIK consultation should not feel like a high-pressure sales process. Your goal is to achieve your best vision, not merely your best deal. Know what to expect from LASIK and be especially wary of any practice that over-promises.

Remember, though your surgeon probably works with a team, your surgeon is the team leader who takes the ultimate responsibility for your procedure and its outcome, so put in all the effort you need to find the surgeon best for you.

CHAPTER SEVENTEEN

Fourteen Frequently Asked Questions to Ask Your Eye Surgeon

These frequently asked questions will probably help you think of more and may help you start a conversation with your ophthalmologist or eye surgeon.

If you're considering surgery to replace your eyeglasses or your contact lenses, it's important to understand your options and to clarify your expectations.

Although LASIK eye surgery benefits many people, it may not necessarily be the right choice for you. So here are some important questions your doctor will be delighted to answer.

Q1: Will my eyes look the same after LASIK surgery?

A1: Yes. Your eyes will look exactly the same.

Q2: Will I need a formal referral from my eye doctor?

A2: Referrals for a preoperative consultation and laser vision correction are not needed. However, it may be wise to seek advice from your eye doctor or your family doctor concerning LASIK eye surgery. If you prefer,

especially if your private physician is significantly closer to home than your eye surgeon, ask your LASIK provider to collaborate with your doctor on postoperative follow-up on or after the first anniversary of your surgery.

Q3: Does my vision prescription have to fall within a certain range for LASIK?

A3: In general, if your prescription falls outside the commonly approved limits, your surgeon will probably advise against the procedure. The limit for nearsightedness is up to -12.00 diopters, farsightedness up to +6.00 diopters, and astigmatism up to 6 diopters. Severe near- or farsightedness reduces your chance of success and increases the risk that retreatment may be needed.

Q4: Are there general eye or health conditions that could rule out LASIK or need to be resolved before surgery?

A4: General health is important because it will influence your tolerance for surgery and the rate and completeness of healing. Some conditions to consider include, but are not limited to, autoimmune or immunodeficiency states, diabetes, eye conditions such as contact lens-induced dry eye or dry eye syndrome, eye inflammations such as uveitis, conjunctivitis, and others, previous surgeries or eye injuries resulting in corneal scarring, keratoconus, cataracts, glaucoma, retinal disease, and ocular herpes.

Q5: Can I get both eyes done at the same time with LASIK surgery?

A5: Yes, in about 99 percent of cases, both eyes are done at the same time. Typically, it's only if the surgeon believes the correction in your first eye is not perfect that surgery on the other eye will be delayed.

Q6: If I use bifocals now, will reading glasses still be needed after LASIK surgery if I have my eyes corrected for distance vision?

A6: Whether or not you correct for distance vision, if you are forty or older you will need reading glasses due to the development of presbyopia, a condition that cannot be corrected by LASIK.

However, your surgeon may offer an option called blended vision, or other techniques, to account for that. There are vision procedures that can reduce or eliminate the need for reading glasses.

Q7: What results can I reasonably expect overall?

A7: The vast majority of LASIK patients—95 percent to 99 percent—achieve permanent vision correction to between 20/20 and 20/40 vision. That is the level at which you can get a driver's license clearing you to drive without glasses or contacts.

Q8: If I decide on correction for better distance vision, will I lose my ability to see comfortably up close?

A8: When you have LASIK surgery that corrects your eyes for better distance vision, you can still expect clear overall vision. However, if you are over forty, you may not see objects close to you as clearly after having LASIK eye surgery. After forty, you will probably need reading glasses or another procedure for up-close work.

Q9: How long will it take for my eyes to recover and adjust after LASIK?

A9: After your LASIK surgery, your eyes start to heal immediately and healing proceeds rapidly. Most patients see impressive improvement right after the procedure, but some blurred vision and vision fluctuations are normal for a few weeks or even months while healing continues. On the rare chance that your vision remains bothersome after more than ninety days of recovery, your surgeon may suggest a LASIK enhancement procedure to further sharpen your eyesight.

Q10: What if I develop cataracts later in life if I've already had a successful LASIK, PRK, or SMILE procedure?

A10: Cataracts generally appear in your sixties to eighties. Cataracts are a cloudiness that slowly develops in the lens that is behind your cornea. As a result, corneal corrections and cataract removal occur in two totally different places. They do not hamper each other in any way. However, cataracts present before LASIK surgery may complicate precise determination of your prescription, a topic for discussion with your surgeon.

A cataract is treated by removing the lens and replacing it with a soft plastic or acrylic lens. That lens prescription will take into account the laser vision correction already in place in your cornea. Your LASIK, PRK, or SMILE procedure should get along with a cataract correction just fine.

Q11: How long after having a child should I wait before LASIK surgery and do hormones affect vision prescriptions?

A11: Postpartum fluid changes in the body do not change the prescription in the eye. But generally speaking, it might be wise to wait a month or two after you deliver your child just to get your new family dynamics figured out. Then, after your surgery, it will be important to watch out for those wonderfully inquisitive little fingers. Newborns just discovering the world love to touch their mom's eyes.

Q12: Do I need to have someone drive me home after the procedure? How soon can I drive?

A12: You should not drive until your surgeon verifies that your vision is safe for getting back behind your wheel. LASIK patients often have good driving vision the same day, but it's more certain by the next day. PRK patients typically have a little more variability and delay. Surgeons measure your vision immediately after your procedure, and then recheck it the day after. Best practices, then, strongly suggest that you have a driver to bring you to the procedure and drive you home afterward. Most surgeons will cancel the surgery if you do not have a driver.

Q13: How many visits should I plan for afterward?

A13: After the procedure, a next day visit, one-week visit, followed by a one-month, three-month, and six-month visit is generally considered a good gameplan to make sure everything is healing right and your new vision is living up to your and your surgeon's expectations.

Q14: Is it possible to achieve better than 20/20 vision with LASIK eye surgery?

A14: This is quite common, although it cannot be guaranteed.

CHAPTER EIGHTEEN

LASIK Marketing Traps to Watch Out For — Bait and Switch Advertising and More

A few cautions where your eyes and your finances are involved are worth considering.

Advertising is a good way for fast-chain LASIK places to attract customers who need their services. But surgery, like any other purchase, calls on the buyer to do some research. Ad promotions are not necessarily a guarantee of the quality they may promise.

Here are a few pointers to help you select the best eye surgeon:

Follow the Money

Prices vary, but laser vision surgery should not be a bargain hunt. For example, the “good deal” some practices offer may in reality be only available to select, so-called “qualified” patients. This can be a sign of a *bait-and-switch trap* or an introduction to up-selling of features that are usually included in ordinary care plans.

Low-priced individual components of a complete surgical package are sometimes advertised only to be later revealed as lures meant to open the door to higher priced options not necessarily supported by either a detailed exam or by disclosure of qualifications for surgery.

So here are a few suggestions to help you save time, money, and maybe a poor vision outcome:

Trust personal recommendations from satisfied customers and informed doctors instead of media ads.

Ask questions about your eligibility for promotions before you visit a LASIK center. Get the details on limitations or special requirements to take advantage of “special” offers. Ask about other fees or payments. Be wary if the explanations aren’t full and candid.

Search online for reviews, endorsements, and complaints from a wide variety of sources about the practice before you go there for a consultation.

Beware the hard sell advertising of mega-practice chains spending heavily on advertising and sometimes devoting more of their investments to corporate wellbeing than yours.

If you believe a physician or medical group has used misleading practices to sell you a service or product, whether faulty or not, report it to the FTC at [reportfraud.ftc.gov](https://www.ftc.gov) and take control of your eye care.

Beware of Universal Patient Selection

Leading laser eye surgeons will turn away a lot of patients, sometimes 15 to 25 percent of all who inquire. That is a good practice. An initial consultation and complete eye examination often highlights signs of a disqualifying eye or general health condition or an extreme vision prescription beyond a safely correctable range. Such findings reflect a focus on patient safety and will rule out a patient as a surgical candidate.

Be wary of any practitioner who promises success for everyone and anyone who asks for a LASIK treatment.

Don't Be Fooled by the Numbers

Verify that you will receive individualized evaluation and treatment. If the practice uses only one type of laser eye surgery and a single, standardized treatment plan, this might be a signal that they operate on a “one-size-fits-all” basis. In this case, look for a LASIK center that offers a variety of customized LASIK procedures. Every patient deserves a unique solution customized to their specific needs and preferences.

Technology

When it comes to LASIK eye surgery, technology matters, especially in the precision of measuring and treating your eye's imperfections. Only in this way can your surgeon

make the precise corrections you need. Ask how up to date the surgeon's and the practice's technology and training are. Laser eye surgery is an ever-advancing field because new research continues to promote rising standards of care and creation of ever more advanced technology.

However, new technology alone does not guarantee better outcomes. Once again, make sure the results match the advertising and promotions.

Beware the "Big Box" LASIK Store

Be wary of LASIK Sales Centers and fast-chain LASIK places. They're not necessarily sub-standard, but they invest very heavily in expensive media advertising and real estate and often create hard-sell environments. Those costs will be passed on to you and may not directly enhance your care. The hard sell might also bypass a thorough assessment of whether you're a good candidate.

Have more questions? Please contact our office and we'll be happy to help.

CHAPTER NINETEEN

Conclusion: Is LASIK Your Next Step?

If you've decided that you're tired of looking at the world through your old eyeglasses or contact lenses, if you're fed up with their costs, and ready to be done with your blurry vision without them . . . then you're probably ready for LASIK.

We hope this *Patient's Guide to LASIK Eye Surgery* has helped you decide to take your next step—finding the right surgeon for your surgery and starting the conversation with him or her about your vision for a new life.

Your Next Step?

Please look at our “Checklist for Action!” below if you'd like a step-by-step quick guide to help you remember each step to consider on your way to your decision.

Then, if LASIK is your choice, start with a call to our office. Our information is at the back of this book.

CHAPTER TWENTY

Your Checklist for Action!

“What I really liked was [that] I can put on makeup [without] needing [glasses]. I can look at a telephone and see caller ID without needing glasses.”

– **Susan Parkhurst**

(Dr. Parkhurst’s Mother & Parkhurst NuVision Patient)

“I can watch the football game on TV and I can play with my cell phone at the same time and be able to see both just perfectly with no issues.”

– **Douglas Parkhurst**

(Dr. Parkhurst’s Father & Parkhurst NuVision Patient)

Ready to Start?

Book your LASIK surgery and begin planning for your new life of restored vision permanently free of your old spectacles and lenses.

Here’s a simple checklist to guide you through a few easy steps on your way to the vision you want and the new lifestyle you deserve.

1. Meet Your Doctor

- Visit our website: www.ReadNewVision.com
- Call us for a free consultation at 210-405-1440
- Meet with our doctors and surgery staff for your free consultation
- Tour our state-of-the-art facilities
- If you have any questions left, contact your patient concierge

2. Preparing for Surgery

- Complete an exhaustive battery of eye tests
- Find out if you are a good candidate for LASIK (or other procedures offered by the practice)
- Plan with your surgeon for the vision correction best suited to your lifestyle, your age, and your exam results
- If you wear contact lenses, follow your doctor's directions about when to stop wearing them before your surgery
- Check with your primary care physician to treat any pre-existing conditions that could hamper your recovery
- Bring a driver with you to take you home after the surgery
- Plan for minimal exertion and a two-to-four-hour nap when you get home

3. Making Your Financial Plan

- Discuss the costs. If an up-front payment-in-full is not your preferred strategy, talk to us about which other option will work best for you
- Will you need to travel for this procedure? Consider your costs
- Initial deposit, balance later
- Financing options?
 - Through a plan with our practice
 - A bank/financing company
 - Your employee savings plan
 - Other

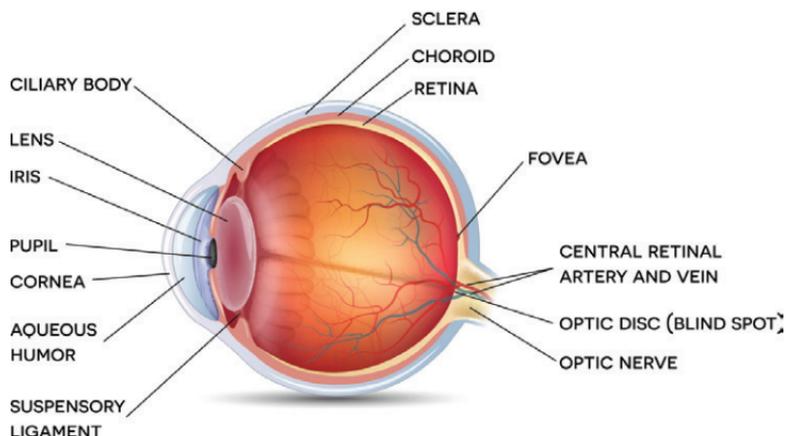
Congratulations! You are now in control of your own vision for the future.

“Those days of making sure you take your contacts out or not misplacing your glasses are over. The greatest blessing is being able to forget all that you used to go through. No more broken glasses or torn contact lenses. You get to wake up and go. In the military, that is exactly what you want, to get up and go without hindrance. It was quick and painless and I have had perfect vision ever since.”

– **Ron**, Military Service Member,
Parkhurst NuVision Patient

LASIK: Glossary

ANATOMY OF THE EYE



Ablate – in surgery, to remove.

Ablation zone – the area of tissue that is removed during laser surgery.

Accommodation – the ability of the eye to change its focus from distant objects to near objects.

Acuity – clearness, sharpness of vision.

All-Laser LASIK – (also known as “*Bladeless LASIK*”) a laser keratome device is used to cut a corneal flap for LASIK surgery.

Astigmatism – a distortion of the image on the retina caused by irregularities in the cornea or lens.

Cornea – the clear, front part of the eye. The cornea is the first part of the eye that bends (or refracts) the light and provides most of the focusing power.

Diopter – the measurement of refractive error. A negative diopter value signifies an eye with myopia and positive diopter value signifies an eye with hyperopia.

Dry Eye Syndrome – a common condition that occurs when the eyes do not produce enough tears to keep the eye moist and comfortable. Common symptoms of dry eye include pain, stinging, burning, scratchiness, and intermittent blurring of vision.

Endothelium – the inner layer of cells on the inside surface of the cornea.

Epithelium – the outermost layer of cells of the cornea and the eye's first defense against infection.

Excimer laser – an ultraviolet laser used in refractive surgery to remove corneal tissue.

Farsightedness – the common term for hyperopia.

FDA – the abbreviation for the Food and Drug Administration. It is the United States governmental agency responsible for the evaluation and approval of medical devices.

Flap & Zap – a slang term for LASIK.

Ghost image – a fainter second image of the object you are viewing.

Glare – scatter from bright light that decreases vision.

Halos – rings around lights due to optical imperfections in or in front of the eye.

Haze – corneal clouding that causes the sensation of looking through smoke or fog.

Higher order aberrations – refractive errors, other than nearsightedness, farsightedness, and astigmatism, that cannot be corrected with glasses or contacts.

Hyperopia – the inability to see near objects as clearly as distant objects, and the need for accommodation to see distant objects clearly.

Inflammation – the body’s reaction to trauma, infection, or a foreign substance, often associated with pain, heat, redness, swelling, and/or loss of function.

Informed consent form – a document disclosing the risks, benefits, and alternatives to a procedure.

In Situ – a Latin term meaning “*in place*” or not removed.

Iris – the colored ring of tissue suspended behind the cornea and immediately in front of the lens.

Keratotomy – the surgical removal of corneal tissue.

Keratotomy – a surgical incision (cut) of the cornea.

Keratitis – inflammation of the cornea.

Kerato – prefix indicating relationship to the cornea.

Keratoconus – a disorder characterized by an irregular corneal surface (cone-shaped) resulting in blurred and distorted images.

Keratomileusis – carving of the cornea to reshape it.

Laser – the acronym for *light amplification by stimulated emission of radiation*. A laser is an instrument that produces a powerful beam of light that can vaporize tissue.

Laser keratome – a laser device used to create a corneal flap.

LASIK – the acronym for *laser assisted in situ keratomileusis* which refers to creating a flap in the cornea with a microkeratome and using a laser to reshape the underlying cornea.

Lens – a part of the eye that provides some focusing power. The lens is able to change shape allowing the eye to focus at different distances.

Microkeratome – a mechanical surgical device that is affixed to the eye by use of a vacuum ring. When secured, a very sharp blade cuts a layer of the cornea at a predetermined depth.

Mono vision – the purposeful adjustment of one eye for near vision and the other eye for distance vision.

Myopia – the inability to see distant objects as clearly as near objects.

Nearsightedness – the common term for myopia.

Ophthalmologist – a medical doctor specializing in the diagnosis and medical or surgical treatment of visual disorders and eye disease.

Optician – an expert in the art and science of making and fitting glasses and may also dispense contact lenses.

Optometrist – a primary eye care provider who diagnoses, manages, and treats disorders of the visual system and eye diseases.

Over correction – a complication of refractive surgery where the achieved amount of correction is more than desired.

PRK – the acronym for photorefractive keratectomy, which is a procedure involving the removal of the surface layer of the cornea (epithelium) by gentle scraping and use of a computer-controlled excimer laser to reshape the stroma.

Presbyopia – the inability to maintain a clear image (focus) as objects are moved closer. Presbyopia is due to reduced elasticity of the lens with increasing age.

Pupil – a hole in the center of the iris that changes size in response to changes in lighting. It gets larger in dim lighting conditions and gets smaller in brighter lighting conditions.

Radial Keratotomy – commonly referred to as “RK.” A surgical procedure designed to correct myopia (nearsightedness) by flattening the cornea using radial cuts.

Refraction – a test to determine the refractive power of the eye; also, the bending of light as it passes from one medium into another.

Refractive errors – imperfections in the focusing power of the eye; for example, hyperopia, myopia, and astigmatism.

Refractive power – the ability of an object, such as the eye, to bend light as light passes through it.

Retina – a layer of fine sensory tissue that lines the inside wall of the eye. The retina acts like the film in a camera to capture images, transforms the images into electrical signals, and sends the signals to the brain.

Sclera – the tough, white, outer layer (coat) of the eyeball that, along with the cornea, protects the eyeball.

Snellen visual acuity chart – one of many charts used to measure vision.

Stroma – the middle, thickest layer of tissue in the cornea.

Under correction – a complication of refractive surgery where the achieved amount of correction is less than desired.

Visual acuity – the clearness of vision; the ability to distinguish details and shapes.

Vitreous humor – the transparent, colorless mass of gel that lies behind the lens and in front of the retina, which fills the center of the eyeball.

Wavefront – a measure of the total refractive errors of the eye, including nearsightedness, farsightedness, astigmatism, and other refractive errors that cannot be corrected with glasses or contacts.

About the Author

Dr. Gregory Parkhurst graduated with honors from the undergraduate program at Hillsdale College before completing medical school at Northwestern University. He then went on to a residency training during which he was appointed Chief Resident in eye surgery at Walter Reed Army Medical Center followed by a fellowship at University of Texas and Slade & Baker Vision Center in Houston, with subspecialty training as a corneal specialist and refractive eye surgeon.

Dr. Parkhurst is distinguished as one of the “Top 40 Under 40” Most Influential Ophthalmologists in the world by *The Ophthalmologist*, an authority on the eye care industry and was named one of San Antonio’s “Top Doctors” by *San Antonio Magazine* and a “Top Ophthalmologist” in San Antonio by *The Leading Physicians of the World*. His work has been published in numerous peer reviewed journals including *Ophthalmology*, *Journal of Cataract & Refractive Surgery*, and *Journal of Refractive Surgery* among others. Dr. Parkhurst has led multiple FDA clinical trials in the role of Principal Investigator and is widely considered one of the world’s foremost experts in refractive eye surgery and vision correction procedures.

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Gregory Parkhurst

SIGNATURE



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about our practice and redeem your savings
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Center at www.ReadNewVision.com

Are You Considering Vision Correction Surgery?

If so, this book is a must read. Written by Dr. Gregory Parkhurst, an experienced eye surgeon who is a LASIK patient as well. This is a concise, easy to read guide designed to answer all your questions regarding LASIK. A quick lesson in anatomy is followed by chapters on all available procedures in modern refractive surgery, their benefits, risks, and alternatives (spoiler alert: there's more than just LASIK!) The information is presented in basic terms with clear illustrations that anyone can understand. If you are considering laser vision correction, you **need** this book.

Dr. Gregory Parkhurst graduated from the honors program at Hillsdale College before completing medical school at Northwestern University in Chicago. He then went to residency training during which he was appointed Chief Resident in eye surgery at Walter Reed Army Medical Center in the nation's capital followed by a fellowship at the University of Texas, training as a corneal specialist and refractive eye surgeon. He is a trustee of the World College of Refractive Surgery and Visual Sciences and has trained hundreds of eye doctors and surgeons in the management of vision correction procedures.

Dr. Parkhurst is distinguished as one of the "Top 40 Under 40" Most Influential Ophthalmologists in the world by *The Ophthalmologist*, an authority on the eye care industry out of Europe and was named one "Top Doctors" by *San Antonio Magazine* and a "Top Ophthalmologist" in San Antonio by *The Leading Physicians of the World*. His work has been published in numerous peer reviewed journals including *Ophthalmology*, *The Journal of Cataract & Refractive Surgery*, and *The Journal of Refractive Surgery* among others, and has led as Principal Investigator for multiple FDA clinical trials in emerging technologies for vision.

