

# Lasik: Why & Why Not

*A guide to preparing for what may be the most memorable day of your life.*



**HALE**  **VISION**  
**LASER & IMPLANT CENTER**

Presented by Hale Vision & The Advanced  
Vision Correction Foundation



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# The Why

## OUR PHILOSOPHY

The "Why" to have Laser Vision Correction surgery such as Lasik or PRK can be summarized in the following affirmations that we try to live by at Hale Vision:

***Restoring Vision.....Enhancing Lifestyles.....Empowering Futures!***

We believe this encapsulates the goal and effect of Vision Correction Surgery. While we would like to make this available to every single person, there are, unfortunately, medical and ocular situations that make it an unwise decision for some individuals. These conditions and situations contribute to the "Why Not" (to have surgery). In this edition we will concentrate on the "Why Not" and perhaps in the future we can delve further into the benefits and advantages of Vision Correction Surgery, the "Why".

# The Why Not

## STABILITY:

One of the most essential factors in a successful Lasik/PRK procedure is the stability of your refractive error, in other words, your glasses or contact lens prescription. The younger you are, the more likely it may be that your prescription could still be changing as your eyes may still be maturing. This is why the FDA chose to enroll patients 21 years old and older into the original laser studies. The problem with having an unstable prescription is that, over a period of years, your nearsightedness may slowly increase and eventually reach a level where the near for correction returns. Methods available to determine stability involve checking any old prescription records, current or old glasses or contact lens boxes that you may have available. The FDA's definition of stability is a change of no more 0.5 diopter in the past year. Lasik/PRK will still work if your prescription is unstable but the effect may not last the decades that it is intended to.

Don't be fooled by the "Lifetime Guarantee" offered by some corporate laser companies and feel that stability is not really important because you can always get another

treatment due to that policy. First of all, there are many restrictions in the typical "Lifetime Guarantee" that can easily render it useless, one of which is yearly eye exams at your cost to maintain eligibility. Most well known private Laser Vision practices offer a one year free retreatment policy as this is the ideal period in which to make adjustments. After one year it becomes progressively more difficult to repeat the procedure and recoveries can become lengthy.

*It is far wiser to wait until your prescription is stable to proceed with Lasik/PRK and decrease the odds of ever needing a retreatment to about 5%, than to count on a promise to keep undergoing progressively more complicated fixes from companies that have closed scores of offices around the country. In Milwaukee alone we have seen the departure of OmniVision, TLC Vision, Davis Duehr Dean and Clearly Lasik.*

## CONTACT LENS WEARERS:

The FDA developed definitive policies regarding contact lens wearing and laser eye surgery. The FDA mandated policy states that a daily soft lens wearer must discontinue wearing their lenses for at least 2 weeks prior to both the exam and the laser treatment. Toric soft lenses, Extended wear soft lenses and all forms of Rigid contact lenses (Gas Perm and Hard) must discontinue wearing their lenses at least 3 weeks prior to exam and laser treatment. This is to optimize the information gathered to create the laser treatment as contact lens wear often causes mild swelling and changes in the corneal shape which directly effect the treatment calculations. While it may seem a nice "convenient" to skip or reduce the time out of contact lenses, it is not convenient to undergo a sub-optimal treatment and run the risk of reduced quality of vision.

*If any provider shortens this time sequence you should be concerned about what other steps they are willing to overlook in their surgical preparation or the procedure itself.*

## YOUR LEVEL OF REFRACTIVE ERROR:

The severity of your pre-operative refractive error is important to understand as your post-operative course can be effected by your level of correction. Since nearsightedness is by far the most common condition treated by laser surgery we will concentrate on those levels.

Mild nearsightedness: 1-3 diopters  
Moderate nearsightedness: 3-6 diopters  
High nearsightedness: >6 diopters

As the level of your nearsightedness increases, the possibility that you could require a secondary treatment increases. Some laser providers, primarily national corporate entities, charge higher fees for patients with more severe degrees of treatment in an attempt to recoup the extra fees involved with secondary treatments. In reality, it is statistically true that the higher the pre-operative prescription is, the more likely a secondary will be. This is especially true in those with very high prescriptions. Just because an individual has a "high" prescription, it does not follow that they have a "difficult" eye to work on. Most eyes with high prescriptions are large and easily accessible to the surgeon, making certain aspects of the surgery easier. The higher prescription requires a longer laser treatment and this leads to greater variability in the treatment result, which leads to secondary treatments. Laser treatments however, even when longer, have excellent accuracy and the rates of secondary procedures, also known as retreatments, have been steadily shrinking over the years.

Similar conditions occur with patients with larger amounts of astigmatism, or warping of the cornea.

## MEDICAL & OCULAR CONDITIONS:

There are certain physical and medical conditions that can automatically disqualify you from laser eye surgery. This does not mean that there is nothing that can be done to correct your vision as there may be a non-laser solution to your condition, but the following issues prohibit laser eye surgery according to the FDA:

### SYSTEMIC MEDICAL CONDITIONS:

Rheumatoid Arthritis  
Lupus  
Dermatomyositis  
Poorly controlled Diabetes  
Some AutoImmune Disease  
ImmunoSuppressed or ImmunoCompromised Status

### MEDICATION USE:

Cordarone: Must be discontinued for at least 6 months prior to laser surgery  
Accutane: Must be discontinued for at least 6 months prior to laser surgery

### OCULAR CONDITIONS:

Keratoconus and other corneal shaping problems  
Un-controllable dry eye  
Significant cataract formation  
Advanced Glaucoma  
Any eye condition that causes poor correctable vision in one or both eyes, ie:  
    Lazy Eye  
    Previous Injuries with scarring

## Previous Infections with scarring Other Corneal Diseases

*Remember: Just because you have an issue listed above, it does not mean that it is impossible to have your vision corrected. It just means that laser vision correction may not be the appropriate modality. At Hale Vision we can help you select the proper technology, if any, for you to consider, even if laser is not available in your particular case.*

## ANATOMICAL CONSIDERATIONS:

An individual can have essentially a normal eye and still not be a good candidate for laser eye surgery. There are situations where the curvature of the cornea will not optically support the changes that the laser will be required to make. There are situations in which the laser flattening required to correct the vision will result in an unusually flat cornea which can have deleterious effects on the vision. The same can be said of corneas that are on the thin side of normal. Excessive thinning of the cornea can lead to instability and progressive changes in the visual acuity. These problems are more likely to occur in patients with higher degrees of nearsightedness where more treatment is needed causing a greater curvature and thickness change.

*Detection of some of these anatomical variations can require very sophisticated and advanced diagnostic equipment, so it is vital that you seek treatment from a provider that specializes in these surgeries in order to safeguard against proceeding with a procedure that may not be ideal for your particular situation. Hale Vision has always been an area leader in technology and is unmatched in their sophistication and knowledge in both the pre-operative analysis and surgical treatment of your specific condition.*

## PRESBYOPIA:

Presbyopia, or aging vision, relates to the reading difficulties that everyone experiences and is only indirectly related to your distance vision situation. The simplest way to think about it is that your distance vision is a result of the shape of your eye, its length, corneal curvature and lens power. The "normal" eye has all of these elements in the proper configuration and the vision will be excellent in the distance without any correction needed. (Distance focus is usually considered to be at infinity but is at least 20 feet away as measured in offices, and relates to the 20/20, etc measurements.) When that normal eye has to change that focus point to a reading distance it has to have some mechanism to accomplish that as it can't change the length or the corneal curvature. That leaves the lens inside the eye as the only variable factor. The lens does change shape under the influence of a muscular system and this allows the eye to

shift its focus from distance to near. This is a marvelous system but it weakens over the years. By the early to mid forties the lens will no longer flex enough to focus on the small print it could during the younger years. Reading glasses become necessary and become stronger as the years go by and the system continues to weaken. Nearsighted individuals are called that because with no correction on (glasses or contacts), their distance vision is blurred but their near vision remains fine. This is because their eyes (corneal curvature, eye length, lens power) result in a focus point that does not reach far enough out into the distance. When this curvature, etc. situation is corrected by glasses or contacts, they suddenly function for reading the same as the "normal" eye, and will require reading help when they reach the appropriate age. Laser eye surgery works by using the laser to change the corneal curvature thus putting the eye into better focus and making it like the natural "normal" eye.

Because of this dual function of the eye, patients over forty must realize that laser vision correction cannot modify the eye in such a way as to make it function as it did when it was able to read when you were younger. Attempts have been made to use laser correction to create a "bifocal" like effect but, so far, these have not been adequate enough to allow FDA approval. There is some promising ongoing research in this area as everyone wants to be able to see both in the distance and at near without correction. Currently, there are internal lens implants that have the ability to correct both near and distance vision simultaneously but this is typically done in conjunction with cataract surgery as it requires the removal of your internal, natural lens.

There are certain manipulations that can be done with laser eye surgery, primarily a process known as MONOVISION, that involves targeting one eye (mono) for distance vision, while assigning the other to better near focus by purposely leaving a pre-determined amount of nearsightedness untreated. This causes that "reading" eye to have better near focus but still blurred in the distance. Some of us can adapt to this somewhat un-natural situation while others cannot and prefer to have normal, bilateral distance vision and wear reading glasses when needed. If you have successfully used the monovision technique in your contact lenses, then we can try to duplicate those settings with laser treatments. If you have never tried monovision and wish to, the very best way is to try it in contact lenses as this closely simulates laser vision correction whereas glasses corrections do not. If you cannot wear contacts then an in-office trial in spectacles can be performed.

*At Hale Vision, we are constantly evaluating new technologies that can help our patients avoid the effects of presbyopia. Dr. Hale and some of the staff recently flew to Toronto, Canada to investigate an exciting new technique that may be available in the US in late 2013 or 2014. Watch for further updates on this and other advancements on our website, blog, and a new eBook planned for later this year.*

## RESTRICTIONS FOLLOWINGS LASER VISION SURGERY:

There are a number of restrictions you will need to observe following LASIK/PRK procedures. The ones that prove most annoying to most patients are:

- 1) Inability to rub eyes for 2 weeks, meaning no lid makeup for women, and
- 2) No swimming or hot tub use, also for a period of 2 weeks.

There are others but they seem to bother patients less:

- 3) Wearing a protective shield while sleeping for at least 1 week,
- 4) Avoiding serious eye contact, i.e., basketball injury, etc, for 1 month.

Patients also will be instructed to use medicated eye drops for 5-7 days, and artificial tears for several weeks or months.

While the PRK, surface laser correction, is performed without the creation of a corneal flap and therefore no flap to dislodge, it is still important not to traumatize the newly forming surface replacement cells. Therefore, we tend to follow a very similar post operative protective routine for both Lasik and PRK. While flap creation technology can effect the healing strength and speed of the corneal flap in Lasik, most surgeons have not changes their post operative restrictions from the early days of blade technology.

*As Hale Vision possesses the most advanced technology in Lasik flap creation in the Milwaukee area, you should be very careful if you are allowed to decrease the post operative protective routine any sooner than we advocate. While accidentally wrinkled flaps are possible no matter how careful you are, you should not be swayed by promises of unusually fast recovery as this is unproven.*

## LASER VISION CORRECTION TECHNOLOGY:

Patients have many questions concerning laser vision correction procedures and that's good. However, it seems that over the years we have received less queries about the technology used. That's good too, in as much as it means patients in general trust that their chosen surgeon is up to date and using the latest technology. At Hale Vision that is true, but unfortunately this is not true across the board. Patients today are usually looking for what is referred to as "All-Laser Lasik". This form of Lasik utilizes a femtosecond device to create the corneal flap instead of the blade devices used from the mid 1990's to the mid 2000's. Hale Vision has performed All-Laser Lasik since 2005 when it was the first practice in Southeastern Wisconsin to use the Intralase laser. A specific branded version of this procedure is called "iLasik". Dr. Hale was the first certified iLasik surgeon in the Milwaukee area. While more and more providers have switched to this technology over the years, there are still a significant number of cases done in Milwaukee using the older, bladed technology. You should not take for granted that your surgeon is providing All-Laser Lasik and you should verify directly that this is the case because they may not volunteer the information.

A second consideration is the re-shaping laser treatment itself. This comes in various formats also. Primarily three: 1) Conventional laser treatments - a glasses information



level treatment, 2) Optimized treatments - a glasses treatment with an added factor derived from an age chart, and 3) Wavefront Guided laser treatments - known as "Custom" treatments which are derived from high resolution scans of the patients eye which are fed to the treatment laser to provide the highest quality treatment currently available. The true "iLasik" procedure is a combination of the laser flap creation followed by a "Custom" treatment. With the exception of unusual circumstances where this type is not possible, "iLasik" is all that we perform at Hale Vision.

In an attempt to further insure your surgical safety, it is important to use the latest in diagnostic technology. For example, the Pentacam, is an advanced instrument for the analysis of your corneal shape, thickness, etc., in a three dimensional manner. The Pentacam was considered the most advanced device of its kind when Hale Vision first introduced it into the Milwaukee area in 2007. Recently, in early 2013, Hale Vision added the LenStar to its diagnostic armamentarium. This device is considered state-of-the-art for corneal curvature measurements and IntraOcular Lens assessment.

## PLANNING YOUR CALENDAR:

As you get more serious about having laser vision correction you will start to think about the timing necessary to go through the entire process. While it would be wonderful to be able to condense this all into one day, that just isn't possible yet. First, if you're a contact lens wearer you will need to discontinue wearing as described in the section "Contact Lens Wearers". Instead, however, of being without contacts for 2-3 weeks before you can even find out if you are a candidate or not, we suggest you use the "consultation" visit to get started. For the consultation, you may wear your contacts into the office or, even better, skip putting them in that morning after you awake. We will do a series of technical measurements and discuss how you use your eyes and how a laser procedure, or even a different technology, could work for your lifestyle. If after that, vision correction makes sense to you, then you can count on following a timeline similar to the one below, beginning with discontinuing contact lens wearing as the starting point:

Stop Daily Soft Lenses:

Full Exam 2 weeks later



*Procedure should be performed within the next 30 days after the exam is completed.*

Stop Extended & Rigid Lenses:

Full Exam 3 weeks later



*Procedure should be performed within the next 30 days after the exam is completed.*

NOTE: If you are planning for your Flex Plan for your procedure, then the process will be somewhat different. You will need to notify your plan that you intend to use funds for the laser procedure which means you should undergo a consultation in order to feel confident in putting the funds away. However, as you may be having your procedure months after the consultation, there is no reason to start the complete exam countdown sequence until you approach your planned procedure date. In this case, we work this in reverse, meaning you pick your surgical date based on your flex plan fund distribution and we can select the time to remove the contacts and plan the complete exam from there.

Flex Plan Consult

Start Contact Removal Plan



NOTE: If you are not currently wearing contact lenses of any type, then it is not necessary to follow the plan above. You may still choose to attempt consultation, full exam and surgery

THANKS FOR READING:



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