LASIK & Refractive Surgery

Eye Institute

LASIK | PRK | ICL | RLE | Monovision

For over 30 years, The Eye Institute of Utah has been giving people vision for life...

The Eye Institute of Utah was the first medical facility to offer LASIK vision correction in the state of Utah. Since that time, vision correction has evolved even further so that patients now have an array of choices for their procedure, depending on their personal eye health and vision goals. Vision correction is not a step to be taken lightly as our sight is one of the most valuable senses that help us enjoy life.

That is why the dedicated surgeons at The Eye Institute of Utah are not only conservative in their approach, but they also offer a wide range of surgical solutions such as LASIK, PRK, Visian ICL™ surgery, and refractive lens exchange to help you reduce, and often eliminate, your dependency on eyeglasses and contact lenses. Today, the most commonly performed vision correction procedure, LASIK, is almost a household term for those wanting to reduce or eliminate their dependency on contacts or glasses and the results have been fantastic.

However, for many people, LASIK is not always the best option for vision correction. We offer a variety of alternatives for patients who have high prescriptions, thin corneas, dry eye and even presbyopia. If you have been told in the past that you were not a good candidate for LASIK, we may have a procedure that is perfect for you!

Benefits of Vision Correction at The Eye Institute Of Utah

- Free, no-obligation consultation (Free refractive consults available for qualified individuals under the age of 60.)
- 24-months, no-interest financing available (with approved credit through CareCredit)
- One-year post-operative care included with surgery. Co-managed or shared care options are available if you already have an eye doctor outside of The Eye Institute of Utah

• Life in Focus Warranty ensures free enhancements for life for patients that receive LASIK or PRK who are eligible for a qualifying enhancement¹

• Latest, state-of-the-art technology used to provide all-laser LASIK and top quality vision correction surgery

• Great alternative surgical options for those who don't qualify for LASIK due to thin corneas, dry eye, high prescriptions and presbyopia

Understanding the Basics: Why You Need Vision Correction

What is a refraction and refractive error? First and foremost, we should give you some background on how your eye works and define "refractions" and "refractive errors" as they are commonly used terms in the eye care field. Your refractive error is the measurement or prescription (just like your glasses or contacts) that tells us how to correct your vision. In order to calculate this, we perform a number of tests that measure how light and images pass through your eye. We measure how light refracts through your eye and focuses on the back surface of your eye (the retina) to form a picture that your brain processes. It's hard to imagine that this is how you actually SEE!

One of the best ways to think of how your eye works is to think of the inner workings of a camera. The front surface or clear window of the eye (the cornea) has certain magnification power just like a camera lens, but it is not always shaped perfectly like a camera lens. When the cornea is not perfectly shaped, the images cannot be clearly projected onto your retina. These are the imperfections or refractive errors that will be described below. Once images pass through the cornea, a second interior lens, which is flexible when we are young, also helps to focus the image on the retina. So there are two lenses that can possibly affect your refraction. When we test your vision, we measure the focusing strengths of both lenses and how they work together so we can determine what is needed to get your best possible vision.



Nearsighted



Farsighted



Astigmatism

Myopia (nearsightedness)

Myopia, or nearsightedness, is an eye condition that occurs when the cornea is too steep or the total length of the eye is too long. This means the light that enters the eye focuses in front of the retina causing distant objects to appear blurry. This is the most common type of refractive error.

Hyperopia (farsightedness)

Hyperopia, or farsightedness, is a condition where near and intermediate objects are blurry. In farsightedness, the eye is too short, which causes the light to focus past the retina. Those who have high amounts of hyperopia are very dependent on glasses or contacts; however, many people who are slightly hyperopic may not realize problems until they are in their 40's.

Astigmatism

Astigmatism is a common eye condition caused by an irregularly shaped cornea. This refractive error can occur with any of the above conditions, as well. In a perfect world, the cornea should be shaped like a basketball, but with astigmatism, it is shaped more like a football resulting in blurred vision or double images at all distances.

Presbyopia (a need for reading glasses)

Presbyopia occurs when the interior lens inside your eye loses its ability to change focusing power simply because of age. As we age, this lens becomes less flexible.

On average, between the ages of 40-60, most people gradually lose the ability to see up close when performing activities such as reading a newspaper, book, or menu. You will notice that presbyopia develops progressively so your reading or near vision will continue to worsen and become blurry.

Many people nickname presbyopia the "long-arm" disease because they develop the need to hold reading materials further away.

Eventually, this condition may also affect your intermediate vision (working at computers), as well. Presbyopic patients may still be a candidate for vision correction surgery but you need to discuss the risks and benefits with your surgeon.

Vision Correction Options

LASIK

LASIK, or Laser-Assisted In-Situ Keratomileusis, is one of the most advanced and precise vision correction procedures available today, improving, or in most cases, fully restoring vision. LASIK is an effective treatment used to correct mild to severe cases of nearsightedness, farsightedness, and astigmatism. All LASIK procedures at The Eye Institute of Utah are performed with lasers. Many other LASIK providers still use blades for certain steps of the procedure. You can be assured that at The Eye Institute of Utah your LASIK procedure will be completely bladeless.

LASIK is a two-step process:

– First, your surgeon will utilize the most advanced and fastest femtosecond laser available in the United States, the WaveLight[®] FS200 laser, to create a flap on the surface of your cornea. The wonderful benefit is that this flap

acts as a natural bandage when the procedure is finished.

 After the flap is created, a second laser, the WaveLight[®] EX500 Excimer, is used to create your refractive prescription on the cornea, giving you your best possible vision. While each laser treatment is very fast,



lasting only 30-60 seconds, you should expect to spend a total of 10-15 minutes in the operating room.

Ideal LASIK Candidates:

- People between the ages of 18 and 50, with a history of stable vision
- Mild to moderate levels of myopia, hyperopia, or astigmatism
- Healthy eyes with no history of disease
- Normal corneal topography (corneal thickness and treatable shape)

PRK

PRK, or Photo-Refractive Keratectomy, is often times best for patients with thin corneas. The procedure is very similar to that of LASIK, but no flap is created. During PRK, the surface cells of the cornea, called the epithelium, are removed using a dilute alcohol solution. The surgeon then uses the WaveLight[®] EX500 Excimer Laser to reshape the cornea



to the desired correction. A laser treatment usually lasts an average of 30 seconds depending on the amount of correction necessary. The soft contact lens is placed on the eye to act as a "bandage" to promote comfort and healing of the surface cells. This will be removed by the doctor within 5-7 days after the surgery.

Ideal PRK Candidates:

- People between the ages of 18 and 50, with a history of stable vision
- Mild to moderate myopia, hyperopia, or astigmatism
- People who don't qualify for LASIK due to thin corneas or irregular topography

at The Eye Institute Of Utah

Visian ICL[™]

If your eye doctor says you are not a good candidate for LASIK or PRK because your corneas are too thin, you have dry eyes, or your prescription is too high, then the Visian ICL[™] may be perfect for you!

The Visian ICL[™] is also available for people who are looking for other alternatives to LASIK. The Visian ICL[™] is an implantable contact/collamer lens. It's different from LASIK because it doesn't involve using a laser to reshape the cornea permanently. One of the benefits of ICL surgery is that it is reversible if necessary, although an ICL explant surgery would be required. During ICL surgery, the surgeon makes a tiny incision in the eye and inserts a micro-thin contact lens in front of the eye's natural lens.



Ideal Visian ICL[™] Candidates:

- People between the ages of 18 and 50, with a history of stable vision
- Patients with high levels of myopia and less than 3 diopters of astigmatism
- Patients with dry eye or thin corneas
- People wanting a reversible option for surgical vision correction

Refractive Lens Exchange

If you are over the age of 45 and interested in correcting your vision, then refractive lens exchange (RLE) surgery may be a great option for you! As we age, everyone develops presbyopia, making it difficult to see objects up close. Refractive lens exchange replaces the eye's interior/natural lens with an artificial lens to improve the

overall prescription, range, and focus of vision. It is basically cataract surgery performed for the purpose of correcting vision when no cataract is present.

Here at The Eye Institute of Utah, we have premium intraocular lenses (IOLs) including multifocal and toric lenses that can reduce or help eliminate your dependency on glasses or contacts. The multifocal lenses aim to correct vision at all ranges (near, intermediate, and distance). The toric lens is an astigmatism-correcting intraocular lens that corrects vision at one distance.



You will want to discuss your lifestyle needs and concerns with your doctor when deciding which lens is right for you.

Ideal RLE Candidates:

- People with presbyopia, stable vision, and myopia, hyperopia, or astigmatism
- People over the age of 45

Monovision

If you are over the age of 45 and are presbyopic, you could elect to have monovision with most of the vision correction procedures that we have just reviewed. Monovision is where we correct the distance vision in one eye, and near vision in the other eye.

In order to determine if you are a candidate for monovision, we will have you simulate the correction using contacts for a certain period of time. This is to ensure that your brain can process the images together and that you are comfortable with this "blended" vision. Many people already have monovision with their contacts – these patients are the best candidates.

Technology

One of the reasons The Eye Institute of Utah is one of the most respected and well-established vision care facilities in the Intermountain West is owed to the fact that we use the most state-of-the-art technology available. The lasers and medical devices listed below demonstrate the types of technology we have on hand to give patients the most accurate and precise vision correction treatment possible.

Our technology allows you to enjoy significantly improved vision without the need for glasses or contacts. The use of lasers instead of manual incisions using microkeratome blades allows for more accurate incisions with reduced likelihood of complications or visual problems after surgery.

We pride ourselves on always using the best and most proven technology available.

 WaveLight[®] Refractive Suite – Fastest refractive surgery platform in the U.S., integrates the use of the FS200 and EX500 lasers, a swiveling patient bed, and advanced data transferring technology to perform LASIK and PRK surgery

- WaveLight[®] FS200 Femtosecond Laser The fastest femtosecond laser in the world is used to create the flap during LASIK
- WaveLight[®] EX500 Excimer Laser The highest speed excimer laser is used to reshape the cornea and reduce irregularities in the eye during all-laser LASIK and PRK surgeries
- LenSx[®] Femtosecond Laser One of the most commonly used femtosecond lasers is used to create laser-assisted incisions to correct astigmatism during RLE, ICL, or cataract surgery

• Advanced Technology IOLs including multifocal and toric IOLs – Intraocular lenses used in RLE and cataract surgery to correct astigmatism and vision at near, intermediate, or far distances



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