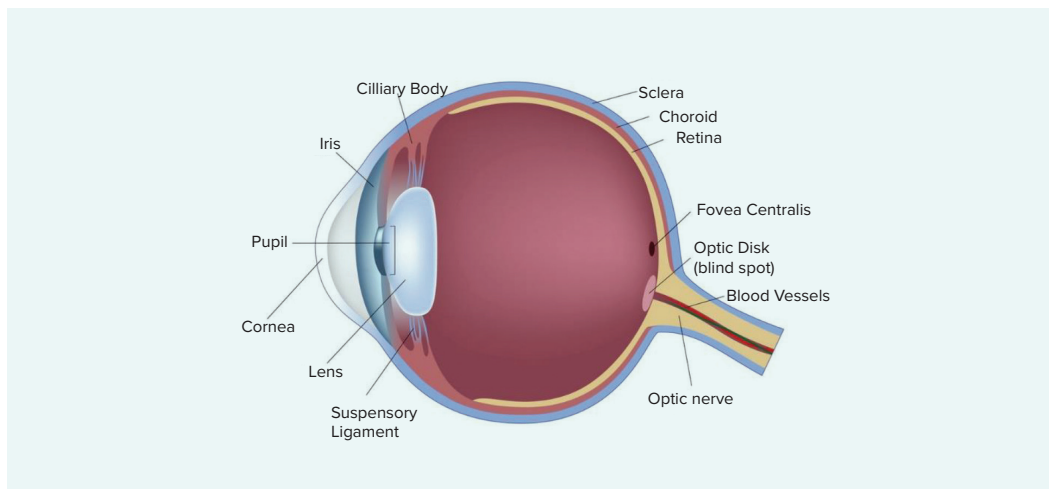


PATIENT GUIDE

iLasik Information





Understanding the eye.

Prior to embarking with laser refractive surgery it is important to understand some of the workings of the eye and the function of the components which will be involved. Laser refractive surgery concentrates on the very front of the eye reshaping the cornea to improve vision by reducing refractive error.

The cornea: The clear window at the front of the eye providing most of the eyes focusing power. Light rays from objects pass through the cornea and are partially focused.

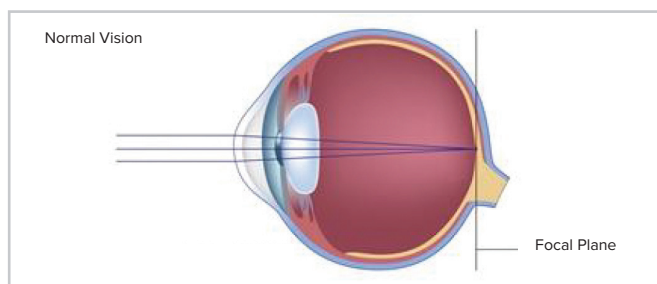
The lens: The structure behind the pupil that accounts for some of the remaining focusing power. The lens works with the cornea to focus light rays onto the retina which sends signals to the brain through the optic nerve.

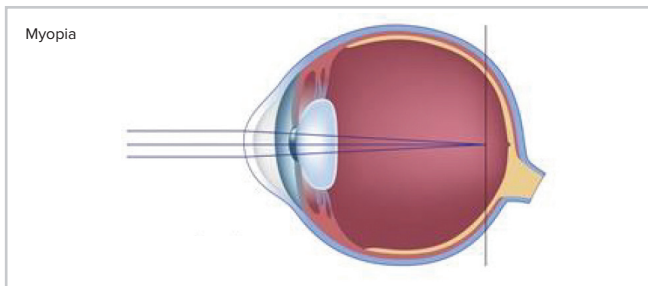
In a normal eye the cornea and lens are able to allow parallel rays of light to pass through and focus upon the retina without effort. There is no refractive error in this state requiring correction and the eye is considered to be emmetropic.

UNDERSTANDING REFRACTIVE ERRORS

Blurred vision may be caused by different refractive errors such as:

- Myopia (nearsighted)
- Hyperopia (farsighted)
- Presbyopia (inability to focus on near objects)
- Astigmatism (irregular eye shape)

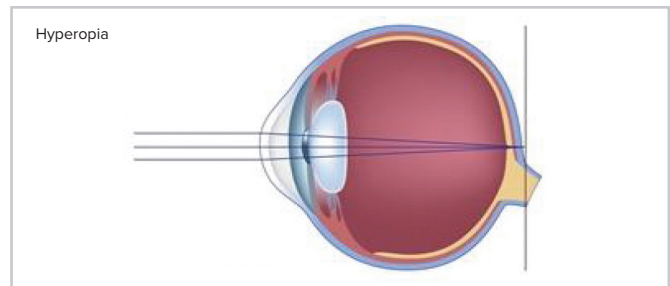




Myopia (nearsighted):

The corneal surface is too steeply curved so images focus in front of the retina causing blurred vision.

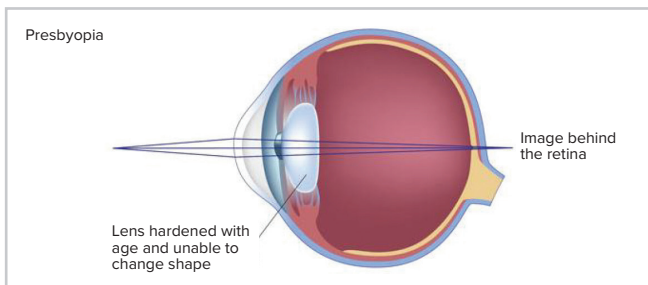
- Distance objects appear blurry
- Near objects appear clear



Hyperopia (farsighted):

The corneal surface is too flat so images focus behind the retina causing blurred vision.

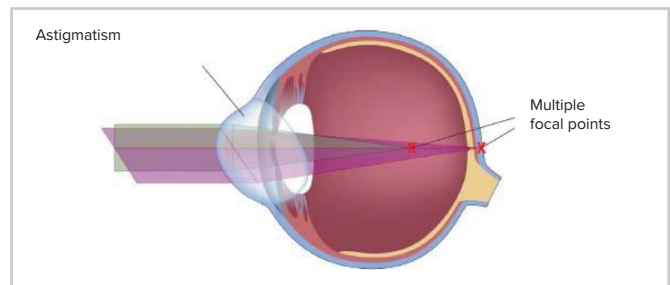
- Distance objects appear blurry
- Near objects appear blurry



Presbyopic:

A natural weakening of the elasticity of the internal lens often developing in mid 40s which reduces the focusing ability of the eye.

- Distance vision unchanged
- Near vision becomes increasingly blurry



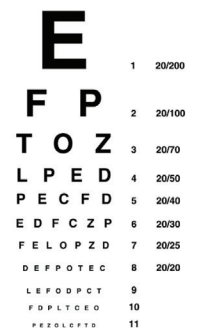
Astigmatism:

The corneal shape is oval rather than spherical so the light rays focus on multiple points on the retina causing blurred vision.

- Distance vision is blurred
- Commonly associated with myopia and hyperopia

MEASURING VISION

Visual acuity is measured according to the ability to see different sized letters on a Snellen eye chart at a distance of 20 feet. Someone with perfect vision can clearly see a particular line of letters at 20 feet without glasses and is considered to have 20/20 vision. Someone with worse vision, 20/30 for example, would need to stand 20 feet from an object to see it as someone with perfect vision would see it at 30 feet. And yes there are people with better than perfect vision such as 20/15. This reflects their ability to see objects at a distance of 20 feet that the person with perfect vision of 20/20 would have to move to the 15 foot mark to see.



DETERMINING CANDIDACY

The first step in determining if laser refractive surgery is right for you would generally be performed by your optometrist. Your optometrist will assess the history of your eyes and perform many of the necessary preoperative tests required to establish the best treatment for you. Once your optometrist has confirmed your candidacy then a free consultation with the doctors at VICTORIA EYE is the next step.

FREE CONSULTATION

During your free consultation our technicians and doctors will thoroughly examine your eyes using Zeiss Ocular Coherence Tomography (OCT), topography, pachymetry, and Visx iDesign aberrometry (Wavescan). They will measure your glasses, pupil size, ocular dominance, refraction, visual acuities, intraocular pressures and examine all of the ocular anatomy. Based on your exam, if you are a candidate for the procedure, you will then meet with our surgical counsellor who will go over the surgery details, consent form, prices of surgery and even help you schedule the procedure if you feel ready.

CONTACT LENSES

Contact lenses temporarily change the natural shape of your cornea. In order to obtain accurate measurements of your eye it is important to remove your contact lenses prior to the surgery appointment.

- **Soft contact lenses** should be removed 7 days prior to your procedure at VICTORIA EYE.
 - **Toric contact lenses** should be removed 2 weeks prior to your procedure at VICTORIA EYE.
 - **Hard contact lenses** should be removed 4 weeks, plus an additional 1 week for every decade worn, prior to your procedure at VICTORIA EYE.
-

THE PROCEDURES

VICTORIA EYE offers two laser refractive procedures which drastically reduce the need for glasses and contact lenses giving patients more freedom in their everyday lives:

1) Custom Wavefront Guided Intralase LASIK

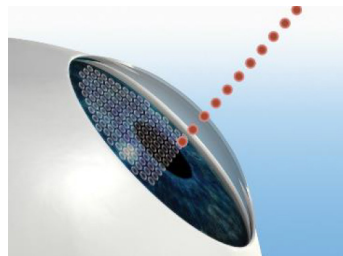
The initial step in a LASIK procedure involves creating a corneal flap. VICTORIA EYE offers blade free, all laser flap creation using the Intralase femtosecond laser. The Intralase is the newest and safest method for creating a corneal flap.

Unlike the older method microkeratome ("blade LASIK"), all the parameters of an Intralase flap can be preprogrammed. This allows the surgeon to customize a patient's flap thickness, diameter, and edge profile, in order to optimize each patient's visual outcome, while reducing patient risk.

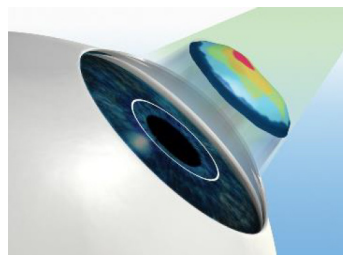
Once the flap is created, an excimer laser is used to reshape the cornea. VICTORIA EYE offers only state of the art iDesign Wavefront Guided excimer laser treatments. Traditional standard (conventional) excimer platforms are not used. The flap is then positioned back in place and begins to heal immediately.

For most patients who undergo Intralase LASIK they are able to return to normal activities such as driving and work within 24-48 hours.

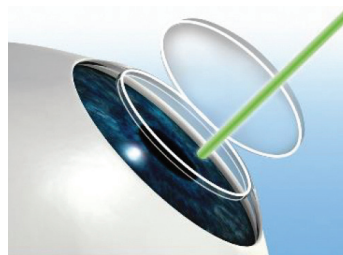
Intralase Procedure



1) The Intralase Femtosecond laser allows a thin, precise flap to be created using a laser only. No surgical blades are required. The Intralase will create the corneal flap in approximately 15-20 seconds.



2) The Visx Star S4 equipped with Iris Registration technology allows the custom laser treatment to be perfectly aligned according to the individual's specific wavefront mapping.



3) Once aligned via Iris Registration, the Visx Star S4's excimer laser applies the custom treatment beneath the flap.

THE PROCEDURES CONT.

2.) Photorefractive Keratectomy (PRK)

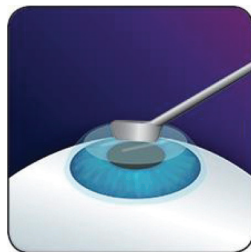
No flap is involved in this procedure, instead the custom laser treatment is applied directly to the corneal surface. PRK is a great option for patients with thinner corneas, higher prescriptions or corneal scarring. During PRK the surgeon will gently remove the first layer of the cornea (epithelium) by using a diluted alcohol solution and surgical sponge. Once these cells have been removed, the vision will be corrected by reshaping the cornea using the Visx Star S4 laser with Iris Registration. A bandage contact lens (soft contact with no power) will then be placed on the eye for comfort as the epithelium regenerates. This typically takes 4 days at which time the bandage contact lens is removed.

It is advised that patients who undergo PRK take 1 week off of work and driving. Most patients are able to resume their normal activities after 1 week although individual healing may vary this.

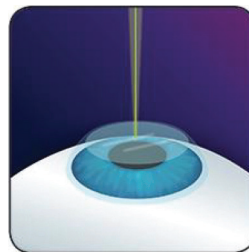
PRK Procedure



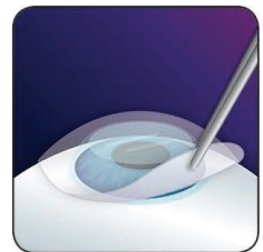
1) Alongside numbing drops, an alcohol solution is placed on the eye to help soften the cornea



2) The surgeon then smooths the surface of the cornea with a special surgical instrument



3) An excimer laser is then used to precisely reshape the curvature of the cornea's surface.



4) A bandage-like soft contact lens is then placed on the cornea to help protect the eye as it heals.

OPTICAL ABERRATIONS (ERRORS) OF THE EYE

Lower order optical aberrations: These are the simplest refractive errors of the eye including nearsightedness (myopia), farsightedness (hyperopia) and regular astigmatism. Overall, these account for approximately 90% of vision problems and may be corrected by glasses, contact lenses or laser refractive surgery. These are the only aberrations which standard or conventional laser platforms can treat.

Higher order optical aberrations: These are more complex refractive errors of the eye. There are many different types of higher order aberrations. An aberrometer is used to measure the amount of each type of higher order aberration in an eye, known as the wavefront of the eye. Every eye's higher order aberration make up, or wavefront, is unique. These aberrations contribute to vision problems such as halos, glare, doubling, and poor contrast sensitivity. Only laser platforms which have true wavefront guided laser treatments, such as the Visx Star S4 IR iDesign platform at VICTORIA EYE, can address all of these aberrations.

THE TECHNOLOGY

The advanced Technology of iLASIK used at VICTORIA EYE will provide patients with the highest level of safety and accuracy to achieve the best possible outcomes.

The iDesign Wavefront Aberrometer: This advanced diagnostic device maps your eye's higher and lower order optical aberrations. Every eye's map, or Wavescan, is unique much like a fingerprint. This diagnostic information allows the laser treatment delivered to be completely customized. The Wavescan data is automatically loaded directly into the Visx Star S4 IR excimer laser computer in preparation for the Custom iDesign treatment. There is no manual entry of this critical data.

Visx Star S4 with Iris Registration: This is the latest generation of excimer laser used to precisely reshape the cornea according to the Wavescan data collected. All of the unique data measured for your eyes would be useless if the laser treatment is not precisely placed in the same location the measurements were taken. The Visx Star S4 IR is able to precisely match the position of the custom laser treatment with the Wavescan map data using Iris Registration technology. Iris Registration allows the Wavescan map data to be linked and oriented with the detail of the iris pattern. Unlike pupil tracking, which can only detect side to side and up and down eye movements, iris tracking is able to track rotational movements (known as cyclorotation). This rotational alignment is critically important to ensure astigmatism and higher order aberration treatments are effective.

THE SURGICAL EXPERIENCE

- Intralase LASIK and PRK can be performed very quickly and generally the patient's experience is extremely positive.
 - Some patients may elect to take a mild sedative prior to the procedure but this is not mandatory as topical anesthetic eye drops are used to ensure comfort during the surgery.
 - Patients can expect to be in the office for 2 to 3 hours although typically only in the operating room for 15 to 30 minutes. The laser treatment itself lasts only a few seconds to 90 seconds per eye.
 - Immediately following the procedure patients will likely notice an improvement in vision without their glasses or contacts.
 - For the remainder of the surgery day it is best to avoid any activity that may strain the eyes such as TV or computer work and rest is recommended.
 - LASIK patients may experience a burning, stinging or gritty sensation and some discomfort for the first 6 – 8 hours.
 - PRK patients may experience burning, stinging or gritty sensation for a much longer time (often several days). Pain relief will be prescribed to help manage any discomfort.
 - Routine follow ups are required and the first appointment is commonly scheduled for the day after surgery.
 - Drop regimen and some activity restrictions will be implemented to ensure proper healing.
 - Visual changes and improvements may be noticed for the next few months.
 - LASIK patient's vision is considered stable at 3 months post-surgery.
 - PRK patient's vision is considered stable at 6 months post-surgery.
 - An escort is required to pick up every patient.
-

FREQUENTLY ASKED QUESTIONS

What does LASIK stand for? Laser assisted in situ keratomileusis.

What does PRK Stand for? Photorefractive keratectomy.

What is Microkeratome? Beginning in the early 1990's, this was the first instrument used to create a LASIK flap and is still used today. Also referred to as "blade LASIK", the microkeratome uses an oscillating blade to create the corneal flap. Flap thickness can be as much as 200 microns. Moreover, the thickness can vary within individual flaps up to 100 microns. In comparison, Intralase femtosecond flap thickness can be selected by the surgeon with a variability of less than a few microns throughout the entire flap.

What is a conventional treatment? A conventional treatment does not utilize the wavefront mapping (like the iDesign) to guide the laser. This allows correction of only the lower order aberrations such as myopia, hyperopia and astigmatism and does not customize the procedure to each individual eye's anatomy.

Is there an age limit? Although there is not a definitive age range the following considerations are taken:

- For the minimum age the patient must have a stable prescription for their glasses and typically this isn't seen until very late in the teen years or even in the early 20s.
- For the maximum age the patient in their sixties, or beyond, may benefit more from a lens related procedure similar to cataract surgery.

What makes someone a non-candidate? Potential contraindications for laser refractive surgery include corneal irregularities, dry eyes, cataracts, glaucoma, unstable glasses prescriptions or prescriptions that are outside of the scope of the laser's treatment. In addition, laser surgery may not be advised for people taking certain medications.

Women who are pregnant or nursing may be advised not to proceed with surgery until they have finished nursing. If you are pregnant, nursing or considering pregnancy within 6 months please advise the VICTORIA EYE staff.

Are there risks involved? No surgical procedure is risk free. Fortunately, laser refractive surgery is one of the safest procedures available. Following a comprehensive ocular exam, the doctors at VICTORIA EYE will determine which procedure is safest for you.

Will I need glasses after? For most patients the need for glasses and contact lenses is eliminated after refractive surgery. However patients in their 40's and beyond may still require the use of reading glasses following surgery.

How long do the results last? Beyond the initial healing period (typically several months), the results are very stable. However, during the healing period there is a chance some of the original prescription may return (referred to as regression), in which case a second treatment, known as an enhancement, may be recommended.

Is laser surgery covered by BC's MSP or other 3rd party Insurance? Refractive surgery is not covered under MSP however some extended benefit policies may cover a portion of the costs. Each provider offers different coverage so it is best to contact your insurance company directly to find out.

At VICTORIA EYE we are dedicated to providing patients with the highest level of patient care combined with the most advanced technology.

Our highly trained staff and doctors are happy to help answer any questions or concerns you may have regarding refractive surgery and the above information.

Please contact us directly at 250-598-5665 ext. 4
or via email at laser@victoriaeye.com

Don't let poor eyesight stand in the way of
you and life's most meaningful moments.

Now is the time to live life in sharper focus.

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