



# PATIENT GUIDE

Refractive Surgery





## Located in beautiful Victoria, British Columbia, Canada

Our multiple physicians and staff offer our patients the highest quality of ocular care. The state-of-the-art VICTORIA EYE facility is equipped with a diagnostic area that houses the latest technology to assist our physicians in diagnosing, monitoring, and treating multiple eye conditions. In addition, the state-of-the-art surgical suite at VICTORIA EYE offers surgery patients premium care and the latest in ocular surgery advancements.

The VICTORIA EYE Surgical Suite is the first private ocular surgery centre on Vancouver Island with the latest femtosecond laser technology. Refractive lens surgery offers our patients the most advanced equipment and allows us to bring world class surgical eye care to Victoria, British Columbia.

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 following information.



## Dr. Darren Behn MsC, MD, FRCSC

Dr. Behn completed a Bachelor of Science in Physiology and a Master of Science in the Department of Ophthalmology and Neurology/Neurosurgery at McGill University, Montreal, QC. He then returned to the province and completed his Doctorate of Medicine (M.D.) from the University of British Columbia, Vancouver, BC. After finishing his medical degree, Dr. Behn had the opportunity to explore Canada's East Coast. He completed his specialty training in ophthalmology at Dalhousie University, Halifax, NS and in the same year became a Fellow of the Royal College of Physicians and Surgeons of Canada.

Dr. Behn has performed thousands of eye surgeries focusing on Refractive Surgery, Cataract and Glaucoma care. Dr. Behn also enjoys travelling and experiencing different cultures and has volunteered his surgical and medical expertise in the developing world. On one of his trips, he travelled to Bolivia as part of a group and performed over one hundred sight-saving operations.

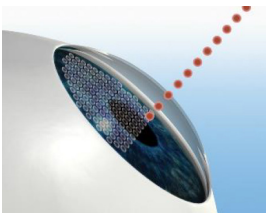
Dr. Behn's connection and commitment to Vancouver Island is long and spans generations. He was born and raised in Nanaimo, BC. His grandfather, Walter Behn, was a passionate politician and championed healthcare in Port Alberni, BC.

### 1 Custom Wavefront Guided Intralase LASIK

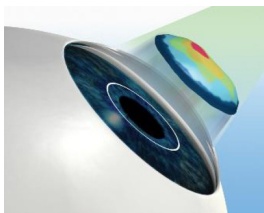
The initial step in a LASIK procedure involves creating a corneal flap. VICTORIA EYE offers blade free, all laser flap creation using the Intralase femtosecond laser. The Intralase is the newest and safest method for creating a corneal flap.

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.

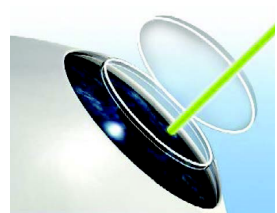
Once the flap is created, an excimer laser is used to reshape the cornea. VICTORIA EYE offers only state of the art iDesign Wavefront Guided excimer laser treatments. Traditional standard (conventional) excimer platforms are not used. The flap is then positioned back in place and begins to heal immediately.



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.



## 2 Photorefractive Keratectomy (PRK)

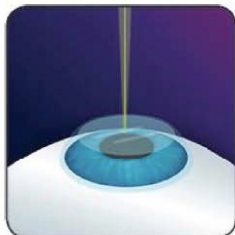
No flap is involved in this procedure, instead the custom laser treatment is applied directly to the corneal surface. PRK is a great option for patients with thinner corneas, higher prescriptions or corneal scarring. During PRK the surgeon will gently remove the first layer of the cornea (epithelium) 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.



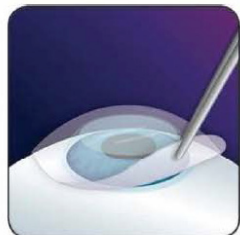
① Alongside numbing drops, an alcohol solution is placed on the eye to help soften the cornea



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.



**VICTORIA EYE** is excited to offer our laser assisted refractive lens surgery in the **VICTORIA EYE** surgical suite.

The laser equips our surgeons with the ability to create perfectly sized and shaped incisions, to break up and soften the lens which allows for an agile surgery. This means that your lens can be removed with more ease and you will experience a gentle procedure.

Laser assisted refractive lens surgery is a customized and precise method of surgery. The accuracy of the incisions help the surgeon place the artificial IOL in an optimal position. The accuracy of the incisions and lens placement can result in the best outcome of vision after the surgery.

With refractive lens surgery, the eye's natural lens is fragmented and softened by the laser.

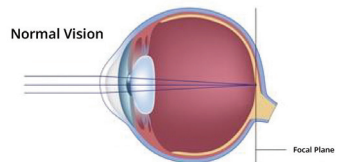
This approach can reduce the energy entering the eye up to 90%. The smaller amount of energy required to enter the eye results in a faster healing time.

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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.

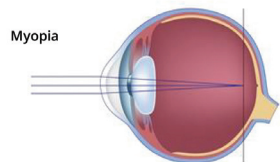
Refractive Lens Surgery is designed to reduce dependency on glasses by replacing the eye's natural lens. Blurred vision may be caused by different refractive errors such as:



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### Myopia (nearsighted):

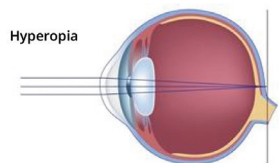
The corneal surface is too steeply curved so images focus in front of the retina causing blurred vision.



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### Hyperopia (farsighted):

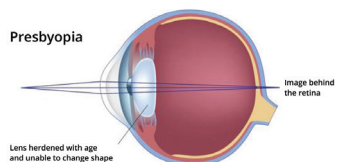
The corneal surface is too flat so images focus behind the retina causing blurred vision.



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### Presbyopia:

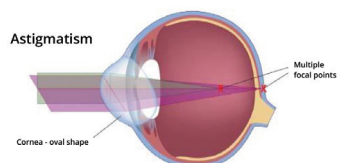
A natural weakening of the elasticity of the internal lens often developing in mid 40s which reduces the focusing ability of the eye.



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### Astigmatism:

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





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.





## Your optometrist plays a crucial role in both the pre-operative and post-operative LASIK process.

As your primary eye care provider, they are able to supply the doctors at VICTORIA EYE with valuable information regarding your eye history. This information helps the doctors determine your candidacy for the procedure.

Your optometrist will assess the history of your eyes and perform many of the necessary pre-operative 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.

Post-operatively your optometrist will provide VICTORIA EYE with information regarding your healing and visual outcomes. Following your 1 year of post-operative exams, routine exams every 1-2 years with your optometrist should be continued.



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.



ENHANCE YOUR LIFE WITH



**VICTORIAEYE**  
LASIK • SPECIALISTS • SURGERY



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.

Schedule your free consultation to get more detailed  
information on our life-changing procedures.



Call or go online now 1-250-598-5665 [victoriaeye.com](https://victoriaeye.com)