Understanding the eye.

Prior to embarking with cataract surgery it is important to understand some of the workings of the eye and the function of the components which are involved. Cataract surgery concentrates on the internal lens of the eye.

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.
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

**Presbyopia:**
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.

CATARACTS

A cataract is the hardening or clouding of the eye’s natural lens which prevents light rays from passing through the lens appropriately. This may cause blurred vision, distortion and glare. Cataract surgery replaces the cloudy natural lens of the eye with a clear artificial lens, known as an intraocular lens (IOL).

Factors

If you have been told you have a cataract there is no need to worry. Cataract formation is part of the normal aging process. There is no medical therapy such as eye drops or diets available to prevent or treat cataracts. Cataract surgery has one of the highest success rates in medicine. There is no way to prevent cataracts but they can be caused by:

- Aging & family history
- Injury
- Certain medications
- Ocular inflammation
- Diabetes
- Alcohol use
- Smoking
- Radiation exposure
- Prolonged UV light exposure

Signs and Symptoms

Cataracts start out mild but progressively block more light to the retina as they become denser and the lens becomes cloudier. Some of the symptoms a cataract can cause are:

- Cloudy or blurred vision
- Halos and glare from lights
- Difficulty seeing at night
- Frequent changes in glasses prescription

Healthy Eye

Eye with Cataract
DETERMINING CANDIDACY
Your optometrist plays a significant role in your eye care and will perform an initial assessment including the history of your eyes and much of the necessary preoperative testing. Once your optometrist has completed the initial assessment then a free consultation with the doctors at VICTORIA EYE is your next step to visual rehabilitation.

When the blurring of vision caused by the cataract formation begins to interfere with a patient’s quality of life then the decision to proceed to cataract surgery is made, with the expectation that the surgery will improve the patient’s vision.

FREE CONSULTATION
During a free consultation our technicians will examine your eyes using Zeiss Ocular Coherence Tomography (OCT), topography, auto refractor and IOL Master. In addition they will discuss lens and surgery options before scheduling an exam with the surgeon.

THE TECHNOLOGY
The technology used at VICTORIA EYE allows patients to achieve the best possible outcomes, while maximizing procedure safety.

IOL Master: The IOL Master is a scanning device that is used to determine the power of an intraocular lens implant prior to cataract surgery. The Zeiss IOL Master system evaluates the length of the eye, surface curvature and anterior chamber depth with great accuracy. With this information it then calculates the intraocular lens power. The information obtained from the IOL Master will allow your surgeon to do more calculations and evaluate your specific case when choosing an intraocular lens implant.

Corneal Topography: A recommended diagnostic test used to optimize the results of your cataract surgery. It is a non-invasive medical imaging technique for mapping the surface curvature of your eye’s cornea. Since the cornea is normally responsible for about 70% of the eye’s refractive power, its topography is of critical importance in determining the quality of vision and corneal health.

The three-dimensional map provided by this test is therefore a valuable aid to your surgeon and assists in the planning of cataract surgery and intraocular lens (IOL) implantation as well as in planning refractive surgery such as LASIK, and evaluating results. The test is carried out in seconds and is completely painless.
**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.

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**THE PROCEDURES**

VICTORIA EYE offers the traditional method of cataract surgery with a basic monofocal lens at no extra cost to the patient as well as private cataract surgery in our state-of-the-art facility with additional options. We are proud to be the first and only facility on Vancouver Island to offer both the option of traditional cataract surgery as well as femtosecond refractive laser assisted cataract surgery:

1) **Traditional Cataract Surgery**

   In traditional cataract surgery, a scalpel is used to create incisions in the eye by hand. The surgeon then uses a high-frequency ultrasound device to break up the cloudy lens into small pieces, which are removed from the eye with suction.

   After all remnants of the cloudy lens have been removed from your eye, the surgeon will insert a clear intraocular lens.

2) **Femtosecond Refractive Laser Assisted Cataract Surgery**

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

   Refractive laser assisted cataract surgery is a customized and precise method of cataract 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 laser assisted cataract surgery, the cataract is fragmented and softened by the laser. This approach reduces the energy entering the eye by over 90%. The smaller amount of energy required to enter the eye results in a faster healing time.

   Once the incisions are made and the cataract is fragmented by the laser, the surgeon will use an instrument to remove the cataract from your eye. After all remnants of the cloudy lens have been removed, the surgeon will insert a clear intraocular lens, positioning it securely behind the iris and pupil, in the same location your natural lens occupied.

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INTRAOCULAR LENS IMPLANTS (IOLS):
An intraocular lens is inserted in place of the natural lens of the eye that is removed during surgery. There are many different lens options available to patients. VICTORIA EYE offers a variety of lenses to best fit your visual needs. All lenses offered at VICTORIA EYE are soft foldable lenses which require a minimal incision for insertion.

SELECTING A LENS

**Monofocal IOL:**
Designed to offer patients the highest quality vision at one focal point. This means that after surgery you may require glasses for either distance, near or astigmatism.

**Monofocal Toric IOL:**
This lens provides the highest quality of vision at one focal point and has the ability to correct for astigmatism. Many patients with astigmatism require this additional correction in order to see images clearly. You may require glasses for either near or distance after surgery.

**Extended Range of Vision IOL:**
Designed to provide the ability to focus at near, intermediate and distant focal points decreasing your dependency on glasses for daily activities with less glare and halos than previous multifocal lenses. Allows for continuous vision rather than distinct focal points.

**Extended Range of Vision Toric IOL:**
Corrects for astigmatism. For patients who have an astigmatism and want the benefits of the Symfony lens.
THE SURGICAL EXPERIENCE

• Performed in an outpatient setting with no needles and usually without the need for stitches.
• Highly successful procedure.
• Patients can expect to be in our care for about 2 hours although typically only in the operating room for 15 to 30 minutes.
• Patients may elect to take a mild sedative prior to the procedure. Topical anesthetic eye drops and gel are used during surgery for comfort.
• Immediately following the procedure patients will likely notice an improvement in vision without their glasses or contacts.
• Immediately following the procedure patients may experience a burning, stinging or gritty sensation which can be helped with the use of lubricant eye drops.
• Vision may be blurry the next day and will improve throughout the day.
• You may experience sensitivity to light following your cataract surgery so sunglasses can be worn to reduce the symptoms. This sensitivity will dissipate over time.
• 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.
• An escort is required to pick up every patient.

LIMITATIONS AFTER CATARACT SURGERY

The following activities must be avoided for 1 week following cataract surgery in order to allow proper healing:

No water in your eye
Avoid getting water in your eye. You may have a bath or sponge bath but avoid showers.

No gardening
Keep your hands clean to avoid accidentally getting debris into your eye. Avoid being on your hands and knees for long periods of time. Limit your involvement to light watering, deadheading or small plant trimming.

No heavy lifting
Avoid lifting objects greater than 10 lbs.

No strenuous activities
You can ride a stationary bike or take a walk on a flat surface but AVOID inclines.

No bending
With the exception of putting on your shoes avoid bending your head below your waist level.
FREQUENTLY ASKED QUESTIONS

What is the difference between traditional cataract and laser assisted surgery?
Traditional cataract removal uses a handheld scalpel to create incisions in the eye. Another handheld instrument then uses ultrasonic power to break up the clouded cataract lens.

Laser cataract surgery offers a more refined vision restoration experience by introducing a laser to allow for a safer, less invasive procedure with precision that can’t be mimicked by hand alone.

Using our state-of-the-art laser technology, the surgeon is able to make more precise, customized, and accurate incisions compared with a procedure performed by hand alone. The laser is also used to gently soften the lens, allowing it to be removed and replaced with a new artificial intraocular [IOL] lens. This less invasive, laser assisted procedure promotes faster healing.

What if I can’t afford private cataract surgery?
If cataract surgery is necessary for you, it is completely covered under MSP with no extra cost to patients. This option is the traditional method of cataract surgery with a monofocal lens and is performed at the Royal Jubilee Hospital.

Are both eyes done on the same day?
No. The two surgeries are usually spaced 2-6 weeks apart to allow for healing time.

What is an Intraocular Lens Implant?
An intraocular lens (IOL) implant is an artificial lens implanted by the surgeon to replace your natural lens. Your natural lens may be affected by cataracts, refractive error or health issues and replacement requires an intraocular lens implant.

What is astigmatism?
There are two components to astigmatism. An astigmatism occurs when the cornea and/or lens of your eye are not completely smooth or round. As light rays pass through a cornea or lens that is not completely smooth or round, the light rays are prevented from meeting at a common focus. When this occurs images are distorted or stretched. This can often be corrected by prescription glasses. We can correct astigmatism using our laser during Refractive laser assisted cataract surgery [ReLACS] and by implanting a Toric lens at the time of your surgery.

Are all lenses at VICTORIA EYE soft foldable lenses?
Yes.

Do you offer payment plans?
Full payment is required at least one week prior to surgery. For patients undergoing surgery to both eyes the option of paying for one lens at a time is available provided the payments are received at least one
Will my extended health cover the procedure or the cost of the lens?
Coverage with each individual’s extended health plan can vary so we encourage you to check with your provider. VICTORIA EYE will provide a detailed invoice for your records and submission if applicable.

Do I need a driver for the day of my surgery?
To ensure your safety all patients are required to have a driver/escort with them after surgery. You will be permitted to take a taxi IF escorted by an adult. If you do not have an escort your surgery may be postponed.

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
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.

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