

# LENS REPLACEMENT SURGERY for Cataract disease

## What is Cataract disease?

- A cataract is when the natural lens in the eye clouds. Light passes through the pupil, the dark area/ hole in the center of the iris (colored part of the eye), to the lens and because cataracts block this light, they can cause visual decline.
- A cataract is not a film over the eye, cannot spread from one eye to the other, is not caused by overusing the eyes and is not a cause of irreversible blindness.
- Common symptoms of cataract disease include cloudy or blurry vision, photosensitivity, such as headlights that seem too bright at night, glare from lamps or the sun, or a halo or haze around lights. Poor night vision, especially when driving, frequent changes in eyeglasses or contacts, fading colors, or double / multiple vision are also common symptoms.

## What causes Cataracts?

- Cataracts are most commonly due to aging but may also occur due to trauma or radiation exposure, be present from birth, or occur following eye surgery for other problems. Risk factors include diabetes, smoking tobacco, prolonged exposure to sunlight and alcohol. Prevention includes wearing sunglasses and not smoking.
- There is no current medical therapy such as eye drops or diets available to prevent or treat cataracts.

## Why and How are Cataracts removed?

- The surgery is a day procedure at qathet River General Hospital and is done under topical anesthetic (freezing drops). A very small incision is made in the eye and an ultrasound probe is used to break up the natural lens. The fragments are then vacuumed out of the eye. The lens will be replaced with an artificial lens, called an intra-ocular lens implant (IOL). This takes roughly 15 minutes.

## **LENS REPLACEMENT SURGERY for Cataract disease**

- You will be required to take medicated eye drops before and after surgery. Patients may require reading glasses after surgery, but these glasses are not usually that strong.

### **IMPORTANT NOTES:**

#### **Do you wear contact lenses?**

The contact lenses can change the shape of your eye and affect the accuracy of your measurements and in turn the vision you will have after surgery. For **soft contact** lenses, at least 1 week before measurements. For **hard contact** lenses at least 3 weeks prior to measurements.

#### **Have you had previous eye surgery?**

LASIK / LASEK/ PRK and RK manipulate the cornea and can affect your measurements for surgery. You will require topography which is not covered by MSP.

#### **Do you have dry eyes?**

If you suffer from dry eye, please use lubricating drops for at minimum 2 weeks 4 times daily prior to your measurement appointment. This will improve your surgical outcome.

## LENS REPLACEMENT SURGERY for Cataract disease

### We offer 2 types of pre-Operative measurements.

Your eyes must be measured so that your doctor can choose the appropriate lens (IOL) regardless of whether you choose a basic lens or a specialty lens. The power of your IOL must be accurate to achieve the optimal visual result. This power varies with everyone and is different for each eye.

**A-scan measurements are mandatory and are fully covered by MSP.** It involves taking 3 pictures that measure the biometry of the eye including the thickness of the cataract. This information is put into a formula to estimate the required IOL to improve your vision.

**The second type, Corneal Topography is not covered by MSP.** This uses 1000-point technology to map out the surface of the eye and provide Dr. Botha the information he needs to better plan your surgery and fine tune the IOL selection. ***Required for specialty IOLs. Cost varies.***

***These measurements are mandatory if you are interested in a Toric/ multifocal lens or have had previous Lasik / refractive surgery.***

### **Intraocular Lenses (IOLS)**

A precisely engineered artificial lens, an IOL, is implanted into the eye at the time of surgery, to take the place of the clouded lens. It is permanently placed in the eye. In this way, it cannot fall out, does not require cleaning, and does not change the appearance of the eye. It produces no sensation and cannot be felt. Once in place and healed, it will not move and because it is lightweight and flexible it will not be affected by physical activity or by rubbing the eye. You can resume all physical activity without restrictions once fully healed.

# LENS REPLACEMENT SURGERY for Cataract disease

**Dr. Botha works with FOUR TYPES OF IOL'S:**

## **1. SINGLE FOCUS INTRA OCCULAR LENS**

This lens is covered by MSP/ government insurance and has no private cost to yourself. It is a high-quality lens and is designed to correct vision at a single point of focus (distance or near). If you select this lens, Dr. Botha recommends correction for distance vision.

### **Please note:**

Reading glasses WILL be needed for arm's length and closer (this includes the food on your dinner plate). This lens is a single focus lens that does NOT correct for astigmatism.

Your intermediate vision may not be as clear as you would like but will be considered functional.

## **2. TORIC (astigmatism correcting) IOL:**

These lenses are single focus lenses for **Distance vision**. You will still require reading glasses for near vision. Its sole purpose is to give clarity in the distance and correct for astigmatism.

Astigmatism is a refractive error caused by the shape of the eye. Astigmatism causes lack of sharpness, blurred vision, glares and halos. It affects all ranges of vision and without correcting you would require spectacles for near, intermediate, and far post cataract surgery. A TORIC intraocular lens during surgery can be used to correct this. It must be precisely positioned and aligned inside the eye for maximum benefit. A small percentage of patients may require additional minor surgery to optimize positioning, but this is rare. The Toric lens will correct for up to **80%** of the astigmatism and again only correct for distance, therefore, reading glasses will still be required to achieve full range of vision. Depending on your level of astigmatism, even with the Toric lens we cannot guarantee full freedom from glasses. To ensure a successful outcome you

## LENS REPLACEMENT SURGERY for Cataract disease

must have advanced/ topography measurements done prior. This lens is not covered by MSP and has a cost involved.

### 3. EXTENDED DEPTH OF VISION IOL'S:

These lenses provide high quality vision for Distance vision with **improved intermediate vision** (Dash of car/pedals of bicycle, food on your plate). This improves depth perception and daily activities. You will still need glasses for near vision.

- They also come in a TORIC option for those who have astigmatism.
- You must have advanced/ topography measurements done prior. This lens is not covered by MSP and has a cost involved.

### 4. Multifocal IOL:

These Lenses give high quality vision **for near, intermediate, and far**. These lenses are for those who absolutely do not wish to wear reading glasses post-surgery. They do give freedom from spectacles but come with some compromises such as glare and halos during night driving.

- They also come in a TORIC option for those who have astigmatism.
- You must have advanced/ topography measurements done prior. This lens is not covered by MSP and has a cost involved.

# LENS REPLACEMENT SURGERY for Cataract disease

## Types of vision

### **DISTANCE VISION**

Dr. Botha recommends correcting for **distance vision**. This is the most usable and recommended vision target. This vision aims for clarity 20 feet and farther with vision progressively decreasing from 20 feet and closer. This gives you the ability to see road signs, peoples' faces, a wall clock, landscape etc.....

If chosen, you will need spectacles for everything arm's length and in.

### **INTERMEDIATE VISION**

Intermediate considered from arm's length and out until 20 feet (in between reading and distance vision)

### **NEAR VISION**

For those who are mobility bound or whose whole world is close range. If chosen, distance spectacles would be needed for everything beyond arm's length.

***Please note: Astigmatism and other ocular disorders will affect your post-operative visual acuity.***

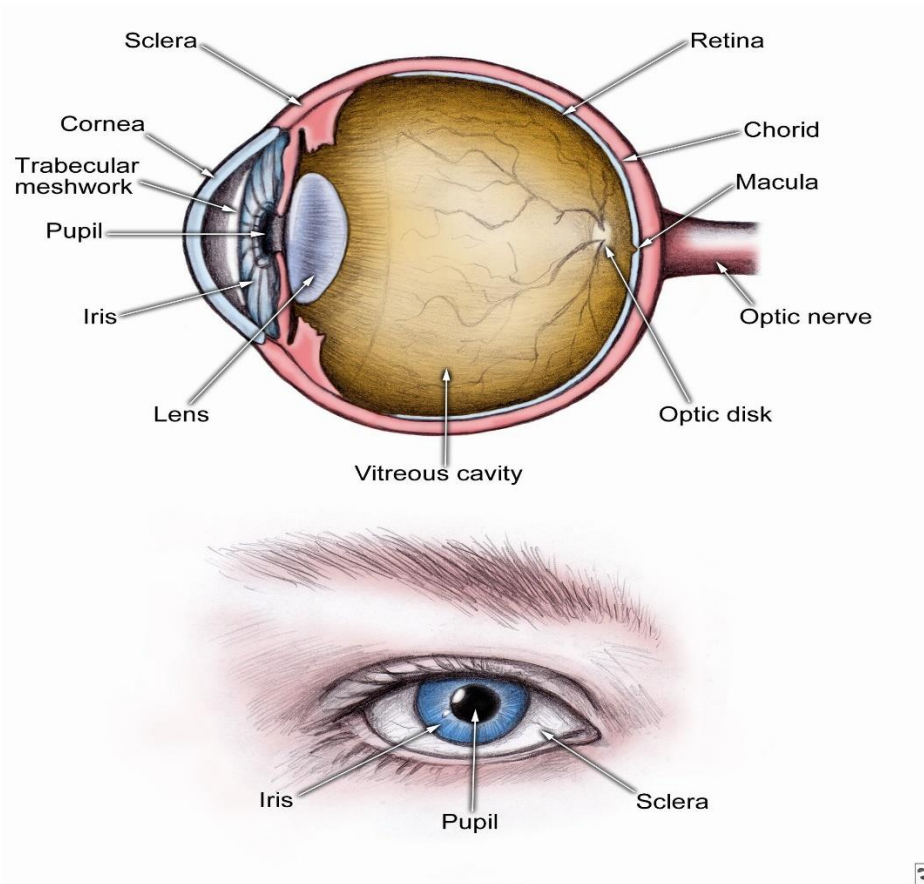
### **Monovision**

**One eye is fit to fully correct your distance vision, while the other eye is fit to correct your near vision.**

monovision works well for those who have experienced it previously. The downside of monovision is that some people find it compromises the clarity of their distance vision too much, making distant objects appear slightly

# LENS REPLACEMENT SURGERY for Cataract disease

blurred. Others find monovision does not provide adequate near vision to give them the freedom from reading glasses they were hoping for.



## The Process Simplified

Once Dr. Botha has indicated you have cataracts and you have signed the cataract surgery consent forms, the process begins. Our team receives the consent forms and completes measurements. They will then add you to the qathet General Hospital waitlist for cataract surgery. The hospital OR booking clerk will then call you with a booking date 1 month prior to your surgery. The waitlist is roughly 9 months long from the date of your measurements.

# LENS REPLACEMENT SURGERY for Cataract disease

## Basic Eye Anatomy

- Our eyes work a lot like a camera. When we look at an object, light rays reflect off that object and enter our eyes through the cornea. After light passes through the pupil, the dark opening in the center of the eye, the lens, located behind the iris, focuses light rays on the retina where the information is sent to the brain. This lens is called the crystalline lens and is what is replaced during cataract surgery.
- The lens must be clear and have the correct power to focus images at a distance. The natural lens is flexible as a child and can adjust to focus on near objects (called accommodation). This ability to accommodate is slowly lost with age as the lens stiffens, beginning in the early 40's. This loss of accommodation is why reading glasses have become necessary.
- A refractive error means that the eye does not focus light sharply on the retina and the image that is seen is blurred. Refractive errors include **Myopia** (nearsightedness – too much focusing power, so there is more blurring of objects at distance), **Hyperopia** (farsightedness – not enough power, so nearer objects are blurrier), and **Astigmatism** (blurring of near and distant objects due to irregular curvature in the cornea at the front of the eye, the lens or both).

**Cataract surgery is different for all patients and is medically necessary for patients at different stages in their life. Please ask questions if you have concerns or feel you are not ready to pursue surgery!**

---

**Dr. Louis M. Botha Inc.**  
M.B.Ch.B., FCS. (Ophth) SA, FRCSC  
Ophthalmic Surgeon

Suite 102 - 4675 Marine Ave,  
Powell River, BC V8A 2L2  
Phone: (604) 485 - 8455 Fax: (604) 485-8415  
[www.preyesurgeon.com](http://www.preyesurgeon.com)