## LASER CATARACT SURGERY







## LASER CATARACT SURGERY AT THE **BOCHNER EYE** INSTITUTE

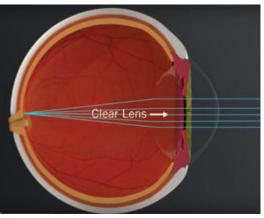


If your vision is getting cloudy, if you are losing your colour perception, if you are having trouble reading or with your night vision, you may be experiencing the early stages of cataracts. The natural lens inside the eye is normally transparent in our youth. As we age, our clear lenses inevitably become cloudy. A cataract is the clouding of this natural lens. Cataracts are a normal part of the aging process. There is no medical treatment to reverse or prevent the development

of cataracts. Once they form, the only way to see clearly again is to have them removed and replaced with an artificial lens, known as an intraocular lens.

In general, when you are bothered by your vision during your daily activities, it is time to think about cataract surgery. Cataracts will typically not damage the eye while growing, so there is no need to rush into the surgery.

You can decide when the time is right for you. Although it is surgery, the risks with modern cataract surgery are very low. You should not be anxious or afraid of the procedure. Laser cataract surgery has improved the precision and outcomes. Exciting advances in intraocular lenses now provide patients with a variety of options as to how they can choose to see after cataract surgery.



NATURAL CLEAR LENS

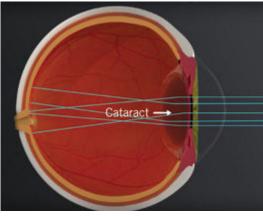
For over 95 years, the doctors at Bochner Eye Institute hove been committed to providing the most advanced, effective, and proven technology and surgical techniques to help people see clearly and naturally. This tradition continues as they became the first centre in Canada to perform laser cataract surgery with the Catalys™ Precision Laser System in February of 2012.

Traditional cataract surgery is considered to be one of the safest and most successful procedures performed in medicine today, even though many of the steps are performed manually with a blade or needle. With the technological breakthrough of the Catalys<sup>™</sup> femtosecond laser, many of the more challenging steps can be automated, adding unprecedented levels of precision and accuracy to the entire cataract procedure, while potentially making cataract surgery even safer and improving visual outcomes.

Using the laser's 3D imaging, which is more accurate than an MRI, our surgeons plan and customize the entire procedure to each patient's unique optical characteristics. This customization is especially important when patients elect to hove a premium lens implant and astigmatism correction to increase the likelihood of seeing well without glasses following surgery.



### WHAT IS A CATARACT?



NATURAL LENS WITH CATARACT

## THE LASER CATARACT PROCEDURE

At the Bochner Eye Institute, all patients can choose between traditional cataract surgery or laser cataract surgery with a Premium IOL and astigmatism control or reduction.

Laser cataract surgery is performed at the Bochner Eye Institute, the first government approved independent facility in Ontario devoted exclusively to eye surgery. You should expect to be in the surgical suite for approximately 20 minutes.

In addition to using the Catalys femtosecond laser to perform many of the surgical steps traditionally performed by hand, we use the best and latest innovations in cataract surgery, such as "drops only" anesthesia (no injections), sutureless microincisions and foldable lens implants.



To begin, your surgeon corrects any astigmatism with the laser by creating precise incisions in the cornea. This has been found to be more accurate than using a hand-held blade with the Traditional technique.

The laser then creates a perfectly round opening (capsulorhexis) in the thin capsular membrane that surrounds the cataract, which studies have shown to be 99% more accurate than manual capsulorhexi. This contributes to better centration of the intraocular lens which can result in better quality of vision without glasses.

In order to gently remove the cataract, the laser is used to fragment or break the cataract into microscopic pieces. This allows your surgeon to use 96% less ultrasound energy removing the cataract, which can lead to faster visual recovery and less trauma to the delicate structures in the eye.

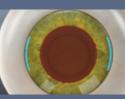
### THE SIX STEPS OF LASER CATARACT SURGERY

#### **STEP ONE**

Precise mapping of the cornea, iris and lens.

#### STEP TWO

Precise laser astigmatism incisions.



Perfectly round opening in the cataract.

**STEP THREE** 



#### STEP FOUR

Laser fragmentation (softening) of the lens.

### STEP FIVE

Gentle removal of the softened lens



STEP SIX

Insertion and placement of the IOL.



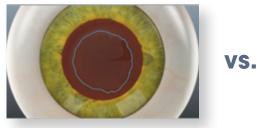
### TRADITIONAL VS. LASER CATARACT SURGERY

#### **ASTIGMATISM CORRECTION**





**CENTRAL OPENING IN THE CATARACT** 



Manual Capsulorhexis



Laser Capsulorhexis

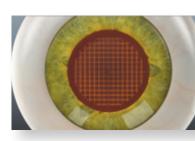
The laser technique allows for a more precise correction of astigmatism with corneal incisions made at an exact depth, location, and length. Correction of astigmatism allows for a greater chance of clear vision without glasses.

Unlike with a manual technique, the laser performs a perfectly centered and perfectly round central opening on the surface of the cataract. It is through this opening that the cataract is removed and the implant inserted. The fact that the laser performs this step in less than 2 seconds eliminates any mishap that could occur if the patient were to move during the procedure.

#### FRAGMENTATION OF THE CATARACT



Manual Lens Division



Laser Lens Division

The laser is able to soften the cataract by dividing the lens into very small pieces prior to entering the eye with instruments. This allows for a more gentle removal of the cataract leading to less trauma to the delicate internal structures of the eye. This may be the most significant advantage the laser offers.

## **INTRAOCULAR LENSES FOR CATARACT**

Intraocular lenses (IOLs) are flexible lenses placed in the eye to replace natural lenses affected by cataracts. IOLs are available to provide patients with a wide range of visual clarity and focusing capability. Our aim is to optimize your postoperative vision by selecting the most suitable lens for your eye and lifestyle.

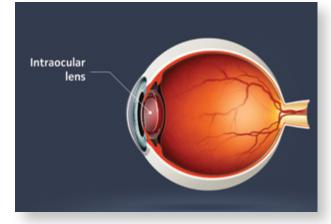
Standard Monofocal IOLs, covered by OHIP, often necessitate glasses for both near and distant vision.

The Advanced Aspheric Monofocal IOLs offer enhanced vision across a broader range, in addition to reducing visual aberrations to improve the quality of vision during the day and night. Advanced Toric Monofocal IOLs are used to manage higher degrees of astigmatism.



For those seeking freedom from glasses, specialized Multifocal, Extended-Depth of Focus (EDOF), and Light-Adjustable IOLs can provide a full range of vision for near, intermediate, and distant objects. These IOLs can typically allow one to see a phone, computer, and drive without optical aids.

Your choice of IOL and whether to opt for laser or traditional cataract surgery are crucial decisions that will impact your lifelong vision. Understanding these options is essential to achieving your desired visual outcome. Your surgeon will assess your eye tests, lifestyle, and vision objectives to recommend the most suitable option for you.



# **CHOOSING YOUR LENS**



Monofocal IOL with Astigmatism



Monofocal IOL with Astigmatism Corrected



Premium IOL with Broad Range of Vision

How do you decide which lens will work best for you? Here are some guidelines we use.

If you want the advanced technique of Laser Cataract Surgery, your eye surgeon will use the laser to reduce your astigmatism. You will need to decide whether you prefer best distance vision in both eyes, best reading vision in both eyes, or monovision, which is one eye for distance and one for near (Diamond Package). This can be achieved with an aspheric implant or a new extended-depth of focus implant that provides a broader range of vision (Diamond Package). If you desire the full range of vision in each eye (distance, intermediate, and near), this can be achieved with a multifocal implant (Diamond Plus Package) or Light Adjustable Lens.

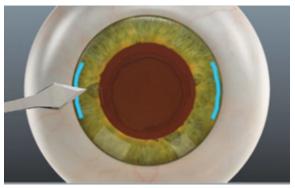
If you choose Traditional Cataract Surgery, you need to decide whether you want distance vision without glasses and use reading glasses, reading vision without glasses and use distance glasses, or monovision (Silver Package for low astigmatism level, or Platinum Package for higher astigmatism level). A new extended-depth-of-focus lens is available that provides a broader range of vision. If you want the full range of vision in each eye without the use of glasses, a multifocal lens is available (Gold Package).

Almost everyone has some amount of astigmatism. Astigmatism is present when the cornea, or outer window of the eye, is more curved in one direction than the other, like the back of a spoon. Astigmatism blurs your vision at all distances and is often present along with nearsightedness or farsightedness.

At Bochner Eye Institute, we use either the Catalys laser, a "Toric" IOL with built-in astigmatism correction, or specially designed blades to produce corneal relaxing incisions. For patients with astigmatism, our laser provides the most precise and predictable astigmatism treatment.



After Cataract Surgery Without **Astigmatism Corrected** 

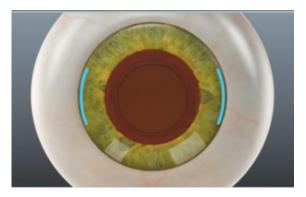


Astigmatism Corrected With A Blade

# CORRECTING **ASTIGMATISM**



#### After Cataract Surgery With **Astigmatism Corrected**



Astigmatism Corrected With Laser

## WHAT TO EXPECT AFTER YOUR LASER CATARACT SURGERY

You will be released soon after the procedure to go home and relax. Your eye will not be patched and you are likely to see improvement in your vision in a few days. Complete visual recovery varies from patient to patient, but most patients return to their regular activities within a day or two. If cataracts are present in both eyes, the second procedure may be scheduled within days or weeks of the first eye.

Serious complications are extremely rare, but because it is surgery, there are potential risks involved. The most serious risk is that of an intraocular infection. Fortunately,

infections are rare at the Bochner Eve Institute, with an incidence of less than 1 in 10,000. There is a risk of swelling of the back of the eye referred to as macular edema. This risk is 1 in 100 procedures and typically is resolved with drops. There is a risk that the entire lens cannot be removed in one operation and that further surgery is required.

Our counselors at Bochner Eye Institute will provide you with additional information about the risks associated with cataract



surgery and answer any of the questions you may have. We appreciate your trust and confidence in choosing Bochner Eye Institute and consider it an honour and a privilege to be entrusted with your eye care.

#### FULL RANGE OF VISION PACKAGE

Freedom from glasses for most of your daily activities.



**Diamond Plus or** Gold Packages **Diamond.** Platinum or Silver Packages



The doctors at Bochner Eye Institute believe laser cataract surgery is the most significant advancement st 50 years. Yet we also Bt everyone can afford dvantage of its benefits. a wide variety of vision n packages. The most important decision is if you want to have laser or traditional cataract surgery. The second most important decision is the type of lens implant you would like. Your surgeon will make a recommendation based on the results of your eye examination and the unique characteristics of your eye. Your primary vision choices are simulated here, along with their associated vision restoration package(s).

#### **CUSTOM VISION PACKAGE**

Good distance vision but need alasses for near and immediate.



#### **BASIC VISION PACKAGE**

Requires alasses all the time if you have astigmatism.



# WHAT OUR PATIENTS ARE SAYING.





Dr. Stein operated on my mom's cataracts. He suggested a multi-focal implants for my mom. Now my mom is enjoying an improved vision day by day without eyeglasses! Thanks to Dr. Stein and his team for the professional advice and services we received!

### \*\*\*\*

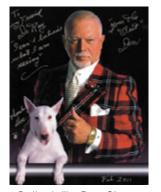
#### Staff 5 O Punctuality 5 O Helpfulness 5 V Knowledge 5

Dr Ray Stein was highly recommended to me prior to my surgery. He performed cataract surgery on both my eyes Dec 16 & 17, 2019. The recommendation was truly warranted. I am thoroughly pleased with the results and the entire experience. The staff at the Bochner Eye Institute were all very helpful and caring. Dr Stein was reassuring throughout the procedure and answered any guestions my husband and I had both before and after. He made sure I would be amble to reach him during the holidays if needed. My eyes have healed beautifully with no problems whatsoever. My sight was vastly improved immediately and I have not needed my glasses since 2 days after the surgery. Dr Stein is an excellent ophthalmologist and I have already been recommending the procedure and Dr Stein to everyone I talk to. My husband is seriously considering having Dr Stein perform corrective eye surgery for him, now that I have had such a positive experience. Thank you Dr Stein and your staff!!

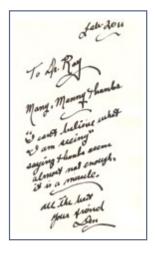




I had refractive lens exchange surgery in order to help reduce serious dizziness issues caused, in part, by wearing corrective glasses. My experience, from start to finish, was excellent. All my upfront questions and concerns were clearly answered and I was given a detailed step by step outline of the process. My vision was 20/20 within two days and I no longer need any corrective glasses and my dizziness issues have significantly improved. I would definitely recommend Dr. Stein and the Bochner Eye Institute.



Patients like Don Cherry have great things to say about their surgery at the Bochner.



#### \*\*\*\* 5 months ago

Dr. Gilani at Bochner Eye Institute performed my laser cataract surgery and the results were absolutely remarkable. The day after surgery, I was amazed at how clear, colourful and bright everything looked. Having this surgery has positively impacted every aspect of my life! I selected laser surgery over the more traditional method because of the improved precision, potential clearer vision and quicker recovery time. Dr. Gilani's credentials and experience are exceptional - everything you could ever want in an eye surgeon. Deciding to have laser cataract surgery by Dr. Gilani is one of the best decisions I ever made. What are you waiting for?



#### \*\*\*\*\*

Dr. Nancy Tucker is an amazing surgeon. I had an advanced cataract removed by her last week and was really impressed by her professionalism and kindness. She made me feel like I was in excellent hands the moment I met her. She does not rush through your questions, explains everything and makes you feel confident that the operation will go smoothly. I have heard wonderful things about the Bochner Institute but now I would not consider going anywhere else for my second cataract removal. Words cannot express how impressed I was by her!!! Thank you!

#### ★★★★★ 2 years ago

Dr Gilani was absolutely fantastic! Her empathetic and friendly nature made me feel safe, secure and relaxed during the entire process. She, along with the entire team at Bochner, were always available to answer questions and were always very welcoming and knowledgeable. The actual procedure was quick, painless, and easy! I would recommend anyone to trust their eyes with Dr Gilani and the Bochner team. Thanks for giving me the miracle of 20/20 vision!



#### Staff 5 O Punctuality 5 O Helpfulness 5 Knowledge 5

### DR. RAYMOND STEIN, MD, FRCSC



Medical Director, Bochner Eye Institute, Professor of Ophthalmology and Vision Sciences, University of Toronto

" It is a privilege to work at the Bochner Eye Institute, founded by my grandfather, Dr. Maxwell Bochner, in 1929. I think he would be both amazed and proud of the advanced technology and surgical techniques we use, and more importantly, gratified with our continued devotion and commitment to patient care that he started over 90 years ago."

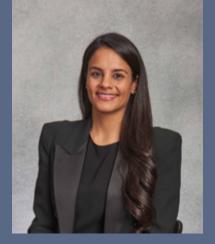
Dr. Raymond Stein serves as Medical Director of the Bochner Eye Institute and was the first surgeon in Canada to perform Laser Cataract Surgery with the Catalys Precision Laser. He has performed over 100,000 cataract and laser surgical procedures, published numerous books, scientific papers, and magazine articles on the latest techniques of vision correction.

Dr. Stein was designated a Benjamin Franklin scholar at the University of Pennsylvania, graduated from the University of Toronto Medical School and completed his ophthalmology residency at the Mayo Clinic in Minnesota. He was chosen for a fellowship in Corneal and External Diseases at Wills Eye Hospital in Philadelphia, and in 1987 became a Fellow of the Royal College of Surgeons of Canada and the American Board of Ophthalmology. He is also Corneal Consultant at Mount Sinai Hospital in Toronto, Professor of Ophthalmology and Vision Sciences at the University of Toronto, Past Chief of Ophthalmology at the Scarborough Hospital, and Past President of the Canadian Society of Cataract & Refractive Surgery. Dr. Stein is licensed to practice ophthalmology in Ontario, New York, Arizona and Minnesota.

Dr. Stein has lectured to his professional colleagues internationally and received honour awards from organizations including the American Academy of Ophthalmology, the International Intraocular Implant Club, and the Contact Lens Association of Ophthalmologists.

## DR. FATIMAH GILANI MD, FRCSC

Cataract and Refractive Surgeon



Dr. Fatimah Gilani is a board-certified ophthalmologist both in Canada and the United States. Educated on three different continents, she has a diverse background, that provides an international perspective.

Dr. Gilani began her career at the Royal College of Surgeons in Ireland and subsequently completed her medical internship at the Baystate Medical Center, a hospital affiliated with Tufts University in Springfield, Massachusetts. She completed her ophthalmology residency at the University of Arizona, followed by a medical retina fellowship at Northwell Long Island Jewish Hospital and the Vitreous Retina Consultants of New York under the tutelage of world-renowned retina specialists Dr. Lawrence Yannuzzi, Dr. K Bailey Freund, Dr. William Schiff and Dr. Gaetano Barile.

Dr. Gilani is actively involved with clinical research and has written a number of published journal and magazine articles. She grew up in Kenya and throughout her medical career has maintained an interest in alleviating blindness in developing countries and has participated in charitable work in Kenya, Pakistan, Vietnam, Mexico and Honduras.

Dr. Gilani is highly trained in the management of cataracts and anterior segment refractive surgery procedures. She also specializes in the management of age-related macular degeneration, diabetic retinopathy, and other vitreoretinal disorders.

### DR. NANCY TUCKER, MD, FRCSC



#### **Oculoplastics and Cataract Surgeon**

Dr. Nancy Tucker is an oculoplastics and cataract surgeon specializing in cosmetic eyelid and intraocular lens implant surgery. She brings over twenty years of experience in eyelid and advanced cataract surgery to the Bochner Eye Institute.

Dr. Tucker completed her ophthalmology residency at McGill University, and then went on to do a further two years in oculoplastics, the first year in Montreal and the second year in San Francisco, completing her oculoplastics training in 1994. She then joined the Ophthalmology Department at McGill University and the University of Montreal where she practiced for 8 years. She then moved to Chicago, joining the University of Chicago where she also opened a private practice to focus on cosmetic eyelid surgery.

In 2006 she moved to Toronto and joined the Ophthalmology Department at Mount Sinai Hospital. She is past president of the Canadian Oculoplastics Society, past Chief of Oculoplastics at the University of Toronto, the recipient of multiple surgical awards, has written several publications and has lectured extensively both nationally and internationally.

She brings the use of cutting edge technology, surgical talent and a thoughtful approach to helping patients understand the various options for rejuvenation in the eyelid area as well as cataract surgery.

## DR. REBECCA STEIN, MD, FRCSC



Cataract and Refractive Surgeon

Dr. Rebecca Stein is a board certified Ophthalmologist with advanced training in Canada, United States and the United Kingdom. She completed her Ophthalmology residency at the University of Toronto. After graduation, she was chosen for a prestigious fellowship in Cornea and External disease, Cataract and Refractive Surgery in New York with world renowned Dr. Eric Donnenfeld.

Dr. Stein is the great granddaughter of Dr Maxwell Bochner, the granddaughter of Dr. Harold Stein, and the daughter of Dr. Raymond Stein. She is the fourth generation ophthalmologist at the Bochner Eye Institute, a first in North America.

Dr. Rebecca Stein has a strong interest in ophthalmic education and enjoys teaching medical students, residents, and eyecare professionals, alongside her clinical duties. She has been an invited speaker to the American Academy of Ophthalmology, American Society of Cataract Refractive Surgery, and Family Day in Eye Care.

She is actively involved in clinical research and has had multiple peer-reviewed papers published in the areas of cornea and refractive surgery, corneal cross-linking, and blepharoconjunctivitis. She is also a co-author of the 11th edition of *The Ophthalmic Assistant* text book.

Dr. Rebecca Stein is committed to providing high-quality care, including cataract surgery, refractive lens exchange, LASIK, PRK, keratoconus treatment, implantable contact lenses, pterygium, and corneal transplantation. She offers numerous advanced refractive surgery procedures at Bochner Eye Institute utilizing the latest technologies and techniques.

### TRADITIONAL CATARACT SURGERY OPTIONS

### **Bronze Package**

- Standard monofocal IOL
- Satisfactory distance vision
- Glasses required all of the time (If you have astigmatism)



**Covered by OHIP** 

### Silver Package

- Advanced ASPHERIC monofocal IOL
- Better distance vision
- Sharper day vision
- Enhanced night vision
- Manual astigmatism reduction/control
- Glasses required for near & intermediate



\$1450 per eye

### **Diamond Package**

- Laser cataract surgery (vs. manual) •
- Advanced TORIC or ASPHERIC monofoca •
- Best distance vision without glasses •
- Laser astigmatism reduction/control •
- Glasses usually required for reading •

### \$3750 per eye



alasses

- ncea day and highr vision
- Glasses usually required for reading



\$1850 per eye



### **Gold Package**

- Premium multifocal IOL or EDOF IOL
- Provides clearer vision at ALL distances
- Manual astigmatism reduction/control
- 98% of patients do not require any glasses



\$2500 per eye

### **Diamond Plus Package**

- Laser cataract surgery (vs. manual)
- Premium multifocal IOL, EDOF IOL, or Light Adjustable Lens
- Provides clearer vision at ALL distances
- Laser astigmatism reduction/control
- 98% of patients do not require any glasses

\$4500 per eye (multifocal or EDOF)

\$5800 per eye (Light Adjustable Lens)













## THE BOCHNER EYE INSTITUTE

Since 1929



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OFFICIAL LASER AND EYE CENTRE OF THE TORONTO BLUE JAYS<sup>™</sup>.



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