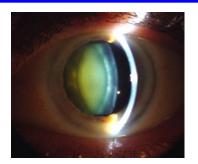
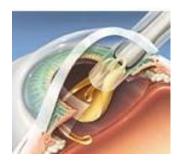


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# **Cataract Surgery**

#### What is a Cataract?

A cataract is the clouding of the naturally clear lens, a structure behind the iris (colored part of the eye). The lens is clear and pliable when we are young, changing shape and contour, helping to focus light onto the retina (back of the eye). As we age, the lens becomes more cloudy, thicker, and harder. As the cataract matures over time, patients may experience blurring of vision and glare. Vision changes may require new glasses and eventually surgery to restore sight. Other factors may lead to cataract formation including UV light exposure, diabetes, and steroid use.

### **Pre-operative Evaluation**

A detailed evaluation for cataract surgery includes a complete eye examination, measurement of vision with and without glasses, intraocular pressure readings, measuring the shape of the cornea (keratometry), and ultrasonic measurement of the length of the eye. Biometry is the method used to calculate the appropriate intraocular lens power. It is highly accurate in a vast majority of patients, but patients who are highly nearsighted, highly farsighted, or have had prior LASIK/refractive surgeries have the greatest risk of differences between expected and actual surgical outcomes.

### What Should I Expect During Cataract Surgery?

The cataract is removed by an ultrasonic device called phacoemulsification and a new plastic intraocular lens is placed in the eye to help focus light. Without a lens, light will not focus, requiring very thick, "coke-bottle" glasses. The incisions are so small in cataract surgery that they are usually self-sealing and do not require stitches. At the end of surgery, a shield is placed over the eye and you will be given instructions on eye drops to prevent infection and help with healing. Cataract surgery is an outpatient procedure, meaning your surgery will be performed in our surgery center, and you will return the next day for your post-operative visit.

### What are the Risks of Cataract Surgery?

Fortunately, complications are infrequent. Potential risks include infection, bleeding, glaucoma, retinal detachment, or corneal swelling. Most of these can be effectively treated with medications or surgery. Your doctor will discuss the risks and benefits of cataract surgery with you further.

### What Happens After Surgery?

After surgery, your doctor will see you the next morning for evaluation, instructions on eye drops and restrictions. In general, your post-operative visits will occur at 1-2 weeks then 4-6 weeks. Your second eye surgery may occur as soon as 3 weeks after surgery, or when it becomes visually significant in the future.



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# (IOLs)

As technology advances, patients are faced with many decisions when it is time for cataract surgery. Specialty lenses require additional fees, not covered by insurance. These lenses require thorough and precise measurements and no other ocular pathology. Many patients do not qualify for the lens due to macular degeneration, advanced glaucoma, other retinal pathology, irregular astigmatism, scarring, previous laser refractive surgery or other ocular issues. A standard (monofocal) intraocular lens is a great option for those who do not qualify for the specialty lenses or for patients who do not mind wearing glasses after cataract surgery.

Although not everyone qualifies for a special type of lens, many patients are able to choose the type of lens that is placed in their eye, to help minimize dependence on glasses or contact lenses. Your doctor will discuss which of the following IOL options is appropriate for you based upon your individualized evaluation.

# • Multifocal IOL: Correction for both near and distance vision

These innovative lenses help patients achieve spectacle independence at distance and near. This lens works best when it is placed in both eyes and is designed to allow patients to see clearly at all distances. The optics in the lens requires a "learning curve" called neuro-adaptation to adjust to the new optics and achieve maximal benefit from the technology. It is a life-changing experience for many and an exciting option for patients! New extended depth of focus lenses allow for better intermediate and distance vision with less glare/haloes of the diffractive lenses. Multifocal lenses can also have astigmatism correction as well.

# **o** Astigmatism correction

• The **TORIC lens** improves vision for those who have blurry vision from corneal astigmatism. The lens comes in different strengths and is placed inside the eye at a specific axis to correct

the astigmatism based on multiple measurements and calculations.

- Limbal relaxing incisions are small incisions, based on individualized patient measurements, made by hand or by the LenSx<sup>®</sup> femtosecond laser, to change the corneal shape and correct for astigmatism.
- Patients will still need eyeglasses or contact lenses for near vision, but it is an exciting option to allow for excellent distance vision!

# **o** ORA Intraoperative Measurements

Biometry measurements are obtained in the office prior to surgery, but now additional measurements can be taken at the time of surgery to ensure the most accurate lens is placed. This technology is used for multifocal and TORIC lenses and previous laser refractive surgery, but it can also be used with any cataract surgery including standard monofocal lenses if backup calculation is desired.

# Laser-Assisted Cataract Surgery

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The LenSx<sup>®</sup> femtosecond laser improves the accuracy of many critical steps of cataract surgery. The state-of-the-art technology utilizes an advanced computer guidance system to assist the surgeon in operating with excellent precision and reproducibility. This option corrects mild astigmatism.

# **o** Standard Monofocal IOLs

The standard or basic intraocular lens has been used for decades to help patients see well after cataract removal. Traditionally these patients will choose to correct their distance vision and a majority of patients will still need to wear glasses after the surgery for reading and near activities.

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