

# Femtosecond laser-assisted cataract surgery

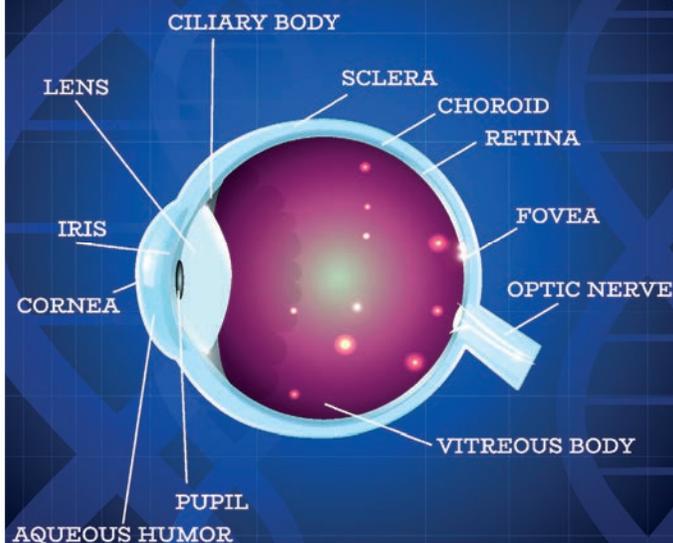
Traditionally, surgeons use blades and other cutting instruments to create the capsulotomy, an incision of the outer layer of the cataract, during cataract surgery. The surgeon then uses ultrasonic power to break up the natural lens and remove it from the eye.

Emory Eye Center now offers femtosecond laser technology for cataract surgery patients, which may replace the use of blades during parts of the surgery and assist in softening the cataract. Potential benefits of using this type of laser can include:

- ✓ Bladeless incisions that are customized for each patient and which can help correct astigmatism
- ✓ Increased surgical precision and consistency
- ✓ Less ultrasound and mechanical energy in the eye, especially in mature or dense cataracts

Your Emory Eye Center surgeon will discuss the advantages that femtosecond laser-assisted cataract surgery may offer in your situation.

## The structure of the eye



Femtosecond laser assisted cataract surgery location:

The Emory Ambulatory Surgery Center at Dunwoody  
4555 N. Shallowford Road  
Dunwoody, GA 30338

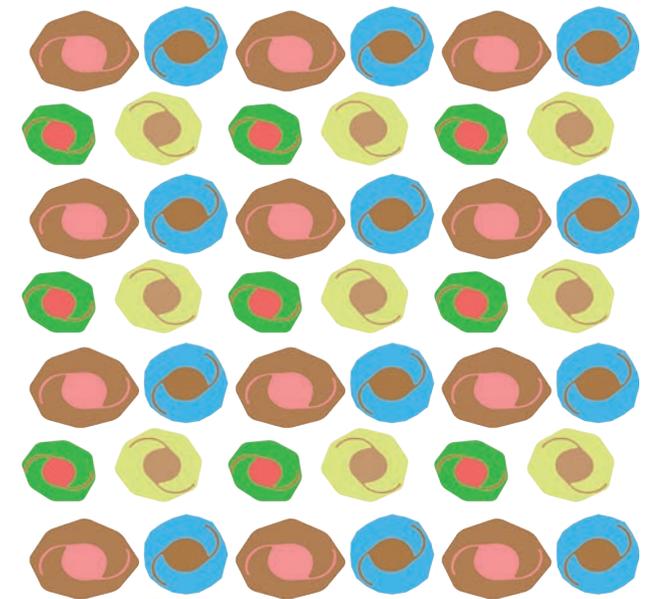
**404-778-2733 (2SEE)**

Femtosecond laser-assisted cataract surgery is not for everyone. Your doctor can determine if it's right for you.

# EMORY EYE CENTER

## Patient Guide

### Cataract Surgery with Implantation of Intraocular Lenses (IOLs)



Emory Eye Center's main location:

Emory Clinic Building B  
1365B Clifton Road, NE  
Atlanta, GA 30322

[eyecenter.emory.edu](http://eyecenter.emory.edu)

## What is a cataract?

A cataract is the result of the natural lens inside your eye becoming cloudy and hard. Cataracts usually develop from normal aging, but may occur in rare circumstances following eye trauma or after using certain medications. Cataracts may cause blurred vision, dulled vision, sensitivity to light and glare and/or ghost images, but otherwise do not usually cause damage to your eye.

Removing the cataract will help correct the decreased vision it causes. An artificial lens, called an intraocular lens (IOL), will be implanted permanently in the eye. This is not something you will feel or see directly.

Most people still need to wear glasses or a contact lens after routine cataract surgery. Choosing a specialized lens implant will minimize, but may not eliminate, your need for glasses or contact lenses postoperatively.

## Cataracts and astigmatism

Some patients have astigmatism before cataract surgery—a condition where the shape of the cornea causes objects to appear somewhat distorted at all distances.

If you have a high level of astigmatism, your surgeon could recommend insertion of toric IOLs. The femtosecond laser can be used to correct lower amounts of astigmatism.



## Differences in IOL choices

**Standard monofocal IOLs** provide focus at one distance and do not correct astigmatism. After surgery, you will need glasses for reading and intermediate distance vision (such as using a computer or tablet). Patients who choose monovision with monofocal IOLs (with one eye focused in the distance and the other up close) also often need glasses for sustained reading or for better depth perception when driving.

**Toric monofocal IOLs** provide focus at one distance and correct astigmatism. They also can be used for monovision.

**Multifocal IOLs** are bifocal IOLs that provide distance and intermediate or near vision, depending on the model chosen. Because they focus both nearby and distance simultaneously, one image is always out of focus. This second out-of-focus image is responsible for halos around lights sometimes seen while driving at night. These lenses are not recommended for all patients; your ophthalmologist can discuss this with you further.

**Extended depth of focus IOLs** are a newer technology available in IOLs that correct presbyopia. These lenses focus all objects from nearby (approximately 18 inches) to a distance and have other advanced optical features that provide the potential for very clear vision. This includes improved vision for working on your computer. Patients will often need to wear low-power, over-the-counter reading glasses to read fine print.

## Examinations prior to cataract surgery

Before your surgery, several measurements will be taken to determine the optimal type and power of IOL to implant. This is standard for all cataract surgery patients; however, additional measurements are taken for patients who are interested in more specialized lens implants to reduce the need for contacts or glasses after surgery.

## Healing and post-operative outcome

While the method used to calculate the IOL power is very accurate, the final result may differ from what you and your surgeon planned. Patients who have a history of extreme nearsightedness, farsightedness, or have had refractive surgery previously (LASIK, RK, or PRK) have the greatest risk of differences between planned and actual outcomes.

## Risks

Modern cataract surgery is one of the safest and most successful of all surgical procedures. However, certain complications may occur which, if treated promptly, can still allow for a good result. These may include dryness, bleeding, infection, swelling/clouding of the cornea or retina, retinal detachment, increased astigmatism and IOL dislocation.

Since your surgeon will operate on only one eye at a time, you may experience a period of imbalance between your eyes. Your surgeon can operate on the second eye once the first has stabilized, usually within two weeks. This should relieve the imbalance that you may have noticed. You can wear your original glasses between your two cataract surgeries.

## Your eyes are as distinctive as fingerprints.

We offer cataract procedures that are customized just for you.

