

## Frequently Asked Questions about Cataract Surgery

### What is a cataract?

A cataract is an opacification of the natural lens that causes blurry, cloudy, or distorted vision. The human lens is located just behind the iris, or the colored part of the eye. A healthy lens is clear and flexible, allowing us to see focused images. As a part of the normal aging process, the proteins in the lens oxidize, which leads to a loss of clarity and hardening. Left untreated, a cataract can become so dense that it causes blindness and a white appearance to the pupil. In fact, cataracts are the leading cause of blindness in the world. The original meaning of "cataract" is "waterfall," because the visual distortion of a cataract is similar to the view through a waterfall. There are multiple types of cataracts, and even within the same type, there are a range of symptoms a person can experience.

### Who gets cataracts?

Everybody who lives long enough develops cataracts, so they are considered a normal part of the aging process, similar to graying hair and aging skin. There are no known medicines to stop or reverse this change. Certain factors can speed up cataract formation, such as diabetes, steroid use, trauma, smoking, alcohol, and excessive sunlight or radiation exposure. In rare cases, cataracts are present at birth and are genetic or caused by a problem during development.

- Cataracts are present in 50% of people by the age of 65 and in 95% by the age of 75.
- More than 3 million cataract surgeries are performed in the U.S. each year.
- Cataract surgery has an overall success rate of 97 percent or greater.

### When do I need cataract surgery?

Age-related cataracts develop very slowly and painlessly. In fact, many people discover they have a cataract only when they visit their eye doctor for new glasses. Early in the course of cataract formation, changes in glasses or contact lens prescription can improve vision to some extent. Eventually, a new prescription does not allow for "satisfactory" vision. "Satisfactory vision" may differ from patient to patient and depends on factors such as occupation, hobbies, driving needs, and personality.

Tell your doctor how your cataract affects your vision and your life:

- You have cloudy, fuzzy, foggy, or filmy vision.
- You have changes in the perception of colors.
- You have frequent changes in your eyeglass prescription.
- You have double vision.
- You need to drive, but there is too much glare from the sun or headlights for you comfort.
- You do not see well enough to do your best at work.
- You do not see well enough to do your normal activities of daily living at home.
- You do not see well enough to read, watch TV, sew, play sports, or drive.
- You are afraid you will bump into something or fall.
- Because of your cataract, you are not as independent as you would like to be.
- You cannot see well enough with your glasses.
- Your eyesight bothers you a lot.

Many people believe that cataracts have to be “ripe” or in a highly advanced stage before they can be removed. This is no longer true. Today, cataract surgery is a routine procedure that can be typically performed as soon as you and your physician feel your vision interferes with the quality of your life, and this is typically a younger age than in generations past.

### **How can cataracts be treated?**

Surgery is the only definitive treatment. Cataract surgery involves removing the damaged natural lens through a small incision, typically less than 3 millimeters or a tenth of an inch. Currently, the best way of removing a cataract is by phacoemulsification, which uses ultrasound to safely break up the cataract. The lens has a natural coating, called the “capsular bag”, that is left suspended in the eye and polished to make it clear. The artificial intraocular lens (or “IOL”) is placed through the same incision and usually into the capsular bag. The lens unfolds and stabilizes without the need for glue or stitches. Most patients have significantly improved vision after the procedure.

### **What is presbyopia?**

Presbyopia occurs when the natural lens hardens with age and loses its ability to focus for near vision. Presbyopia usually occurs in our 40's and gets progressively worse as we get older. Presbyopia occurs in 100% of the population. Traditional correction of presbyopia requires reading glasses for individuals who have good distance vision, and bifocals for nearsighted or farsighted patients. Some nearsighted patients overcome presbyopia by removing their glasses so they can comfortably read by taking advantage of their near focus.

### **What is an Intra-Ocular Lens (IOL)?**

An IOL is a manufactured artificial lens made from silicone, acrylic, or plastic. IOLs are available in different powers, just like contact lenses. The power is chosen specifically for each eye based on measurements by your doctor. IOL's are made of safe, durable materials and you can expect that the implant will last your lifetime without need for replacement or maintenance.

### **What is a monofocal lens?**

A standard IOL is monofocal. This means the IOL only focuses at one distance. If an IOL is set for distance vision, then the eye typically needs glasses to read. Alternatively, the IOL can be set for intermediate or reading vision, but the eye will need glasses for distance vision. Presbyopia and astigmatism are not corrected with monofocal IOL's, and typically glasses are required for some tasks, unless monovision is done (see below). For someone who doesn't mind wearing glasses after cataract surgery, a monofocal lens can provide an excellent result.

### **What is a Premium IOL?**

IOL technology is progressing rapidly. You now have the option to choose from a selection of “premium” IOLs. This exciting new development allows you to fix or reduce your presbyopia (loss of reading vision) or your astigmatism.

When choosing a standard IOL or a premium IOL, consider your visual needs and how you feel about glasses. The premium IOL's are ideal for those with active lifestyles who are annoyed by glasses. They allow you to turn a potentially negative condition, cataracts, into an opportunity to improve your vision – to perhaps even better than it was before you developed a cataract.

Because they are optional, premium lenses are not covered by insurance and are an out-of-pocket investment in your vision.

### **What is a Toric Intraocular lens (IOL)?**

A toric IOL is a premium IOL that makes it possible to not only treat the cataract but also to correct corneal astigmatism. Corneal astigmatism occurs when the cornea, the clear dome in the front of the eye, is not perfectly spherical. Astigmatism causes blurry vision at all distances, but especially distance vision and in dim light. If you have astigmatism and choose a standard IOL implant, you will still have blurry vision unless you wear glasses, a contact lens, or undergo additional surgery such as laser vision correction or a limbal relaxing incision (LRI). A toric IOL has the correction for astigmatism built in and is an excellent option for someone who wishes to spend much of their time without glasses on. In May 2013, the first accommodating toric IOL (Trulign) was FDA approved.

### **What is a Presbyopia-correcting IOL? A Multifocal IOL? An Accommodating IOL?**

Over the course of your day, you are focusing in at least in three different distances: distance vision (for driving, sports, TV), intermediate vision (for computers, dashboards, preparing food, conversation), and near vision (for reading books and newspapers, hobbies). No current IOL allows you to see all three distances perfectly, but presbyopia-correcting IOLs can expand your field of vision. All of them offer good distance vision coupled with some degree of improved intermediate and near vision. However, with current technology, you may still need a mild pair of glasses on occasion for some activities.

There are two types of presbyopia-correcting IOLs - multifocal and accommodating. A multifocal lens has gradients of powers in the optics to allow for distance vision and improved near vision. There is no need to move your head like is required with bifocals or progressive glasses. These lenses often allow for good vision for small print without glasses, especially in good light. Intermediate vision (computers) is not quite as good and may require glasses in some cases. As a trade off, there is a potential side effect of glare, haloes, or a decrease in quality of vision, especially for driving at night. This side effect often diminishes over time because of adaptation, but if you do a lot of night driving, the multifocal IOL's may not be a good choice for you. Current brands of multifocal IOLs include ReStor, Tecnis Multifocal, and ReZoom. Dr. Mandava placed the first ReStor lens in Connecticut.

Accommodating lenses attempt to achieve better near vision by flexing and movement, similar to a younger, natural lens. Distance vision is usually very good without the added risk of glare as in a multifocal lens. However, current accommodating lenses do not accommodate as well as a young human lens. The level of accommodation varies from that of a 40 year-old to that of a 50 year-old. Intermediate vision, or "on-the-go reading vision," (computer, dashboards, preparing food, price tags, reading cellphones at arm's length) is usually very good. Reading vision is possible as long as the print is not too small and the light is good, but a mild pair of over the counter reading glasses is often required. Usually, we target the two eyes for a slightly different distance so that both eyes complement each other and allow for a broader range of acceptable vision. This decreases the need for reading glasses at the expense of some distance vision. The first accommodating lens in the US was the crystalens, which has gone through five or more generations of improvements since 2003. Other accommodating lenses will be available in the US shortly.

**What is a toric accommodating IOL?**

The Trulign IOL provides the astigmatism correction of a toric IOL as well as providing the wider range of vision of an accommodating IOL. Dr. Mandava was chosen by Bausch and Lomb, the manufacturer, to launch Trulign in Connecticut.

**What is a limbal relaxing incision (LRI)?**

Many people who desire a presbyopia-correcting IOL have some corneal astigmatism. This must be addressed for a successful outcome. A quick procedure called a limbal relaxing incision, or LRI, can be performed during cataract surgery. It involves making one or two very precise partial thickness incisions that relax the cornea into a more round shape.

**What is monovision?**

In an attempt to improve reading vision, you and your doctor may decide to target one eye for distance and one eye for reading or intermediate distance. This can be accomplished with a monofocal lens, or even better with an accommodating lens. There will be an adaptation period. This method requires two eyes with good visual potential.

**What if I am not satisfied with my outcome?**

Premium lenses are an exciting option to turn cataract surgery into an opportunity to enhance your natural vision. However, cataract surgery is not perfect. Even after successful, uncomplicated surgery, it is possible that your result has not been reached to your expectations. Many of these patients can benefit from a touch-up with laser vision correction for residual near-sightedness, far-sightedness, or astigmatism. Because we have our own laser center, we can offer a very discounted rate for patients who choose a premium IOL and require a touch-up.

**Should I choose a premium IOL?**

This may be the hardest decision when it comes time for cataract surgery. Every surgeon has his or her preferences in IOLs based on experience. Our practice has cutting-edge experience in premium IOL technology. We will do our best to help you make a good decision for your specific situation. Cost may also be a factor. While most of your actual cataract surgery is covered by Medicare or commercial insurance, the added fees associated with the premium IOL's are not covered by Medicare or insurance companies. These fees are for the extra testing necessary before surgery, the added cost of the premium IOL, the extra work and management required, and the discounted laser vision correction, if needed.

**If I have a standard IOL implant now, can I have a toric or premium IOL implant put in later?**

No. Once implants have been placed in the eye and have healed in place, they are very difficult to remove. You should expect to have the lens that is initially implanted for the rest of your life.

**Does insurance cover cataract surgery?**

Medicare and commercial insurance companies cover most of the cost of cataract surgery; however, they do not pay for everything. The goal of minimizing glasses is considered optional, even if you and your doctor decide that premium lenses or other additional procedures will enhance your outcome and your life. Our cataract specialist team will review your insurance coverage and out-of-pocket expenses with you prior to or when booking your surgery.

**What can I expect at my pre-operative visit?**

If you haven't had a recent comprehensive eye examination, we will perform one. Your pupils may be dilated to examine the retina and the structures the back of the eye. Special measurements will be taken such as keratometry (corneal curvature measurement), and axial length measurement by ultrasound, IOL Master or Lenstar.

If you are considering a premium lens, further tests such as corneal topography, eye dominance, and wavefront analysis may be taken. All of the tests are non-invasive and painless.

**Do I need to see my primary care physician (PCP) prior to my surgery?**

Yes. You should schedule a surgical clearance with your PCP within the month prior to your surgery date. You should bring the Greenwich Hospital Assessment/Progress Short Form (green border) for your PCP to complete. If you have a cardiac condition, an EKG is required.

**Where is the surgery performed?**

The surgery is performed in most cases on an out-patient basis at The Helmsley Ambulatory Surgery Center located at 55 Holly Hill Lane, Greenwich CT 06831 with parking off Muskrat Pond Drive. You will be provided with directions to the surgery center.

**How long does the surgery take?**

Even though the operation itself usually takes less than 20 minutes, you should plan to spend 3 hours at the surgery center. There is preparation and post-operative observation as well as post-operative instructions that take time to complete.

**Do I need someone to drive me home from the surgery?**

Yes. Hospital regulations state that all patients must have someone to drive them home. You may not take a taxi from the surgery home without a companion.

**What do I bring to the surgery center with me?**

There will be some down time prior to your surgery. Please bring a book to read and the pre-operative kit that you were given.

**I am using eye medications in my eye to be operated on. Do I stop taking them?**

Continue all eye medications as directed before, including the morning of your surgery, unless your doctor advises otherwise.

**Can I take aspirin, Plavix, Coumadin or Warfarin before and after my surgery?**

Modern cataract surgery rarely causes any bleeding. Topical anesthesia removes the risk of bleeding behind the eye from local anesthetic injections. Continue your medications unless you are specifically instructed to stop.

**Do I take my diabetes medication/insulin?**

Your medical doctor should direct medication instructions. We will try to schedule you early so you can take your medications with a snack right after surgery.

**I am taking oral medications. Do I need to stop them prior to surgery?**

Take all your usual medications the morning of surgery with a sip of water. Tell your doctor what medications you are taking, with special care to remember to mention whether you have ever taken Flomax, Uroxatrol, or Cardura, which are medicines prescribed for urinary difficulties that can make cataract surgery more complex.

**Can I wear my contact lenses right up to surgery day?**

Depending on what kind of contacts you wear, you will need to go without them prior to the IOL power measurements as well as prior to the surgery. Contact lenses distort the cornea and might cause a "surprise" result from our IOL power calculations. Soft lens wearers should discontinue wear for at least one week. Rigid gas permeable (RGP) contact lenses or hard contact lens wearers ideally should discontinue wear for 3 weeks. Failure to discontinue contact lens wear may delay your pre-operative appointment and surgery.

**Can I eat or drink before surgery?**

Please do not eat or drink after midnight prior to your surgery or your surgery may be delayed.

**Can I wear eye makeup before/after surgery?**

Eye make-up can contain particles and bacteria, particularly eyeliner and mascara, so please discontinue using them one or two days prior to surgery and remove all traces of make-up. Also, refrain from eye make-up for one week after your surgery.

**On the day of surgery, what should I wear?**

Wear comfortable clothing. Wear a loose shirt or a shirt that buttons in front without a T-shirt so we can easily apply EKG leads. You will be asked to wear a gown over your shirt and will remain dressed in your own clothing from the waist down. Do not wear jewelry except for a wedding band, if you would like.

**What can I expect the day of my cataract surgery?**

Cataract surgery is usually done on an outpatient basis; the actual surgery is 15 to 20 minutes long. Upon arrival at the facility, you will be given eye drops to dilate your pupils and a sedative to help you relax. A local or topical anesthetic will make the operation painless. The skin around your eye will be thoroughly cleansed, and sterile coverings will be placed around your eye and head. Under an operating microscope, very small incisions are made through which microinstruments are placed to remove your cataract. This procedure is usually performed using an instrument that breaks up the cataract with ultrasound (called "phacoemulsification") and then the cataract is suctioned out of the eye. The IOL will be rolled up and injected into the capsule and placed in the eye where it will unfold.

When the operation is over, the surgeon will usually place drops and a protective shield over your eye. After a brief period of observation, our staff will discuss how to care for your eyes at home and provide you with medication prescriptions, if they have not already. Your follow up visit will be scheduled, usually for within 24 hours, and then you will be allowed to go home. Plan to have someone else drive you home.

**Will I get stitches?**

The vast majority of cataract surgery is accomplished with such a small incision that stitches are unnecessary. Most incisions used for cataract surgery are self-sealing. However, on occasion, a suture may be needed for a short while.

**Should I have the procedure in both eyes?**

Typically cataracts will develop in both eyes. Many patients have their second eye done 2-6 weeks after the first eye. If the second cataract is not significant, you can wait until it progresses.

**Will I be awake during surgery?**

We will give you a sedative as soon as you get checked in to help with the anticipation of surgery. This may be enough to relax you, but the anesthesiologist will be available to deliver stronger medicines through your IV if you are still nervous. It is best to remain awake but very relaxed for the surgery. Occasionally, we will recommend general anesthesia for patients who cannot lie still for 20 minutes or for those who are extremely anxious.

**How do I keep from blinking during the surgery?**

Your eyelids will gently be held open for surgery. If you are awake, your only task is to look toward a light. This will be easy as you will have a very pleasant relaxing medication just before surgery.

**Is cataract surgery painful?**

Experiencing pain would be unusual. Most patients feel some occasional mild eye pressure and a lot of cool fluid. Most patients are surprised when we tell them “Your surgery is over!” You are typically very relaxed from the sedation, and you may even doze during the operation.

**What can I expect for post-operative recovery?**

When you get home after the surgery, just take it easy—rest and do not plan on doing any important paperwork or making any decisions. You will probably feel like taking a nap due to the sedatives.

During at least the first week of your recovery, it is essential that you avoid:

- Strenuous activity and heavy lifting; nothing over 40 pounds.
- Bending or inversions for long periods of time. Light exercise is okay.
- Water that might splash into your eye and cause infection. Keep your eye closed while showering or bathing. Avoid swimming or hot tubs for at least two weeks.
- Any activity, such as changing cat litter boxes<sup>5</sup> that would expose your healing eye to dust, grime, or other infection-causing contaminants.
- Eye makeup.

Vision on the day of surgery is quite variable from one eye to the next, even for the same patient. It is usually blurry in all patients on and off during the first day. You usually experience your best vision after cataract surgery two to four weeks post-operatively. Accommodating lenses may take months for the reading portion of your vision to improve. There is no harm in reading and using the eye as much as you are comfortable.

Your eye may be sensitive to the touch and maybe even a little scratchy for a few days. Using artificial tears, such as Systane, Optive, or Blink, helps with the scratchy sensation. You will be using multiple prescription drops which will also decrease discomfort. While your eye heals, you might experience some blurred vision during the first few days or even weeks following the procedure.

You should not drive home after your cataract surgery and to your one day post-operative visit. Be prepared to have someone else drive you around for a few days if your vision is not sufficiently clear to drive safely and confidently. Use good judgment and if you have any question do not drive until you are confident your vision is clear. Wear the protective eye shield while you sleep for one a week after surgery. Wear sunglasses to help protect your eye in bright light.

**Will my eyes hurt after the surgery?**

While there is sometimes minor aching after surgery, plain Tylenol nearly always relieves it. It is very common to have some "sandy" or "scratchy" feelings mostly the first day and decreasing thereafter. Using preservative free artificial tears will help, as well as closing the eye. If your discomfort is more severe than this, please call your doctor.

**How soon can I go to the mountains or ride in an airplane?**

High altitude and air travel pose no problems after cataract surgery.

**Will I be able to go through a metal detector without setting them off? Will I be able to have an MRI?**

Yes. IOL implants are made of plastic, silicone or acrylic and contain no metal. You will be able to safely go through metal detectors and have MRI's in the future.

**If needed, when will I receive my new glasses?**

We will check you for a new prescription for glasses about one month after your cataract surgery. This will give the eye time to heal thus giving you the best possible prescription after surgery.

**When should I be seen for post-operative visits?**

Usually, you will be seen the next day, at one week and one month.

**Will I need to have cataract surgery again? What is a secondary cataract?**

Once you have had successful cataract surgery, you will never need to have cataract surgery again. Occasionally, several months after the lens has been placed in the eye, your vision may start to become cloudy again. This can happen with any type of IOL. This is sometimes called a secondary cataract and refers to the clouding of the membrane that surrounds the implant. There is a very simple cure called a YAG laser capsulotomy which quickly and painlessly breaks up the membrane. This is done in our office and usually takes just a few minutes.

**Will I have any lifestyle changes after having cataract surgery?**

In almost all cases, cataract surgery only enhances your lifestyle and your ability to perform your activities of daily living. After your eye is healed there are no limitations except avoiding getting struck in the eye.

**What are the risks of cataract surgery?**

Rarely, complications occur that can permanently affect vision. This document cannot detail all the complications, but some of the important ones include infection, bleeding, posterior capsular rupture, and vitreous loss. All of these conditions occur in less than 1% of Dr. Mandava’s cases. Such complications may require a second surgery, or a change in plans of the type of IOL chosen. If you paid for a premium IOL and it is deemed not advisable due to an unexpected complication, we will automatically place the best IOL for your condition, and you will be reimbursed for any premium lens expenses.

**What if I have more questions?**

Please do not hesitate to contact your doctor or a member of our staff at (203) 869-3082 with any questions or concerns you may have.

Notes and Questions:

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