

Some detailed information to consider regarding cataracts prior to surgery:**What is a cataract?**

The natural lens inside the eye becomes cloudy which is a normal aging process. Other risk factors for cataract include family history, steroid use, eye trauma, diabetes, and previous retinal surgery.

What are the symptoms of a cataract?

Blurred vision, hazy vision, and glare at night from lights which cannot be fixed with glasses.

When should I have my cataract fixed?

When the vision bothers you on a daily basis making it hard for you to do important activities like driving, reading, and enjoying hobbies even with a recent pair of glasses. This varies from patient to patient. At your cataract evaluation, you and your surgeon together will decide if it is time.

What will happen in my appointment for cataract evaluation?

We will take a detailed history from you and perform a thorough examination of your eyes. Dilation is performed to examine the cataract, optic nerve and retina. Many tests are done that photograph the important structures of your eyes including the macula and the cornea. The surgeon will review all your history and testing and you will have a detailed discussion together about cataract surgery.

What is cataract surgery like?

Through a very small incision, the cataract is removed with ultrasonic energy and a small artificial intra-ocular lens (IOL) is placed inside the eye. The IOL has a built-in prescription in it. You will return for measurements of your eye(s) for the IOL power prior to the surgery. The surgery is outpatient. We have a team of nurse anesthetists and nurses who will help set up your procedure. You will receive either oral or IV sedation to help relax you. The eye is numbed and you should not feel much. For routine cases, the surgery takes about 10-15 minutes and it will be performed by the surgeon that evaluated you in clinic. Plan on being in the surgery center for about 1.5-2 hours total because it takes time for the pupil to dilate and there are pre and post surgical steps.

What is recovery like?

Typically, it takes about 1 week for the vision to improve to a good level. The full recovery is about 3 weeks which is when you will receive a new prescription for glasses for any residual refractive error. You should avoid strenuous exercise and bending for 1 week. Showering with your eye closed is okay. Walking is okay. You will have drops to do for about 3 weeks. The drops are to avoid infection, inflammation, and to decrease swelling. You should also avoid rubbing your eye and you will sleep with a shield over your eye for 1 week. Avoid swimming pools and hot tubs (dirty water) for 2 weeks. You can fly after surgery but we recommend staying in town for 1 week after your surgery so that we know you are healing well prior to leaving town.

What might make my cataract surgery more challenging?

Most cases are considered routine, however, there are situations that can make surgery more complex requiring more time and instrumentation and thus require longer healing time and potentially more surgery. Some common examples would be a history of trauma, previous eye surgeries including corneal transplantation, retinal detachment surgery, retinal membrane peel, and retinal injections. Also, a common condition called pseudo-exfoliation (PXF) can make normal structures very loose resulting in more difficult cataract removal. For men, a history of using prostate medicines including Flomax (generic: Tamsulosin) can create a floppy iris and a poorly dilating pupil sometimes resulting in a longer and more challenging case. Finally, a very dense cataract or white cataract can result in complicated surgery.

What are some of the risks of cataract surgery?

Overall, the surgery is very successful with very good outcomes and low rates of complication. However, there are potential risks and complications that can happen like with any other surgery. This includes infection, high eye pressure, inflammation, swelling of the retina, swelling of the cornea, glare and halos with lights, dark shadows peripherally, retinal tear, retinal detachment, etc. The consent form will list more potential risks.

When are the IOL measurements taken?

They are done prior to surgery and we will schedule this preop visit when we set up all your appointments.

Are the IOL measurements perfect?

No, these measurements are very good but nothing is a guarantee. The measurements help us get close to the desired outcome but often times people still need glasses to achieve their best vision.

Why are the IOL measurements not perfect?

The main reason is effective lens position (ELP). The measurements assume that the IOL is going to sit perfectly in the center of where the cataract used to be. However, the eye heals around the new IOL and where the IOL gets attached to the eye is known as ELP and this is not always in that perfect position. This means that there can be a residual refractive error requiring glasses to fine tune the vision. Also, the corneal incision can heal differently in different eyes resulting in a residual refractive error.

Is it possible that I might not get the IOL I had planned on getting?

Yes, in the rare case where there is a complication that involves rupture of the posterior capsule of the natural lens, it is possible that the surgeon will not be able to implant the desired IOL and the surgeon will then implant another IOL that is best suited for the situation.

Do I have to stay out of my contact lenses for the measurements?

Yes, if you wear soft contact lenses, we recommend 2 weeks out of your contact lenses prior to the preop appointment. If you wear hard contact lenses, we recommend 4 weeks out of your contact lenses prior to the preop appointment.

What is mono-vision?

Mono-vision is when we set up your dominant eye for distance and your non-dominant eye for intermediate or reading vision. This is done with a mono-focal IOL like a standard or Toric IOL (if you have astigmatism). Usually, patients can adapt to this but some people do experience loss of depth perception and other symptoms like headaches. Patients that have tried this with contact lenses are good candidates for this with cataract surgery.

If I have had Lasik or PRK before, how does this affect my cataract surgery?

The surgery itself is the same. However, the IOL power is very much affected by how much Lasik or PRK you have had in the past. The machines that measure you preoperatively for the IOL power sometimes are not accurate in post Lasik or PRK eyes which may mean that you would still need to wear glasses to achieve your best vision. Rarely, an IOL exchange surgery becomes necessary if the IOL power is significantly wrong. Getting your old Lasik or PRK records can be very helpful in helping predict the most accurate IOL power. Even without records, nowadays, with newer machines and formulas, we can typically get close to the desired target.

If I have had RK before, how does this affect my cataract surgery?

The RK incisions can swell with surgery and it can take many weeks for the swelling to go away. The RK incisions can open up during surgery requiring sutures. The IOL power may not be accurate in post RK eyes often requiring glasses postoperatively.

What are some other eye diseases that can affect how well I will see after cataract surgery?

Any other disease process like macular degeneration, dry eyes, epiretinal membranes, irregular astigmatism, keratoconus, Fuchs' cornea dystrophy, history of retinal detachment, glaucoma, etc.

What is refractive lens exchange or clear lens exchange?

Clear lenses that have not yet developed cataracts can be removed to reduce or eliminate the need for glasses. The surgery is exactly like cataract surgery. Your insurance will not pay for any of this option because it is not medically necessary.

What is posterior capsular opacification (PCO)?

PCO is very common after cataract surgery. Once the cataract has been removed, the posterior capsule is left in the eye to hold the new IOL in place. The posterior capsule often times becomes cloudy and there is a very safe laser procedure known as a YAG capsulotomy that can fix this with a low possibility of side effects.

What are my Intra ocular Lens (IOL) options?

You will have to make some decisions yourself about which IOL is best for you. Your surgeon will help guide you. Part of the decision is where you want your focal point to be. You will also need to decide whether you mind wearing glasses after surgery or not. Some IOLs that make you more independent from glasses are considered elective. Insurances don't pay for these elective upgrades and this will be an out of pocket expense to you. Not everyone is a candidate for every IOL.

The options for focal points are:

- A) Distance: driving, TV, most sports (far away)
- B) Intermediate: computer, dashboard, reading music (arms length away)
- C) Near: reading a book, sewing, needle work (close to face)

There are 3 general categories of IOLs for you to consider:

1) **Standard/Basic IOLs** - NO EXTRA COST

- This is paid for by your insurance, no extra cost to you. You will still have your normal copays and deductibles but this IOL does not cost anything extra. Standard IOLs are mono-focal so you will only get one focal point with this IOL when you don't have glasses on. You will have to choose a focal point of distance vision or intermediate vision or near vision. These IOLs do not fix astigmatism. Typically, patients who choose this IOL still need driving, computer, and/or reading glasses to obtain their best vision.

2) **Astigmatism correcting IOLs** - *Extra out of pocket cost for this category of lenses.*

- These are known as Toric IOLs. These IOLs are designed to eliminate or reduce your astigmatism. Astigmatism comes from the shape of your cornea and astigmatism makes things blurry. Astigmatism can be corrected with glasses or contact lenses or you can choose a Toric IOL. We measure astigmatism at the cataract evaluation and at the preop visit. Toric IOLs are mono-focal so you will only get one focal point with this IOL when you don't have glasses on. You will have to choose a focal point of distance vision or intermediate vision or near vision. The benefit of the Toric IOL is that your astigmatism has been eliminated or reduced and your chosen focal point should be in good focus without glasses. You will still need glasses for the other focal points. This is an excellent option for people with astigmatism.

- 3) **Premium IOLs** – *Extra out of pocket cost for this category of lenses. If there is a significant residual refractive error after Premium IOL, we offer a free Lasik/PRK enhancement.*
- **Multifocal IOLs (MFIOLs)** - These IOLs are designed to give you good distance, good intermediate, and good near vision at the same time. MFIOLs can fix astigmatism, too. The benefit of MFIOLs is that they should give you a full range of vision without glasses. These IOLs are not perfect. With MFIOLs, one can expect to see some night time rings and halos around lights. People that are perfectionists might find these night time symptoms more bothersome than people that are more easy going. Sometimes people with MFIOLs still need low powered reading glasses for fine print and reading in dark conditions. An example of a very commonly used MFIOL in the US is the PanOptix IOL.
 - **Extended Depth of Focus IOLs (EDOF)** These are designed to give you good distance and good intermediate vision without glasses. EDOF IOLs can fix astigmatism, too. You will most likely still need reading glasses. The benefit of EDOF IOLs is that they should give you more range of vision than a standard mono-focal IOL without glasses. EDOF IOLs have less night time issues than MFIOLs. An example of a very commonly used EDOF IOL in the US is the Vivity IOL.
 - **Accommodating IOLs** -These IOLs are designed to give you good distance and good intermediate vision without glasses. Accommodating IOLs can fix astigmatism, too. You will most likely still need reading glasses. Accommodating IOLs are designed to utilize the eye muscles to move in the eye to give you more than one focal point. In some eyes, the muscles are atrophied and this IOL doesn't move in the eye. Because of this reason, these IOLs are not as commonly used as the MFIOLs or EDOF IOLs. The benefit of accommodating IOLs is that they should give you more range of vision than a standard mono-focal IOL without glasses and there should be less night time glare and halos as compared to MFIOLs and EDOF IOLs. An example of an accommodating IOL in the US is the Crystalens.