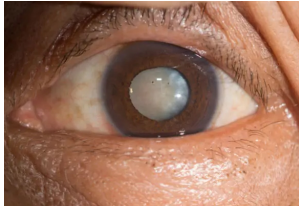


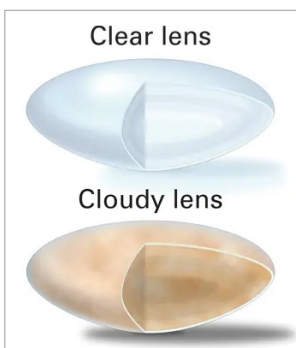
## WHAT IS A CATARACT?



A cataract is a loss of transparency, or clouding, of the eye lens. The eye lens plays a vital role in focusing images on the retina. A cloudy lens interferes with light passing through to the retina, the light-sensing layer of cells at the

back of the eye. Compare a cataract to looking at the world through a foggy or blurry window. Light rays do not focus clearly if the lens loses its clarity, as it does when a cataract develops. Glasses or contact lenses cannot sharpen vision if a cataract is present.

## WHAT CAUSES A CATARACT?



The top lens is a clear, natural lens.

The bottom lens shows clouding by cataract.

The most common cause of a cataract is aging. As you get older, chemical changes in your lens make it less transparent. The loss of transparency may be so mild that vision is hardly affected or so severe that no shapes or movements are seen, only light and dark. You have a cataract when the lens gets cloudy enough to obstruct vision to any significant degree.

Other causes of cataracts include trauma, medications like

steroids, systemic diseases such as diabetes, and prolonged exposure to ultraviolet light. Occasionally, babies are born with a cataract. Glasses or contact lenses cannot sharpen your vision if a cataract is present.

Reducing the amount of ultraviolet light exposure by wearing a wide-brim hat and sunglasses may reduce your risk for developing a cataract, but once set, there is no cure except to have the cataract surgically removed. Outpatient surgical procedures remove the cataract either through a small incision (phacoemulsification) or a large incision (extracapsular extraction). The time to have the surgical procedure is when your vision is bad enough to interfere with your lifestyle.

## WHAT ARE THE SYMPTOMS?

Cataract formation is a slow, progressive, and painless decrease in vision. Ironically as the lens gets harder, farsighted (hyperopic) people experience improved distance vision and are less dependent on glasses. However, nearsighted (myopic) people become more nearsighted, causing distance vision to worsen.

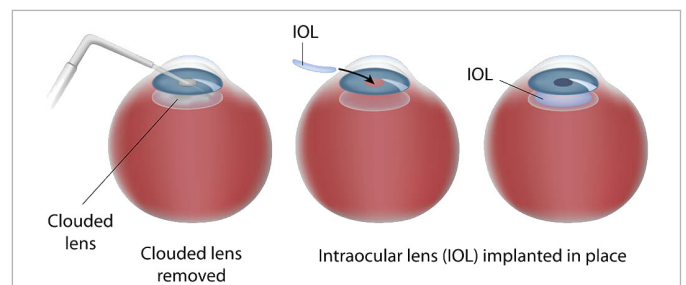
- Blurring of vision
- Glare, particularly at night
- Frequent glasses prescription changes
- Reduction in color intensity
- Yellowing of images
- Double vision in rare cases

## HOW IS A CATARACT DIAGNOSED?

A cataract is detected during our comprehensive eye exams. Your eyes will be dilated, so the pupils are wide open, enabling our medical team to look for signs of a cataract with a slit lamp, along with checking your retina and optic nerve. We will also do a refraction to test your visual acuity.

## WHAT ARE THE TREATMENTS?

The treatment for a cataract is to remove the lens and implant an Intraocular Lens (IOL). An IOL is a tiny, lightweight, clear plastic disk placed in the eye during cataract surgery. Intraocular lenses have many advantages. The IOL remains in the eye after surgery, unlike contact lenses, which must be removed, cleaned, and reinserted. An IOL replaces the focusing power of the eye's natural lens. The rapid evolution of IOL designs, materials, and implant techniques has made them a safe and practical way to restore normal vision after cataract surgery.



One and a half million people have a cataract procedure every year, and 98% achieve success. As with any surgery, complications may occur during or after, and some are severe enough to limit vision. In most cases, vision, as well as the quality of life, improves.

## WHAT HAPPENS DURING CATARACT SURGERY?

Cataract surgery has changed dramatically over the last 20 years. Many patients remember the days when the operation required a hospital stay of several days and weeks of recovery. Retinal detachment was a frequent complication and thick aphakic glasses were necessary for clear vision. Today's cataract surgery is totally different. The operation is now done on an outpatient basis, usually only a two to three-hour stay.

- The actual surgery is 10 to 20 minutes in length and typically painless. A mild sedative takes care of any anxiety during the surgery.
- A very small incision is made through a bloodless area of the eye and the cataract is removed with ultrasound.
- A foldable implant is rolled up like a carpet and insert through the same small incision. It is fitted into the eye behind the pupil where the cataract was located before removal. Suturing is generally not necessary. The wound seals on its own and is quite secure.
- A seal protects the eye the first day and then the patient wears a shield at night for a week. Regular activity is possible right away. Eyedrops are used on a tapering schedule for one month after surgery to reduce the risk of infection and help to heal.

New glasses, if necessary, are prescribed two to three weeks after surgery. If the second eye has a cataract it can be done within three to four weeks. Whether or not glasses are needed depends on the implant lens chosen.

Complications are rare and the success rate is in excess of 98%. The cataract will not grow back after surgery. However, the membrane, which supports the intraocular lens implant, can become cloudy in some patients months or years later. If this occurs, simple laser treatment is all that is necessary to restore clear vision.

## DIFFERENT TYPES OF INTRAOCULAR LENSES (IOLs)

There are many types of IOLs, each with its own pros and cons. Below are some general categories. Ask your ophthalmologist about which type of IOL is best for you.

**Monofocal:** This is the type of IOL that most people select. Monofocal lenses have one focusing power. This means they sharpen either your distance, mid-range or close-up vision.

**Toric:** This lens is considered if you have a significant amount of astigmatism (an irregularly shaped cornea). These lenses improve how light hits your retina, allowing you to have a sharper, clearer vision. Toric lenses are available in monofocal, multifocal, extended depth of focus (EDOF) or accommodative models.

**Multifocal:** This lens makes it possible for patients to see near, intermediate, and distance without eyeglasses. Multifocal lenses contain several focal zones. Your brain adjusts to these zones and chooses the focusing power you need for any given task (like driving or reading).

**Extended Depth of Focus (EDOF):** This lens creates a single elongated focal point and provides an uninterrupted range of vision. These lenses give you excellent distance vision along with improvements in your mid-range vision (for tasks such as computer use). You may still need to use glasses for close-up tasks like reading.

## ADVANCED CATARACT SURGERY OPTIONS

### Traditional Cataract Surgery

- Improve quality of vision with glasses
- Glasses required all of the time (if you have astigmatism)

### Cataract Surgery with Astigmatism Correction

- Premium Toric Implant
- Improved Distance Vision without Glasses

### Cataract Surgery for Distance Intermediate & Near Vision

- Premium Multifocal Implant or EDOFs Implant
- Improved Distance, Intermediate and/or Near vision without Glasses
- Improved Distance Vision without Glasses

## DIFFERENT TYPES OF INTRAOCULAR LENS (IOLs)

|   | MONOFOCAL<br>(STANDARD)                                    | TORIC<br>(ASTIGMATISM)  | MULTIFOCAL   | EXTENDED DEPTH<br>OF FOCUS  |
|---|--|---|--|---|
| <b>Astigmatism Correction</b>                     | No   | Yes   | Yes  | Yes   |
| <b>Zones of clear vision without glasses</b>      | Glasses likely needed at all distances for best vision     | Distance  | Distance, Intermediate, Near                                     | Distance, Intermediate  |
| <b>Strengths</b>                                  | Most affordable  | Excellent distance vision without glasses                                 | Excellent full range of vision (distance, intermediate, & near)  | Excellent distance and intermediate vision                            |
| <b>Weaknesses</b>                                 | Glasses likely needed at all distances for best vision     | Glasses required for intermediate and near tasks                          | Low risk of glare and halos given lens design                    | May need glasses for near tasks and low light (within 20 inches)      |
| <b>Optimal patient</b>                            | Doesn't mind wearing glasses or can't afford other options | Prioritizes distance activities, ok with glasses for computer and reading | Needs full range of vision, ok with low risk of bothersome halos | Fits with modern lifestyle, ok with glasses for reading and low light |
| <b>Good choice with coexistent ocular disease</b> | Yes  | Yes   | No   | Probably  |