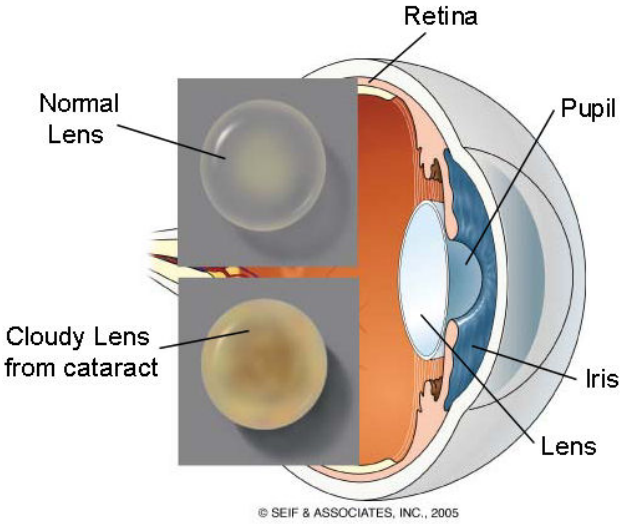
Cataract

A cataract is a clouding of the lens of the eye. It is most often related to aging. A cataract is not a “film” over the surface of the eye. The lens is inside the eye and changes size of the pupil. The lens can enlarge to let more light enter the eye in dark environments and contract the size of the pupil to let in bright light.

The **lens** is the part of the eye that helps focus light on the **retina**. The retina is the eye's light-sensitive layer. It is in the back of the eye that sends visual signals to the brain. In a normal eye, light passes through the **lens** and gets focused on the **retina**. To help produce a sharp image, the lens must remain clear.



When a lens becomes cloudy, vision is compromised by the degree and nature of the clouding. Certain cataracts make people more near-sighted as they develop, others increase glare, and all reduce vision to some degree or another. A cataract that is so dense that it becomes milky white and a white opacity can be seen through the pupil. When the white color is seen, it is called a “mature” or “hyper-mature cataract.” Such cataracts cause total blindness in the affected eye. The cataract must be removed to prevent damage to the eye itself. Some types of cataracts can cause a secondary disease of the eye, such as certain types of glaucoma.

In the early stages, better lighting and eyeglasses may lessen vision problems caused by cataracts. At a certain point, surgery may be needed to improve vision.

CAUSES

- Aging. However, cataracts may occur at any age, even in newborns.
- Certain drugs.
- Trauma to the eye.
- Certain diseases (such as diabetes).
- Inherited or acquired medical syndromes.

SYMPTOMS

- Gradual, progressive drop in vision in the affected eye. Cataracts may develop at different rates in each eye. Cataracts may even be in just one eye with the other unaffected.
- Cataracts due to trauma may develop quickly, sometimes over a matter or days or even hours. The result is severe and rapid visual loss.

DIAGNOSIS

To detect a cataract, an eye doctor examines the lens. A well developed cataract can be diagnosed without dilating the pupil. Early cataracts and others of a specific nature are best diagnosed with an exam of the eyes with the pupils dilated by drops.

TREATMENT

- For an early cataract, vision may improve by using different eyeglasses or stronger lighting.
- If the above measures do not help, surgery is the only effective treatment. This treatment removes the cloudy lens and replaces it with a substitute lens (Intraocular lens, or IOL). Newly developed IOL technology allows the implanted lens to improve vision both at a distance and up close. Discuss with your eye surgeon

about the possibility of still needing glasses. Also discuss how visual coordination between both eyes will be affected.

A cataract needs to be removed only when vision loss interferes with your everyday activities such as driving, reading or watching TV. You and your eye doctor can make that decision together. In most cases, waiting until you are ready to have cataract surgery will not harm your eye. If you have cataracts in both eyes, only one should be removed at a time. This allows the operated eye to heal and be out of danger from serious problems (such as infection or poor wound healing) before having the other eye undergo surgery.

Sometimes, a cataract should be removed even if it does not cause problems with your vision. For example, a cataract should be removed if it prevents examination or treatment of another eye problem. Just as you cannot see out of the affected eye well, your doctor cannot see into your eye well through a cataract.

The vast majority of people who have cataract surgery have better vision afterward.

CATARACT REMOVAL

There are two primary ways to remove a cataract. Your doctor can explain the differences and help determine which is best for you:

- **Phacoemulsification** (small incision cataract surgery). This involves making a small cut (*incision*) on the edge of the clear, dome-shaped surface that covers the front of the eye (the *cornea*). An injection behind the eye or eye drops are given to make this a painless procedure. The doctor then inserts a tiny probe into the eye. This device emits ultrasound waves that soften and break up the cloudy center of the lens so it can be removed by suction. Most cataract surgery is done this way. The cuts are usually so small and performed in such a manner that often no sutures are needed to keep it closed.
- **Extracapsular surgery**. Your doctor makes a slightly longer incision on the side of the cornea. The doctor removes the hard center of the lens. The remainder of the lens is then removed by suction. In some cases, extremely fine sutures are needed which the doctor may, or may not remove in the office after the surgery.

When an IOL is implanted, it needs no care. It becomes a permanent part of your eye and cannot be seen or felt. Some people cannot have an IOL. They may have problems during surgery, or maybe they have another eye disease. For these people, a soft contact lens may be suggested. If an IOL or contact lens cannot be used, very powerful and thick glasses are required after surgery. Since vision is very different through such thick glasses, it is important to have your doctor discuss the impact on your vision after any cataract surgery where there is no plan to implant an IOL.

The normal lens of the eye is covered by a clear capsule. Both phacoemulsification and extracapsular surgery require that the back surface of this lens capsule be left in place. This helps support IOLs and prevents the IOL from dislocating and falling back into the deeper interior of the eye. Right after surgery, and often permanently this “posterior capsule” remains clear. In some cases however, it can become cloudy, presenting the same type of visual compromise that the original cataract did since light is again obstructed as it passes through the clear IOL. This condition is often referred to as an “after-cataract.” Fortunately, after-cataracts are easily treated using a painless and very fast laser treatment that is performed without anesthesia or incisions. It is done in a matter of minutes in an outpatient environment. Visual improvement is often immediate.

HOME CARE INSTRUCTIONS

- Your surgeon will discuss pre and post operative care with you prior to surgery. The majority of people are able to do almost all normal activities right away. Although, it is often advised to avoid strenuous activity for a period of time.
- Postoperative drops and careful avoidance of infection will be needed. Many surgeons suggest the use of a protective shield during the first few days after surgery.
- There is a very small incidence of complication from modern cataract surgery, but it can happen. Infection that spreads to the inside of the eye (*endophthalmitis*) can result in total visual loss and even loss of the eye

itself. In extremely rare instances, the inflammation of endophthalmitis can spread to both eyes (*sympathetic ophthalmia*). Appropriate post-operative care under the close observation of your surgeon is essential to a successful outcome.

SEEK IMMEDIATE MEDICAL CARE AFTER SURGERY IF:

- You have any sudden drop of vision in the operated eye.
- You have pain in the operated eye.
- You see a large number of floating dots in the field of vision in the operated eye.
- You see flashing lights, or if a portion of your side vision in any direction appears black (like a curtain being drawn into your field of vision) in the operated eye.

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