



## X-Plain Cataracts

### Reference Summary

#### Introduction

A cataract is a clouding of the eye's lens. Cataracts are a common eye condition that affects more than half of the people aged 65 or older in the United States.

Your doctor may recommend cataract surgery to enhance your vision. The decision to have cataract surgery will be reached by you and your doctor together.

This reference summary will help you understand what cataracts are and how they can be treated surgically.

#### Anatomy

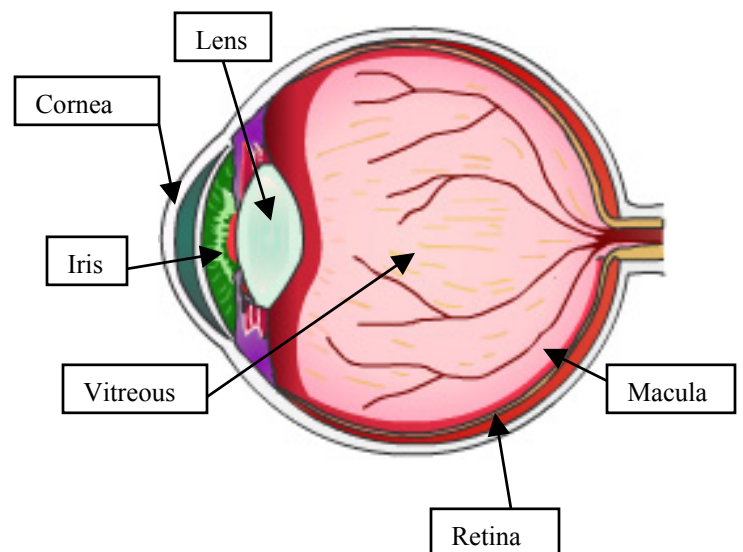
Our eyes are very sophisticated optical organs that collect light and focus it on the back of the eye, allowing us to see.

The cornea is the front, transparent part of the eye. It allows light to enter.

The light then hits the iris, which is the colored part of the eye. The opening in the middle of the iris is known as the pupil. The iris controls the amount of light entering the eye by changing the size of the pupil.

As light passes through the pupil, it goes through a clear lens. Like the lens of a camera, the lens of the eye focuses the light onto the back of the eye. The capsule holds the lens in place.

After hitting the lens and before reaching the back of the eye, the light rays travel through a transparent substance called the vitreous.



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The back of the eye is called the retina. The retina changes light signals into electric signals. These electric signals are sent through the optic nerve to the brain, which translates these signals into images we see.

## Cataracts

The lens of the eye is made of water and protein molecules. As we age, sometimes the molecules clump together. This can start to cloud areas of the lens, blocking some light from reaching the retina, and reducing vision.

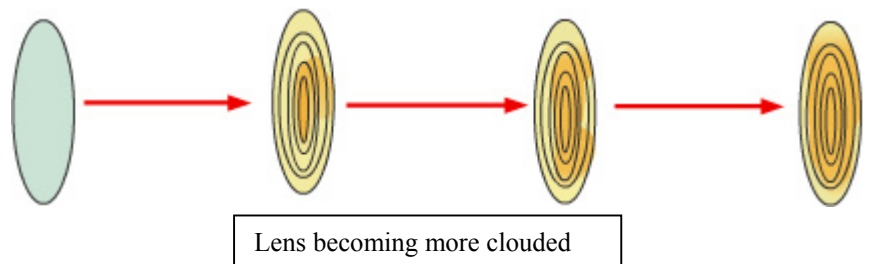
Clouded areas on the lens of the eye cause cataracts. Cataracts are mostly associated with aging. However, they can also occur after birth or after an eye injury.

Diabetes and smoking can also predispose patients to have cataracts.

A personal or family history of cataracts can also increase the chances of developing cataracts.

## Symptoms

In their earliest stages, cataracts may not be noticeable. As the eye lens becomes more clouded, vision is blurred and reduced.



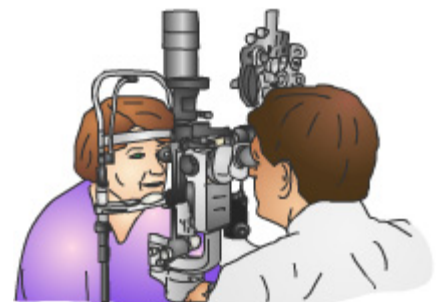
Signs of cataracts include having blurry vision or poor night vision. Symptoms of cataracts also include seeing halo around lights, faded colors, or double vision.

As the lens becomes more clouded, vision gradually gets worse.

## Diagnosis & Treatment Options

Your doctor will take a detailed medical history and do a thorough eye examination in order to determine the cause of the blurred vision.

If the doctor determines you have cataracts, the treatment depends on how blurred your vision is and the degree to



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which it affects your lifestyle.

In mild cases of cataracts, eyeglasses may help temporarily. As time goes by, the lens of the eye can become so cloudy that it blocks light from reaching the retina. This can reduce vision to the extent that sharp images can no longer be formed. In cases such as this, cataract surgery is recommended.

If you decide to have the cataract operation done, your eye care professional will do some tests. A special painless ultrasound scan of the eye, known as an a scan, allows your doctor to decide what type and what strength of replacement lens to use.

## Surgery

Cataract surgery is a very safe and successful operation. The operation usually lasts less than one hour and is almost painless.

For people who have cataracts in both eyes, the doctor will not replace the lenses at the same time. The second eye will be done after the first has healed.

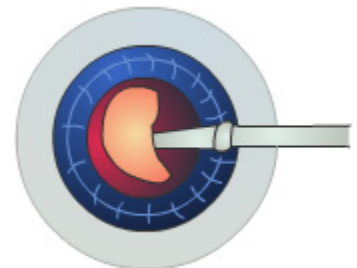
Cataract surgery is usually an outpatient surgery, where the patient goes home the same day. However, you should have somebody with you to drive you home after the surgery.

This procedure is usually done under regional, or topical, anesthesia. The eye itself is numbed. General anesthesia could be used to put you to sleep if needed.

After making a small incision in the cornea, the doctor removes the lens.

There are two main ways to remove a cataract. The doctor may insert a tiny probe through a small incision on the side of the cornea. The probe breaks the lens and sucks it out. This procedure is known as “phacoemulsification”.

The doctor may, instead, make a slightly longer incision on the side of the cornea and remove the hard center of the lens in one piece. The remainder of the lens is then removed by suction. This is known as extracapsular



Phacoemulsification



Removal of hard lens

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surgery. Your doctor can explain which procedure is recommended for you.

In most instances, the doctor replaces the removed clouded lens with an intraocular lens, or IOL. This is an artificial permanent lens that requires no care. Patients cannot feel or see the new lens.

The cornea is then closed either using stitches or a no-stitch technique. The stitches may have to be taken out at a later date. Some stitches may dissolve on their own.

After the surgery, the eye is patched and the patient is allowed to go home after resting for a while in a recovery area.

### **Risks and complications**

Cataract surgery is a very safe and successful operation.

Risks and complications are, however, possible; knowing about them will help you detect them early and hopefully avoid further complications.

There are risks associated with the use of anesthesia. These will be discussed with you in greater length by your anesthesiologist.

Other risks are associated with any type of surgery, such as infection. Infection can occur during or after cataract surgery. This may lead to scarring and deteriorating vision. Antibiotics can be used to treat infection.



Bleeding and inflammation in the eye can occur, which can lead to reduced vision.

In some cases, depending on the patient's eye condition, an IOL may not be placed at the time of the removal of the lens. Another operation may be necessary to place the IOL after removing the cataract.

The capsule holds the eye lens in place. During cataract surgery, it is left behind to support the IOL. In some cases, the back part of the capsule may become cloudy. If this happens, the doctor may open a tiny hole in it using a laser. This procedure only takes a few minutes and is not painful.

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## After the operation

Following the doctor's instructions is essential for a good and speedy recovery.

It may take six weeks before the eye is healed. The length of the healing period depends on the patient's age and medical condition.

For a few days after surgery, you may take eye-drops or pills to help healing. Medications need to be taken as prescribed.

You will also need to protect the eye using glasses during the day and a shield at night.



You should call your doctor if you have symptoms such as increased pain, decreased vision, or increased swelling and redness.

After such an operation patients should not strain themselves by lifting anything heavier than 25 pounds. Patients should also avoid bending and rubbing the eye.

The use of shampoo or other soaps around the eye may irritate the eyes and is not recommended until the doctor allows it. After the eye heals, these restrictions are lifted.

Patients may need new glasses after the operation.

## Summary

A cataract is a very common condition. It involves removing the clouded eye lens and replacing it with an artificial lens.

Patients may decide to have cataract surgery when their vision is impaired and interferes with daily activities such as reading, driving, and watching TV.

Cataract surgery is very safe and successful in restoring vision. Rarely, however, some risks and complications can occur. Learning about them will help you detect them and treat them early if they happen.



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