

What is a cataract?

A cataract is a clouding of the lens in the eye that affects vision. Most cataracts are related to aging. Cataracts are very common in older people. By age 80, more than half of all Americans either have a cataract or have had cataract surgery.

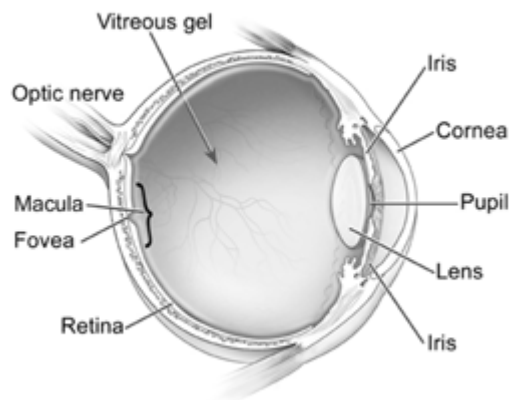
A cataract can occur in either or both eyes. It cannot spread from one eye to the other.

What is the lens?

The lens is a clear part of the eye that helps to focus light, or an image, on the retina. The retina is the light-sensitive tissue at the back of the eye.

In a normal eye, light passes through the transparent lens to the retina. Once it reaches the retina, light is changed into nerve signals that are sent to the brain.

The lens must be clear for the retina to receive a sharp image. If the lens is cloudy from a cataract, the image you see will be blurred.



Normal vision



Viewed by a person with cataract

What causes cataracts?

Most cataracts are due to age-related changes in the lens of the eye that cause it to become **cloudy** or opaque. However, other factors can

contribute to cataract development, including: Diabetes mellitus. People with diabetes are at higher risk for cataracts.

What are the symptoms of a cataract?

The most common symptoms of a cataract are:

- Cloudy or blurry vision.
- Colors seem faded.
- Glare. Headlights, lamps, or sunlight may appear too bright. A halo may appear around lights.
- Poor night vision.
- Double vision or multiple images in one eye. (This symptom may clear as the cataract gets larger.)
- Frequent prescription changes in your eyeglasses or contact lenses.

These symptoms also can be a sign of other eye problems. If you have any of these symptoms, check with your eye care professional.

How is a cataract detected?

Cataract is detected through a comprehensive eye exam that includes:

1. **Visual acuity test.** This eye chart test measures how well you see at various distances.
2. **Dilated eye exam.** Drops are placed in your eyes to widen, or dilate, the pupils. Your eye care professional uses a special magnifying lens to examine your retina and optic nerve for signs of damage and other eye problems. After the exam, your close-up vision may remain blurred for several hours.
3. **Tonometry.** An instrument measures the pressure inside the eye. Numbing drops may be applied to your eye for this test.

Your eye care professional also may do other tests to learn more about the structure and health of your eye.

What treatment options are available?

Developing a cataract does not mean a permanent loss of vision quality, or having to give up the things you love, because cataract surgery is a safe and effective way to improve your vision.

Fortunately, there is a commonly performed surgery to treat a cataract. This involves removing the natural lens from the eye and replacing it with a new artificial lens.

What is involved in surgery?

Cataract surgery involves removing the cataract and replacing with an artificial lens implant.

When you visit our OPD, our doctor will test your eyes to check how well you can see. The doctor will dilate your pupil in order to examine the condition of the lens and other parts of the eye and suggest the treatment accordingly. While you can bring your glasses or lenses along, it is advisable not to come for the surgery with your contact lens on.

The counseling department will then brief you about the surgery and run fitness & safety tests to ensure you are fit for the operation. You will be given a surgery date by the healthcare team.

The healthcare team at NSSEH will carry out a number of checks to make sure you have the operation you came in for and on the correct side. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

Types of Surgery

Currently, the two most frequently used techniques to remove a cataract are-

1. Phacoemulsification (PKE)
2. Micro Incision Cataract Surgery (MICS)

The other two techniques for cataract removal are-

1. SICS (Small Incision Sutureless Cataract Surgery)
2. Extracapsular cataract extraction (ECCE)

What is Phacoemulsification?

Phacoemulsification is the surgery which involves removing the cataract from your eye and replacing it with an artificial lens implant.

In this surgery, the eye surgeon makes a very small cut at the edge of the eye's clear front covering, known as cornea. Sound waves (ultrasound) break the cataract into small pieces. These pieces are removed from the eye using suction. Through the same incision, a new artificial lens (intraocular lens implant) is then inserted into the eye and placed behind the iris in the lens capsule that held the natural lens of the eye.

Benefits of Phacoemulsification

- The surgery requires no stitches
- It is quicker
- Less post-operative discomfort as the surgery is gentler and less invasive
- Early rehabilitation
- Less chances of induced astigmatism
- Faster healing and recovery time

What is Micro Incision Cataract Surgery (MICS)?

Recent advances in the conventional phacoemulsification cataract surgery procedures have gradually reduced the size of the incisions needed for the surgery from 12 mm to 2.8 mm, making it safer and less invasive.

MICS is the advanced, state-of-the-art technique for treating cataracts. In this type of surgery, the cataract is emulsified using sound waves through a micro incision.

In MICS, incision of 1.8 mm to 2.2 mm is required to perform the entire cataract surgery procedure. The micro incision heals fast, enabling you to recover quickly.

Benefits of MICS

- Safe and reliable surgery

- Improved patient comfort as the surgery is gentler and less invasive
- Prevents unwanted interferences to vision known as astigmatism
- Faster healing and recovery time

What is SICS (Small Incision Sutureless Cataract Surgery)?

Manual small incision cataract surgery is a non-phaco type of cataract surgery through a small corneo-scleral tunnel with the help of self sealing corneal valve through which the nucleus is delivered intact or by dividing into two or three pieces.

What is Extracapsular cataract extraction (ECCE)?

In this type of surgery, the eye surgeon makes an 8 mm to 10 mm cut at the edge of the eye's clear front covering, known as cornea, and another small cut into the front portion of the lens capsule. The lens is then removed in a single piece. An intraocular lens implant (IOL) may then be placed inside the lens capsule. And the incision is closed using sutures.