

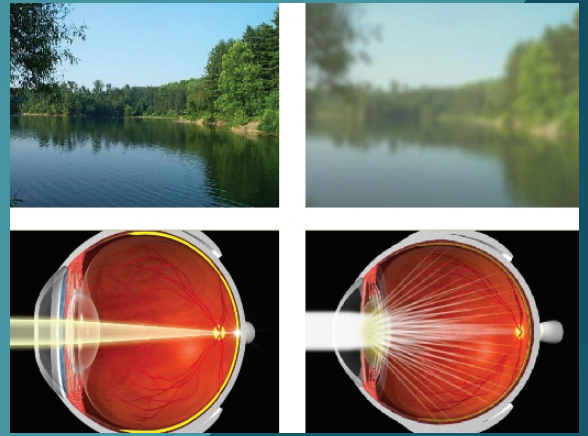


# CATARACT

**A GUIDE FOR OUR PATIENTS**

# What is a Cataract?

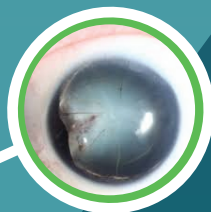
Cataract is a condition where the natural crystalline lens of the eye becomes cloudy leading to decrease in vision. It is the most common cause of blindness which is treatable with surgery. Most cataracts are simply due to the natural ageing process of the human lens like greying of hair. It is not considered as a disease and they do not occur at the same age or progress at the same rate for everyone. Opacification of the lens obstructs light from passing and being focused on the retina at the back of the eye. Cataract can also occur secondary to an eye trauma, UV-B rays, genetic abnormalities, smoking, metabolic diseases or even certain medications.



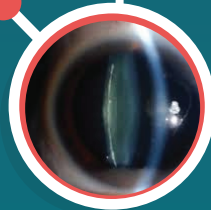
## Types of Cataract



**Senile:** Age-related opacification of the lens. It is staged as Nuclear Sclerosis (opacification of lens centre), Cortical Cataract (opacification of peripheral fibres of the lens) and Subcapsular type (plaque like opacity at the back of the lens)



**Traumatic:** Cataract may occur following injury to the eye. This kind of cataract may vary from minor opacification of the natural lens to profound damage to the natural lens along with injury to outer layers of eye and the posterior part of the eye as well. The force exerted during trauma may damage the zonular fibres that support the lens.



**Posterior Polar Cataract:** A posterior polar cataract is a round, opaque mass that is composed of malformed and distorted lens fibres adherent to the posterior capsule which may be difficult to remove and may sometimes require special types of instruments and lenses.

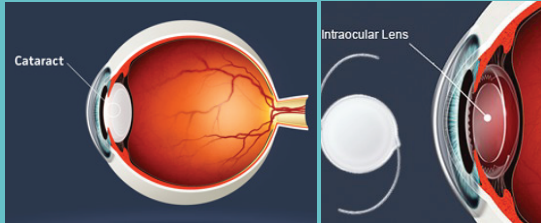


**Subluxated Cataract:** Zonular fibres are attached to the bag which encapsulates the natural lens and they ensure lens centration. Sometimes due to weakness or malformations of these supporting fibres, the lens may be partially or completely displaced from its natural position. Patient may complain of diminution of vision and/or doubling of images in one eye. This condition may be present since childhood due to a metabolic disease or may occur due to injury.



## When should you opt for a cataract surgery ?

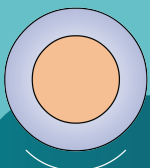
The decision to have a cataract surgery is often elective. However, as activities such as driving and reading become increasingly difficult as a result of cataract, surgery becomes a logical option. With success of the modern implants, waiting for cataracts to 'ripen' is no longer necessary. Since a cataract will eventually worsen, there is no advantage in delaying treatment if vision is sufficiently affected. You are never 'too young' to have cataract surgery, just as you are never 'too old' to enjoy better vision!



## How do you treat cataract ?

Cataracts are treated surgically by removing the natural lens and replacing it with a permanent artificial lens called IOLs (Intraocular lens) which can focus light on to the retina and restore vision

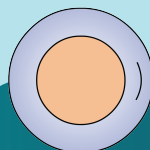
## Types of Cataract Surgery



7-8 mm

### SICS-Small Incision cataract surgery

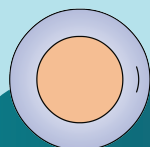
This is a cataract surgery wherein a 6-7 mm cut is made and the cataract is removed as a whole preserving the capsule of the lens. Then the new artificial intraocular lens is inserted into the lens capsule through the same wound to replace the old lens. The wound is then sealed and usually stitches are not required.



2.8 mm

### Phaco/Phacoemulsification

Phacoemulsification refers to modern cataract surgery via a small 2.8-3 mm cut, in which a handheld probe is used to break up and emulsify the lens into liquid using ultrasound energy. The resulting 'emulsion' is sucked out. After these steps, the artificial intraocular lens is inserted inside the eye through the same wound.



2.2 mm

### MICS-Microincision Cataract Surgery

MICS is a modification of standard phacoemulsification where the incision made on the eye is smaller. It is around 2.2mm and phacoemulsification is performed as usual. It is minimally invasive and provides faster visual rehabilitation.



### Post Refractive Cataract surgery

For patients who have previously undergone refractive surgeries like LASIK/SMILE/RK, we offer customized solutions for cataract surgery by performing IOL calculations using state of the art machines thus offering the best visual outcomes.

### Femtosecond Laser Assisted Cataract Surgery (FLACS)

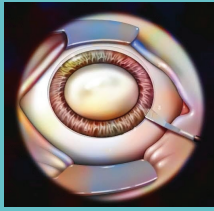
Cataract surgery can be laser-assisted where several crucial surgical steps such as surgical cuts, capsulorhexis, breaking of cataract are performed using a femtosecond laser which is then removed by the surgeon and the intraocular lens is placed. This kind of surgery is known to have lesser complications because of improved precision and repeatability of surgical steps.



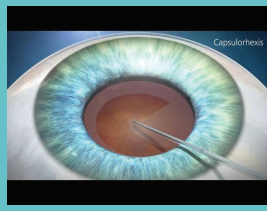
# Steps of Cataract Surgery

Anaesthetic drops or jelly is applied over the eye or an anaesthetic injection is given around the eye to make your surgery pain-free.

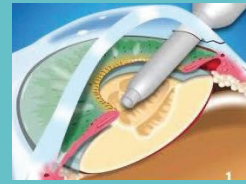
**An eye clip is placed to keep your eyes open during the surgery.**



**Corneal incision**—Two to three small cuts are made through the clear cornea to allow insertion of instruments into the eye.



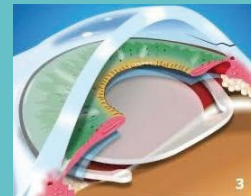
**Capsulorhexis**—A needle or small pair of forceps are used to create a circular opening in the capsule (cover) of the lens.



**Lens removal**—The lens consists of a hard part—the nucleus and a soft part—the cortex. The nucleus is removed by various means after being cut into small bits.



**Irrigation and aspiration**—The cortex, which is the soft outer layer of the cataract, is aspirated or sucked away. The fluid removed is continually replaced with a special solution to prevent collapse of the eye.



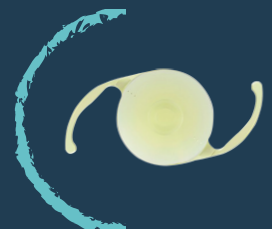
**Lens insertion**—A plastic, foldable lens is inserted into the capsular bag that formerly contained the natural lens. The final step is to bring the eye to its normal pressure and seal the wounds that have been created. Stitches are usually not required, but may be needed in certain situations.

## What are the types of Intraocular Lenses available ?



**Monofocal IOLs:** are implantable lenses made of different materials and placed permanently in the eye after removal of the cataractous lens. Monofocal lenses have a single zone of clear focus set for excellent distance vision, but require the use of reading glasses for intermediate distance such as using laptops and near tasks, like reading using mobile phones, sewing etc..

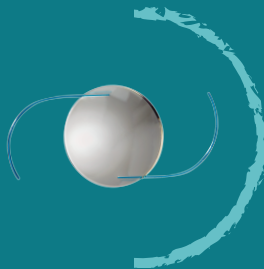
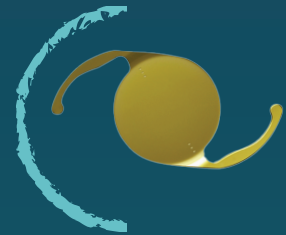
**Extended Depth of Focus (EDoF) IOLs:** are special kind of modified monofocal lenses that give good distant, intermediate and functional near vision with minimal visual disturbances. You may require to wear glasses to read very fine prints with these lenses.





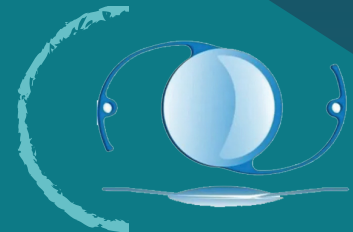
**Multifocal IOLs:** have multiple focal points that can provide vision for distance, intermediate and near work thus reducing the dependency on spectacles. These lenses are sensitive to light and may cause visual disturbances like glare and halos especially at night-time.

**Toric IOLs:** are intraocular lenses that reduce the effect of pre-existing corneal astigmatism by reducing the residual refractive cylinder and improve the quality of uncorrected distant vision. This is equivalent to correcting the cylindrical power that you may have with spectacles.



**Three Piece IOLs:** are versatile flexible lenses that can be placed in the sulcus. They are particularly useful in cases where the capsular bag is weak making IOL implantation in the bag challenging.

**Scleral Fixated IOLs:** Ideally, the lens is placed in the capsular cover (bag) of the lens using the support structure of the natural lens. However, In instances where "in the bag" implantation isn't possible these special IOLs can be fixed to the sclera with special permanent sutures. Scleral Fixated Intraocular lens (SFIOL) are well established and a good option in patients with insufficient capsular or zonular support.

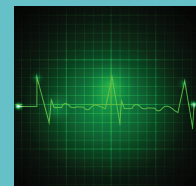


## General pre-operative Examination

The pre-operative work-up includes various clinical examinations to evaluate the eye as a whole. Investigation done pre-operatively include some specialised eye measurement tests to determine the IOL type that may best suit you. Apart from these there will be few blood tests and electro-cardiogram (ECG) done to determine your physical fitness to undergo a surgical procedure. The entire testing takes about 3 hours.

If you wish to have the examination performed elsewhere, kindly bring all the results with you on the day of your cardiopulmonary clearance with the physician.

If you are diabetic, please discuss with the physician about the medication you should take before surgery.



## How should I prepare for Cataract Surgery?

Cataract surgery is a day-care procedure. The entire process of admission, surgery and discharge takes about 3 hours. However, we request you to be prepared to stay for atleast half a day in the hospital only if required.



# Patient education instructions prior to cataract surgery

In order to prepare you for the surgery, we advise you to



Stay calm and relaxed on the day of surgery. We advise you to have breakfast about 2 hours before surgery.

Please report at the OT reception on time communicated to you. Please bring an attender to assist you, preferably an adult who has fair knowledge of your health.



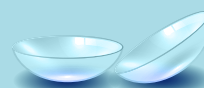
Take a bath and wear clean clothes. During the admission, you will be asked to change into surgical gowns. Please bring a bag to put your clothes in. Avoid using any cosmetics on your face.

We advise you to leave your valuables and jewellery at home. You will be asked to remove all ornaments, including body piercings prior to surgery. Hospital does not take responsibility for lost or stolen goods.



Make sure to take all your routine medications as scheduled. Do not stop taking your regular medicines unless advised by your doctor. Talk to your doctor if you are taking ayurvedic medicines. Your doctor may want to discontinue them prior to the surgery.

Avoid wearing contact lenses before surgery. you may wear your glasses instead.



Notify your surgeon if you develop a cold, persistent cough, fever, facial, puffiness/rashes or any other health related problems prior to surgery.

If you must cancel/postpone your surgery, notify your counsellor to make alternative arrangements.



If your surgery is under general anaesthesia or if your surgery requires longer duration, we encourage you and the accompanying family member to use patient rooms available in the hospital from a day prior to surgery. For additional details on availability and charges, please contact your counsellor.

## What should I expect AFTER my surgery?

- Immediately after surgery, you will be shifted to the ward.
- Your operated eye may either be patched or you may be given protective glasses to wear, on your way home.
- You might experience some redness, watering, itching, sensitivity to light and blurred vision in the operated eye which is expected after surgery.
- Post-operative medications and the instructions for its use and general precautions post-surgery will be explained by the counsellors.
- Once you change out of your surgical gown, you may go home. You are instructed not to drive. If you need assistance to arrange a cab please inform the floor co-ordinator.
- If you experience severe pain, sudden blurring of vision or have episode of vomiting, please do not hesitate to call the hospital emergency number.

## Should I see my surgeon after my surgery ?

Yes, be sure to follow-up with your surgeon on the next day at a time given to you by your counsellor. It is important for the surgeon to examine you to make sure that your eyes are healing well.



## Potential complications with cataract surgery

Though cataract surgery is one of the most successfully performed surgical procedures, complications may still occur. Over 95% of patients have improved vision after cataract surgery. Most complications are minor, such as swelling of the cornea or retina or increased pressure in the eye. In general, the risk of severe visual loss is very rare, but may occur as a result of infection or bleeding inside the eye, or even retinal detachment, which may occur months or years after a successful cataract surgery. Sometimes the vision after cataract surgery does not improve to the full extent due to other eye diseases like age related macular degeneration (ARMD), diabetic retinopathy, glaucoma etc. Your doctor would have checked for these conditions and if detected, the surgery would have been performed under guarded visual prognosis (GVP).

# CATARACT

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