

OPHTHALMOLOGY

Latest advancements in cataract surgery

Our eyes contain a lens that works like the autofocus function in a camera. It is a clear, transparent lens that changes shape so that the focus of our eyes is adjustable, enabling us to see distant and near objects clearly.



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As we get older, especially after 50, the lens in our eye gradually becomes cloudy and prevents us from seeing things as clearly as we did before. This is usually a slow and painless process that results from age-related degeneration. Unfortunately, this cannot be avoided or prevented and eventually, a cataract is formed. This is a cloudy lens that cannot focus images clearly anymore, making it difficult to read, watch television or drive a car.

People with cataract often complain of blurred vision. Some may find their spectacle prescription changes quickly over the course of one to two years even though it had been stable for many years before that. Others may notice that colours appear faded. Even as these symptoms intensify with the worsening of the cataract, they seldom experience eye pain, redness, tearing or headache.

Cataract surgery

This is one of the most commonly performed surgical procedures, and is done as a day surgery procedure under local anaesthesia. The cloudy lens is removed and an artificial lens is implanted to restore clear vision. In the past, patients had to wait until their cataracts had 'ripened' before they could have them surgically removed. Extracapsular cataract extraction was done using a large incision so the lens could be removed as a whole. This required the wound to be stitched and the healing took many weeks. This technique is used less often now except for some advanced cataracts.

With the technological advances of the last 20 to 30 years, it is no longer necessary to wait until the cataract is at



such an advanced stage. Now, we consider it the right time for surgery when the cataract causes enough visual impairment to hinder a person's daily activities. This timing could vary between people, depending on the visual requirements of their occupation, hobbies and lifestyle. Those who require clear, sharp vision would need to undergo cataract surgery at an earlier stage than those who don't.

Phacoemulsification is used for most patients and can be carried out through incisions measuring 2.75mm or less. The cataract is broken into small pieces with ultrasound energy and sucked out of the eye, and then a small foldable lens implant is inserted in its place. Recovery time is greatly reduced because of the smaller incision sizes and safer technique. Over the last two to three years, femtosecond laser-assisted cataract surgery has been used to create the incisions and soften the cataract so that minimal ultrasound energy is required to complete the surgery. This form of surgery is beneficial for certain types of cataracts but

offers only slight advantages over the usual phacoemulsification without femtosecond laser in most forms of cataract.

Lens implants

Several types of artificial lenses can be implanted at the time of surgery. A monofocal lens enables clear vision for distant objects, so the patient would require spectacles to read and see near objects clearly. Toric lenses correct astigmatism in the eye and reduce the need for spectacles after surgery.

Multifocal lenses are convenient for those who do not wish to wear reading glasses. Toric multifocal lenses give those with larger amounts of astigmatism the chance to enjoy the benefits of multifocal lenses. Toric and multifocal lenses work well in patients with normal eyes but patients with eye diseases would find their usefulness diminished.

The best patient advice? Have a discussion with your ophthalmologist so that the most appropriate lens implant is chosen to fit your occupation, lifestyle and eye condition. [🔗](#)