

# ***Catalys FemtoSecond Laser for your Cataract<sup>®</sup>***



This booklet is for people with cataract and their families and friends. It provides information about how ***Catalys FemtoSecond Laser*** surgery would benefit them. This booklet explains how the Femto"Second Laser system works, what the patient can expect from the procedure and discusses its key advantages.

*The First and ONLY Catalys FemtoSecond Laser in  
Mumbai* at the

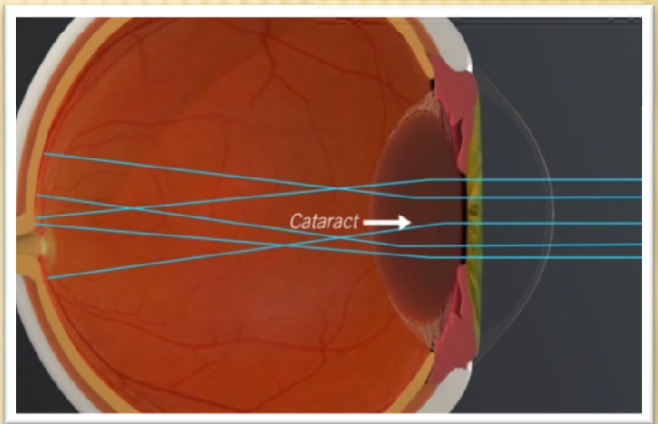
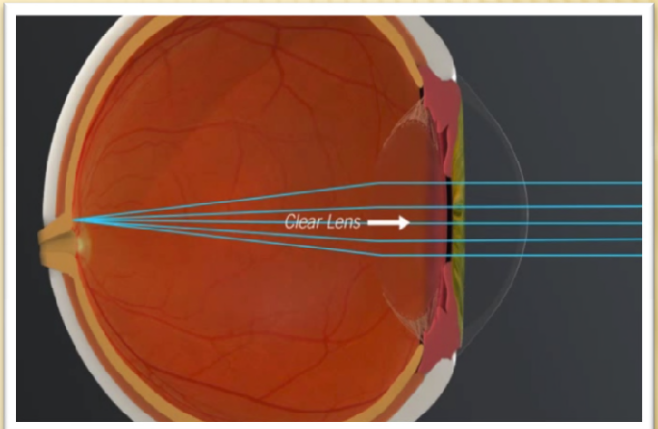
**Mehta International Eye Institute**

Asia's Most Advanced Eye Centre

**www.mehtaye.com**

# What is a Cataract ?

- ✗ The lens is a transparent structure in the eye that helps focus that light to create a clear view.
- ✗ As we age, the lens can become cloudy – this is called a cataract.
- ✗ When light passes through a cataract, it can become distorted or blurry.
- ✗ Compared to vision with a clear lens, vision with a cataract The vision may look fuzzy and colors might be muted.





# All about Cataracts

- ✖ The symptoms of cataracts are progressive and can not be corrected with glasses or contacts. The patient may experience difficulty reading signs while driving at night.



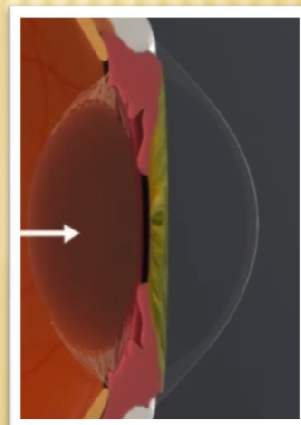
vision through clear lens.

- ✖ When symptoms become bothersome or limit your daily activities, its time to consider treatment.

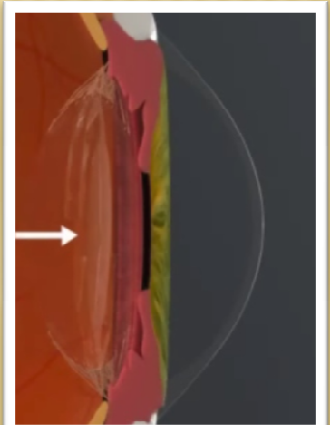


vision through cataract

- ✖ Treatment for cataracts involves removal of the cataract and replacement with an artificial lens that can restore clear vision.



Cataract



Lens implant

# Cataract surgery.. Different techniques

- ✖ **Extra capsular small incision, non phaco technique surgery.** Your doctor makes a long incision on the side of the cornea and removes the cloudy core of the lens in one piece. The rest of the lens is removed by pulling it out with a forceps or sliding it out.
- ✖ **Phacoemulsification or phaco:** The standard way of removing cataracts. Here ultrasound energy is used to dissolve the cataract.. In soft cataracts it works well. In hard cataracts it damages the innermost layer of the cornea leading to blurring of vision which some times may be permanent. It cannot be used in weak corneas or in those who have weak eyes.
- ✖ **Please note.. Phaco surgery is not Laser surgery as it uses focused ultrasound energy and erroneously has been labeled as Laser surgery. There is NO LASER in Phacoemulsification**
- ✖ **Pure Cataract Laser surgery using the *Catalys FemtoSecond Laser*** Is the only true laser cataract surgery and gives the maximum advantage to the patient. This type of surgery is bladeless, safe to the cornea and the eye and is very rapid and efficacious.



The advanced  
Optikon R-Evolution  
phacoemulsification  
machine only at  
Mehta International  
Eye Institute



Laser cataract  
“Catalys” machine



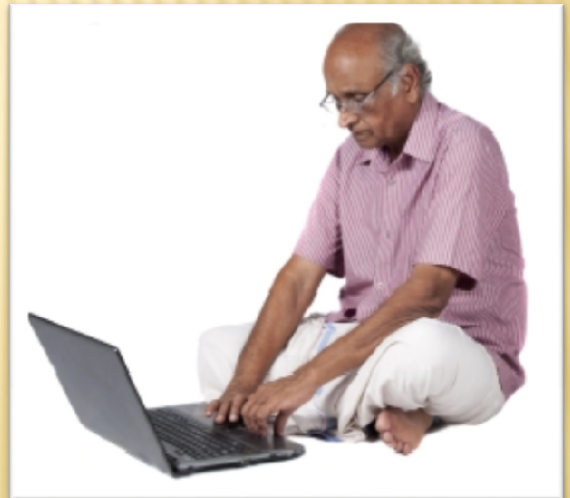
# The CATALYS:

## A pure Femtosecond Laser, bladeless system

The **Catalys FemtoSecond Laser** System—developed in the heart of Silicon Valley—is designed specifically for laser cataract surgery. **Catalys FemtoSecond Laser** is one of the most popular technique for cataract removal all over the world with thousand having being treated on this platform which is both CE (European) and FDA (American) standards certified.



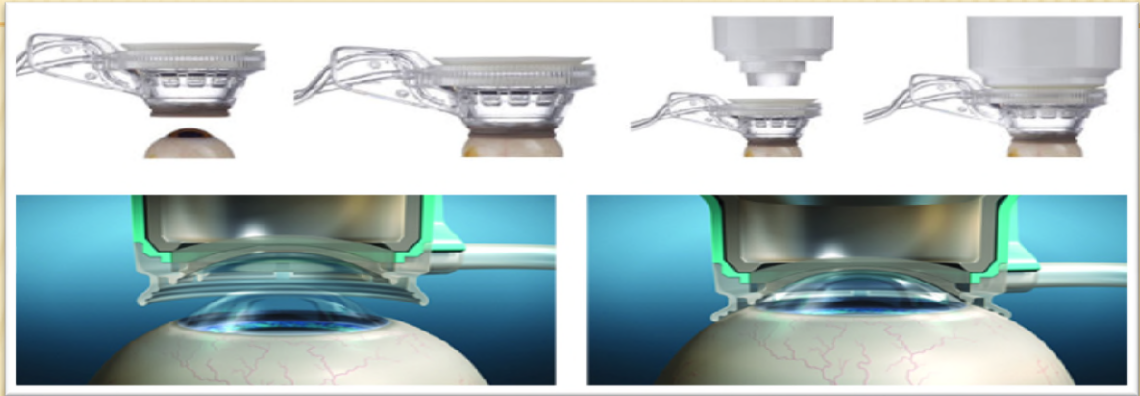
- ✗ **Catalys FemtoSecond Laser** (Opti Medica Corp.USA) is the world's most advanced laser system for cataract surgery and is bladeless as the surgeon can make all openings in perfect shape, size and position using the femto second laser.
- ✗ The patient walks off the table and since the laser opening are self sealing, can join the office the next day, work, or even travel with complete safety.



Your **Vision** is Our **Mission**

# Steps of Catalys Laser cataract surgery

## ✖ Step 1 Docking to the machine



- ✖ The eye is “docked” or attached to the *Catalys FemtoSecond Laser* machine using a very simple suction device. The level of suction is so low that one cannot feel it. The suction and docking permit total safety to the eye and the patient

## ✖ Step 2 Computerized planning of the entire procedure



The Computerized Custom Guided system does the complete planning of the entire procedure in advance and all parameters are checked for accuracy and total safety. Once the planning is complete the laser will carry out the entire procedure in only seconds.



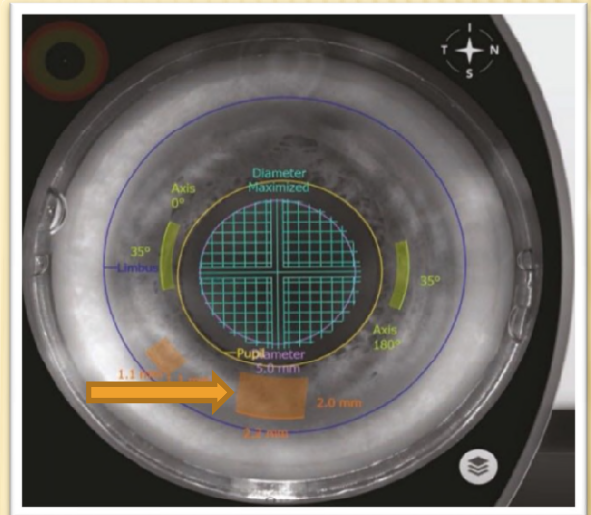
# Steps of laser cataract surgery

## ✖ Step 3 Laser corneal incisions

The laser (blade-free) makes auto sealing openings in the cornea

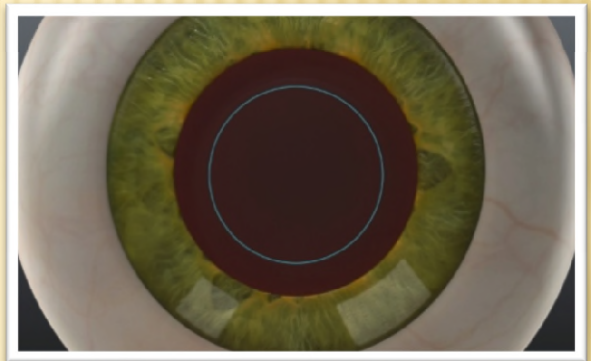
## ✖ Step 4 Capsulotomy

The opening of the lens capsule is done with micro millimetre perfection giving a perfectly centred and round, safe rhexis.

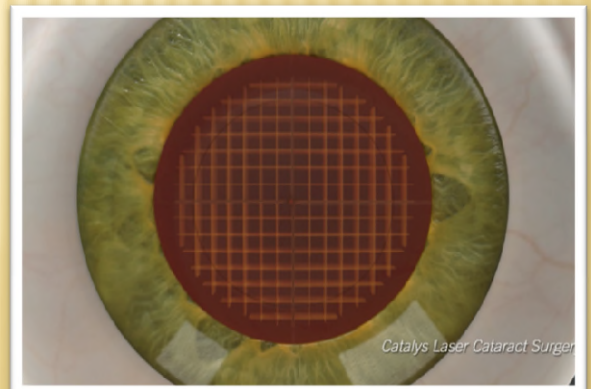


## ✖ Step 4 Laser cataract fragmentation

Removing the hard central part of the lens or the nucleus is simple using the advanced laser pattern scanning technology. The **Catalys FemtoSecond Laser** breaks up the lens nucleus in grid-like pattern which facilitates the subsequent removal of the lens nucleus significantly irrespective of the lens hardness.



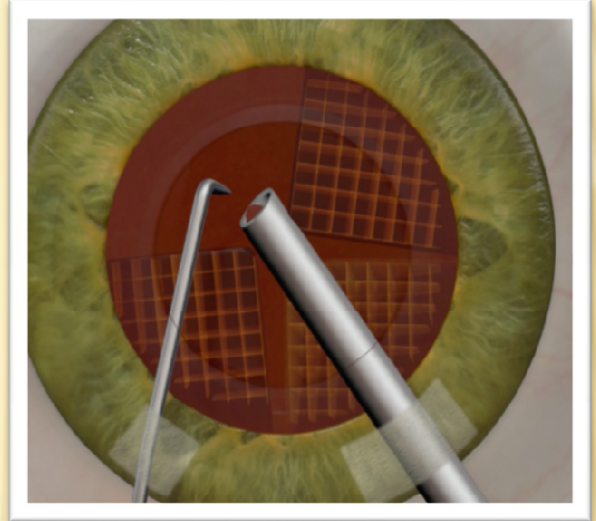
## ✖ ALL THE ABOVE STEPS ARE COMPLETED IN LESS THAN A MINUTE.



# Final steps of the Laser cataract procedure

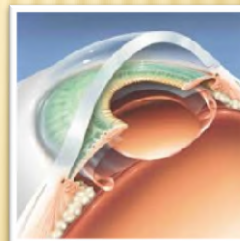
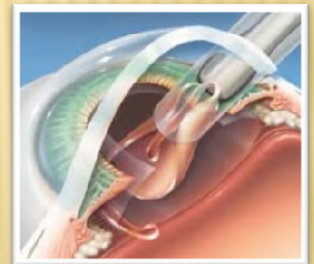
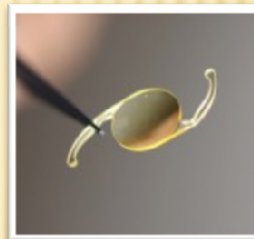
## ✖ Step 5 Simple aspiration of the fragmented lens

The left over residue is vacuumed off and a new implant (IOL) is inserted in around a minute. The patient walks off the table and since the laser opening are self sealing, can join the office the next day, work or even travel with complete safety.



## ✖ Step 6 Insertion of IOL in the eye and closure.

The laser incisions are self sealing and do not need any sutures or any management. The openings lock down making sure it is totally safe and free of any chances of late infection.



A new Foldable IOL is injected in the eye





# 10 KEY BENEFITS of Catalys Femtosecond cataract surgery for the patient

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The Catalys Femtosecond Laser is one of the most important technological advances in the field of cataract surgery to come along in some time. This computer-guided, surgeon-controlled laser has a number of advantages when compared to traditional cataract surgery, that include:

- 1) **Laser Precision** Surgeon can use the ***Catalys FemtoSecond Laser*** to create laser precise incisions, including a circular opening in the lens capsule to access and remove the cataract. This precise incision helps the surgeon place the new artificial lens where intended thus allowing far greater surgical precision.
- 2) **Totally blade free and hence painless** .Since Involves no surgical blades for corneal incisions and anterior capsulotomies.
- 3) **Individual Customization** .Since every eye has a unique size and shape, prior to treatment, the ***Catalys FemtoSecond Laser*** images patient eye and makes precise 3D maps of relevant structures. This enables surgeon to create a tailored treatment plan that is uniquely customized for patient eye.
- 4) **Auto Astigmatic control by laser guided arcuate incisions** Corrects for Astigmatism via laser rather than a manual incision, during the time of cataract surgery. This lessens the need for glasses post-operatively. Most important since there is no toric lens hence no risk of the lens rotating in the eye and changing the power.
- 5) **Diminishes risks during surgery** Since the laser automates the difficult steps in traditional cataract surgery the risks are reduced significantly

**For further information :**

**[www.mehtaeye.com](http://www.mehtaeye.com) / [www.mehtayeinstitute.com](http://www.mehtayeinstitute.com)  
[www.amo-inc.com](http://www.amo-inc.com)**

# 10 KEY BENEFITS of Catalys Femtosecond cataract surgery for the patient

- 6) **Precise centring of Implants** The laser precisely centres the capsulotomy to the optical axis of your eye. Thus the new IOL fitted will give precision results. With the **Catalys FemtoSecond Laser**, premium lenses especially multifocal functions superbly as they are always perfectly centred
- 7) **Security and tissue protection** The progressive 3D imaging method and sophisticated software of **Catalys FemtoSecond Laser** makes sure that the laser pulses impinge only on the desired treatment region so that the surrounding tissue is protected. In addition, the laser system enables a smooth and gentle removal of the lens nucleus
- 8) **Ideal for weak corneas** Since zero ultrasound energy is used the cornea cells in the innermost endothelial layer stay protected. In compromised eyes the **Catalys FemtoSecond Laser** is a far far safer procedure
- 9) **Speed and comfort** Each treatment is planned individually with **Catalys FemtoSecond Laser**. This increases the accuracy and minimizes the duration of the intervention. In a unique gentle way the system of the eye docks to keep it stable. This results in high patient comfort
- 10) **Faster recovery and quicker return to daily activities** The gentler techniques induces virtually no inflammatory response so the eye is quieter and the self sealing openings give high security to the eye from external risks.  
Most normal activities, except strenuous exercise, need not be restricted following cataract surgery. And your sight will continue to improve for several days or weeks after surgery.



# Mehta International Eye Institute

## Knowing Prof. Dr. Keiki R. Mehta



**M.B.B.S., D.O.M.S., M.S.(Ophth), D.O. (Ireland)  
D.O. (London), F.N.E.R.F(U.S.A.)F.R.S.H. (London), F.I.O.S.(U.S.A.)**  
Chief Surgical & Medical Director, Mehta International Eye Institute  
Awarded **PADMASHREE** by the President of India in 2008 for  
Exemplary Surgical Skills and his outstanding Achievements and  
Research in Ophthalmology

- Prof. Dr. Keiki R. Mehta is India's foremost Consultant Ophthalmic Surgeon, and is The Surgical Chief & Medical Director of The Mehta International Eye Institute, Colaba, Mumbai, considered to be Asia's most advanced and foremost Ophthalmic Institute, and specializes in Cataract, LASIK, Glaucoma, Squint, Lazy Eyes, Keratoconus, Retinal surgeries and treatment. An outstanding researcher and clinician, he has extensive experience of Excimer Laser, PRK and LASIK techniques which he has done on over 11000 patients over the last 15 years.
- Received the "ASCRS Honored Guest Award", the highest recognition award by the American Society of Cataract and Refractive Surgeons, (ASCRS), the world's largest ophthalmic society, at the ASCRS Annual Symposium held in Boston, USA this April, 2014 by the President of the Society, Prof. Dr. Eric Donnenfield.
- Awarded the Antonio SCARPA Medal and Oration of the Italian Ophthalmic Society, which is the highest honor given by the Italian Ophthalmic Society for outstanding Work, Research, Outstanding Surgical Skills in Ophthalmology by the President of the Society, Prof. Matteo Piovella in Milan, Italy, May 2014.
- He has been honored by the Swiss Eye Research Foundation, by the President of the Swiss Ophthalmic Society, Prof. Bojan Pajic at the recently concluded Congress EyeAdvance Focus conference, June 2014.
- He is the only Indian to be elected a Member of the Legion d' Honor of the Instituto Barraquer, Barcelona, Spain
- Prof. Dr. Keiki Mehta is the only distinguished Indian Ophthalmic surgeon to be ever invited to Operate Live at Video Cataracta in Milan, Italy, where only the best of the best are invited, at Europe's biggest Live Surgery Conference
- Prof. Dr. Keiki R. Mehta is considered India's foremost Ophthalmic surgeon, and has conducted Live Surgical workshops in every major city in India, and has trained thousands of doctors in Intraocular implant surgery and Phacoemulsification and Laser refractive surgery including Lasik

.... P. T. O.

