Wide entrance

Reception area

Spacious waiting area

Superb instruments

All about the Mehta International Eye Institute

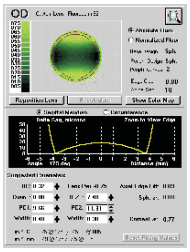
- The Mehta International Eye Institute is recognized as a prominent center for patient care, vision research and physician education. Our state-of-the-art facility is oriented toward providing patient-friendly care. Our internationally renowned physicians possess the clinical and surgical expertise to provide consultations and medical and surgical care for complex ophthalmic problems.
- Eye services are comprehensive, and include cataract removal, strabismus repair, glaucoma correction, retinal surgeries, and management of chronic corneal diseases. Complete pre-operative and post-operative care, as well as patient education, is provided.
- The Mehta International Eye Institute has an eye care team that provides the professional support necessary to ensure that every patient receives personal attention. Our dedicated staff is highly trained in the art of patient care and draws on their many years of collective experience in assisting you.
- We provide a level of individual attention highly valued by our patients, whether they are visiting us for an outpatient procedure, extended care, or emergency treatment.
- Today, MIEI (Mehta International Eye Institute) is considered one of the world's premier ophthalmic treatment, research and education centers.
- One of the hallmarks of a quality eye care provider is its commitment to state-of-the-art technology. We at the Mehta International Eye Institute strive to maintain the most up-to-date facilities so patients receive the best care possible.
- During your visit you'll be thoroughly examined using the latest technology. We utilize computerized, electronically activated equipment designed for maximum precision, accuracy and patient comfort.
- Healthy eyes means more that 6/6 vision. We believe preventive care is an important part of eye care. So we combine sophisticated technology with our know-how to thoroughly examine the health of your eyes. This allows us to evaluate for serious conditions that often do not present with any symptoms in their initial, yet most treatable stages.
- We want you to see as well many years from now as you do today, so we spend extra time conducting a variety of tests you may not have experienced elsewhere.
- You'll find we'll always take time to explain the results of your examination describe your options and listen to your needs. We're here to make sure all your questions are answered, so you fully understand your treatment program at each phase.
- We believe that the Mehta International Eye Institute provides the most sophisticated and comprehensive subspecialty care available to ophthalmic patients in Asia.
- We hope that coming to Mehta Eye Institute will be one of your most thorough and enjoyable eye care experiences ever.

Our Quality Policy

- *We at The Mehta International Eye Institute will provide the best quality of loving and caring humane services to our patients through our committed, professionally oriented team.*
- *We aspire for total customer Satisfaction in all ophthalmological services we undertake and will constantly strive for continual improvement.*

Computerized Contact Lens Fitting

- The goal of contact lens fitting is to find the most appropriate contact lens for your optimal comfort and vision. An enormous variety of types, styles, materials, sizes and colors are offered. We are committed to taking the time and making the effort to fit you properly. Although many patients need only one fitting session, some require several appointments. In our experience, the extra time, effort and patience are very worthwhile, both for your ultimate satisfaction and the health of your eyes .



Corneal contact lens map

LOW VISION CLINIC

Low vision is an condition in which the vision loss is severe enough to interfere with the daily life of the patient. After a retina or corneal problem the vision can only be enhanced sufficient to read or see with special aids.

The vision rehabilitation centre trains low vision patients to overcome their visual impairment by using magnifying devices and by adapting independent skills to improve their quality of life..

Counseling the patient in accepting the limitations imposed by the eye condition, overcoming psychological and emotional problems and facilitating acceptance of low vision devices form part of the rehabilitation program.

Mehta International Eye Institute is a link partner in VisionConnection (www.visionconnection.org), an accessible, interactive global Internet portal for people who are partially sighted or blind rehabilitation.

The Mehta Institute is developing a new software for the blind person to be able to work comfortably on the computer. Undergoing trials at the Workshop for the Blind, it will bring much needed relief to the blind And provide an opportunity to be gainfully employed.

OUR CHARITABLE PROJECT

Netra Rakshak Rural Eye Hospital Kadav: Maharashtra

Netra Rakshak Rural Eye Care Hospital is run by Netra Rakshak Charitable trust, R. C. Mehta Memorial Charitable trust with Rotary Dist 3140. It is sponsored by The International Academy for Advances in Ophthalmology .

The hospital is situated in a small village called Kadav, which is in Karjat Taluka, in Raigad and is in a proclaimed Adivasi area- A zone of extreme poverty with no ophthalmic care in a 50 kilometer radius.The adivasi's are the poorest of the poor.

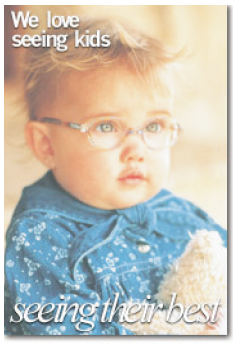
A core principle of the Netra Rakshak Rural Eye Care Hospital System is that the hospital must provide high quality services to the poor as good as is available in any good hospital Bombay. This principle is achieved through high quality, large volume care and a well-organized system. Good donations have been the backbone of this charitable venture.

At Netra Rakshak Rural Eye Care Hospital great stress is placed on maximum utilization of resources. The hospital will have well-equipped clinics with comprehensive support facilities.

Netra Rakshak Satellite System encompasses an advanced model for rural eye care. Instead of conducting surgeries in the primary health centers for rural camp surgeries, Netra Rakshak Rural Eye Care Hospital model has suggested a model of one base camp hospital, with five satellite centers with in 100 km radius of the hospital.

Satellite Concept: The satellite centers would screen patients in the villages and send them to the base camp for further referral if required. The base camp would conduct surgeries and perform post-operative care While the satellite centers would have minimal infrastructure to screen patients, the base camp would be a well equipped hospital with state of the art surgical instruments, operation theatre, infection control and efficient ophthalmic surgeons

For the pilot project, a 50-bed charitable eye hospital has being built in Kadav, with five satellite centers commencing shortly within a 100 km range.



PAEDIATRIC EYE SERVICES.

These services focus on the entire family, providing a range of support to sighted and visually impaired children and their parents. The components of the program include parent support, outreach to rural communities and county health clinics, public education, and high-risk tracking and intervention.

Children are unable to distinguish between clear and unclear vision. Even if your child can read the smallest letters on an eye chart, there may still be hidden problems. School vision tests briefly screen vision only at a distance. The majority of school tasks require that a child be able to focus and see clearly up close to read and write.

That's why we recommend a complete eye examination for every child by age three, and sooner if problems are suspected. A child's vision exam includes many important tests.

Your children will feel comfortable in their own waiting area and designated exam rooms. Our optical department has many frame styles especially for children. If your child would benefit from contact lenses, this service is also available.

Clinical Services: Mehta International Eye Institute provides full medical and surgical care of all pediatric eye problems, including the following.

- Vision assessment
- Amblyopia (lazy eye)
- Sports injuries
- Routine eye care
- Pediatric glaucoma
- Retinoblastoma
- Strabismus (eye misalignment)
- Pediatric cataracts
- Hereditary eye diseases
- Referral consultation
- Retinopathy of Prematurity

SQUINT

And its Management

Mehta International Eye Institute is fully equipped to diagnose and accurately measure all types and degrees of squints.

Synaptophore. (Clement Clark. UK) helps to measure squint, as well as treat minor degrees of squint and in Amblyopia Prism bars help to measure the exact amount of squint. and is an par excellence exercise tool to decrease squint even without surgery.

Maddox Wing .. (Clement Clark.. UK) Used to check imbalances in vertical and horizontal deviation

RAF Binocular Rule (Clement Clark. UK) Used to verify the accommodative outplay of the eye.

Hess Screen (B&H) used to verify the imbalances of muscles prior surgery and post surgery.

Cam Stimulator: Stimulates and inadequately functional macula with a series of moving plates.

Tensiometer (Haag Street Switzerland) Evaluates the tensional changes in the muscle and gives exercise to relax the,.

We are also proud to have a panel of well-trained Strabsmologists, as well as the surgical equipment for the surgical correction of squint.

CONTACT LENS

Advance Fitting and Evaluation

Advancements in contact lens technology offer the potential for successful contact lens wear to most of our patients.

Contact lenses not only enhance visual acuity and appearance, but also improve performance in visual tasks and sports.

Because contact lenses are medical devices placed on the eyes, they require expert fitting and careful instruction, as well as conscientious care and compliance with recommended follow-up examinations to maintain the healthy functioning of your eyes.

MILESTONES OF THE MEHTA INTERNATIONAL EYE INSTITUTE

- Dr Keiki R. Mehta, the pioneer of the Institute, graduated from Christian Medical College and completed his post-graduation at the PGI, Chandigarh. He then went to London and joined the prestigious Moorfields Eye Hospital and Institute of Ophthalmology completing his DO (London) with top honors. He then graduated from Dublin passing the DO (Ireland) with acclaim and went to New York, USA for further advanced training.
- Dr. Mehta felt that there was a great need in India for a world class, top-rated, Institute where optimal levels of eye care, clinical as well as diagnostic, coupled with the finest surgical treatment, would be available.
- Returning to Bombay, he commenced the Colaba Eye Hospital outfitting it with the finest equipment available, from Zeiss, (Germany) and set up Bombay's ***first*** superlative Eye Clinic and Hospital, on par with the best Institutes abroad.
- Dr. Keiki Mehta, at the Colaba Eye Hospital has many ***firsts*** to his credit.
- Dr. Mehta a pioneer in the field of intraocular implants had special training for implanting lenses following cataract surgery and brought this technology to India. Thus he was the ***first*** to implant IOL lenses in India, in regular practice, and started the IOL revolution which has saved so many eyes and resulted in good vision to many.
- Dr. Mehta developed the world's ***first soft foldable intraocular implant*** in 1978 and presented it at the world renowned, ***American Implant Society*** at San Francisco in USA for which he was awarded its "***Prestigious Appreciation***" award.
- He developed the world's ***first foldable HEMA disc lens*** and implanted in 1984. Now all lenses implanted are foldable.
- He then turned to refractive surgery (decrease spectacle numbers) and pioneered the use of Radial keratotomy, in 1988 and wrote the only text book on the subject.
- He ***pioneered*** the advent of Excimer surgery (now known as ***LASIK surgery***) for reducing spectacle powers and is now ***India's foremost LASIK Surgeon***. The Mehta International Eye Institute has now acquired the world's foremost Excimer laser, the German ***Schwind Esiris System***, with the revolutionary new Carriazo Pendular Microkeratome, for the ***first*** time in India considered by many the 'Rolls-Royce' of laser systems, to give superlative optical correction.
- Phacoemulsifcation (Laser cataract surgery) was introduced once again by Dr Keiki Mehta at the Colaba Eye Hospital, for the ***first*** time in regular practice in India in1989, presenting his first papers at the AIOS in the next year. He is recognized as the "*Father of Phacoemulsification Surgery*" in India. He showed how effective the surgery was in the rural milieu and is credited with saving lakhs of eyes with the application of this technique in our rural areas.
- True to its International caliber the Institute has recently imported the most advanced Cataract surgery machine in the world from Alcon USA, the ***Infiniti*** with its revolutionary new ***AquaLase*** System for the ***first*** time in India. With this new machine, Dr Mehta remains on the forefront of cataract surgery.
- The *Colaba Eye Hospital* is known all over India for its excellence of treatment and surgery, making the Hospital a Mecca for Ophthalmic care. The hospital, seven years ago evolved into the ***Mehta International Eye Institute***. The genesis of the Institute was conceived in 1998 in response to a growing need to have a world class eye institute in Mumbai, having access to the most advanced and the latest equipment, in one coordinated Institution. The patient is thus assured of a full-fledged examination of all the various facets of the human eye. Here diagnosis can be carried out quickly, and treatment applied in the fastest possible time.
- Dr. Keiki Mehta, India's foremost ophthalmic surgeon is always in the forefront of all the latest technology, a prolific writer and teacher who has many ophthalmic text books to his credit. Having won ***9 Gold medals and numerous awards***, with his superb surgical skills and excellent diagnostic ability Dr. Keiki Mehta is ranked among the leading eye surgeons in the world. His exemplary surgical performance has earned him invitations all over the world not only to present lectures on the latest innovative surgical techniques but also to perform ***LIVE Surgical Demonstrations*** at all the topmost International Ophthalmic Congresses.
- The Institute offers, for difficult cases, the concept of consultation with on the Tele-Net with world class leading surgeons of the world thanks to its affiliation with the World Class Swiss ONO Eye Hospital and with the St. Luke's Eye Institute Texas: USA.

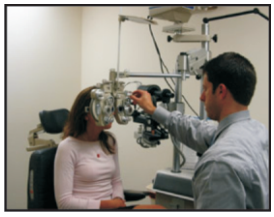
Fully equipped Examination room

Well appointed Waiting area

Laser complex

Prof Bovet of Switzerland at MIEI

Lush greenery around Institute complex



Phoropter Spectacle Power Check

Slit Lamp Biomicroscope

Automated combination Kerato-Refractometer

Air puff pneumo tonometer

Ophthalmoscopy Direct & Indirect

Computerized Lensometer

st charts

Ultrasound B Scan

Computerised Specular Microscope

The Mehta International Eye Institute (MIEI) has the most advanced, comprehensive list of equipment, making it the foremost centre for Ophthalmology in Asia.

Comprehensive Eye Examination

Phoropter (Topcon Japan) is used for spectacle refraction. Usage of the phoropter, is now considered as the most advanced manner and technique of evaluating spectacles. The biggest advantage of phoropter is that once the axis is setup, every lens will have the same axis, permitting accurate and fast refraction.

Automated Computerized Kerato-Refractor (Topcon 8000E. Japan) This unit automatically computes the spectacle power of the eye and at the same time computes the exact axis and the amount of astigmatism. It also assesses the pupillar distance, thus enabling that the glasses are set perfectly in the frames.

The Slit Lamp Biomicroscope (Topcon Japan) is used to visualize the front of the eye to be magnified and examined in great detail. The slit enables the front of the eye to be examined layer by layer. Using special lenses even the retina can be seen under high magnification.

Airpuff pneumotonometer (Topcon Japan) is very essential that the intraocular pressure or IOP be recorded of every patient including children to be sure that glaucoma (raised IOP) is not developing. The air puff tonometer permits safe, non-contact evaluation of the pressure with a high level of accuracy.

Fibre-Optic Direct and Indirect Ophthalmoscopes (Heine Germany)

An Ophthalmoscope is used to examine the retina in detail. There are two types of ophthalmoscopes, direct, where one sees the retina directly, used mainly to visualize the central retina, magnified, and the Indirect Ophthalmoscope, (head mounted) which using a special lens enables the retina to be examined upto the extreme periphery.

Computerized lensometer (Topcon Japan)

Computes the power of the spectacles the patient is wearing and as to whether the spectacle power has been properly made and set up accurately at the proper pupillary distance can be computed with this instrument which has exceptional accuracy.

SPECIAL TESTS

- **Contrast Sensitivity testing (VectorVision USA)** : In lens opacity (cataracts), utilizing the Pelli Robson charts with a grating system the doctor can tell how far the cataract has developed and even the speed of development and when he would expect the cataract would be ready for removal. They also predict , early glaucomatous damage. and other retinal conditions.
- **Ultrasound B Scan Sonography "Ultrascan" Alcon (USA) :** In the presence of a mature cataract or vitreous opacities or blood in the eye , the retina cannot be seen. Ultrasound tells you the position of the retina , looks for retinal detachment or if there are opacities or foreign bodies. The Ultrascan is a very high resolution equipment which can accurately show the changes
- **Specular Non-Contact Computerized Microscopy (Topcon Japan) :** A sophisticated non contact microscope which can, with high magnification, auto focus on the fine endothelial cells on the inner side of the cornea are assessed to evaluate their function and status. Very important for evaluation if the patient can withstand cataract surgery, prior corneal surgery, and especially for LASIK surgery.
- **Alphascan A Scan Sonography Alcon (USA):** This is done to evaluate the exact power of the implant which needs to be inserted in the eye following cataract surgery. Essentially a computer which computes the specified power taking into account the length of the eye ball and the curvature of the eye, and even the approx area where the lens will finally stabilize in the eye.

How is it treated

The leaking retinal areas will be sealed off using a special laser. It is a non surgical method and painless. If the diabetic changes have progressed too far, Vitrectomy needs to be done to prevent a retinal detachment. In late stages flat shallow detachments occur allover the eye and membranes form which leads to loss of vision.

LASIK REFRACTIVE SURGERY (for removal of spectacle number)

Schwind AMARIS Excimer Laser System with the Carriazo Pendular Microkerartome - For the 1st time in South Asia

The Rolls Royce of Laser systems, for the first time in India

- LASIK is the most commonly performed refractive surgery procedure. You may hear people calling it "LASIK," but the name is actually short for "laser-assisted in situ keratomileusis."
  Why is it so popular?
- LASIK has advantages over other procedures, including a relative lack of pain afterward and the fact that good vision is usually achieved almost immediately, or at least by the very next day.
- An instrument called a microkeratome is used in LASIK eye surgery to create a thin, circular flap in the cornea. The surgeon folds the flap back out of the way, then removes some corneal tissue underneath using an excimer laser.
- The laser uses a cool ultraviolet light beam to precisely remove ("ablate") very tiny bits of tissue from the cornea to reshape it. When the cornea is reshaped in the right way, it works better to focus light into the eye and onto the retina, providing clearer vision than before. The flap is then laid back in place, covering the area where the corneal tissue was removed.
- Both nearsighted and farsighted people can benefit from the LASIK procedure. With nearsighted people, the goal is to flatten the too-steep cornea; with farsighted people, a steeper cornea is desired. Also, excimer lasers can correct astigmatism, by smoothing an irregular cornea into a more normal shape.

The Schwind AMARIS LASIK Laser with its components

The AMARIS LASIK Laser is Superlative, Sensationally Accurate Results, with Virtually total Safety, This laser is an all-rounder which offers extraordinarily high level of state-of-the-art technologies in one system. With this intelligent process, the laser treatment is significantly shortened, especially when higher refractions are corrected, and at the same time carried out with exceptional precision. The correction of one diopter takes on average less than 2.5 seconds with the SCHWIND AMARIS. Thereby, the stroma is preserved through thermally optimized laser pulse distribution

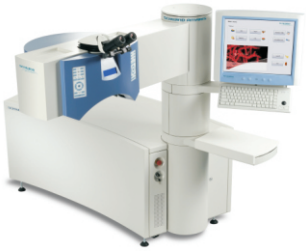
The new excimer laser generation, SCHWIND AMARIS, impresses with a multitude of groundbreaking innovations. From the very beginning, the development activities for this ambitious project concentrated on setting new outstanding technological and clinical standards in refractive surgery. SCHWIND engineers with different specializations, mathematicians and physicists worked towards a single goal: To realize the maximum of today's technological possibilities and to integrate the experience gained through the up to now successful laser generations from SCHWIND.

This concept of maximum safety is completed through the integration of high-resolution online pachymetry. Unique ergonomic advantages that optimize the treatment process are also included. The laser arm and the patient bed, for example, can be swiveled 90°. This makes patient preparation and the combination with other medical devices easy and comfortable.

An eyetracker must work at a significantly higher frequency than the laser in order to safely allow a very short ablation time. The SCHWIND AMARIS' 1050 Hz turbo eyetracker, with a response time of less than three milliseconds, serves to provide unsurpassed precision in the positioning of each laser pulse. The extreme speed and other groundbreaking features, Innovative particle aspiration system such as rotation balance, limbus tracking and static as well as dynamic cyclotorsion control, ensure exact compensation of every eye movement, on into the fifth dimension.

Applying laser

Mehta International Eye Institute's SuperVision LASIK Laser Centre



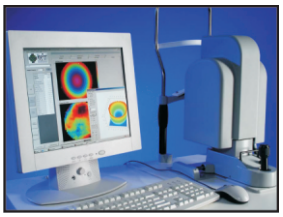
The Schwind AMARIS LASIK Laser.

Dr. Keiki R. Mehta performing LASIK

LASIK Examination units

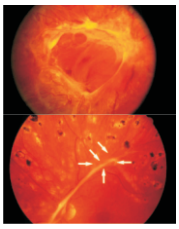
Carriazo Microkeratome

Keraton Scout



OckaWave Abberometer

ImageNet equipped Fundus camera



High resolution fundus photos

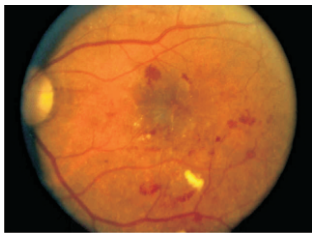
Applying laser

Eyelite freq² Yag Laser

Ultrscan "B" Retina scan

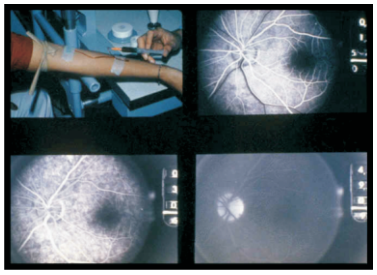
Accurus retinal Surgical unit

IRIS Diode laser with laser ophthalmoscope



Leaking retinal araes

Retinal angiography



Angiography equipment

RETINA & VITREOUS PROBLEMS.

A superlative vitreo- retinal specialized unit forms a part and parcel of the Mehta International Eye Institute. Handling difficult and complicated retinal surgeries with exceptional results has established it in India and internationally as "the" center to consult.

Retina Fundus Camera (Topcon Japan).

- A dedicated camera utilizing a high intensity flash coupled to a Digital (8 megapixel) camera takes large and very detailed pictures of the retina.
- **(Video Digital System) : ImageNet (Topcon Japan)** : Coupled to the camera upper end graphic card enables the images captured to be analyzed , enhanced, and literally blown up digitally to a 1000X for examination in detail. He data can be transferred to anywhere in the world for a second opinion.
- **Doubled Freq EYELITE Retinal Laser, (Alcon USA)** : Used for retinal laser. As compared to a Diode laser which is used in the operation theatre , the Freq² Yag is painless and gives an exceeding good reacuoion, ideal for diabetic retinopathy patients and macular lesions. It has a dual delivery system and the laser can be delivered via a headmount ophthalmoscope.
- **High Intensity B Scan ULTRASCAN (Alcon USA)** : For scanning the retina to look for retinal detachment, distortions in the retina pattern and blood , exudates, foreign bodies in the vitreous.
- **ACCURUS Vitreoretinal Surgical System (Alcon USA)** : Considered to be one of the finest vitreo-retinal surgical system in the world. Standard at all major centers worldwide. Gives exceptional control and the ability to manage the most difficult retinal problems. Has automated air infusion, and automated silicone injection and removal systems.
- **Iris Diode Retina Laser (USA)** : with endo laser and laser ophthalmoscope. Utilized to seal all the breaks and imperfections in the retina. A surgical tool par excellence.

DIABETIC RETINOPATHY

Specialized Treatment Center.

Diabetic retinopathy is a potentially blinding complication of diabetes that damages the eye's retina. It affects half of the 14 million Indians, with diabetes.

How does Diabetic retinopathy occurs ?

Diabetes damages the tiny blood vessels in the retina. At this point, most people do not notice any changes in their vision. Diabetic retinopathy often has no early warning signs. At some point, though, you may have blurred vsision which occurs because the central part of the retina, the macular develops a fluid swelling or edema. It blurs vision, making it hard to do things like read and drive. In some cases, your vision will get better or worse during the day. As the disease progresses, it enters its advanced, or proliferative, stage. Fragile, new blood vessels grow along the retina and in the clear, gel-like vitreous that fills the inside of the eye. Without timely treatment, these new blood vessels can bleed, cloud vision, and destroy the retina.

How is it detected ?

The doctor will look at your retina for early signs of the disease, such as: (1) leaking blood vessels, (2) retinal swelling, such as macular edema, (3) pale, fatty deposits on the retina—signs of leaking blood vessels, (4) damaged nerve tissue, and (5) any changes in the blood vessels. Should your doctor suspect that you need treatment for macular edema, he or she may ask you to have a test called Fluorescein Angiography. In this test, a special dye is injected into your arm. Pictures are then taken as the dye passes through the blood vessels in the retina. This test allows your doctor to find the leaking blood vessels

CATARACT

The Mehta International Eye Institute is reputed all over, not only in India , but internationally for its excellence in Cataract surgery. Virtually the who's who of India have all been operated by Dr. Mehta. It has the most refined, the most advanced cataract systems. No where in the world can any better equipment be found.

Leica Wild (German) Operating microscope.: In surgery the well known adage is that you can only operate as well as you can see. The Leica Wild operating microscope gives state of the art superlative high magnifictaion with absolutely crystal clear vision to permit the most intricate surgery to be done wit absolute safety.

Infiniti Cataract Surgery System (Alcon USA) :

For the First Time in South Asia

(I) A revolutionary new surgical device for safer, cataract surgery, it puts unprecedented precision, perfection and performance to and virtual total safety in cataract surgery.

- This system utilizes a revolutionary new device termed the Aqualaser Liquifactor. AquaLase® Liquefaction Device is part of the Infiniti™ Vision System, the world's first tri-modal cataract removal surgical instrument.
- This multifunction unit has:

a. **Hyperpulse ultrasound** phacoemulsification

b. **NeoSonix**: The combination of ultrasound and oscillation energy.

c. **AquaLase Cataract Surgery**: A new technique whereby the cataract is dissolved using only high energy microburst of warmed water in the eye. It is very safe as it cannot damage the tissue in the eye, however restricted to softer cataracts.

AquaLase is available since 2004 for the first time in India at The Mehta International Eye Institute.

Lagacy Cataract surgery system (Alcon USA)

(ll) A Superb cataract removal system, second only to the infiniti. Fivesexceptional results. Was the first system to have disposable cartridgesystem for total safety and sterility.

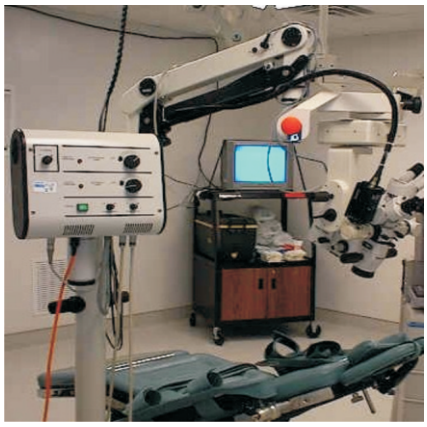
(lll) Opticon Pulsar2 Hyperpulse Cataract surgery system for thefirst time in India; The Opticon System, considered to be one of the finest units in Europe where it is extensively used. It has the advantage ofhyperpulse which makes for excellent very safe surgery.

(lV) THE MEHTA EYE INSTITUTE IS THE ONLY INSTITUTE IN INDIA WHICH HAS ALL THREE OF THE FINEST CATARACT SURGERY EQUIPEMNT

GLAUCOMA

One of the leading causes of blindness in India is glaucoma. Glaucoma is an eye disease that causes damage to the eye's optic nerve. The fact that about 3.5% of people have intra ocular pressure of above 21 mmHg in the general population above the age group of 40. Importance is given only next to Cataract for screening and treating this practically symptomless and slowly creeping blinding glaucoma. In most glaucoma patients, the optic nerve damage is incurred when intraocular pressure (IOP) becomes elevated. High IOP occurs when the fluid in the eye does not drain properly. If left untreated, high IOP can damage the optic nerve and cause vision loss. There are also less common cases of glaucoma where optic nerve damage occurs without high eye pressure.

Glaucoma often presents no symptoms in its early stages -- only by having regular eye exams can the disease be found.



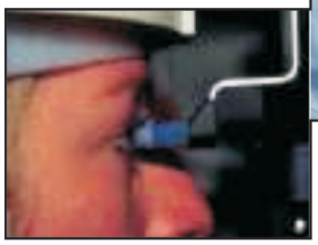
High Powered Swiss Operating microscope

Dr. Keiki Mehta with the Infiniti Machine

The Infinit The finest cataract removal machine in the world

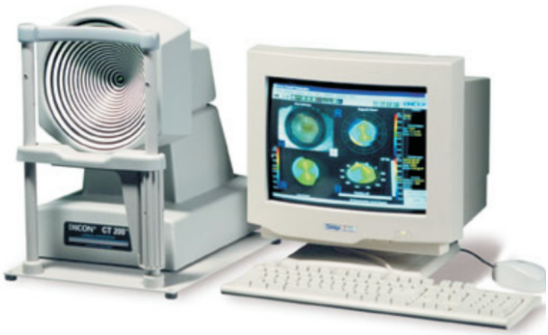
Heidelberg HRT test

Huphrey Field analyzer



Applanation Tonometry

Schiotz Tonometer



Dicon Topographer

Are you at risk for glaucoma? If you are over the age of 60, have a family history of glaucoma, have diabetes, then you may have an increased risk of developing glaucoma. Scheduling an appointment that includes a test for glaucoma could save your sight!

At ***Mehta International Eye Institute***, we offer a variety of advanced glaucoma treatments. The first line of care is usually medication that works to lower intraocular pressure. We provide our patients with the newest, most effective medications available. They may be oral or topical (including eye drops). We will work with you to find the best medicine for your individual case. If medication alone does not lower IOP, we also offer advanced surgical treatment for glaucoma.

We offer the most sophisticated testing equipment for Glaucoma.

- **The Heidelberg Retina Tomograph (Heidelberg Corp. Germany) :** The Heidelberg Retina Tomograph or HRT is the finest technique in the early detection, evaluation and to check progression of Glaucoma.

  It is a confocal scanning laser imaging device that obtains three-dimensional images of the optic nerve head and retina in the posterior segment, checking the height changes or differences of the optic nerve head

  There is now good evidence that the HRT can diagnose glaucoma 5 years before changes become evident by any other technique

  The HRT is now the gold standard for imaging the optic nerve. The Mehta International Eye Institute uses the Heidelberg Retina Tomograph in its continuous effort to provide quality care to its patients.

  The test is usually repeated thrice a year, and helps the physician assess if changes are occurring in the nerve fiber layer or the optic nerve head. These changes almost always occur prior to any visual symptoms the patient

- **The Humphrey Computerized Field analyzer (Zeiss Germany) :** An instrument which evaluates what you can see with your "fields" of view, from the periphery of your eye to the center, while keeping the eye fixated in the middle. It evaluates the extent of loss. In glaucoma the fields progressively decrease till only a central island is left, which if untreated , extinguishes ,leading to irreversible blindness. The Humphrey Analyzer is the Gold standard all over the world. Fields are normally done twice a year.

- **Air Puff Computerized Pneumotonometer** (**Topcon Japan**): Completely safe, checks pressure without touching the eye . Acts as an analyzing tool High accuracy. Every patient visiting the institute, even little children are checked on this instrument.

- **Goldman Applanation** biomicroscope mounted Tonometer. Exceptionally accurate but requires steady fixation. Can identify pressure accurately even in post operative and highly myopic eyes.

- **Schiotz tonometry.** When the surface is grossly irregular or as a verification device the Schiotz tonometry is an exceptional tool.

CORNEA
And its Management

What is the cornea?

The cornea is the clear outer layer at the front of the eye. The coloured iris and the black pupil can be seen through the cornea. The cornea helps to focus and transmit light as it passes to the lens and on to the retina at the back of the eye.

- Examination of the surface of the cornea is very important as it is the primary surface where the number of the eye, its refraction , takes place. Careful evaluation can give a very accurate idea of the state of the cornea, any changes on its surface/

- It is a very effective way of evaluating the astigmatism which leads to a very accurate refraction .
- Customarily all children are put on the keartometer to give very accurate asix measurement. Usually cylindrical numbers do in not change in the first 30-40 years of age.
- Especially after doing cataract or corneal graft surgery the computerized keratometer can give a very accurate spectacle number which is not possible by any other means.

DICON Corneal Topographer (USA) this device photographs your eye and creates a kind of "map" of your cornea. will display the corneal irregularities and the steepness or flatness that the surgeon must correct.

Optikon "Scout" Arc Step Corneal topo- analyzer: (Optikon Italy)

First Time In India

The first topographer in the world to have Arc Step technology , has the availability to analyze and accurately mapout imperfections in the cornea, which can be later laser corrected.

Specular microscopy (Topcon Japan). Not only evaluates the thickness of the cornea in 1000ths of a micron, but with the ImageNet software analyzes in detail the fine endothelial cells in the cornea.

Cornea evaluation and Keratoplasty (Corneal Graft)

What is corneal grafting?

When a damaged cornea cannot be improved by other treatment, a corneal graft may be performed. This is to replace the damaged cornea or part of it, with healthy corneal tissue. The new cornea is obtained from donated corneas, which undergo thorough testing before being used for transplantation.

What is the source of corneas for transplantation?

Corneas are removed from the eyes of people who have died. The individual, or his family, consent to the medical use of the eyes after death. Cornea's are processed and stored in an Eye Bank

What is the procedure?

A central piece of cornea is cut and removed. This will be replaced by the clear donor cornea, which will have been treated prior to surgery with an antibiotic solution. The grafted cornea will be sewn with very fine stitches, which may stay in place for up to two years. The cornea can take at least a year to heal completely. After the surgery, the operated eye will be covered with an eye pad and protective plastic eye shield.

After the procedure

The eye needs to be examined at regular intervals of a month. Using the computerized keratometric equipment we can give accurate spectacles to enable the patient to get the best vision possible. At a later stage, using the new Bioptic concept, the corneal vision can be improved using laser polishing. Customarily stitches are removed after 14 months.

Corneal topography

Image Biomicroscope analysis of cornea

Specular microscopy

Eye bank in 2003

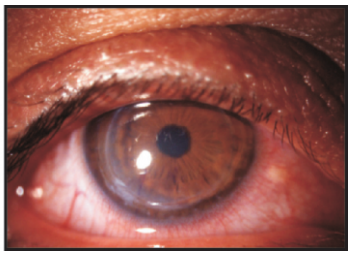
Preparing cornea

Examining cornea

Checking corneal 'e' cells

Storing in media

grafted eye



KNOW YOUR SURGEON

Prof. Dr. Keiki R. Mehta

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Chief Surgical & Medical Director,
Mehta International Eye Institute.

Dr. Keiki R. Mehta, receiving the Padmashree Award by the President of India, Smt. Pratibha Patil for his exemplary surgical skills and his outstanding contribution to 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**
- **He has pioneered, in India, the commencement of Intraocular Implants, Phacoemulsification Cataract surgery.**
- **He is the winner of 11 Gold Medals in India, having received virtually all the Honors possible, has been the President of the All India Ophthalmologists Association and President of the Intraocular Implant and Refractive Society** among many others. **Chairman and Organizing Secretary of the very successful Eye Advance Congresses** for the last 12 years 1996- 2008. These have now reached an iconic status and are recognized worldwide.
- **The American Implant Society awarded him its Appreciation Award, at San Francisco for pioneering Soft Intraocular implants for the first time in the world. He has received Grand Honors Award from the National Eye Research Foundation, Chicago, USA, the only Indian to be ever awarded. Presented the prestigious Lim International Award from the Asia Pacific Intraocular Implant Association for outstanding work in Ophthalmology in the Asia Pacific Region, the only India to be presented this award. Awarded the Triple Ribbon Award of the American Society for Cataract and Refractive Surgery, USA, for Outstanding Research presentations in Ophthalmology. Presented the Outstanding Recognition Award by International Council of Cataract Surgeons for Outstanding Research & Development in Cataract Surgery, award presented at Barcelona, Spain.**
- **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.**
- **Presented advanced research papers on Lasik Internationally and won the Outstanding Presentation Award at San Diego, USA.**
- **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.**
- **He is Honorary Visiting Professor at ONO Eye Hospital in Geneva, Switzerland and St. Luke's Institute, Texas, USA**
- **He is the Consultant Ophthalmic Surgeon to the Governor of Maharashtra, to the Armed Forces, Government of India and to the Maharashtra Police.**

Awarded Padmashree By The President Of India In 2008 for his exemplary surgical skills and his Outstanding Achievements And Research In Ophthalmology

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