

Editorial CELEBRATING A YEAR OF "VISIONARY INSIGHTS"

As we step into the second year of **Visionary Insights**, the esteemed newsletter of Sankar Foundation, it is a moment of pride and reflection. Over the past 12 months, this publication has successfully bridged the gap between cutting-edge innovations in ophthalmology and the dedicated professionals who shape the future of eye care.

From its inception, **Visionary Insights** has been committed to delivering rich, insightful content on the latest trends in ophthalmology, catering to doctors, medical students, and eye care institutions across Visakhapatnam as well as highlighting the achievements and advancements made by the surgeons, doctors and staff of the institute. The response has been overwhelming-our newsletter has not only garnered wide appreciation but has also been acclaimed as one of the best for its thoughtfully curated content and exceptional layout, making complex medical advancements accessible and engaging.

As Visionary Insights enters its second year, we celebrate not just the successful completion of 12 issues but also a remarkable recognition that underscores its impact. This profound impact, though difficult to define, is no small achievement. The enthusiasm it has sparked has transformed many ophthalmologists within the foundation into literary giants through their contributions.

In December 2024, at the prestigious Public Relations Society of India (PRSI) national conference held in Raipur, **Visionary Insights** was honoured with the **Second Best Newsletter (English) Award** at the national level-a testament to its excellence in content, layout, and relevance in the field of ophthalmology. This national recognition holds special significance, as it comes merely months after the newsletter's launch. The award, presented by **Deputy Chief Minister of Chhattisgarh, Sri Vijay Sharma**, was received by our Editor, marking a proud moment for Sankar Foundation and all those who have contributed to the newsletter's success.

The newsletter's success is also a recognition to the unwavering support of **Sri M. Ramdas, Chairman of the Board of Trustees; Sri Krishna Kumar Atmakuri, Managing Trustee; Sri K. Radhakrishnan, General Manager and all the trustees of Sankar Foundation**. Their steadfast backing of the Editorial Board has been instrumental in elevating the newsletter to its current standing.

As Visionary Insights enters its second year, it continues to redefine excellence in **ophthalmology journalism**. With insightful content, cutting-edge trends, and national recognition, the newsletter has set a new benchmark for eye care communication.

We look forward to continuing our journey, bringing more ground breaking advancements and expert insights and as a trusted source of information to our growing readership. Here's to another year of excellence and innovation in eye care!

K. Ranga Rao
EDITOR

Sharper Vision, Stronger Impact : Q1 Triumphs for Sankar Foundation

The first quarter (Q1) of the financial year 2025-26 has been a remarkable chapter in the journey of Sankar Foundation, reaffirming its unwavering commitment to eliminating avoidable blindness and bringing quality eye care to all sections of society.

The Foundation's **main hospital** along with its **branches in Maddilapalem, Madhurawada, Srikakulam, and Gajuwaka** achieved a notable performance in conducting eye surgeries marking a new milestone in its service delivery. This unprecedented performance underscores the trust patients place in the Foundation's medical excellence and compassionate care.

During the period Sankar Foundation achieved remarkable performance in the following areas:

- ◆ Performed highest number of **9804** eye surgeries
- ◆ Record screening of more number of **53,587** Out patients
- ◆ Conducted highest number of **164** Outreach Rural Eye Camps and screened **10,442** Out Patients and conducted **3932** eye surgeries totally free of cost to the patients.

Adding to the accolades, Sankar Foundation also recorded the **highest-ever outpatient screening of people**, reflecting the efficiency of its clinical services and the dedication of its medical team. The institution's proactive approach extended well beyond hospital walls, with a **substantial increase in outreach eye screening camps across rural communities**.

Sri Krishna Kumar Atmakuri, Managing Trustee, and Sri K. Radhakrishnan, General Manager (Administration & Operations), extended their heartfelt congratulations to the entire Sankar Foundation team for this remarkable achievement.

True to its mission of serving the society, Sankar Foundation has provided over **57%** of its cataract surgeries free of cost to patients in addition to another **16%** of surgeries done at



Very enthusiastic participation from rural communities at the free eye screening camps by Sankar Foundation.

(cont...2nd page)

Performance at a Glance

Total Eye Surgeries 4,84,879 Since Inception
Total OP Screened 28,15,664 Since Inception

Sharper Vision, Stronger Impact : Q1 Triumphs for Sankar Foundation

subsidised cost under the Andhra Pradesh Government's prestigious Dr. NTR Vaidya Seva Programme.

- ♦ A special mention was made of the significant surge in footfall for the specialty services of Retina and Glaucoma.
- ♦ Equally commendable was the Foundation's proactive community outreach, with a significant number of eye screening camps conducted in rural and underprivileged areas. A standout example was the 21-day free eye screening camp sponsored by SALPG Company Pvt. Ltd. at Kapparada, within the GVMC limits—an initiative that drew overwhelming participation, screening nearly 4,400 local residents for eye ailments.
- ♦ Furthermore, Sankar Foundation's distinguished team of specialists

proudly participated in the 40th Asia Pacific Academy of Ophthalmology Congress held in Delhi, highlighting the Foundation's growing influence on the global ophthalmology stage.



Sankar Foundation's outreach team plays a vital role in delivering eye care to underserved communities.



Following a successful eye screening, rural residents head to Sankar Foundation for life-changing eye surgeries.

- ♦ A major institutional milestone was the successful re-registration of the Sankar Foundation Ethics Committee by the Central Licensing Authority, New Delhi—ensuring another five years of recognized trust, transparency and ethical rigor.
- ♦ Sankar Foundation's exceptional performance in this quarter reflects more than just numbers—it signals a mission in action: to restore sight, deepen trust, and build healthier communities across India.



Sri N. Appala Raju, Senior Manager – Outreach, engages with patients during a free eye screening camp in a village, providing orientation and raising awareness about eye health and available services at Sankar Foundation.

DO YOU KNOW?

Beans: A Nutritional Powerhouse for Healthy Eyes

If you're looking to upgrade your health in 2025, eating more beans and lentils should be on your bingo card. Packed with nutrients such as fibre, protein, iron and magnesium, beans and lentils are among the most nutritious and versatile foods on the planet. Yet these little wonders are often overlooked at the supermarket. Maybe it's because they often come in a can or that they got a bad rap in the '90s as the "musical fruit," but beans and lentils have flown under the radar for decades, while other superfoods like kale, chia and cauliflower have had their moments.

However, it looks like beans are finally going to get the spotlight they deserve in 2025. Last month, the Scientific Report of the 2025 Dietary Guidelines Advisory Committee was released, with recommendations for changes to dietary guidelines, including eating more beans and lentils. In its report, the committee noted that 83% of people fall short of the recommended 1 to 4 cups of cooked beans, peas and lentils per day.

Beans are more than just a nutritious addition to your plate—they can also play a vital role in **protecting your eye health**. Packed with essential nutrients, they contribute to maintaining good vision and preventing eye-related issues.

One of their key benefits comes from their high levels of zinc, a mineral that helps transport vitamin A from the liver to the retina, where it aids in producing melanin, a pigment that protects the eyes. Zinc deficiency has been linked to night blindness and other vision problems, making beans an excellent dietary source to support eye function.

Additionally, beans are rich in antioxidants like flavonoids, which help combat oxidative stress. Oxidative damage can lead to conditions such as cataracts and age-related macular degeneration (AMD), so incorporating beans into your diet can help shield your eyes from harmful free radicals.

Fibre, another major component of beans, plays a role in regulating blood sugar levels. **Since diabetes can lead to eye conditions such as diabetic retinopathy, consuming fibre-rich foods like beans can support overall eye health by promoting balanced blood sugar levels.**

Incorporating a variety of beans—such as black beans, kidney beans, and lentils—into your meals can provide long-term benefits for your vision and overall well-being. So, a simple bowl of beans may be a small but powerful step toward protecting your eyesight!

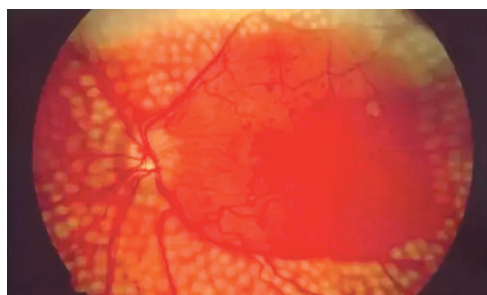


Eyes that sing the tales of the forgotten past.

Edited by **K Bangar Raju**, Dy General Manager (PR & Liaison) with source from HindustanTimes.com

When Sugar Strikes the Eyes: 5 Diabetic Vision Dangers

Diabetes is a chronic condition that impairs the body's ability to regulate blood sugar levels. When insulin production is insufficient or ineffective, sugar builds up in the bloodstream and gradually damages multiple organs—including the eyes. If left uncontrolled, diabetes can lead to serious and sometimes irreversible vision problems. Here are **five major eye conditions linked to diabetes**:



Diabetic Retinopathy : This is the most common diabetes-related eye disease. High blood sugar levels damage the tiny blood vessels in the retina—the light-sensitive tissue at the back of the eye. These vessels may swell, leak fluid, or close off, while fragile new vessels may form and bleed.

In early stages, diabetic retinopathy may not cause noticeable symptoms. As it progresses, you might experience blurry vision, dark spots, or floaters. If not managed, it can lead to blindness. The longer you've had diabetes and the less controlled your blood sugar is, the higher your risk.

Diabetic Macular Edema (DME) : The macula, located at the center of the retina, is responsible for sharp, focused vision. In some cases of diabetic retinopathy, fluid leaks into the macula, causing it to swell—a condition known as DME. This leads to blurry or distorted central vision and, without treatment, can cause permanent vision loss.

Laser therapy or injections can reduce swelling and help preserve sight. DME is one of the leading causes of vision impairment in people with diabetes.

Cataracts : People with diabetes tend to develop cataracts—clouding of the eye's natural lens—earlier and more rapidly. Elevated blood sugar alters the structure of lens proteins, making vision appear foggy or dim.

Eying Excellence : One Year of "Visionary Insights"



Sri K Bangar Raju,
Editor

"As we complete one remarkable year of Visionary Insights, it gives me immense pleasure to reflect on our journey. Every issue has been a testament to our commitment to timely delivery, scientific accuracy, and rich content on the ever-evolving advancements in Ophthalmology and broader eye health. I extend heartfelt thanks to our editorial team, contributors and loyal readers who have made this milestone possible."

"It has been a deeply fulfilling journey to be part of Visionary Insights over the past year. The publication has grown into a vibrant platform for scholarly exchange and critical reflection. I commend the contributors, readers, and my fellow editorial board members for their dedication and insight. Here's to continued excellence and innovation."



Dr. T. Raveendra,
Editorial Board Member



Dr. Nasrin,
Editorial Board Member

"As Visionary Insights completes its first year, I take immense pride in contributing to a publication that fosters curiosity, inclusivity, and intellectual depth. This milestone is a testament to the passion and perseverance of our entire editorial team. Let us continue striving for meaningful discourse and thought leadership."

"One year of Visionary Insights marks not only a temporal milestone but a celebration of thoughtful engagement and academic rigor. I am honored to be part of this evolving intellectual collective. May the future bring even broader perspectives and impactful contributions."



Prof. R. Krishna Prasad,
Editorial Board Member

Symptoms include glare, faded colors, and trouble seeing at night. Cataract surgery is highly effective and commonly performed, even among non-diabetic individuals, especially those over 60.



Glaucoma : Diabetes doubles the risk of glaucoma, a group of conditions that damage the optic nerve, which transmits visual signals to the brain. One type, neovascular glaucoma, involves the growth of abnormal blood vessels that block fluid drainage and increase eye pressure—leading to vision loss.

Often called the **"silent thief of sight,"** glaucoma can develop without symptoms. Regular eye exams are critical for early detection.

Retinal Detachment : In advanced diabetic retinopathy, scar tissue may form and tug on the retina, causing it to detach from the back of the eye. This condition is called **retinal detachment**, and it often results in sudden vision loss.

It is a medical emergency—if not treated promptly, it can cause permanent blindness. Surgery is usually required to reattach the retina and restore vision.

Watch the diet : Ensure to eat a balanced diet, and also incorporate leafy greens, which provide many benefits for the eyes.

(Edited by **K Bangar Raju**,
Dy General Manager (PR & Liaison)
with inputs from the Times of India)

*Eyes that hold the passion
of a thousand sunsets.*

SALPG'S 21-DAY FREE EYE SCREENING CAMP WRAPS UP WITH GREAT RESPONSE

South Asia LPG Company Pvt Limited (SALPG) sponsored a free door-to-door eye screening camp, conducted by Sankar Foundation, in the Kapparada area within GVMC limits. The camp, which ran for 21 days, concluded on June 13, 2025, with an overwhelming response from residents.

FACT SHEET

- * Door to Door Eye Screening Camp Conducted for 21 Days
- * A total of 4401 individuals were screened
- * 1500 spectacles distributed freely
- * Medicines distributed to 1367 patients
- * Eye surgeries performed to 32 patients

The initiative was inaugurated on May 21, 2025, by Sri G. Subba Rayudu, Senior Manager (Finance), in the presence of Sri K. Radhakrishnan, General Manager, and Sri V. Ramesh Kumar, Deputy General Manager (PC & CR). Also attending were Sri P. C. Ramnath, Head of CSR, and Sri Rakesh Kumar, Company Secretary, SALPG.

Dr Rahul screened the patients. Sri N Appala Raju, Senior Manager, Sri M Arunkumar, Manager, Outreach, Sri K Prasad, camp coordinator from Sankar Foundation took part in the eye camp.



Doctors and staff examining the patients at the eye camp.



*A world sculpted by dreams
lives in those eyes.*

SRI CM RAMESH, ANAKAPALLE MP ASSURES SUPPORT TO SANKAR FOUNDATION



Sri CM Ramesh, Hon'ble MP (Lok Sabha) and Chairman of the Parliamentary Committee on Railways, has assured his full support to Sankar Foundation.

Sri K Bangar Raju, Deputy General Manager (PR & Liaison), met with him

on 2nd June, 2025 to highlight the hospital's contributions to society in preventing avoidable blindness. He submitted a representation to the hon'ble MP seeking his support to the foundation's mission.

Sri Ramesh commended the Foundation's service to the community and reiterated his commitment to assisting the hospital in its endeavours.

Sri Peela Govind Satyanarayana, former MLA of Anakapalle and Chairman of AP Urban Finance and Infrastructure Development Corporation, as well as Sri Tulsiramraj, PS to the Hon'ble MP, were among others were present.

DEPUTY CHAIRMAN, VPA INAUGURATES OCT EQUIPMENT

Sri Durgesh Kumar Dubey, Deputy Chairman of Visakhapatnam Port Authority inaugurated the state of the art Optical Coherence Tomography (OCT) equipment in Sankar Foundation Eye Hospital on 7th June in the presence of Sri K Radhakrishnan, General Manager, Sri V Ramesh Kumar, DGM (PC & CR), Dr T Krishna, HOD, Retina Department and others.

During his visit to the hospital, Sri Durgesh Kumar was explained about the facilities and the services of Sankar Foundation to the community. He was highly impressed about the facilities being extended to the patients.

Optical Coherence Tomography (OCT) is a non-invasive imaging technology used in eye hospitals to obtain high-resolution cross-sectional images of the retina. It helps in diagnosing and monitoring various eye conditions such



as glaucoma, diabetic retinopathy, and age-related macular degeneration. By using light waves, the OCT machine captures detailed images, allowing ophthalmologists to assess the retinal layers and detect early signs of disease. Its quick and painless procedure makes it an essential tool in modern ophthalmology, improving patient care and treatment outcomes.

SAMARTHA SCHOOL OF OPTOMETRY STUDENTS EXCEL IN EXAMS

Eight BSc Optometry students from Samartha School of Optometry, run by Sankar Foundation, achieved the distinction of graduating with first-class honors. Dr. NTR University of Health Sciences, Andhra Pradesh, officially declared the results. On this occasion, Sri K. Radhakrishnan, GM; Prof. P. Krishna Prasad, Director of Medical Education; Sri V. Ramesh Kumar, DGM (PC & CR); Smt. Bhuvana, Faculty Coordinator; and other dignitaries extended their congratulations to the students for their accomplishment.



Seeing the Future: Why Eye Health is Key to Asia Pacific's Growth

The **World Economic Forum**, a global platform dedicated to improving the state of the world, recently highlighted findings from Roche on the future of eye health. The report underscores the severe socio-economic impact vision-related challenges could have on the Asia Pacific region.

- * APAC shoulders a disproportionate burden from vision loss, affecting people's wellbeing, independence and opportunities - and costing the region billions in lost productivity each year.
- * Yet, around 90% of vision impairment is preventable or treatable with appropriate care.
- * Collaborative, cross-sector solutions that connect eye health to healthy-ageing strategies and chronic disease management can deliver economic and societal benefits.

Across the Asia Pacific, millions risk losing their sight-and with it, their independence and quality of life. Yet, vision loss is often preventable. As the region grapples with the dual challenges of an aging population and the increasing prevalence of diabetes, investing in eye health not only safeguards individual well-being and livelihoods but also yields significant economic and social benefits across the region."

"A new regional survey, commissioned by Roche, examines how people experience vision health and identifies areas where coordinated action can have the greatest impact beyond individual behaviours. The findings highlight key opportunities to enhance care, alleviate burdens, and improve outcomes across the region."

Vision loss carries significant costs for individuals, healthcare systems, and economies.

As a leading cause of disability, vision impairment results in \$411 billion in lost productivity globally each year. In the Asia Pacific region-where aging populations and rising diabetes rates exacerbate the issue-the stakes are even higher.

Without targeted intervention, retinal diseases such as age-related macular degeneration and diabetic macular edema could lead to \$715 billion in lost productivity and 13 million healthy life years lost within this decade across the ten major economies studied."

1. Vision loss impacts households and economies :

Vision loss has far-reaching effects on families and communities. One in four caregivers reported income loss, while 39% experienced productivity strain. Many also faced emotional distress and exhaustion, highlighting the significant toll vision loss takes on family well-being and support systems. Survey respondents identified their top concerns as reduced quality of life, loss of independence, financial difficulties, and mental health challenges. When vision is compromised, it affects the ability to work, care for loved ones, and maintain independence, creating a widespread burden that extends across healthcare and economic systems.

THE HIDDEN BURDEN: THE CAREGIVER CHALLENGE

95% of caregivers for individuals with vision impairment report financial, emotional, and physical challenges



2. High concern, low action: A missed opportunity for prevention

Despite 9 in 10 people expressing concern about their eye health, only 28% undergo annual eye exams, and 12% never visit an eye care professional. This gap between awareness and action represents a missed opportunity. Enhancing early detection through education, integrating eye health into routine check-ups, and removing access barriers can significantly reduce the burden of advanced-stage disease.

3. Diabetes management through vision care integration

People with diabetes face a 25-fold higher risk of vision loss, yet nearly a third of surveyed individuals with diabetes do not receive the recommended annual eye exam. Many also report significant daily challenges due to visual symptoms. Integrating vision care into diabetes and primary health services offers a practical solution-enabling early detection, reducing the burden on specialists, and safeguarding independence for working-age adults.

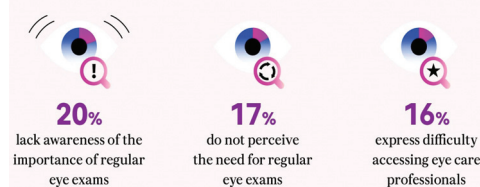
4. Healthy ageing starts with protecting vision

By 2050, one in four people in the Asia Pacific will be 60 or older. While aging is widely acknowledged as a risk factor, many older adults still view vision loss as an unavoidable reality. Less than 60% undergo regular eye check-ups, and preventive measures are often postponed until symptoms arise. This is where healthy-ageing policies can make a meaningful impact-shifting the focus from treating disease after it occurs to integrating eye health into a proactive approach to living well longer.

5. Awareness of retinal diseases is critically low

Despite their significant impact, awareness of retinal conditions like age-related macular degeneration and diabetic macular edema remains low. Across all surveyed markets, knowledge scores averaged just 2.2 out of 4, with many unable to recognize symptoms. This lack of awareness often results in delayed care, missed diagnoses, and preventable complications. Bridging this gap through targeted education and early access to innovative treatments is crucial for preserving vision and reducing long-term healthcare costs."

Respondents with diabetes identify specific barriers to regular eye exams in APAC



A shared opportunity to strengthen systems

The path forward is clear: Strengthening eye health can enhance lives and livelihoods while easing the strain on overburdened health systems. However, achieving lasting impact requires collaboration across sectors and borders.

To realize the **World Health Organization's Vision for Everyone by 2030**, efforts must build on existing initiatives and expand solutions to reach those most in need. Key actions include:

(cont...6th page)

*In the realm of dreams,
his eyes are guiding stars*

Seeing the Future: Why Eye Health is Key to Asia Pacific's Growth

- * Integrating eye care into public health strategies, including non-communicable disease frameworks, healthy aging policies, and primary care pathways.
- * Promoting early detection through coordinated public education and improved access to screenings.
- * Investing in sustainable care models and innovative treatments that reduce the burden on patients and improve long-term outcomes.
- * Leveraging digital tools, such as telemedicine and AI-based screening, to bridge gaps in access—particularly in lower-resource settings.

Achieving these goals requires commitment from all stakeholders, including healthcare providers, policymakers, industry leaders, and patient advocates. By working together, we can ensure individuals receive the care they need, when and where they need it.

Making vision health a regional priority
Vision loss is not inevitable, but changing its trajectory in the Asia Pacific requires more than just awareness. It demands action—through sustained collaboration across sectors and the integration of vision health into broader health and development strategies.

Protecting sight empowers individuals to live independently, fulfill their potential, care for loved ones, and stay connected to the world around them. When people can fully participate in society—at home, in their communities, and in the workforce—the benefits extend outward, strengthening families, communities, and economies.

By working together across sectors, we have the opportunity to turn insights into lasting impact for millions across the Asia Pacific."

Edited by **K Bangar Raju**, Dy General Manager (PR & Liaison) with inputs from World Economic Forum <https://www.weforum.org>

*Your eyes speak the love
my heart has needed*

THE SCIENCE OF SEEING: PIONEERS WHO REVOLUTIONIZED VISION CARE

Ophthalmology has been transformed by pioneering inventions that have revolutionized vision care. Breakthroughs such as intraocular lenses (IOLs) for cataract surgery, LASIK for refractive correction, and optical coherence tomography (OCT) for detailed retinal imaging have set new standards in diagnosis and treatment. Visionaries like Sir Harold Ridley, Dr. Ioannis Pallikaris, and Dr. James

Fujimoto have propelled the field forward with their innovative contributions.

These advancements have not only improved surgical precision but have also enhanced patient outcomes, offering millions worldwide the gift of clearer sight.

The following is a chronological list of landmark inventions in ophthalmology and their inventors, where known:

| Invention | Year | Inventor | Country |
|--|------|--|---|
| Keratoprosthesis | 1789 | Guillaume Pellier de Quengsy | FRFrance |
| Stereoscope (precursor to synoptophore) | 1832 | Charles Wheatstone | GBUK |
| Keratoscope | 1847 | Henry Goode | GBUK |
| Direct ophthalmoscope | 1851 | Hermann von Helmholtz | DEGermany |
| Surgical iridectomy | 1856 | Albrecht von Graefe | DEGermany |
| Snellen chart | 1862 | Herman Snellen | NL Netherlands |
| Pilocarpine | 1875 | E. Hardy Alfred Gerrard | FRFrance GBUK |
| Local anesthesia for eye surgery (cocaine) | 1884 | Carl Koller | ATAustria |
| Hirschberg test | 1886 | Julius Hirschberg | DEGermany |
| Corneal transplant | 1905 | Eduard Konrad Zirm | ATAustria |
| Slit lamp | 1911 | Allvar Gullstrand | SESweden |
| Ishihara color test | 1917 | Shinobu Ishihara | JPJapan |
| Gonioscopy | 1918 | Alexios Trantas | GRGreece |
| Streak retinoscopy | 1927 | Jack Copeland | USUSA |
| Binocular indirect ophthalmoscope | 1945 | Charles Schepens | BEBelgium |
| Amsler grid | 1945 | Marc Amsler | CHSwitzerland |
| Goldmann perimetry | 1945 | Hans Goldmann | ATAustria |
| Light photocoagulation | 1946 | Gerhard Meyer-Schwickerath | DEGermany |
| Intraocular lens | 1949 | Harold Ridley | GBUK |
| Goldmann applanation tonometry | 1954 | Hans Goldmann | ATAustria |
| B-scan ultrasonography | 1958 | Gilbert Baum Ivan Greenword | USUSA |
| Laser photocoagulation | 1960 | Theodore Maiman | USUSA |
| Fluorescein angiography | 1961 | Harold Novotny David Alvis | USUSA |
| Phacoemulsification | 1967 | Charles Kelman | USUSA |
| Trabeculectomy | 1968 | John Cairns Peter Watson | GBUK |
| Pars plana vitrectomy | 1970 | Robert Machemer | DEGermany |
| Indocyanine green angiography | 1972 | Robert Flower Bernard Hochheimer | USUSA |
| LogMAR chart | 1976 | Ian Bailey Jan Lovie-Kitchen | AUAustralia |
| Radial keratotomy | 1979 | Syvatoslav Fyodorov | RURussia |
| Humphrey field analyzer | 1984 | Mike Patella Anders Heijl | USUSA SESweden |
| LASIK | 1989 | Gholam A Peyman | USUSA |
| Optical coherence tomography | 1991 | James Fujimoto Adolf Fercher David Huang Christoph Hitzenberger Eric Swanson | USUSA ATAustria USUSA ATAustria USUSA |

Source: American Academy of Ophthalmology

SMART LENSES, CLEAR FUTURES : THE EVOLUTION OF INTRAOCULAR LENS TECHNOLOGY

Intraocular lenses (IOLs) have transformed cataract surgery from a sight-restoring procedure into a sophisticated refractive solution, enabling patients to achieve greater independence from corrective eyewear. Over the past decade, rapid advancements in technology have enhanced IOL performance, delivering superior visual outcomes, heightened patient satisfaction, and personalized solutions tailored to individual needs.

| Choosing the Right Lens to Match the lifestyle | | | | |
|--|---------------------------------------|------|--------------|----------|
| | | Near | Intermediate | Distance |
| Spherical Refraction only | Presbyopia Correcting Multifocal Lens | | | |
| | Advanced Monofocal Lens | | | |
| | Basic Monofocal Lens | | | |
| Astigmatism Error added | TORIC Power added to above Lenses | | | |

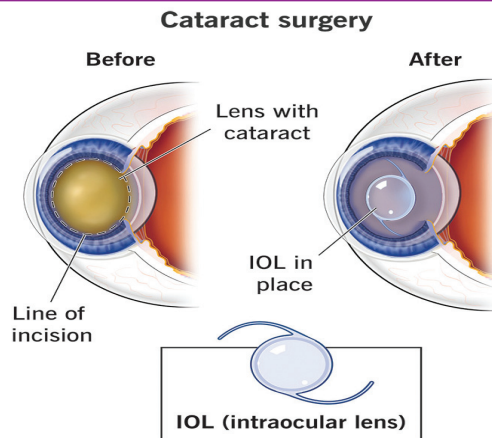
Evolution of IOL Designs

Traditional monofocal IOLs have long delivered excellent vision at a single fixed distance-typically optimized for far vision-while necessitating spectacles for near or intermediate tasks. Recent innovations in lens technology have broadened the options available to meet diverse visual needs:

Monofocal IOLs These lenses are engineered to provide clear vision at one predetermined distance-whether near, intermediate, or far. Like a natural lens, they cannot adjust focus, but they come in various designs, including spherical, aspherical, and toric, to address specific refractive requirements.

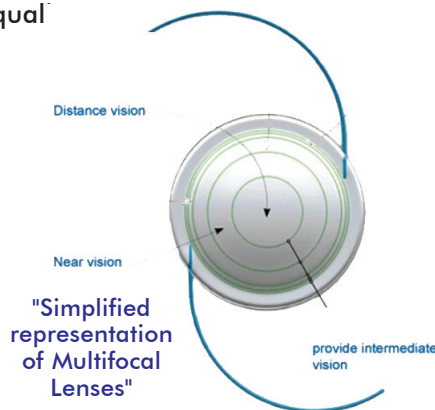
Multifocal IOLs By dividing incoming light into multiple focal points, multifocal lenses enable simultaneous near and distance vision. Modern iterations-often employing diffractive or refractive optics-optimize light distribution to minimize common issues such as halos and glare associated with earlier designs.

Extended Depth of Focus (EDOF) IOLs EDOF lenses, exemplified by models like the Tecnis Symphony, create an elongated focal point that delivers a continuous



range of vision, particularly enhancing intermediate tasks. They offer a balanced compromise, providing a level of clarity reminiscent of monofocal lenses while extending the range of focus seen in multifocal systems, and with fewer photic disturbances.

Trifocal IOLs Recent trifocal designs, such as the PanOptix, integrate three distinct focal points-near, intermediate, and distance-to provide comprehensive visual performance. These lenses deliver robust functionality across everyday activities like reading, computer work, and driving, and are rapidly gaining popularity for their full-range vision quality



Toric IOLs for Astigmatism Correction Toric lenses have become the preferred choice for addressing corneal astigmatism in cataract surgery. With advancements in rotational stability and customizable power, modern toric IOLs, such as the AcrySof IQ Toric II, achieve exceptional refractive accuracy. The use of image-guided systems and intraoperative aberrometry further refines their precise alignment.

Accommodating IOLs Designed to mimic the eye's natural accommodation, these lenses adjust their position or shape in response to ciliary muscle contractions. Although early iterations

such as the Crystalens met with limited success, ongoing research into electroactive polymers and fluid-optic systems holds promise for achieving truly dynamic, naturalistic focusing capabilities.



Dr. S. Bharathi
Fellow,
Anterior Segment

FUTURE ASPECTS

Light Adjustable Lenses (LALs) Light Adjustable Lenses mark a breakthrough in personalized refractive surgery. Utilizing targeted UV light postoperatively, these lenses can be fine-tuned to precisely match the patient's visual requirements. The RxSight Light Adjustable Lens stands as a prominent example, allowing surgeons to adjust lens power after implantation and effectively eliminate residual refractive errors without additional procedures.

Smart and Adjustable IOLs Research is paving the way for "smart" IOLs equipped with embedded sensors, wireless connectivity, and controlled drug delivery systems. These next-generation lenses may also incorporate adaptive optics-using piezoelectric or fluidic mechanisms-to automatically adjust focus in real time, potentially transforming postoperative care.

Biocompatibility and Material Improvements Advancements in IOL materials, including glistening-free hydrophobic acrylics, are enhancing optical clarity and reducing the incidence of posterior capsular opacification (PCO). Innovations such as nano-coatings and refined edge designs further improve biocompatibility and contribute to superior long-term outcomes.

Conclusion The evolution of intraocular lens technology is rapidly reshaping cataract and refractive surgery. From trifocal optics and toric precision to postoperatively adjustable and smart implants, these innovations strive not only to restore sight but also to deliver a quality of vision tailored to each patient's unique needs.

*See the world through
eyes that count blessings*

Performance - June 2025

BASE HOSPITAL

| | |
|-----------------------|--------|
| * Total Eye Surgeries | 3478 |
| * Cataract Surgeries | 2535 |
| * Retina Surgeries | 104 |
| * Retina Injections | 217 |
| * Glaucoma Surgeries | 30 |
| * Cornea Surgeries | 327 |
| * Pediatric Surgeries | 8 |
| * Orbit & Oculoplasty | 56 |
| * Total OP Screened | 18,681 |

BRANCHES

| | |
|------------------------------------|------|
| * Srikakulam -Eye Surgeries | 460 |
| * OP Screened | 2167 |
| * Maddilapalem -Surgeries | 103 |
| * OP Screened | 1362 |
| * Gajuwaka -Surgeries | 29 |
| * OP Screened | 1176 |
| * Madhurawada -Surgeries | 23 |
| * OP Screened | 622 |

* **School Children Screened - 3,21,369**

* Total 56 Outreach free eye camps conducted and screened 3646 patients and Performed 1516 surgeries

EDITOR

K BANGAR RAJU,
Dy GM (PR & Liaison)

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Bright Eyes Ahead: Simple Daily Habits to Boost Eye Health

In today's digital world, it's only natural to worry about your vision. Prolonged screen time, age-related changes, poor diet, dehydration, and lack of sleep can all take a toll on your eyes. The gold standard of healthy eyesight-20/20 vision-means you can see clearly at 20 feet without correction. But when vision becomes blurry or hazy (especially in bright light), or you struggle to recognize faces, experience red or itchy eyes, or get frequent headaches, it could be a sign that your eyesight needs attention.

While only a professional can diagnose and correct vision problems, you can still support your eye health with smart daily habits. Hydrate well-drink 7-8 glasses of water a day to keep your eyes from drying out. Give your eyes a break every 30 minutes to prevent digital eye strain.

Here are 5 ways to improve your eyesight at home :

Eye exercises are a simple yet effective way to support healthy vision by stimulating blood flow and strengthening the muscles around your eyes. Just like any other muscle in your body, your eye muscles benefit from regular movement and focused activity to stay sharp and responsive.

Try exercises like slowly tracing a horizontal figure eight with your eyes, rolling your eyes clockwise and counter clockwise, or shifting your gaze between near and far objects. These movements can help reduce eye fatigue, improve focus, and ease the strain caused by long hours at a screen. If your day involves extended computer use,

incorporating these exercises into your routine is especially important. Just a few minutes can go a long way in keeping your eyes relaxed and your vision steady.

Daily Workouts Regular physical activity does more than keep your body fit-it also plays a key role in supporting eye health. Exercise boosts blood circulation, ensuring that oxygen and essential nutrients reach your eyes. It also helps regulate blood pressure, which is crucial for maintaining the health of delicate blood vessels in and around the eyes.

Nourish Your Eyes with a Healthy Diet Your vision thrives on what you eat. A balanced diet rich in **vitamins A and E**, leafy greens, carrots, citrus fruits, and omega-3-rich fish can significantly support eye health and may help prevent age-related decline.

Take Control of Your Screen Time Digital screens are a major culprit behind eye fatigue and vision problems. Whether you're working, binge-watching, or scrolling endlessly, remember to follow the **20-20-20 rule**-every 20 minutes, look at something 20 feet away for 20 seconds. Your eyes will thank you.

Set the Mood with the Right Lighting Poor lighting strains your eyes more than you might realize. Make sure your room is well-lit with soft, diffused light. Avoid harsh, direct lighting that causes glare or flickering screens, which can lead to eye discomfort and blurry vision over time.

Revamp Your Sleep Routine Your eyes repair themselves while you sleep. Staying up until 4 a.m. glued to a screen disrupts this crucial recovery time. A consistent sleep schedule-**early to bed and early to rise**-helps your eyes rest, rejuvenate, and stay healthy in the long term.

EYE EXERCISES

Exercise 01



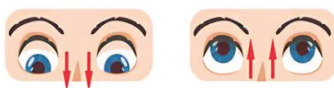
Look right and hold for 3 seconds then look left and hold for another 3 seconds. Repeat 3 times in total

Exercise 02



Rotate your eyeballs 3 times to the right and then 3 times to the left. Blink several times to relax.

Exercise 03



Look up and hold for 3 seconds then look down and hold for another 3 seconds. Repeat 3 times in total.

Exercise 04



Look to the top left corner of your eye and hold for 3 seconds. Rotate your eye & Look to the top right and hold for another 3 seconds. Repeat 3 times.

*Eyes that never lose faith,
even in the darkest nights*

(Edited by

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with inputs from The Times of India)