

NEW RETINA CAMERA SAVES SIGHT

A new ultra-widefield retinal camera can save sight by improving early detection of common causes of vision loss.

This latest advance in technology takes photographs of a large span of the retina's outer edges, leading to a better understanding of how different conditions affect all parts of the retina. Some of the first signs of eye disease and systemic disease can be seen in the retina before they cause other symptoms, including vision loss.

The Sydney Eye Hospital Foundation (SEHF) is raising funds to purchase an Optos California ultra-widefield retinal camera for the hospital, to help ophthalmologists to see and diagnose these early, subtle changes – which previously went undetected – so they can be treated before sight loss occurs.

Demand for excellent eye care, including for conditions that affect the retina, is growing, says Kevin Gardner, the SEHF Chief Executive Officer.

"One of the main drivers of this growth in demand is Australia's ageing population," he explains. More than 85% of vision loss occurs in people aged over fifty. Diabetic retinopathy and age-related macular degeneration are two of the most common causes of vision loss worldwide and the risk for both conditions rises with age. Early stages of both of these conditions can be detected in the periphery of the retina.

"Early detection can have a significant impact on reducing sight loss. Research tells us that up to 90% of vision loss can be prevented with regular, accurate eye tests."

The Optos camera system has an important role to play in early detection. Existing imaging cameras capture only 15% of the retina in each photo. Scattered light and obstructions such as cataracts, corneal pathology and astigmatism can reduce the quality of the photo. Patient's pupils are dilated with eye drops in an attempt to improve the images, causing the discomfort of blurred vision and light sensitivity for some time after the examination.



" EXISTING IMAGING CAMERAS CAPTURE ONLY 15% OF THE RETINA IN EACH PHOTO. IN CONTRAST, THE OPTOS CAMERA CAN CAPTURE UP TO 80% OF THE RETINA IN ONE PHOTO, WITHOUT DILATING THE PUPIL."

In contrast, the Optos camera can capture up to 80% of the retina in one photo, without dilating the pupil. Photos are quick, painless and do not cause any discomfort to the patient. A bonus for patients is that we dramatically cut the time they have to spend in the clinic as they don't have to wait for the pupil-dilating eye drops to work.

Photos are immediately available so patients can see exactly what the doctor sees when examining the eye through a high-powered lens and provide objective documentation of clinical findings. The photos can be saved for future comparisons to help monitor the eye disease and effectiveness of treatment.

With this, patients are better able to learn about their eye condition and treatment options and to make informed decisions about their eye care.

"At \$155,000 for the Optos camera system, we think it's a great investment that will benefit the 10,000 people with retinal conditions that the hospital sees each year," Mr Gardner said.

HOW SYDNEY EYE HOSPITAL CHANGED SARAH'S LIFE:

Sarah is a 13 year old girl from Coffs Harbour who first came to the Sydney Eye Hospital when she was 12 years old.

She was born with a large eye turn which worsened as she grew older and had seen an eye specialist close to home. Surgery was recommended to correct her eye turn, however, due to financial pressures this was not a possibility.

When Sarah started high school, she was bullied because of her eye turn. She was later diagnosed with depression as a result of the bullying she was subjected to.

Sarah's mother was desperate to be able to do something to help her daughter. A friend of hers recommended that she contact the Sydney Eye Hospital to see if they could help.

After receiving the referral from Sarah's family doctor, Sarah was given an appointment at our paediatric and strabismus ophthalmology clinic. Sarah's mother was thrilled to hear that not only would she have the opportunity to have Sarah seen at the Sydney Eye Hospital, but also if surgery was recommended, it would be at no cost to her.

In January 2016, Sarah and her mother came for their first visit to the Sydney Eye Hospital. At the appointment, Orthoptists assessed Sarah's eyes to help determine the type of eye turn Sarah had, the range of movement of her eye muscles, and whether her eyes were able to work together.

"Sarah's eye condition was having a significant impact on her wellbeing and recommended that surgery was an ideal option."

Following her assessment with the Orthoptist, Sarah was then seen by Dr Michael Jones. He recognised that Sarah's eye condition was having a significant impact on her wellbeing and recommended that surgery was an ideal option for her at this point in time.



Within 6 months of her first appointment at the Sydney Eye Hospital, Sarah had eye surgery to straighten her eyes.

Ten days following her operation, Sarah and her mother returned for review so the Orthoptists could assess the positioning of her eyes post-surgery.

"Sarah's mother shed tears of joy when she saw the smile on her daughter's face with her eyes now straightened."

Sarah and her mother were extremely happy with the outcome, with Sarah's eye turn almost completely straightened. Following her surgery, it was clear to see the impact this had on Sarah's general wellbeing. She was visibly happier, constantly chatting and smiling, and engaging with others.

Sarah's mother shed tears of joy when she saw the smile on her daughter's face with her eyes now straightened. When Sarah attends the Sydney Eye Hospital for eye reviews, she now enjoys sharing stories with the Orthoptists explaining how she now feels confident to stand up to the people that used to bully her.

Sarah will be returning to the Sydney Eye Hospital for her next review in a two months' time and we are looking forward to hearing of her progress.

(Name has been changed to maintain patient privacy and confidentiality)

SYDNEY EYE HOSPITAL ORTHOPTIC DEPARTMENT



Melanie Lai (Head Orthoptist), Maria Tran (Orthoptist), Jodie Attard (Acting Orthoptic Student Educator), Sally Steenbeek (Orthoptist)

Orthoptists play a key role in assessing children and adults that approach the Sydney Eye Hospital with eye turns and disorders affecting the eye movements.

We are university trained allied health professionals that specialise in providing thorough assessments of alignment of the eyes, movement of the eyes, and the ability of the eyes to work together. Orthoptists conservatively manage symptoms of double vision or eye strain that patients may experience from disorders affecting the function of their eye muscles or ability of their eyes to work together. By working with patients and understanding their needs, Orthoptists are able to help patients manage their symptoms and minimise the impact symptoms have on their daily activities and general wellbeing.

Orthoptists are also highly skilled in the area of treating amblyopia (or lazy eye) in children. Up until the age of 8 years, the visual system of a child is still developing. It is crucial that any reduction in vision is detected and treated as soon as possible to help the child's vision and visual system to develop normally. If a vision defect is not found until later in childhood, it reduces the potential for normal vision following treatment. When a vision defect is found, the orthoptist and ophthalmologist work together with the child and their parents to treat and improve the child's vision.

The Sydney Eye Orthoptists have a clinic dedicated to screening children to promote early detection of vision defects, eye turns, and eye muscle disorders that may impact a child's vision and visual development. We also take part in the NSW Health State-wide preschool vision screening program that aims to provide all 4 year olds with a free vision screening and access to care when vision defects are found.

Orthoptists also have expertise in using specialty diagnostic equipment for assessment of chronic and age related eye conditions including cataracts, glaucoma, retinal conditions, macular degeneration, and diabetic eye disease.

The Sydney Eye Hospital Orthoptic department accepts referrals from optometrists, family doctors, and private ophthalmology clinics.

**Sydney Eye Hospital Foundation
Board of Management**

All Members of the Board of Management are financial members of the Foundation. They also give their time freely in the interests of enhancing the ability of Sydney Eye Hospital to provide first class eye care to the public of Sydney and beyond.

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**A BEQUEST IN YOUR WILL IS A GIFT THAT KEEPS GIVING
AFTER YOU PASS ON**

It's a way of ensuring that the assets (money, property, shares or valuables) that you need now will eventually be used to help the Sydney Eye Hospital Foundation save sight. It's something that you can arrange in addition to – or instead of – giving cash right now.

By making a Bequest, you will be in good company. Bequests from donors, like Neville G who has provided \$600,000 towards the equipment for the new Bicentennial Clinic that was opened earlier this year, have made a significant difference to our patient outcomes, with the ability to make earlier diagnoses with state of the art equipment.

Bequests are a major source of income that help the Foundation provide much needed research and advanced equipment to help in the diagnosis of Macular and Corneal diseases.

The main advantage of the Bequest system is that it allows donors of all means to make a valuable donation to the Foundation in the knowledge that their generosity will help save the sight of thousands of adults and children who come to the Hospital for help each day.

Should you decide to make a Bequest to Sydney Eye Hospital Foundation, clear instructions in your Will are necessary to ensure your wishes are carried out.

If you would like more information please contact the Foundation's Chief Executive Officer, Mr Kevin Gardner, on (02) 9382 7408 or email: kevin.gardner@health.nsw.gov.au He will be pleased to assist.



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Mr Mrs Miss Ms Other _____
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SYDNEY EYE HOSPITAL PATIENTS**

PLEASE ACCEPT MY GIFT OF: \$50 \$35 \$100 OR MY CHOICE OF _____

My cheque/money order is enclosed. *Made payable to: SYDNEY EYE HOSPITAL FOUNDATION.*

OR Please debit the above amount to my: VISA MASTERCARD AMERICAN EXPRESS

Card No. _____
 Cardholder's name _____

Signature _____ Expiry Date ____ / ____

OR Please deduct \$ _____ each month from my credit card until I advise otherwise.

Yes, I would like further information on (PLEASE TICK)

Bequests Planned Giving (eg: monthly) Volunteering

I have already included Sydney Eye Hospital Foundation in my Will

THANK YOU FOR YOUR GENEROSITY.