

sight & sound

Hospital operation a Victorian first



In a landmark operation performed by a Royal Victorian Eye & Ear Hospital surgeon, toddler Hayley Walsh has become the first person in Victoria to simultaneously receive two cochlear implants.

Victoria's Acting Premier John Thwaites and Minister for Health, Bronwyn Pike, announced the success of the operation at the hospital in January. Mr Thwaites said the cochlear success story put Victoria at the top of the field in achieving research and clinical breakthroughs.

Prior to Hayley's operation, both child and adult patients would receive one implant and then undergo months of therapy before receiving the second implant. One operation reduces the trauma and therapy that would normally be involved with two surgeries.

Hayley's mother, Lyn Walsh, said she was relieved her daughter (20 months) only had to undergo one 14-hour operation rather than two.

Hayley's operation follows research at the hospital which shows children who receive two cochlear implants before four years of age experience better hearing outcomes.

Hospital Cochlear Implant Clinic Director Professor Richard Dowell said having the implants installed simultaneously at a young age would help Hayley better understand speech and decipher noises, including the direction they were coming from.

Since the operation, both of Hayley's implants have been "switched on" and she has been working with an audiologist and speech pathologist to learn how to interpret sounds.

On the day of the first switch on, her parents, Trevor and Lyn, were delighted and relieved that their daughter could finally hear them speak.

Following the success of Hayley's surgery, the hospital intends to perform simultaneous cochlear implant operations for other patients. The hospital anticipates that due to the advances in cochlear technology, and the obvious benefits of dual implants for patients and the community, demand for this surgical treatment will rise. In addition, the hospital is planning for the increased demand that will result from the State Government's roll out of the neonatal hearing screening program, an initiative that promotes early detection of hearing problems through newborn testing.



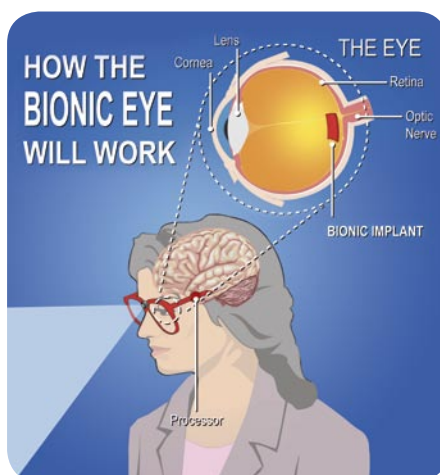
Top Hayley, Victoria's first simultaneous double cochlear implant recipient, with her parents Trevor and Lyn.

Bottom In January, Acting Premier John Thwaites and Minister for Health, Bronwyn Pike, announced the success of the cochlear implant operation.



Far Right The Eye & Ear's Murray to Moyne team.

Right This is a graphic representation of how a Bionic Eye might work. The camera on the glasses captures an image and transmits it via a wireless processor to an electrode panel at the back of the eye. Electronic pulses are then sent to the brain, resulting in visual patterns of light and dark.
Source: Bionic Ear Institute.



Bionic eye: tomorrow's breakthrough

Following the Royal Victorian Eye & Ear Hospital's role in the success of the Bionic Ear, the hospital is now turning its attention to the clinical need in ophthalmology and examining how it can aid the development of the "Bionic Eye".

The hospital's research partners, the Bionic Ear Institute, the Centre for Eye Research Australia (CERA) and the University of Melbourne, have combined efforts with engineers at National ICT Australia to develop a bionic vision device.

This Victorian research group, which includes doctors from the Eye & Ear, is also collaborating with researchers in New South Wales.

The concept of a Bionic Eye is based on the design where a tiny camera and microprocessor are mounted in glasses which captures an image. This image is converted into an electronic signal that is sent to an electrode panel implanted on the back of the eye (the retina). The electrode panel then sends pulses via the optic nerve to the brain and the brain receives patterns of light and dark.

Potential eye conditions that could be treated using a Bionic Eye include Retinitis Pigmentosa, a hereditary group of diseases which destroy light-sensing cells in the retina, and Age-Related Macular Degeneration (AMD), a disease which leads to central

vision loss and which is Australia's leading cause of blindness.

Professor Rob Shepherd, Director of the Bionic Ear Institute, said Victorian efforts to develop a Bionic Eye were recently given a boost by a philanthropic grant. "We will use these funds to do feasibility studies over the next two years."

Professor Shepherd expects clinical trials of a high resolution version of the Bionic Eye to take place in 5-8 years' time.

Director of CERA, Professor Hugh Taylor AC, said research carried out by the Centre projected that by 2020, there would be 1 million Australians living with vision loss. "This demonstrates the need for a bionic vision device and CERA is delighted to be partnering with experts in Bionic Ear technology to address this need," Prof Taylor said.

Dr William Campbell, head of the hospital's Vitreo-Retinal Unit, agreed that the Bionic Eye was an exciting development in the ophthalmological field.

The hospital has received offers from members of the public to participate in a clinical trial of a Bionic Eye. Although patient participation will be welcome and critical to the success of the development of a Bionic Eye, recruitment for any clinical trial is still some years away.

Cycling for kids

A team of Eye & Ear staff and clinicians recently completed a test of personal endurance to help more children receive the gifts of sight and hearing.

The Murray to Moyne Cycle Relay is an annual event to promote health and wellbeing. Staff of Victorian hospitals and health services, and the community, complete a challenging 520 km ride from Swan Hill to Port Fairy over 24 hours, and also raise funds for their nominated health service.

The hospital proudly fielded a team of 19 cyclists and 5 support crew in the relay.

One of the hospital's team cyclists, Dr Andrew Atkins, said the Murray to Moyne was professionally and personally rewarding. "This is the second time I have cycled and I'll be signing up for a third."

The Eye & Ear team raised nearly \$12,000, 100% of which will go directly into kids' health initiatives at the hospital, such as the Cochlear Implant Program (see story on page 1).

The hospital thanks all the riders and families, and individuals and companies who also donated.



sight & sound



Far left Dr Rodger Davies demonstrated a new surgical procedure to health practitioners.

Left Hospital Wagstaff Research Fellow Jill Keeffe will present as part of the Grand Round series.

Lessons in surgery Grand Rounds shed light on research

The Eye & Ear is helping to improve patient care across Victoria through live surgery demonstrations.

More than 60 health professionals recently attended the hospital to observe and discuss the “endoscopic brow lift” surgical procedure. On a giant screen in the hospital’s lecture hall, nurses, orthoptists, pharmacists and clinicians were able to watch and learn as ophthalmologist, Dr Rodger Davies, performed the procedure in theatre.

Usually considered a plastic surgery speciality, the endoscopic brow lift is a treatment option for eye conditions such as blepharoptosis (drooping of the upper eyelids).

Dr Davies said the benefit of having an endoscopic brow lift, where the incision is made behind the hairline, rather than directly above the brow, is that any scarring that occurs is hidden – something that is appreciated by the patients.

He said few ophthalmologists in Australia were currently performing this procedure. “I learnt the procedure from Eye & Ear Fellow, Guy Ben Simon, who spent three years studying it in California.” Dr Davies has used the surgical procedure to treat 10 Eye & Ear patients over the past year.

The live surgery event was run by the Australian Ophthalmic Nurses Association, Victoria (AONA Vic).

Learn how research is impacting the delivery of eye and ear, nose and throat (ENT) care at an upcoming lecture in the Royal Victorian Eye & Ear Hospital’s Grand Round series.

The hospital’s Grand Round series is a new initiative that stimulates learning and sheds light on research and clinical practices that can directly improve healthcare for patient and professional alike.

Presenters are acknowledged national and international leaders in their fields. Professor Martin Birchall, the Chair of Laryngology at the University of Bristol, will lead the 12 May lecture, presenting his vision for achieving better outcomes for head and neck cancer patients, particularly through the use of stem cell, nanotechnology and cybernetics research.

On 18 August the hospital’s Wagstaff Research Fellow, Associate Professor Jill Keeffe, will present on the effectiveness of eye care in the community.

The Grand Round series is one way the hospital encourages lifelong learning for its professional and patient community. This hospital is the main educator of Victoria’s specialist eye and ENT workforce. All of the State’s ophthalmologists and the majority of ENT clinicians undergo their training at the Eye & Ear.

All lectures are open to the public and include complimentary breakfast as well as the opportunity to meet hospital clinicians and staff.

Grand Round Diary Dates

Saturday, 12 May
8.30–10 am

“Harnessing clinical, research and technological innovation: A vision for head and neck surgery”

Professor Martin Birchall MA, MD, FRCS, FRCS (Oto), FRCS (Orl)

Saturday, 18 August
8.30–10 am

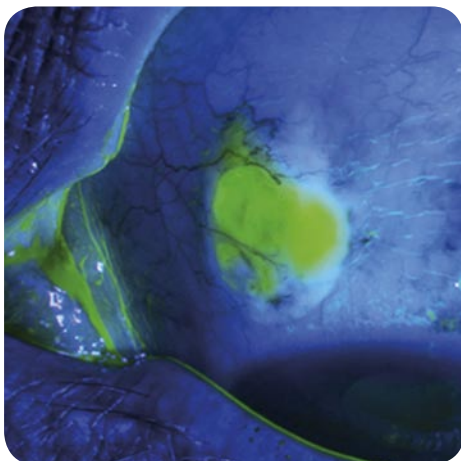
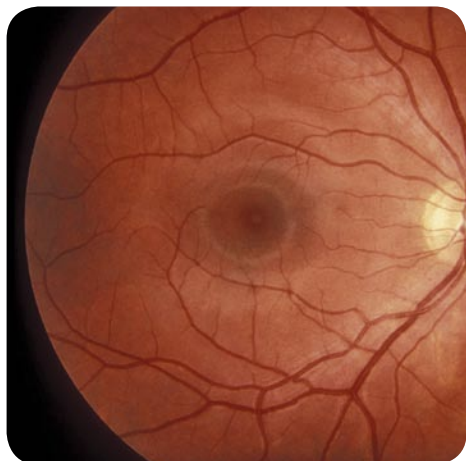
“How should we assess the effectiveness of our eye care services?”

Associate Professor Jill Keeffe PhD

Venue: Lucy Jones Auditorium
The Royal Victorian
Eye & Ear Hospital
426 Albert St
East Melbourne Vic 3002

RSVP: phone (03) 9929 8562 or email sonia.aplin@eyeandear.org.au

Below Healthy Eyes: Most vision loss can be prevented or treated. If you experience any changes to your vision, are over the age of 40 or have a family history of eye disease, seeing an eye specialist regularly will help detect any problems early and allow the best treatment.



Below Hayley Walsh plays with Barbara Bennett, 79, who also has two cochlear implants.



Health round up

Keeping eyes healthy

Progress is being made in the national promotion of good eye health with the release of a new set of graphic warnings for tobacco products sold in Australia. The new system, devised by the Federal Government's Department of Health and Ageing, took effect from 1 March 2007 and includes the message: "Smoking causes blindness".

Smoking has been identified as the only modifiable risk factor of Age-related Macular Degeneration (AMD) – the leading cause of blindness in Australia today (Centre for Eye Research Australia 2006). AMD affects 1 in 7 people aged over 50 and results in a loss of central vision. Central vision is essential for reading, driving, seeing people's faces and pursuing hobbies or activities that require fine vision.

Healthy heart linked to eyes

A new trial examining the potential of cholesterol-lowering medicines to delay the onset of Age-related Macular Degeneration (AMD) is being carried out at the hospital by our research partner, the Centre for Eye Research Australia (CERA). Researchers believe that these medicines, known as statins, may assist in halting the progression of AMD because the eye disease is linked to a similar gene associated with cardio-vascular disease.

Researchers also hypothesise that statins will help improve the flow of nutrients to the retina, the section of the eye that is affected by AMD, keeping it healthier for longer. Around 120 hospital patients are participating in the trial, expected to be complete by 2009.

Early implants better for kids

Recent research conducted by the University of Melbourne at the Eye & Ear has found that some children with hearing loss who receive a cochlear implant before the age of 12 months acquire language skills at a normal developmental rate. In comparison, children with hearing loss who received an implant after 12 months of age progressed in language at only two thirds of the normal rate. A child who develops language skills at a normal rate, is likely to access more educational, social and vocational opportunities. The research involved a major clinical study of 120 infants between 2 months and 2 years of age. Around 1 in 1000 babies around the world are born with significant hearing loss.

Like to help the Eye & Ear?

As a public hospital, the Eye & Ear appreciates the support of the community to help maintain a high standard of patient care, such as through the provision of specialist equipment and the teaching and training of expert surgeons. Donations are welcome and are tax deductible. You can make your tax time donation before 30 June, by phoning 1800 808 137.

Front Cover cont.

Hospital patient Barbara Bennett, 79, has seen her life improve after having two cochlear implants. Prior to the implants Mrs Bennett was becoming reclusive and had lost confidence interacting with people. Now she feels "useful" again, participating in the hospital's clinical research, attending community meetings and helping out with her children and grandchildren.

Mrs Bennett was present to help celebrate Hayley's milestone and wished her well.

"She'll hear, she'll have friends and she'll have everything other children should have, and are entitled to have," Mrs Bennett said.

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This newsletter contains general information only and you should seek independent medical advice before relying on this information.

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