



NSW Tissue Bank Newsletter

March 2020



Welcome to the March edition of the NSW Tissue Bank Newsletter

AUSTRALIA RECORDS HIGHEST NUMBER OF EYE DONORS IN 2019

In 2019, a record 2,414 Australians received a corneal transplant through the generosity of 1,508 deceased eye donors and their families who agreed to donation. This was an 8% increase in the number of eye donors compared with 2018 and a 64% increase since 2009, the year the national program started.

Of these numbers, 406 NSW donors helped restore the sight of hundreds of people, resulting in 718 corneal transplants and 274 scleral grafts.

The NSW Tissue Bank's living donation program also saw 485 people from NSW donate their femoral head following a hip replacement, and 27 generous women donate their amnion membrane following an elective caesarean section.

The 2019 national outcomes were announced on the 26th February 2020 by Minister for Regional Health, Mark Coulton. "I would like to take this opportunity to say thank you," Minister Coulton said, while participating in the annual Gift of Life Walk in Canberra, which raises the profile of the importance of registering as an organ and tissue donor.

"Australians are a nation of givers. We help people in need. We're calling on that Aussie spirit to ask all Australians to take a minute and register as an organ and tissue donor at donatelifelife.gov.au and, importantly, tell their family," Minister Coulton said.

For all 2019 national performance data reports, visit donatelifelife.gov.au/about-us/strategy-and-performance/national-performance-data.

NSW SENDS SKIN TO NEW ZEALAND TO ASSIST VOLCANO VICTIMS

Skin donation in Australia was in the spotlight in mid-December 2019 when a large amount of donated skin from NSW and Victoria was urgently sent to New Zealand to help the victims of the tragic White Island volcano eruption. Donated skin is used to treat serious burns and is lifesaving.

The donation of skin is possible only from a deceased person, after their family have provided consent to donation.

The NSW Tissue Bank is responsible for the retrieval and processing of donated skin tissue in preparation for transplant. After passing a number of stringent assessments, skin is preserved in custom freezers at -80 degrees and can be stored for up to 5 years. It can take up to 3 months for skin to be ready for grafting.

While NSW is working closely with the Victorian and Queensland Tissue Banks to monitor the levels of skin available in Australia to treat current and future burns victims, more skin donors are needed.

NSW commenced its skin donation program in 2018. Last year, only 35 people from NSW became skin donors.

It's important to discuss tissue donation with your family. While only 2% of people who die in hospital can be eligible to donate their organs, many more are able to become skin and tissue donors.

Pictured clockwise: Skin being prepared for transportation; ABC news clip featuring the NSW Tissue Bank's amnion lab; headline from SBS news article



Australia sends 'life-saving' skin donations to treat victims of NZ volcano



The Australian air force has flown medical supplies to New Zealand. Source: Supplied

CORNEAL TRANSPLANTS: HOW DO THEY WORK?

NSW Tissue Bank Coordination Team Leader, Pierre Georges breaks down exactly what a cornea is and how corneal transplants work.

Q: What is a cornea?

A: A cornea is the clear part of the eye that sits in front of the iris and pupil. The white part surrounding the cornea is known as the sclera.

Q: What does the cornea do?

A: The cornea is responsible for focusing the light that comes through the eye, and has to be healthy and clear for a person to be able to see.

Q: Why would someone need a corneal transplant?

A: Unfortunately, some people have corneal disease (that can be hereditary or due to injury) which affects the cornea in a way that either changes the shape of the cornea so that the picture they see is distorted, or the cells in the cornea may be diseased or dying, meaning the cornea becomes opaque or fogged up. Those cells are responsible for keeping the cornea clear.

Q: What is the difference between blindness-causing conditions that affect the cornea and blindness-causing conditions that affect other parts of the eye?

A: There are different types of blindness and one of them is corneal blindness, relating to the cornea only. Cataract is a form of blindness which can be treated by replacing the lens with a synthetic one. Treatments like wearing glasses or laser eye surgery are forms of corrective measures to help someone's eyes focus properly.

Q: So is it true that someone with poor vision but a healthy cornea, can go on to become an eye donor?

A: Absolutely. We say that for people who have all different types of eye diseases, as long as their cornea is healthy, they can help through corneal donation. I had a donor who was only 9 years old, and when I approached the father for donation, he explained that his son was blind. However he was blind due to the fact that the part of the brain responsible for his vision had switched off. I explained the corneas may be healthy and may help others through transplantation; and the father was able to consider eye donation.

Q: How does the actual corneal transplant work?

A: Corneal transplantation has been performed since 1905. For the first 100 years, surgeons transplanted the cornea as a whole. Now, surgeons treat the diseased layer of the cornea rather than replacing the whole cornea. Depending on the type of corneal disease, the diseased layer or layers are removed, and then the same layers from the donor cornea are transplanted. Some patients may still require a full cornea transplant.

Q: How long does the transplanted cornea usually last?

A: Some corneal transplants can last a patient's lifetime while others may need to be replaced due to rejection or failure. It depends on the type of surgery, and also the patient's medical and eye history. In many cases, a transplanted cornea usually lasts 10-20 years.

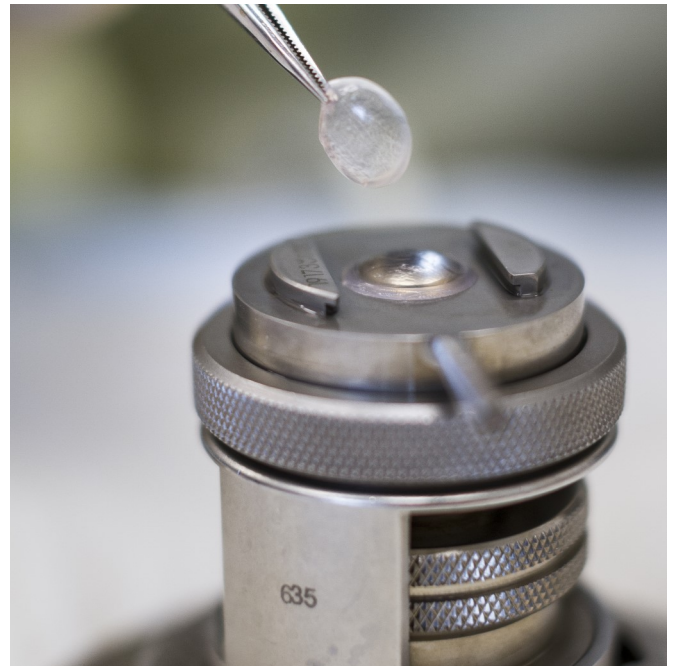
Q: Can a corneal transplant completely restore someone's sight?

A: Yes, absolutely it can and that's the main aim. People can get back the vision they had prior to the disease through corneal transplantation.

Pictured over the page, top to bottom: Pierre Georges with an eye model; a donated cornea in the eye lab

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Contact Us

Please contact the NSW Tissue Banks on 02 9382 7855 if you have any questions.

A VISIT TO AUCKLAND FOR THE ANNUAL CORNEA & EYE BANK MEETING

Ophthalmologists, eye bankers and researchers from Australia, New Zealand and around the world showcased a wealth of scientific and clinical knowledge at the 37th Annual Australia and New Zealand Cornea and Eye Bank Meeting.

NSW Tissue Bank staff, Amy Deller, Mona Ghabcha and Meidong Zhu attended the conference in February, organised by the Royal Australian and New Zealand College of Ophthalmologists.

The theme was *Achieving 2020 in 2020: transplantation or cell therapy?*, and the sessions covered topics on:

- Bioengineering the cornea
- Clinical practice on corneal infections
- Exploring innovations and long term trends in keratoplasty
- Management of Keratoconus being one of the most common corneal disorders worldwide
- The future of cornea repair with cell therapies
- Complex corneal cases
- The Australian Graft Registry reports

Stand out lectures included Professor of Ophthalmology, National Taiwan University and Director of the National Eye Bank of Taiwan, Professor Fung-Rong Hu's presentation on dealing with corneal infectious diseases, as well as Professor Colin Green from the University of Auckland's presentation on developing new medicine to treat corneal disease.

The topics represent some of the most important pre and post-operative issues and surgical techniques, new ideas happening today in corneal surgery and corneal disease treatment, stimulating the audience on what has been achieved over the last 20 years, what we're looking forward to, and the new diagnostic and therapeutic modalities.

The day prior to the conference, the Eye Bank Association of Australia & New Zealand (EBAANZ) held a meeting at the University of Auckland, discussing reviews of donor activities and statistics across each Eye Bank in Australia and New Zealand, improving donation referrals, medical suitability, laboratory processing, storage, tissue distribution and sharing tissue across the Eye Banks. These provided underlines for EBAANZ future guidelines and strategy making.



Pictured: attendees of the Annual Australia and New Zealand Cornea and Eye Bank Meeting

DONATELIFE VOLUNTEERS HEAD TO UNIVERSITIES ACROSS THE STATE FOR O-WEEK

Six universities in six days!

Did you know that only 8% of young people (aged 16-25) are registered on the Australian Organ Donor Register? It's not that young Australians don't agree with organ donation. Research shows that 37%* of those who have not yet registered, want to but haven't got around to it.

Taking part in the University Orientation Festivals is a unique chance to chat to hundreds of young students about their attitudes and beliefs towards organ donation, and encourage them to go home and speak to their families about it.

Volunteers and staff from the NSW Organ & Tissue Donation Service donned their DonateLife pink, braved the heat and spent six days speaking to first year students about the importance of organ and tissue donation. DonateLife visited Notre Dame University, the University of Sydney, the University of Newcastle, the University of Wollongong, Charles Sturt University, and Australian Catholic University.

The team spoke to hundreds of students, completing more than 700 surveys and over 160 on-the-spot registrations.

**Data from YouGov Galaxy Survey 2019. Picture below: volunteers and staff hosting DonateLife stands at University O-Week*

