

Organ and Tissue Donation

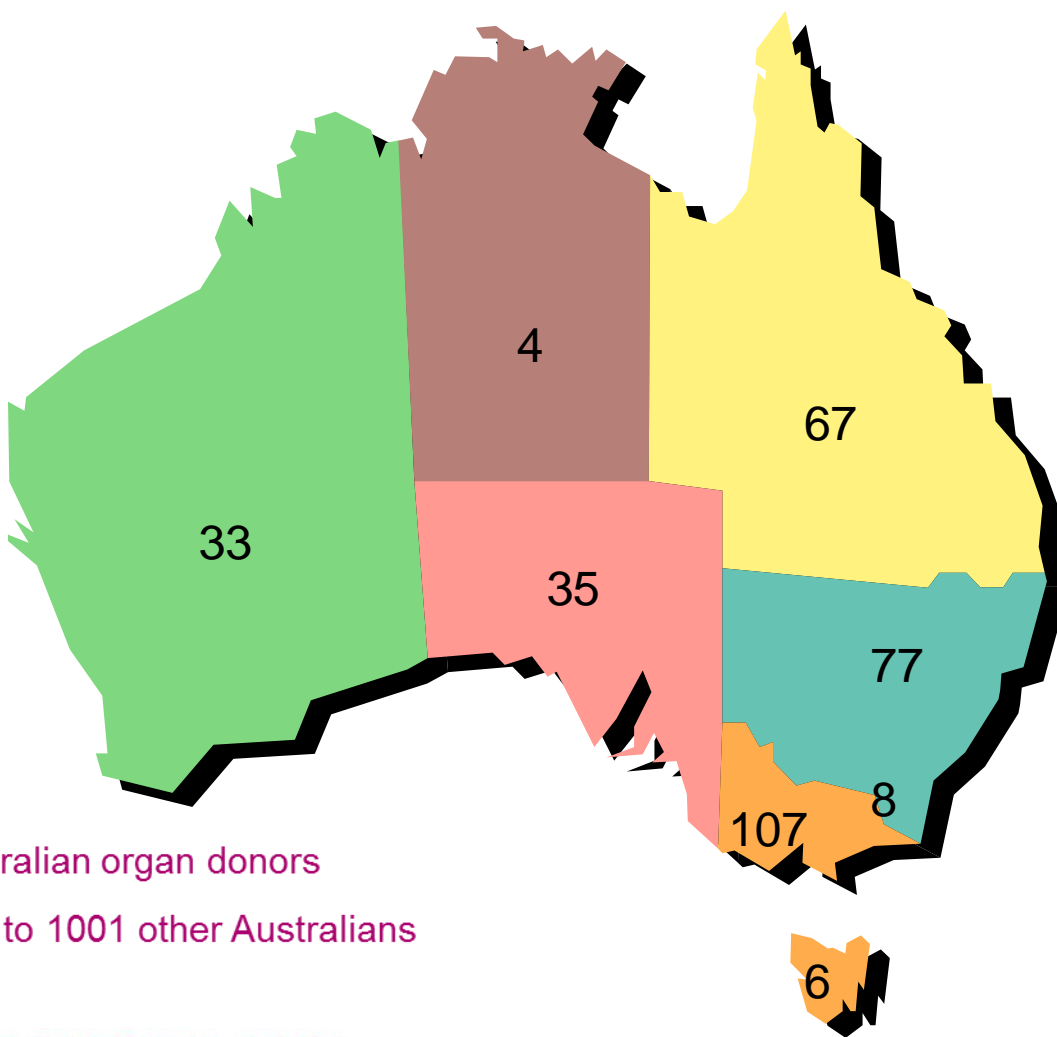
Nicole Coleman

Organ and Tissue Donation Coordinator

Hunter New England Health



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337 Australian organ donors
gave life to 1001 other Australians

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Australian Waiting List at January 2011

- Kidney's 1135
- Liver 174
- Heart 105
- Lung 167
- Pancreas 45
- Intestine 2
- Total 1628



- 40% of waiting pool transplanted
- 45% continue to wait for a transplant
- 15%-20% die waiting for a transplant

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ROLE OF THE NSW ORGAN AND TISSUE DONATION SERVICE

- Act as an advocate for donors and their families:
 - dignity, respect, informed decision making, bereavement after care
- Facilitation of donation process:
 - Assessment, consent, management, referral
- Community Education and awareness
- Data Collection



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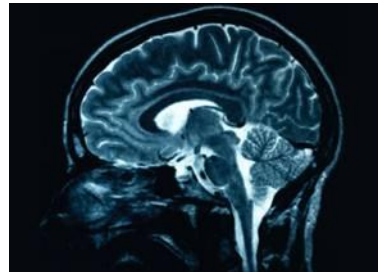


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Type of donation	Place of Death	What you can donate
Brain Death (BD)	Intensive Care	heart, lungs, liver, kidneys, pancreas, skin, heart valves, musculoskeletal, eyes
Cardiac Death (DCD)	Intensive care	lungs, liver, kidneys, skin, heart valves, musculoskeletal, eyes
Tissue Donation	Any ware (including ward)	skin, heart valves, musculoskeletal, eyes

Donation after Brain Death

- Death confirmed using brain death criteria (<1% of hospital deaths)
- Death must occur in ICU
- If there is consent – ventilation is continued until retrieval takes place
- Preferred method of solid organ donation since 1983 - due to the ability to limit ischaemic damage



Brain Death Certification

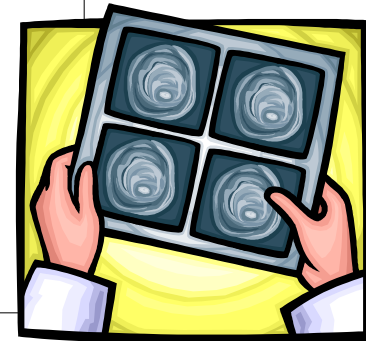
- **Clinical Testing:**
 - response to painful stimuli
 - pupillary response to light
 - corneal reflexes
 - gag reflex
 - cough reflex
 - oculovestibular reflexes
 - respiratory function

Brain Death Certification

- continued

When clinical criteria cannot be met:

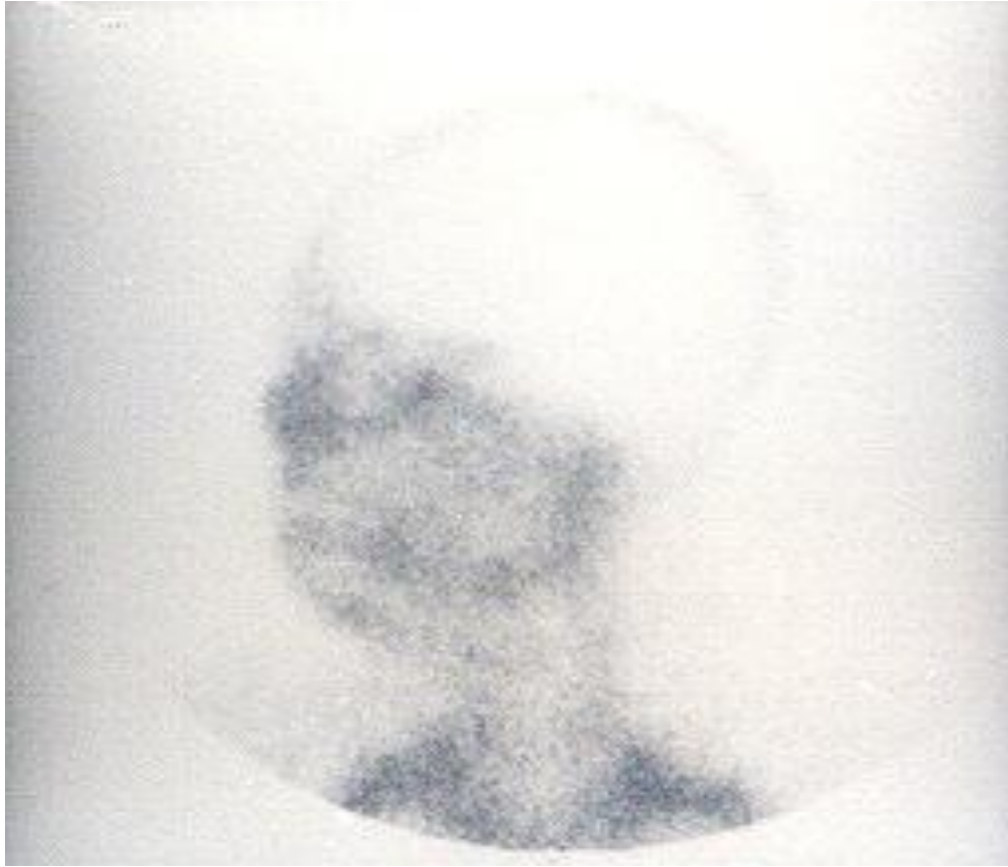
- three of four vessel cerebral angiography
- radionuclide examination
- **NB** 4 hours of observation



Cerebral Angiogram



Cerebral Perfusion Scan





SOUTH EAST HEALTH

FORM F CRITERIA FOR DIAGNOSING BRAIN DEATH

Name:
DOB:
MRN:
Sex:

An examination must be carried out by each of two Medical Practitioners, both of whom must have practiced medicine for 5 years during the past 8 years. One of the two practitioners must be a Designated Specialist, as required under the provisions of the NSW Human Tissue Act 1983.

Cause of brain damage: _____

Responses to sections A (1 - 4) and B (1-7) should be 'no' or in the negative to proceed.

Is the Apnoeic Coma due to:

(A)

1) depressant drugs? _____

2) neuromuscular blocking drugs? _____

3) hypothermia (temp. < 35°C)? _____

4) metabolic/endocrine cause? _____

(B)

1) are pupil reactions to light present? _____

2) are corneal reflexes present? _____

3) are responses present to painful stimuli within the cranial nerve distribution? _____

4) are eye movements present with cold caloric testing? _____

5) is the gag reflex present? _____

6) is the cough reflex present? _____

7) are respiratory movements present? (apply specific criteria*) _____

1st Doctor

2nd Doctor

* **Specific criteria:** Apnoea must persist in the presence of adequate stimulus to spontaneous ventilation. Apnoeic oxygenation is performed ensuring oxygenation is maintained while the patient is disconnected from the ventilator. PaCO₂ should exceed **60mmHg** and arterial **pH < 7.30** before reconnection.

Based on the history, our clinical examination and/or brain blood flow studies, which were carried out while the person's respiration was being maintained by artificial means, we certify that brain function has irreversibly ceased:

Signature (1st Dr.): _____ Signature (2nd Dr.): _____

(Designated Specialist)

Print Name: _____ Print Name: _____

Time: _____ Date: _____ Time: _____ Date: _____

In circumstances where

Angiography/Radionucleide study

is performed: Doctor reporting investigation: _____ Time/Date: _____

For potential organ donors, the Medical Practitioners certifying death must **not** be: members of the Transplant Team; a Doctor attending a potential recipient of the organ to be removed; or the Designated Officer authorising tissue removal.

**Please refer to Australian and New Zealand Intensive Care Society Working Party on Brain Death and Organ Donation Report, March 1998 - Recommendations Concerning Brain Death and Organ Donation, Second Edition.

Documentation

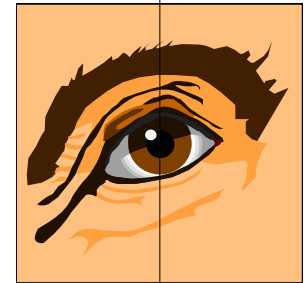
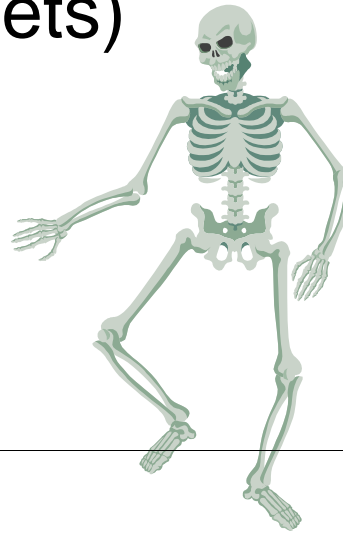
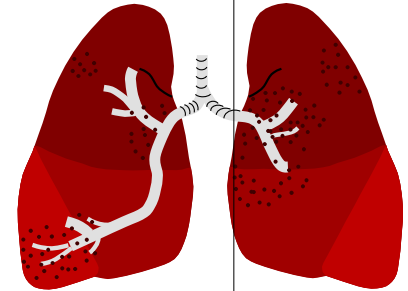
- One of the two Doctors certifying Brain Death must be a *Designated Specialist* appointed by governing body and member of stipulated college
- Both must have worked 5 out of the last 8 years
- Both must have no involvement in the choice of recipients



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What can be donated?

- Heart
- Lungs
- Liver (can be split)
- Kidneys
- Pancreas (and islets)
- Eyes/corneas
- Bones
- Heart Valves



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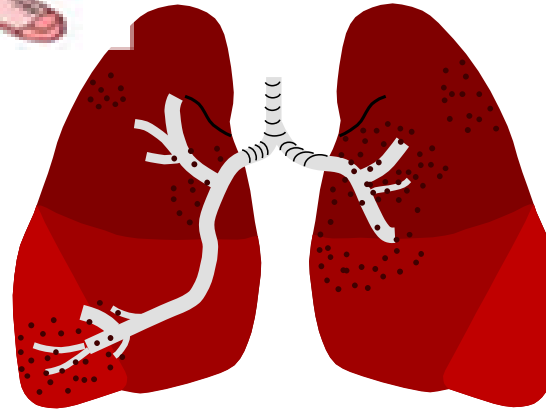
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Organ & tissue donation after cardiac death (DCD)

- Death confirmed using cardiac death criteria
- Unsurvivable injury and end of life discussions regarding withdrawal of cardio-respiratory support
- Time limited

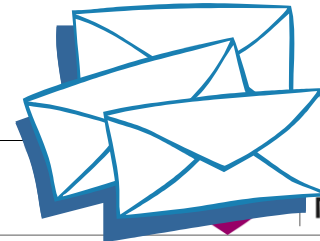
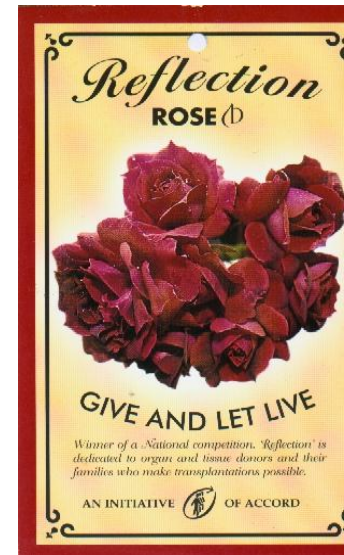
What can be donated in DCD?

- Lungs
- Liver
- Pancreas
- Kidneys
- Eyes
- Heart Valves
- Bone



‘Next Step Program’

- Phone calls
- ‘In Reflection’ booklet
- Reflection rose and badge
- Counseling
- Annual Ecumenical Service
- Cards on the 1st and 2nd Anniversary



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G.I.V.E. protocol

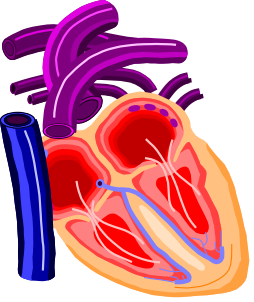
The G.I.V. E. protocol has been adopted as the nationally consistent Clinical Trigger.



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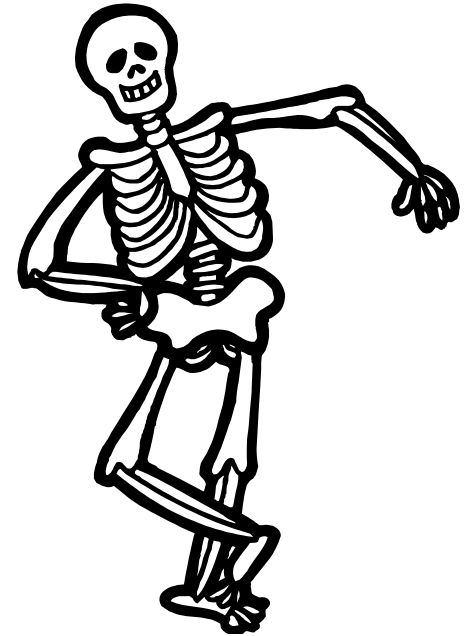
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Tissue only donation



- Death confirmed using cardiac death criteria
- Tissue retrieved within 12 to 24 hrs post death confirmation
- Most common form of donation
- You can make a difference



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Exclusion Criteria

NONE!!!

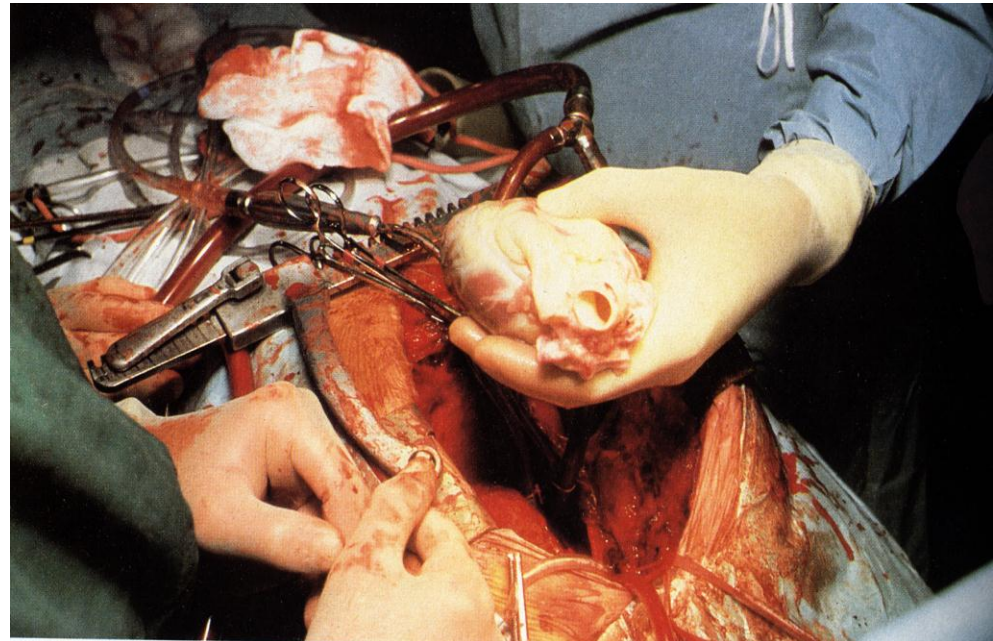
Each potential donor is assessed for medical suitability at the time of their death

Policy Directive

- All deaths to be notified to the Eye Bank *as a matter of urgency* (including coroner's cases)
- All hospitals must comply with this
- The coordinator will make all subsequent arrangements as required

HEART VALVE AND VESSEL DONATION

- NSW and QLD Valve Banks
- The heart is removed in the mortuary within 15 hours of death



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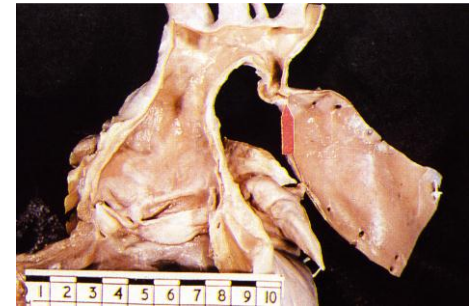
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HEART VALVE AND VESSEL DONATION

- The valves and vessels are removed at the heart bank
- The remaining heart tissue is reunited with the donor usually within 48 hours
- The heart valves undergo a 21 day microbiological quarantine
- Valves and vessels can be stored for up to 10 years

WHY DO WE NEED HEART VALVE AND VESSEL DONATION?

- Aortic valve stenosis hinders the valve leaflets ability to open and close.
 - Repair of this disease can be with an
 - allograft aortic valved conduit.
- High demand in paediatric cardiac surgery
 - Paediatrics with coarctation of the aorta
 - Repair is preferred with an aortic conduit patch



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CORNEAL DONATION

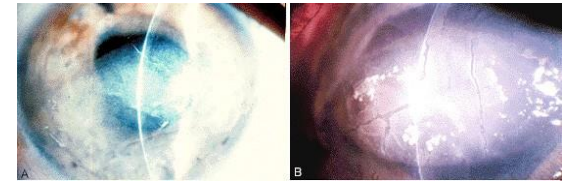
- Lions Eye Bank, based at Sydney
- Eye Hospital
- Must occur within 12 hours of death
- Research is an option for families
- Whole eye is removed in the mortuary
- Prosthesis is placed in eye cavity

WHY DO PEOPLE NEED CORNEAL TRANSPLANTS

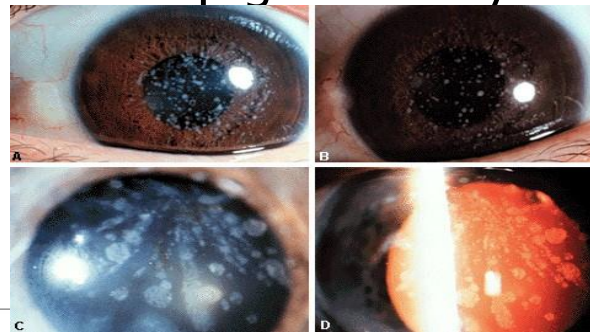
- Young people suffering Keratoconus, a conical misshaping of the cornea, occurs over a few years, initially hard/rigid contact lenses useful



- Older patients with Bullous Keratopathy – very painful blisters on the cornea, often due to previous surgery



- Middle aged patients who develop granular dystrophies over long periods of time



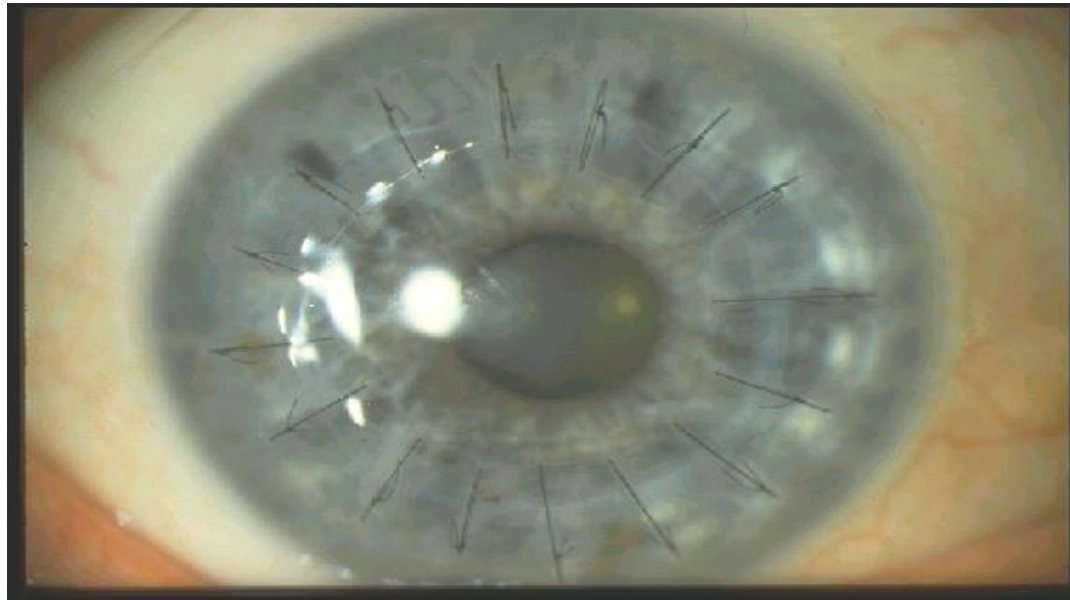
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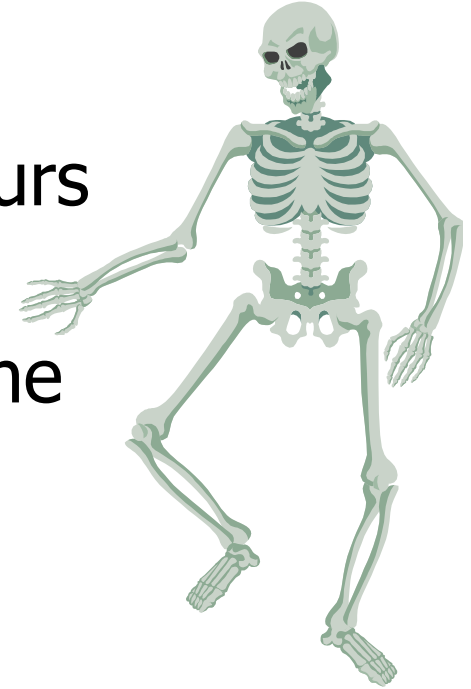
WHAT DOES IT LOOK LIKE AFTER A GRAFT?

- The diseased cornea is removed and the new one sewn into the eye. The sutures stay in the eye for up to 18 months



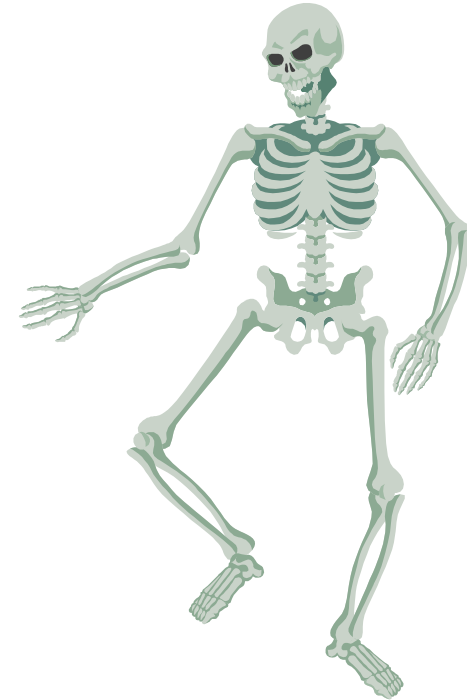
BONE DONATION

- Occurs in the mortuary up to 24 hours after death
- Prosthesis are implanted to retain the normal form
- Research is an option for families



WHAT IS RETRIEVED?

1. Tibia (with or without the patella tendon)
2. Fibula
3. Femur
4. Hemi-pelvis
5. Achilles Tendon (if age within limit)
6. Radius
7. Ulna
8. Humerus (with rotator cuff)



WHY DO WE NEED BONE DONATION?

- Most common form of tissue transplantation after blood
- Used for filling cavities after tumour removal, full bone grafts for amputees saving limbs, strengthen weakened joints (total hip replacements)

Myths

You won't be dead!

You're too old

Doctors won't
try and save
you

Your body
will be used
for research

They will
take
everything

You'll be
butchered!

God won't
like it

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In the majority of cases if a family know their relative wanted to become an organ donor they authorise retrieval.

If they are unaware the outcome is

REFUSAL

DISCOVER the facts
DECIDE to be a donor
DISCUSS with your loved ones



Discover

the facts about organ
& tissue donation

Decide

to become an organ
& tissue donor

Discuss

your decision with your
family & friends

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CEO Karen Murphy

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DonateLife™

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O'Callaghan

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Network

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10 Philippa Jones



An Australian Government Initiative

Prime Minister invites all Australians to become DonateLife™ families



The Prime Minister announces his family's decision to become the first DonateLife™ Family.

Demonstrating his ongoing commitment to the Australian Government's \$151.1 million World's Best Practice Reform Package on Organ and Tissue Donation for Transplantation, the Prime Minister the Hon Kevin Rudd MP today launched the DonateLife™ Network and with his family became Australia's first DonateLife™ Family.

Parliamentary Secretary for Health, the Hon Mark Butler MP joined with the Prime Minister for this important event held at The Lodge in Canberra.

The DonateLife™ Network is the newly established national network of organ and tissue donation agencies and new hospital-based medical directors and senior nurses dedicated to a world's best practice approach to organ and tissue donation for transplantation, and improving donation rates.

The 300 strong people behind the DonateLife™ Network include 130 new hospital-based medical staff in 91 full-time equivalent positions in 75 hospitals around Australia. Also included and pivotal to the network are the DonateLife™



Pre - transplant



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Post - transplant



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www.donatelife.gov.au

Your wish can save a life.
But only if you tell someone!