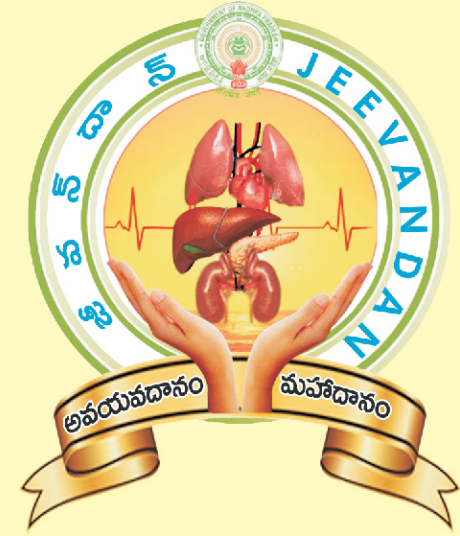


Issued In the Interest Of Public Awareness
By Jeevandan, Nims Hyd.

JEEVANDAN

(CADAVER TRANSPLANTATION)
Government of Andhra Pradesh



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Why do we need Cadaver transplantation ?

Chronic diseases are replacing the infectious diseases as the major cause of morbidity and mortality worldwide. Incidence and prevalence rates of end-stage chronic organ failure, be its congestive heart failure (CHF), chronic lung disease (CLD), chronic liver disease or chronic kidney disease (CKD) are rising due to population, epidemiological and health transitions.. The prevalence of CKD in Indian population varies from 0.785% to 1.39%. The prevalence of heart failure in India due to coronary heart disease, hypertension, obesity, diabetes and rheumatic heart disease ranges from 1.3 to 4.6 million, with an annual incidence of 491 600–1.8 million. The burden of chronic respiratory diseases in India is on the rise. The estimated population with chronic viral hepatitis in India is 400-500 million, and is projected to be the third leading cause of deaths worldwide by 2020.

The Quality of life for patients with chronic organ failure is even poorer than that for many common cancers. There is a gradual decrease in health status and daily functioning in patients with end stage organ failure and timing of death remains uncertain. The cost burden on patients also increases with duration of the disease. Organ transplantation is the only cure to such patients. Though transplantation has been in practice in India for more than 3 decades, it has been grossly inadequate in terms of actual numbers, due to a shortage of resources and organs.

There are thousands of patients waiting for organ transplantation. Organ replacement remains only a dream for the vast majority of these patients. The bottleneck is the availability of organs. The living related donor programme suffers major setbacks.

For example, only about three quarters of the patients obtain potential related donors and not all are willing to donate. This has led to organ trading and organ trafficking. The problem of organ shortage and organ trafficking can be solved by promoting cadaveric organ transplantation.

Unlike most countries where cadaveric transplantation programme is very successful, in India less than 2% of transplantations are based on brain-dead -heart-beating cadaver donors. The obvious conclusion is that unless we have a viable cadaver transplant programme, we will stay routed to where we are now.



How can we promote cadaver transplantation?

Organ donors are healthy people, who have suffered an irreversible brain injury or a brain hemorrhage resulting in brain death. The head injury due to road traffic accidents can account for almost 50% of brain deaths.

Road accidents have earned India a dubious distinction. With over 130,000 deaths annually, the country has overtaken China and now has the worst road traffic accident rate worldwide. According to the WHO, this is the second most important cause of death in the age group of 5 to 29 years. Maharashtra (12.4%) and Andhra Pradesh (12.1%) have the maximum accidents in the country. If such patients can be shifted to nearest hospital and diagnosed with brain death at the earliest possible time, their organs can bring light into the lives of many patients. By donating your organs after your death, you can save or improve as many as 50 lives.



What is brain death?

Before 1968, the determination of the moment of death was done by the cessation of respiratory and cardiac functions which are entirely necessary to maintain the unity of a living being. In 1968 an ad hoc committee at Harvard Medical School, chaired by Sir. Henry Beecher suggested revising the definition of death in a way that would make some patients with devastating neurologic injury suitable for organ transplantation under the dead donor rule. Brain death is a death with certitude, namely the complete and irreversible cessation of all cerebral activity, the person was going to die in any case.

1. Patient should be comatose and on ventilatory support.

2. Functional, reversible causes of a non-functioning brainstem should have been ruled out namely.

- a. Shock/ hypotension.
- b. Hypothermia -temperature $< 32^{\circ}\text{C}$.
- c. Drugs known to alter neurologic, neuromuscular

function and electroencephalographic testing, like anaesthetic agents, neuromuscular drugs, methaqualone, barbiturates, benzodiazepines, high dose bretylium, amitriptyline, meprobamate, trichloroethylene, alcohols.

- a. Brain stem encephalitis.
- b. Guillain- Barre' syndrome.
- c. Encephalopathy associated with hepatic failure, uraemia and hyperosmolar coma.
- d. Severe hypophosphatemia.

3. The cause of irreversible structural brain damage should be known.

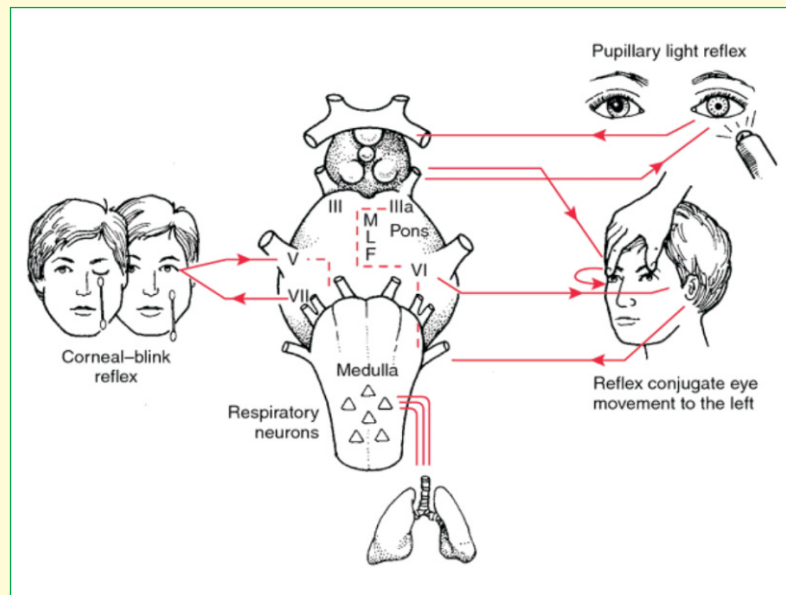
- a. Severe head injury.
- b. Hypertensive intracerebral hemorrhage.
- c. Aneurysmal subarachnoid hemorrhage.
- d. Hypoxic-ischemic brain insults.
- e. Fulminant hepatic failure are potential causes of irreversible loss of brain function.

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4. Absent brain stem reflexes.

- a. Absence of pupillary reflex response to light.
- b. Absence of corneal reflexes.
- c. Absence of vestibulo-ocular reflex.
- d. Absence of cranial nerve response to pain.
- e. Absence of gag and cough reflexes.



5. Certification of Brain death is by the committee of doctors Consisting of,

- a. Medical Superintendent of the Hospital
- b. An independent Registered Medical Practitioner nominated by the Medical Superintendent.
- c. A Neurologist or Neurosurgeon nominated by Medical Superintendent .
- d. The doctor on-duty treating the patient, brain death has to be confirmed twice with an interval of 6 hours, before official declaration is done as per the India THO act, 1995 (Form No.8).

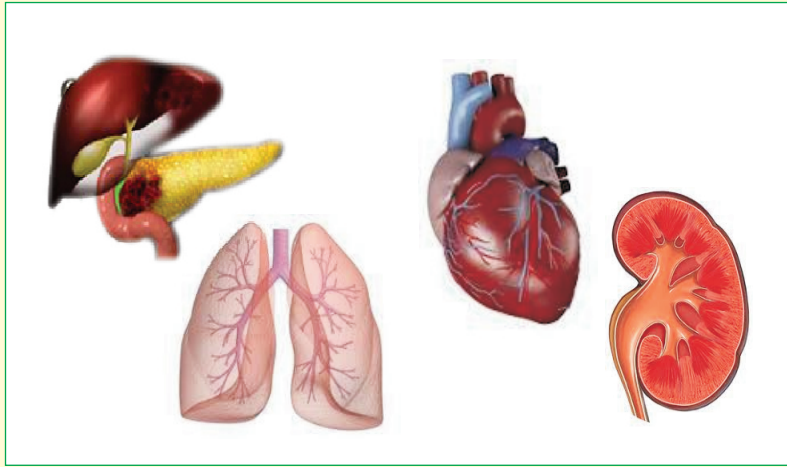
6. When and which organs can be donated ?

A patient becomes eligible for this type of donation when they are declared brain dead. Brain death may result in legal death, but still with the heart beating, and with mechanical ventilation all other vital organs may be kept completely alive and functional, providing optimal opportunities for organ transplantation.

Most organ donation for organ transplantation is done in the setting of brain death. In some nations (for instance, Belgium, Poland, Portugal and France) every brain death patient is automatically an organ donor. In India consent from family members or next-of-kin is required for organ donation. The non-living donor is kept on ventilator support until the organs have been surgically removed.

The length of time depends on what organs are recovered. The average length of time is four to six hours. If a brain-dead individual is not an organ donor, ventilator and drug support is discontinued and cardiac death is allowed to occur.

Donation after brain death allows many different organs to be transplanted, including heart, lungs, kidneys, pancreas, liver and small intestine; Tissues include bones, tendons, cornea, skin, heart valves and veins. Worldwide, the kidneys are most commonly transplanted organs, followed closely by liver and then the heart. If someone is waiting for organ transplantation and suitable donor is not available, he/she will be placed on a waiting list to receive cadaver transplantation.



What is the role of Transplant Coordinators and Grief Counselors ?

Transplant Coordinators position themselves between patient and relatives on one hand and treating doctor's team and cadaver transplantation team on the other hand. The transplant coordinators approach the relatives in the waiting room and begin counseling by expressing sympathy and hinting that good may come from this tragedy.



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Transplant coordinators are responsible for identifying potential organ donors and managing the whole donation process from brain death. The process of organ donation and procurement include: donor management; determination of brain death; the obtaining of consent from the near relatives of the patient for organ donation; organ retrieval, preparation, preservation, packaging and final transport to the transplant hospital by coordinating with the organ harvesting team and organ transplantation team.

Coordinators should promote donation and supervise the teamwork of the whole process. They should be aware of all legal criteria and be responsible for the custody of the documents concerning donor evaluation, brain death determination and donor consent.

After removal of organs, how long can we wait ?

After removal of organs in good condition from "beating-heart donors or brain death donors, the time with in which organs have to be transplanted depending on the quality of harvesting, state of organs, preservation and transport are as follows.

- a. Heart and lungs last 4 -6 hours.
- b. Liver lasts for 12-20 hours.
- c. Pancreas lasts for 12-24 and
- d. Kidneys last for 48-72 hours.



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How can one become an organ donor ?

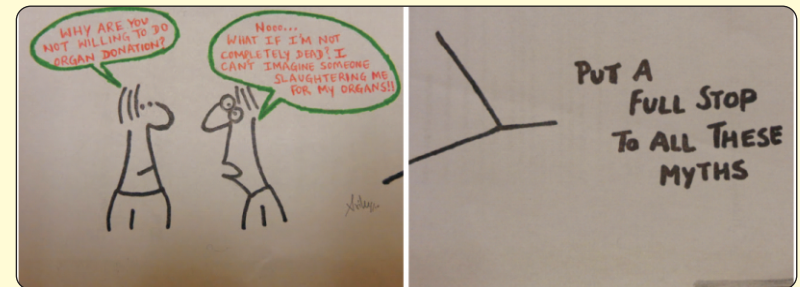
Donor Cards are available from Jeevandan Office, Nizam's Institute of Medical Sciences and will soon be available in Jeevandan website (jeevandan.gov.in). Anyone can register for organ donation and can wish which organs to be donated. It is also important to tell your family that you want to be a donor. Registration for organ donation alone shall not empower doctors to remove your organs as a donor. This can happen only when you are declared brain death and next of kin gives consent for organ donation. Hence please register for organ donation, carry your donor card always with you and let your wishes be known to your relatives.

Donor card

Name :	_____
Father name :	_____
Address :	_____ _____
Cell No :	_____
Relation _____	Name : _____
Mobile No :	_____
(Let your relatives Know your wishes)	

JEEVANDAN ORGAN DONOR CARD		
I _____		
S/O, D/O _____		
Wish to donate the following organs after my brain death		
kidney, liver, heart, pancreas and lungs.		
Donor Sign _____	Date _____	
Witness Name _____	Sign _____	
(Always Carry This Card With You)		

What are the myths of organ donation ?



Myths & Facts on Organ Transplantation

1. If I agree to donate my organs, the hospital staff would not work as hard to save my life

Fact: When you go to the hospital for treatment, doctors focus on saving your life. The medical team treating you is separate from the transplant team. The team coordinating the donation is not notified until all lifesaving efforts have failed and death has been determined. The transplant team would not be notified until your family has consented for organ donation.

2: Maybe I would not really be dead when they sign my death certificate.

Fact: Although it is a popular topic in the tabloids, in reality, people do not start to wiggle their toes after they are declared dead. In fact, people who have agreed to organ donation are given more tests (at no charge to their families) to determine that they are truly dead than are those who haven't agreed to organ donation.

3: Organ donation is against my religion.

Fact: Organ donation is consistent with the beliefs of most religions. All organized religions support donation, typically considering it a generous act that is the individual's choice.

4: I am under age 18. I am too young to make this decision.

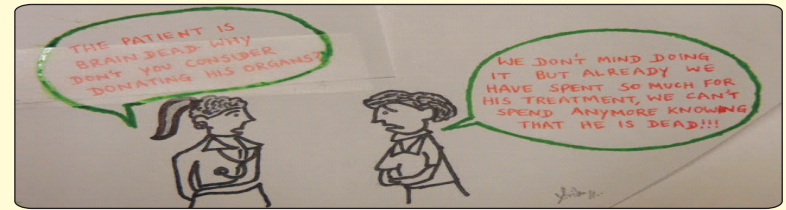
Fact: That is true, in a legal sense. But your parents can authorize this decision. You can express to your parents your wish to donate, and your parents can give their consent knowing that it is what you wanted. Children, too, are in need of organ transplants, and they usually need organs smaller than those an adult can provide.

5: I am too old to donate. Nobody would want my organs.

Fact: There is no defined cutoff age for donating organs. Organs have been successfully transplanted from donors in their 70s and 80s. The decision to use your organs is based on strict medical criteria, not age. Please do not disqualify yourself prematurely. Let the doctors decide at your time of death whether your organs and tissues are suitable for transplantation.

6: I am not in the best of health. Nobody would want my organs or tissues.

Fact: Very few medical conditions automatically disqualify you from donating organs. The decision to use an organ is based on strict medical criteria. It may turn out that certain organs are not suitable for transplantation, but other organs and tissues may be fine. Please do not disqualify yourself prematurely. Only medical professionals at the time of your death can determine whether your organs are suitable for transplantation.



7: Rich and famous people go to the top of the list when they need a donor organ.

Fact: The rich and famous are not given priority when it comes to allocating organs. It may seem that way because of the amount of publicity generated when celebrities receive a transplant, but they are treated no differently from anyone else. In fact, Jeevandan is the AP State government programme responsible for maintaining the organ transplant network, online organ transplant recipients waiting list and make sure the organ allocation was appropriate. The organ allocation and distribution system is blind to name, celebrity or social status, or wealth. When you are on the transplant waiting list for a donor organ, what really counts is the severity of your illness, time spent waiting, blood type, and other important medical information.

8: My family will be charged if I donate my organs.

Fact: The organ donor's family is never charged for donating. The family is charged for the cost of all final efforts to save your life, and those costs are sometimes misinterpreted as costs related to organ donation. Once death occurs, any expenses related to organ or tissue donation are covered and there will be no charges to the donor's family.

9. If I donate, I would worry that the recipient and/or the recipient's family would discover my identity and cause more grief for my family.

Fact: Information about the donor is released by the team that coordinates the donation to the recipients only if the family that donated requests it be provided.

10. I heard that they take everything, even if I only want to donate my eyes.

Fact: You may specify which organs you want donated. Your wishes will be followed.

11. Organ and tissue donation means my body will be mutilated and treated badly.

Fact: Donated organs are removed surgically, in a routine operation similar to gallbladder or appendix removal. Donation does not disfigure the body or change the way it looks in a casket. Normal funeral arrangements are possible.

CONCLUSION

Unless we have an effective cadaver transplantation programme, we will stay rooted to where we are now. This can be overcome by the public awareness of brain death and cadaver transplantation through all available means. It is believed that stronger infrastructure with a counseling staff and adequate training is required to certify brain death that is indeed vital to increase the availability of organs for transplant. Centralised approaches to organ procurement tend to be most effective. Increases in cadaveric donor organ transplants may be achieved through a combination of improved organ procurement, education of transplant teams, better preservation techniques and the creation of a single waiting list. The existing Andhra Pradesh Human Organ Transplantation Act, 1995 should be modified to plug the loop holes and to make 'presumed consent'- unless otherwise explicitly stated- as the operating mode for organ removal from a brain dead cadaver. Finally the organization of a quality control system to ensure the safety, quality and transparency of all the procedures performed. Jeevandan is Andhra Pradesh State Government Cadaver Transplantation Scheme developed to streamline various issues of declaration of brain death, infrastructure development, training of transplant coordinators and public awareness.

Donate Organ, Donate Life.

Don't take your organs to
heaven, heaven knows we
need them here.

Help someone live after your
death.

Be an organ donor, all it costs
is a little love.

Support organ and tissue
donation to help save future
generations.

For Further Details :

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