

Organ and Tissue Donation FAQ

1. What is an organ ?

An organ is a part of the body that performs a specific function for eg. your heart, lungs, kidney, liver, etc.

2. What are the organs that can be donated ?

The organs that can safely be donated are:
Liver, Kidney, Pancreas, Heart, Lung, and Intestine.

3. What is a tissue?

Tissue means a group of cells performing a particular function in the human body. Examples would be bone, skin, cornea of the eye, heart valve, blood vessels, nerves and tendons etc.

4. What are the tissues that can be donated?

The tissues that can be donated are:
Cornea, Bone, Skin, Heart Valve, blood vessels, nerves and tendon etc.

5. What is Organ Donation?

Organ Donation is the gift of an organ to a person with end stage organ disease and who needs a transplant.

6. What are the different types of Organ Donation?

There are two types of organ donation:-

i) Living Donor Organ Donation: A person during his life can donate one kidney (the other kidney is capable of maintaining the body functions adequately for the donor), a portion of pancreas (half of the pancreas is adequate for sustaining pancreatic functions) and a part of the liver (the segments of liver will regenerate after a period of time in both recipient and donor).

ii) Deceased Donor Organ Donation: A person can donate multiple organs and tissues after (brain-stem/cardiac) death. His/her organ continues to live in another person's body.

7. Is there any age limit for Organ Donation?

Age limit for Organ Donation varies, depending upon whether it is living donation or cadaver donation; for example in living donation, person should be above 18 year of age, and for most of the organs deciding factor is the person's physical condition and not the age. Specialist healthcare professionals decide which organs are suitable case to case. Organs and tissue from people in their 70s and 80s have been transplanted successfully all over the world. In the case of tissues and eyes, age usually does not matter. A deceased donor can generally donate the Organs & Tissues with the age limit of:

Kidneys, liver: up-to 70 years

Heart, lungs: up-to 50 years

Pancreas, Intestine: up-to 60-65 years

Corneas, skin: up-to 100 years

Heart valves: up-to 50 years

Bone: up-to 70 years

8. Who can be a Donor?

Living Donor: Any person not less than 18 years of age, who voluntarily authorises the removal of any of his organ and/or tissue, during his or her lifetime, as per prevalent medical practices for therapeutic purposes.

Deceased Donor: Anyone, regardless of age, race or gender can become an organ and tissue donor after his or her Death (Brainstem/Cardiac). Consent of near relative or a person in lawful possession of the dead body is required. If the deceased donor is under the age of 18 years, then the consent required from one of the parent or any near relative authorised by the parents is essential. Medical suitability for donation is determined at the time of death.

9. How can I be a Donor, What is the process to take donor pledge?

You can be a donor by expressing your wish in the authorised organ and tissue donation form (Form-7 As per THOA). You may pledge to donate your organs by signing up with our website www.notto.nic.in and register yourself as donor or for offline registration you may download Form 7 from our website. You are requested to fill the form 7 and send signed copy to NOTTO at below mentioned address:

NATIONAL ORGAN AND TISSUE TRANSPLANT ORGANISATION
4th Floor, NIOP Building, Safdarjung Hospital Campus, New Delhi-110029

10. Do I need to carry my donor card always?

Yes, it will be helpful for the health professionals and your family.

11. Do I need to register my pledge with more than one Organisation?

No, if you have already pledged with one Organisation & received a Donor Card, you need not register with any other organisation.

12. Can a person, without a family, register for pledge?

Yes, you can pledge, but you need to preferably inform the person closest to you in life, a friend of long standing or a close colleague, about your decision of pledging. To fulfill your donation wishes, healthcare professionals will need to speak to someone else at the time of your death for the consent.

13. What is the benefit to my family or me after donation of organs?

Donation of an organ or tissue provides an unparalleled opportunity to give someone a second chance of life. Your donation is not only giving impact to the life of one person or family, but it is of overall help for the society as a whole.

14. If I had pledged before, can I change my mind to un-pledge?

Yes, you can un-pledge by making a call to the NOTTO office or write or visit NOTTO website www.notto.nic.in and avail of the un-pledge option by logging into your account. Also, let your family know that you have changed your mind regarding organ donation pledge.

15. Are there any religious objections to donate Organs and Tissues?

No, none of the major religions object to donating organs and tissues, rather they all promote and support this cause. If you have any doubts, you may discuss with your spiritual or religious leader or advisor.

16. How many patients need organ transplant in India on an average?

In India there is a growing need of Organ and tissue transplant due to large number of organ failure. As there is no organized data available for the required organs, the numbers is only estimates. Every year, following number of persons needs organ/tissue transplant as per organ specified:

Kidney	2,50,000
Liver	80,000
Heart	50,000
Cornea	1,00,000

17. The people who have pledged for Organ donation in life, will they definitely become organ donors?

No, only few people die in the circumstances where they are able to donate their organs. That is the reason we need people to take pledge for Organ Donation and register themselves as potential donors.

18. Are donors screened to identify if they have a transmissible disease?

Yes, Blood is taken from all potential donors and tested to rule out transmissible diseases and viruses such as HIV and hepatitis. The family of the potential donor is made aware that this procedure is required.

19. Can I be a donor if I have an existing medical condition?

Yes, in most circumstances you can be a donor. Having a medical condition does not necessarily prevent a person from becoming an organ or tissue donor. The decision about whether some or all organs or tissue are suitable for transplant is made by a healthcare professional, taking into account your medical history.

In very rare cases, the organs of donors with HIV or hepatitis-C have been used to help others with the same conditions. This is only ever carried out when both parties have the condition. All donors have rigorous checks to guard against infection.

20. Can I be an organ donor, if I have been rejected to donate blood?

Yes, The decision about whether some or all organs or tissue are suitable for transplant is always made by a specialist, taking into account your medical history. There may be specific reasons why it has not been possible to donate blood, such as having anemia or had a blood transfusion or had hepatitis in the past or there may be reasons why you could not donate blood because of your health at the time - sometimes a simple thing like a cold or medication that you are taking can prevent you from donating blood.

21. How does whole body donation differ from organ donation?

Organ donation for therapeutic purposes is covered under the Transplantation of Human Organs Act (THOA 1994). Whole body donation is covered by the Anatomy Act 1984.

Organ and Tissue donation is defined as the act of giving life to others after death by donating his/her organs to the needy suffering from end stage organ failure.

Body donation is defined as the act of giving one's body after death for medical research and education. Those donated cadavers remain a principal teaching tool for anatomists and medical educators teaching gross anatomy.

22. Can a dead body be left for medical education or research after the organs have been retrieved for donation?

No, Bodies are not accepted for teaching purposes if organs have been donated or if there has been a post-mortem examination. However, if only the corneas are to be donated, a body can be left for research.

23. How can I help in increasing organ donation?

You can help by:

- A. Becoming a donor, and talking to your family about your decision of saving lives of others.
- B. Promoting donation by motivating people at work place, in your community, at your place of worship, and in your civic organizations.

Organ and Tissue Transplant

1. What is Transplantation?

Transplantation is the act of surgical removal of an organ from one person and placing it into another person. Transplantation is needed when the recipient's organ has failed or has been damaged due to illness or injury.

2. What are the end stage diseases that can be cured by transplantation?

Here are some end stage diseases which can be cured by the transplantation:

Diseases	Organs
heart failure	Heart
terminal lung illnesses	Lungs
kidney failure	Kidneys
liver failure	Liver
Diabetes	Pancreas
Corneal Blindness	Eyes
Heart Valvular disease	Heart valve
severe burns	Skin

3. Who will tell me about the Transplant process?

Transplant Coordinator and Treating Registered Medical Practitioner will explain you about the process of Transplant.

4. Who is transplant coordinator?

Transplant Coordinator means a person appointed by the hospital for coordinating all matters relating to removal or transplantation of Human Organs or Tissues or both and for assisting the authority for removal of human organs.

Though their work is more related to deceased organ donation, they are responsible for living organ donation also. The current Transplantation of Human Organ Act envisages that every hospital doing transplant activity, whether retrieval or organ transplantation must have a transplant coordinator in the hospital before the center

is registered for transplantation under the act. Transplant coordinator is a pivot of the organ donation and transplantation.

5. What is the role of a transplant coordinator in Organ & Tissue Transplant?

The transplant coordinator has to counsel the grieved family, make them comfortable and approach the subject of eye donation and later on solid organ donation.

If the family gives consent for organ retrieval, then the coordinator has to inform the Nodal Officer and coordinate with the ICU staff to maintain the patient on ventilator and organize organ retrieval. The coordinator has to ensure that all paperwork is correctly done and that the family receives the body as soon as possible.

6. Is there any insurance cover for organ transplant costs?

Till few years back, transplant cost both for donor as well as recipient was not covered by most of the insurance companies. Now a day many insurance companies are covering cost related to transplant. It will be better to be sure when you are going for insurance.

7. Is there any age limit to be registered for transplant?

Yes, patient should be fit for transplant and age is one of the criteria for assessing fitness of patient for transplant.

8. What is waiting list for Organ Transplant?

A list of people waiting for receiving an organ.

9. How does someone get on the waiting list?

The patient can register for inclusion in the waiting list through a registered transplant hospital. The treating physician of the hospital shall make an evaluation (based on medical history, current condition of health, and other factors) and decide if the patient needs a transplant and meets the criteria to be listed. Like for kidney transplant, other than blood group, main criteria is time since patient is on regular dialysis. Similarly, for other organs, criteria are different based on medical history, current condition of health, and other factors.

10. How can I know that I am fit to be listed for organ transplant?

Every patient who has developed end stage organ failure may not be fit for organ transplant. Basic principle is that patient must be screened on medical grounds (based on medical history, current condition of health, and other factors) for the development of end stage organ failure. Your treating doctor will decide whether you are medically fit for transplant and other issues before listing in the wait list.

11. How long will I have to wait?

Once you are added to the national organ transplant waiting list, you may receive an organ on the same day, or you may have to wait many years. Factors affecting are how well you match with the donor, how sick you are, and how many donors are available in your local area compared to the number of patients waiting.

12. Why waiting list is so long?

There is a huge disparity between demand and supply for transplant. There are more numbers of patients requiring different organs as compared to number of organs available for transplantation. That is why there is urgent need to create awareness about organ donation. As more persons decide to take the pledge and donate organs, the waiting list will go down.

13. What is the process to find a right donor?

When a transplant hospital adds an individual to the waiting list, it is placed in a pool of names. When any deceased organ donor becomes available, all the patients in the pool are compared to that donor. Factors such as medical urgency, time spent on the waiting list, organ size, blood type and genetic makeup are considered.

14. How long it will take to get a cadaver's organ?

There is no time line on how long one will have to wait for an organ that the individual requires. This depends on his/her medical situation and how frequently organs are becoming available in a city or state.

15. Do I have option other than organ transplant?

This query can only be answered by the treating doctor depending upon medical condition and stage of damage of the organ. For example in a case of kidney failure, dialysis is an alternative treatment and for kidney failure patient transplant is usually not an emergency. Also, for a heart failure patient, some patients can be maintained on artificial cardiac assistive devices. Similarly for other organs criterias are different, that can be maintained on medical therapies for the time being.

16. Is it possible to know my status in the waiting list?

Yes, you may know your status in the waiting list as this is a quite transparent system. But this will not help you significantly as getting an organ depends on many other factors other than just waiting list number.

17. Do I need to be always prepared to receive call for transplant?

Yes, it may be better to be mentally prepared and have some funds for an urgent organ transplant. Cadaver transplant is mostly on urgent basis. That is why it is better that your investigations for cadaver transplant are updated all the time so that whenever you receive a call, you can get the organ. Getting a cadaver organ is a gift and one should not miss it.

18. If I get a call for transplant, will I definitely get the organ?

No, getting a call for transplant does not mean that you will definitely receive an organ. The transplant team will examine your immediate fitness for transplant. There is possibility that the tests done just before possible transplant may not be normal to make you fit for transplant. Further, more than one patient is called for possible transplant and it may be a chance that someone else will be more fit than you for that particular organ transplant.

19. Would a donor's or recipient's family ever know each other?

No, in Cadaver Organ Donation Programme confidentiality is always maintained, unlike in the case of living donors who usually already know each other.

If the family wishes, they will be given some brief details such as the age and sex of the person or persons who have benefited from the donation. Patients who receive organs can obtain similar details about their donors. It is not always possible to provide recipient information to donor families for some types of tissue transplant.

Those who have wish to exchange anonymous letters of thanks or good wishes they can do it through the transplant coordinator. In some instances donor families and recipients have arranged to meet.

20. What is the protocol to maintain waiting list?

As per protocol, patients who require cadaver organs are put in the waiting list. But in India, number of patients requiring organs are more as compared to number of organs available.

There are two types of waiting list; one is urgent waiting list and another one is regular waiting list. Urgent listing of patients for cadaver organ transplant is primarily based on medical criteria, i.e. patient needs organ on urgent basis otherwise he/she may not survive.

Regular waiting list is also based on medical criteria and these criteria are different for different organs. Like for kidney transplant, main criteria is time spent on regular dialysis. Similarly, for other organs, criteria are different.

21. What is the protocol for organ distribution?

The organs would be distributed locally within the State first, and if no match is found, they are then offered regionally, and then nationally, until a recipient is found. Every attempt would be made to utilize donor organs.

22. How are donated organs matched with patients?

Many medical factors need to match to ensure a successful organ transplant. Blood group is one of the major factors taken into account. Organ size of the donor & recipient is also considered. For kidneys another important factor is tissue matching which is more complex than blood grouping matching and also takes more time. The best results can be achieved if there is a perfect kidney match.

There is a local, regional and national computerized list of patients waiting for an organ transplant. Most of the time, computer will identify the best matched patient for a particular organ and organ is offered to the transplant unit who is treating that patient. Also, priority is given to patients who most urgently need a transplant. NOTTO operates the waiting list and organ allocation system. It works round the clock, every day of the year. In case of tissues, matching is usually not required.

23. Can my Organs be given to a foreigner also?

As per the Transplantation of Human Organ Act 1994, sequence of allocation of organs shall be in the following order: State List-Regional list-National List-Person of Indian Origin-Foreigner.

Living Donor Related Transplant

1. What is living donor organ donation?

Means a person during his life can donate one kidney (one kidney is capable for maintaining the body functions), a portion of pancreas (half of the pancreas is adequate for sustaining pancreatic functions) and a part of the liver (the segments of liver will regenerate after a period of time).

2. Can I donate organ while I am still alive?

Yes, but not all organs and tissues, only few organs can be donated during life. The most common organ donated by a living person is a kidney as a healthy person can lead a completely normal life with only one functional kidney. Kidneys transplanted

from living donors have a better chance of long-term survival than those transplanted from deceased donor. Nearly 90% of all kidney transplants currently in India are from living donor.

In addition to kidney, part of a liver can be transplanted and it may also be possible to donate a segment of a lung and, in a very small number of cases, part of the small bowel. For all forms of living donor transplants the risk to the donor must be considered very carefully. Before a living donor transplant can go ahead there are strict regulations to meet and a thorough process of assessment and discussion.

3. What are the different types of living organ donation?

Living Near Related Donors: Only immediate blood relations are accepted usually as donors viz., parents, siblings, children, grandparents and grand children (THOA Rules 2014). Spouse is also accepted as a living donor in the category of near relative and is permitted to be a donor.

Living Non- near relative Donors: are other than near relative of recipient or patient. They can donate only for the reason of affection and attachment towards the recipient or for any other special reason.

SWAP Donors: In those cases where the living near-relative donor is incompatible with the recipient, provision for swapping of donors between two such pairs exists, when donor of first pair matches with the second recipient and donor of second pair matches with the first recipient This is permissible only for near relatives as donors.

4. Is there age limit for living donor?

Yes, there is some age-limit for living organ donation. Living donation should be done after 18 year of age.

5. What is Swap donation?

Sometimes in the family, there is a potential related donor who is otherwise willing but due to blood group mis-matching criteria or due to some other medical reasons is not fit to donate organ to that particular recipient in family. Further, in another family similar situation exists. However, in these two families, donor of one family may become medically fit for recipient of other family and vice versa. These two families then make a pair and make organ transplant possible for these two recipients of different families. This is called ~~x~~swap donation~~K~~transplantation. Swap transplant is legally permitted in THOA (Amended) act 2012.

6. Will I become medically unfit after organ donation?

No, It is basic principle of living donation program that person remains absolutely healthy for the rest of his/her life after donation. Thus, donor is not medically unfit for any purpose. However, in certain situation, living organ donor is treated differently. Like in the Armed Forces, an organ donor is not taken as normal and donor faces issues related to Promotion in job etc.

7. Is it possible to receive organs from a friend or other than near relative?

As per Transplantation of Human Organ Act, any living person other than near relative can also donate organ for the reason of affection and attachment towards recipient or for any other special reason. Such cases have to be approved by the Authorization Committee of the Hospital, where the transplant is going to take place. Approval of authorization Committee is mandatory in all other than cases involving relatives.

If such authorization committee is not existing in the Hospital then it can be approved by the respective district or state level Authorization committee of the district (or state, if no committee at district level), where the transplant hospital is located.

Deceased Donor Related Transplant

1. What is Cadaver/Deceased?

The Oxford Dictionary defines 'Cadaver' as 'a dead human body'. Medically a 'Cadaver' is a corpse used for dissection and study. In the area of Organ Transplantation, 'cadaver' refers to a brain-dead body with a beating heart, on life support system.

3. What Organs and Tissues can a Deceased donor donate?

If different organs and tissues are in medically fit conditions, following organs and tissues can be donated:

Organs	Tissues
Two kidneys	Two corneas
Liver	Skin
Heart	Heart valves
Two lungs	Cartilage / Ligaments
Intestine	Bones /Tendons
Pancreas	Vessels

4. What is Brain-stem Death?

Brain stem death is cessation of function of the brain stem due to irreversible damage. It is an irreversible condition and the person has died. It is also called Brain Death in India.

A brain stem dead person cannot breathe on his own; however the heart has an inbuilt mechanism for pumping as long as it has a supply of oxygen and blood. A ventilator continues to blow air into lungs of brain stem dead persons, their heart continues to receive oxygenated blood and medicine may be given to maintain their blood pressure. The heart will continue to beat for a period of time after brain stem death - this does not mean that the person is alive, or that there is any chance of recovery.

The declaration of brain stem death is made with accepted medical standards. The parameters emphasize the 3 clinical findings necessary to confirm irreversible cessation of all functions of the entire brain, including the brain stem: coma (loss of consciousness) with a known cause, absence of brainstem reflexes, and apnea (absence of spontaneous breathing). These tests are carried out twice at the interval of at-least 6-12 hours by the team of Medical Experts. Brain-stem Death is accepted under the Transplant Human Organ Act since 1994.

5. Is Brain-stem Death legally accepted as death?

Yes, As per the Transplantation of Human Organs Act 1994 Brain Stem Death is legally accepted as death.

6. Who will certify the Brain-stem Death?

As per THOA Board of Medical Experts Consist of following will certify Brain-stem Death:

1. Doctor in charge of the hospital (medical superintendent)
2. Doctor nominated from a panel of Doctors appointed by the Appropriate Authority
3. Neurologist/neurosurgeon/intensivist nominated from a panel appointed by the Appropriate Authority.
4. Doctor treating the patient.

The panel of four doctors carries out the tests together to certify brain death.

7. Who explains to the family about the brain-stem death?

The doctor (Intensivist/ neurologist/neurosurgeon) who is treating the patient will explain to the family about brain-stem death.

8. If the family is willing to donate organs of the potential donor, how can they proceed for more information in terms of brain-stem dead?

The family can approach the counselor of the hospital, the transplant coordinator or the doctors and nursing staff of the ICU.

9. What are the reasons for time delays in deceased organ donation?

Confirmatory tests for brain death have to be done twice within an interval of six hours between the tests. Once consent for organ donation has been obtained, coordinating the process of organ retrieval takes time.

Organ retrieval from deceased donors involves many hospitals , and transplant teams should ensure that the donated organs match as perfectly as possible with the recipient. If it is a medico-legal case, a post-mortem has to be performed and this involves both the police as well as the Forensic Medicine department.

10. How quickly should the donated Organs by a deceased donor, be transplanted?

Healthy organs should be transplanted as soon as possible. Different organs can be transplanted within different time frame as mentioned below:

Heart	4-6 Hours
Lungs	4-8 Hours
Intestine	6-10 Hours
Liver	12-15 Hours
Pancreas	12-24 Hours
Kidneys	24-48 Hours

11. Who will receive my organ?

Your vital organs will be transplanted into those individuals who need them most urgently. Gifts of life (Organs) are matched to recipients on the basis of medical suitability, urgency of transplant, duration on the waiting list and geographical location. NOTTO and its state units (ROTTTO & SOTTO) will work round the clock, every day of the year and cover the whole of the country. Tissue is very occasionally matched, e.g. for size and tissue type, but otherwise is freely available to any patient in need of a transplant.

12. Who can give consent for organ donation after brain-stem death?

A person legally in possession of the deceased person can sign the consent form. This is usually done by a parent, spouse, son/daughter or brother/sister.

By signing a consent form the family says that they do not have any objection to the removal of organs from the body of their loved one. It is a legal document. This form is kept with the hospital.

13. If my family refused cadaver organ donation, will my treatment be affected?

No. Even though your family refuses for organ donation, the treatment will be carried out as per the clinical condition. Organ donation process is never linked with your appropriate treatment.

These two are separate entities. A completely different team work, for donation. Also, doctors involved in transplant operation are never involved in the donation process from the family of potential donor.

14. Can I be sure doctors will try to save me if I am registered as a potential organ donor?

Yes, its Health professional's duty to save life of patient first. Despite of all efforts, if the patient dies, organ and tissue donation can then be considered and a completely different team of retrieval and transplant specialists would be called in.

15. If I carry a donor card, will my organ be taken out without my family being asked?

No. Even though if you carry a donor card, your immediate family members and close relatives will be asked for donation of organs and tissues. The consent is mandatory from the person lawfully in possession of the dead body, before donation can be carried out. If they refuse, then organ donation will not take place.

16. Is it possible that I can express my wish to donate organs to some people and not to others?

No. Organs and tissue cannot be accepted unless they are freely donated. There is no such conditions that can be accepted in terms of potential recipients. You can express your wish to donate specifically which Organ &/or Tissue, you want to donate.

17. Is there any charge to my family for organ/tissue donation?

No. There is no additional charge to family of potential organ donor. Potential donor needs to be medically maintained in ICU till the time of donation. From the time family agrees to donate organs and tissue, all charges are borne by the treating hospital and donor family is not charged any further.

18. Does organ / tissue removal affect cremation / burial arrangements or disfigure the body?

No. The removal of organs or tissues will not interfere with customary funeral or burial arrangements. The appearance of the body is not altered. A highly skilled surgical transplant team removes the organs and tissues which can be transplanted in other patients. Surgeons stitch the body carefully, hence no disfigurement occurs. The body can be viewed as in any case of death and funeral arrangements need not be delayed.

19. Can organs be removed, after death, at home?

No. It can only be removed when a person is declared as brain stem dead in the hospital and is immediately put on a ventilator and other life support systems. After death at home, only eyes and some tissues can be removed

20. What, if I had pledged to donate Organs, but my family refuses?

In most situations, families agree of donation if they knew that was their loved one's wish. If the family, or those closest to the person who has died, object to the donation when the person who has died has given their explicit permission, either by telling relatives, close friends or clinical staff, or by carrying a donor card or registering their wishes on the NOTTO website, healthcare professionals will discuss the matter sensitively with them. They will be encouraged to accept the dead person's wishes. However, if families still object, then donation process will not go further and donation will not materialize.

21. Is there difference in organs between heart beating donor or donor after cardiac death?

Yes. Heart beating donor means the patient has been declared as Brain-stem Dead, and his /her organs can be retrieved when heart is still beating with the assistive devices. Beating heart keeps the blood supply intact to organs and there is no damaging affect of low blood supply to organs.

In case of donation after cardiac death, heart has stopped beating and there is no blood supply to organs. Because of that, donation after cardiac death has to be done immediately, as without blood supply, the organs will not be viable for use after certain period of time.

22. Why can organs of a brain dead patient be used for transplantation and not those of a patient who has died of a cardiac arrest?

Solid organ donation (heart, lungs, liver, pancreas, kidneys) requires blood circulation to be maintained in these organs until retrieval. This is possible in brain-stem death where the functioning of these organs can be supported for some time. However organ after cardiac death can also be harvested, provided the time gap is minimal.