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### What are Organ Transplants and Organ Donation?

An organ transplant is a medical procedure in which a person with an organ that is failing as a result of illness or an accident receives a healthy organ from another person, with the aim of restoring its function. This organ may be transplanted from a living donor who is a member of the patient's family, or donated by someone who has died. In the latter case, the organ may be donated after the person is brain-dead or after their heart has stopped beating. The organs that can be donated in these two cases are different.

Although people who receive a transplant will need to continue taking immunosuppressant drugs to stop their bodies from rejecting the transplanted organ as a foreign object, they can travel and attend school or return to work. These recipients value their health highly and are extremely grateful to the donors and their families.



# The difference between cardiac death, brain death, and a vegetative state

Only when the organs are donated, there are two classifications of death: cardiac death and brain death.

Cardiac death is the state in which all three of the following signs are confirmed: the heart has stopped, breathing has stopped, and the pupils are dilated.

Brain death is the state in which all brain function has ceased. If the person is on an artificial ventilator, their heart is still beating, but they will never recover no matter what treatment they are given, and in most cases their heart will also stop in a few days.

Cerebrum

Cerebellum

Brain stem

Many countries worldwide accept brain death as human death, and in Japan the Organ Transplant Law enacted on October 16, 1997, permits brain death to be considered human death solely for the purpose of organ donation.

A vegetative state is completely different from brain death because the brainstem, which is responsible for regulating breathing, blood circulation, and other functions necessary for life, is still functioning. In many cases the person can breathe by themselves and there is a possibility that they may recover.

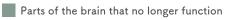
## Healthy brain, brain death, and example of a vegetative state

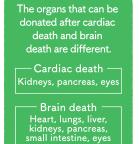
Healthy brain











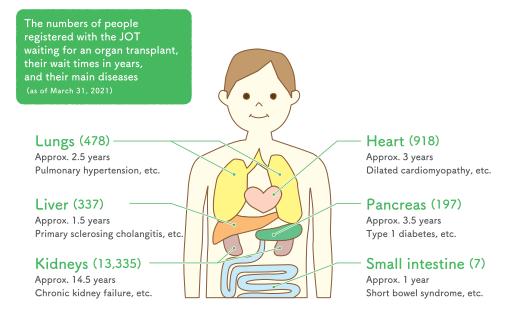
### Who Needs a Transplant?

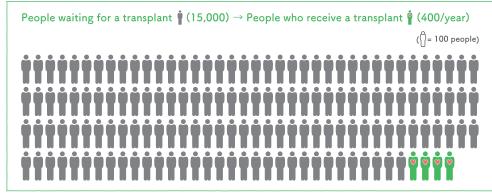
Our bodies stay healthy because all our different organs, including the heart, lungs, liver, and kidneys, work properly. In many people, however, these organs do not function as well as they should because of illnesses or accidents, and they may stop working altogether.

Around 15,000 people are registered with the Japan Organ Transplant Network (JOT) a waiting to receive an organ transplant and take back their health.

However, only around 400 people a year receive a transplant from a deceased donor.

\*Approximately 2,000 people are registered with an eye bank in the hope of a corneal transplant.





# The Organ Transplant Process Hospital admission

### Information provided by an organ procurement coordinator

If family members requests to be provided information about organ donation, an organ procurement coordinator will visit the hospital and inform things to them in detail.



Information provided

Family members reach a decision

### If an organ is to be donated after brain death, following the law, two examinations

of brain death are made, and the time when the second examination is concluded is considered to be the time of death. Family members may be present if they wish.

Brain death examination



rushed to the hospital where the recipient is admitted for transplantation.

Organ recovery surgery

The surgery to recover an

organ takes around 3-5 hours.

Once removed, the organ is

Organ recovery surgery

Return of the body

### Hospital admission

If a person has no hope of recovery despite having been given the best possible treatment in hospital to save their life, the doctor explains the situation to their family and asks whether they wish the person's organs to be donated or not. The person's own wishes can also be conveyed by their family showing the doctor their signed organ donor card.

#### Decision made by family members

The family members discuss the matter thoroughly among themselves and make an overall decision on whether or not to proceed with organ donation.



#### Transplant recipient allocation

The most suitable patient to receive the donated organ is chosen fairly from among those waiting for a transplant.

Brain death

examination



**Transplant** 

recipient

### Return of the body

The body is immediately returned to the family after organ recover. The incision will have been carefully stitched up, so that from the outside it is not noticeable. Family members and friends can then spend time with their loved one in a wake and funeral services.



### A Donor Family's Story

I was at work when the emergency call came. "Mom's had a traffic accident and been taken to hospital. Come now!" When I rushed to the hospital, I was told that she'd suffered a severe cerebral hemorrhage and was in a serious condition.

"Dying like this, it's so better ..." Stroking my wife's head as she lay silent, I asked myself "What is the best possible thing I can do in this situation?" Although the accident had happened while she was driving, miraculously her body was uninjured. It felt as if she were telling me "I' m leaving what happens next to you. Please do donate my organs."

My wife had previously filled in an organ donor form before the accident. The children were all in agreement, saying that "To do what she wanted is most important." But my wife's parents were opposed. "It's tragic enough for her to die

before me. But to cut up her body and take out her organs on top of that ... Absolutely not."

I was unable to persuade them. It was my wife's cousin who eventually said "Death comes for everyone in the end. If her physical body can be of some use, we should make the most of that possibility." It was his advice that helped soften my mother-in-law's heart.

Her organs went to five other people all over Japan. At the funeral, I announced that she had been an organ donor. This induced one of the mourners to respond, "It's so like her to do that at her death. I'm going to consider it [organ donation] seriously as well."

Later, the person who had received her lungs sent a letter saying that she had been able to attend an event at her daughter's kindergarten, and this has become a family treasure.

[from Think Transplant vol. 24]



### A Transplant Recipient's Story

Before I underwent heart transplant surgery, I was unable to get around without help, and was on the border between life and death several times. Just a week after the transplant, I was walking by myself. My body felt incredibly rested and quiet, without any discomfort. From then on, my condition improved every day, and I was continuously thrilled every time I was able to do something I' d been incapable of before. When I was able to leave hospital and go home to my family, my feelings were completely

overwhelming, and I just couldn't stop crying. Those of us who have received transplants are acutely aware of the value of life and the importance of time, perhaps because we have undergone this sort of surgery.

After the transplant, I was able to get married and have a child. When my child grows older, I want to tell them "Your father's body is filled with the hearts of a whole bunch of people. And those people are the reason why you were born." [from Think Transplant vol. 2]

Read more stories from people who have received transplants and organ donors' families on the JOT website.





### Things to Think About

Every individual has four rights regarding organ transplantation. These are the right to donate your organs, the right not to donate your organs, the right to receive a transplant, and the right not to receive a transplant, and whatever you wish, it will be respected. Any of us could be placed in any of these positions, and this could happen suddenly at any time. Organ donation after death ultimately requires your family's consent. It's important to talk to them and make your intentions clear while you are still in good health, so they won't be confused later.

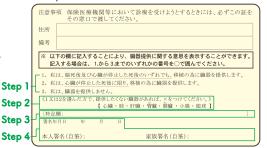


### How to declare your intention

You can declare your intention to be an organ donor by filling in the relevant section on your health insurance card, driver's license, My Number card, or an Organ Donation Decision Card (organ donor card). You can also register your decision online on the JOT website.

\*The decision to donate your organs is valid for people aged 15 or over.

#### Sample Health Insurance Card



### Step 1

Make your own decision

Circle one of sections (1)–(3) on the card.

## **Step 3** (only if you have circled section (1) or (2)) Fill in the Special Comment section

If you also want to donate another part of your body in addition to your organs, such as skin, heart valves, blood vessels, or bone, write this in here. Or if you want to prioritize a member of your close family to receive your donated organs, check the points to note on the JOT website and other sources and write "Prioritize close family" in this section.

**Step 2** (only if you have circled section (1) or (2)) Cross out any organs that you do not want to donate.

### Step 4

Fill in your name and other details

Tell your family about your decision, and ensure that a third party can confirm this in case of need. There is no need to submit your decision or send it by post. If there is a space for a family member's signature, it would be a good idea to have them sign it too.

### Frequently Asked Questions

#### Q1. Can anyone donate their organs? Can you do it anywhere?

A1. There's no upper age limit on declaring your intention to donate your organs.

Older people can fill in the declaration even if they are taking medication for disease.

However, people who die of cancer or a systemic infection may not be able to donate their organs, and the decision will be made by a medical examination when the organs are actually donated organ were donated from young babies to people in their late 70s. Organ donation after cardiac arrest can be performed in any hospital with an operating room, but organ donation after brain death must be performed by a university hospitals or other institutions capable of providing high-level medical care.

#### Q2. Does organ donation involve any costs or fees/gratuities?

A2. Organ donation is purely an act of goodwill, and no costs whatsoever are incurred by the donor. Neither will any fees such as funeral expenses or other gratuities be paid. Donors' families will receive a Certificate of Gratitude from the Minister of Health, Labour and Welfare.

#### Q3. How far can a person's health recover after a transplant?

A3. It varies between individuals, but most patients who take immunosuppressants and other medications after the operation and are careful about the rejection reaction and infection can lead lives like those of healthy individuals. One transplant recipient went on to win an Olympic medal, and another became a professional soccer player.

#### Q4. If I donate my organs, how will the recipients be chosen?

A4. The medical decision on who will receive each organ is decided separately based on factors such as blood type that affect compatibility, as well as on the order of priority, with the most suitable recipient registered with the JOT selected by computer.

#### O5. How do people become brain dead?

A5. The main causes of brain death are accidental head injury and cerebrovascular disease, such as cerebral hemorrhage or cerebral infarction. This means that brain death can suddenly happen to anyone at any time.