

Organ Transplant

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In News

A **transplant is an organ, tissue or a group of cells removed from one person (the donor) and surgically transplanted into another person (the recipient or host) or moved from one site to another site in the same person.** Transplants such as a liver transplant can save lives. They can also restore function to improve quality of life. For example, transplanting the clear tissue that covers the eye (cornea) is not necessary for life, but can restore sight.

More About Organ Transplants

- Transplantation is a complex area of medicine because when organs or tissues are transplanted from one person to another, the **recipient's immune system can reject and destroy the donor organ or tissue**, and **medication is needed to suppress this immune response.**
- The treatments used vary depending on the tissue or organ being transplanted, the level of compatibility between the donor and the recipient, and other factors. (For example, kidney donors and their recipients must have compatible antibodies and similar body sizes).
- A transplant from one part of your body to another part is called an **autograft** and the process is called autotransplantation.
- The advantage of an autograft is that the **person's body is unlikely to reject their own cells**, so long-term medication to suppress the immune system (immunosuppressants) is not needed.
- A transplant between two people who are not genetically identical is called an **allograft** and the process is called allotransplantation.
- For some transplants (especially bone marrow), there is

also the possibility that immune cells in the donated bone marrow will recognise the host's body as foreign and attack the cells of the host. This is known as **graft-versus-host disease (GvHD)**.

- A transplant between species is called a **xenotransplant** and the process is called xenotransplantation. **Heart valves from cows and pigs** have been used for many years to replace faulty heart valves in people.
- Transplants can be for:

. **organs** – heart, kidney, liver, lung, pancreas, stomach and intestine

. **tissue** – cornea, bone, tendon, skin, pancreas islets, heart valves, nerves and veins

. **cells** – bone marrow and stem cells

. **limbs** – hands, arms and feet.

Law Governing Organ Transplant in India

- The legislation called the **Transplantation of Human Organ Act (THO) was passed in India in 1994** to streamline organ donation and transplantation activities.
- **For living donation** – it defines who can donate without any legal formalities. The relatives who are allowed to donate include mother, father, brothers, sisters, son, daughter, and spouse.
- **Brain-death and its declaration** – brain death is defined by the following criteria: two certifications are required 6 hours apart from doctors and two of these have to be doctors nominated by the appropriate authority of the government with one of the two being an expert in the field of neurology.
- Regulation of transplant activities by forming an **Authorization Committee (AC) and Appropriate Authority (AA) in each State or Union Territory:**

. AC: The purpose of this body is to **regulate the process of authorization to approve or reject transplants between the recipient and donors** other than a first relative.

. AA: The purpose of this body is to **regulate the removal, storage, and transplantation of human organs. A hospital is permitted to perform such activities only after being licensed by the authority.** The removal of eyes from a dead body of a donor is not governed by such an authority and can be done at other premises and does not require any licensing procedure.