

# Overview on Kidney Transplantation

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## 1. What is Kidney Transplant?

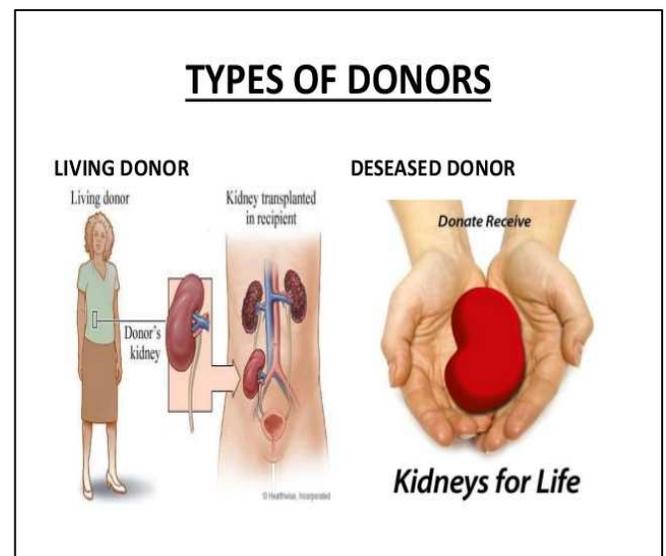
**Kidney transplantation** also called *renal transplantation* is a process of transplanting healthy kidney to a patient who is experiencing kidney failure more commonly known as End Stage Renal Disease. End Stage Renal Disease is a permanent condition which impedes the function of the kidneys and therefore dialysis procedure has to be done on patients to remove waste products and excess fluid from blood. One of the most common transplant surgeries, this procedure normally allows patients greater freedom of lifestyle than kidney dialysis procedure which has been the only other treatment for kidney failure. A successfully transplanted kidney works like a normal healthy person's kidney and this means that the individual will no longer require dialysis treatment and may reduce or completely eliminate the need for medication<sup>2</sup>.

## 2. Where are kidneys for Transplantation Obtained?

There are two types of donors for kidney transplant:

**Living donor:** A donor who may be a family member, friend, or any person who is willing to give a kidney to someone in need<sup>2</sup>.

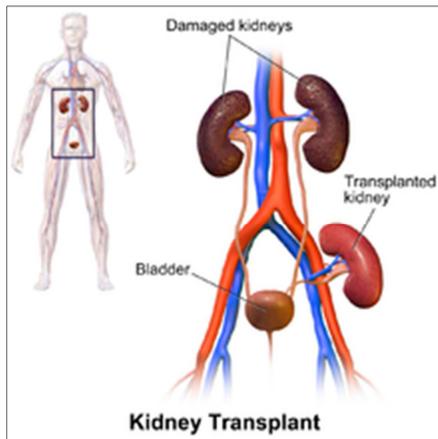
**Deceased (cadaver) donor:** A deceased donor is someone who has recently died<sup>2</sup>. Potential deceased donors are screened for cancer and other



transmissible viruses and their medical history is fully evaluated <sup>3</sup>.

## 2. The Transplant Operation

Transplanted kidney is placed either on the right or the left side of the lower abdomen as shown in the diagram below<sup>3</sup>. During the surgery, the blood vessels from the donor kidney will be connected to arteries and veins in the body and the ureter from the donor kidney will be connected to the recipient's bladder<sup>3</sup>. Blood will be able to flow through the donor kidney, and the kidney resumes its function in filtering and removing wastes to produce urine [3].



Failed kidneys are not removed and are left to continue whatever small amount of function that they may still have<sup>3</sup>. However, in the circumstance that the kidneys must be removed, a separate operation is necessary prior to transplantation [3]. This is only rarely required in the case of chronic infection or very large kidneys<sup>3</sup>.

## 3. Post Transplant Possible Complications

Any patients who have undergone major surgery will experience postoperative complications. In the first few weeks following transplantation majority of patients experience some kind of complications including<sup>3</sup>:

**1. Rejection** - Rejection is the natural process where the body resists the presence of foreign cells or tissue of a donor kidney in the same way it fights off bacteria and viruses that causes illness. Rejection process occurs when the patient's blood cell is reduced or when the function of the transplanted kidney is stopped. Symptoms of rejection include

fever, decreased urine output, fluid retention and increase in weight, tenderness over the kidney and blood pressure elevation.

**2. Infection** – Patients are more prone to infection after transplant since drugs used to control and prevent and control rejection also weakens the body immune system.

Common site of infection includes: wound site, mouth urinary tract, lungs.

**3. Surgical Complications** – Slow wound healing caused by some medications, diabetes and obesity.

## 5. Post-transplant Care

There are a number of precautions that every transplant patient must observe when returning home. Some of the precautionary management includes<sup>3</sup>:

- Taking proper medication guidelines
- Avoid sources of infection to prevent infection
- Maintain good diet and nutrition
- Routine Self-Examination
- Immunizations and Vaccinations

## 6. Conclusion

Kidney transplant offers “new lease of life” for patients and their families since patients are able to lead a healthier lifestyle. Patients would also no longer be requiring dialysis and the increase in longevity is greater for younger patients. However challenges remains in kidney transplantation including shortage of organ donors, immunological barriers and the long term need of immunosuppression.

## **References**

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