PROCEDURE

Kidney transplant

A kidney transplant is surgery to place a healthy donor kidney in your body.

PURPOSE
Replace lost kidney function and reduce or end dialysis

PROCEDURE TYPE
Therapeutic - surgical

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
About 3 to 4 hours

PREPARATION
Fasting, medicine review, blood tests, and dialysis if scheduled

RECOVERY
Several hospital days; no driving until your transplant team clears you

MAIN RISKS
Rejection, infection, bleeding, and blood clots

RESULTS
Kidney function monitored immediately and over following days

Overview

A kidney transplant is an operation that places a healthy kidney from a donor into your body. The donor may be living or deceased.

The new kidney filters waste and extra fluid from your blood. It also helps regulate blood pressure, red blood cell production, and mineral balance. A successful transplant may allow you to stop dialysis, but it does not cure the condition that damaged your kidneys.

Your own kidneys are usually left in place unless they are causing problems, such as repeated infection, severe pain, or uncontrolled bleeding. The transplanted kidney is normally placed in the lower abdomen.

You will need lifelong follow-up and medicines that suppress your immune system. These medicines reduce the chance that your body will reject the kidney.

Why the procedure is performed

Kidney transplantation is used to treat kidney failure, also called end-stage kidney disease. At this stage, the kidneys can no longer support the body adequately.

Compared with remaining on dialysis, a suitable transplant may offer:

Some people receive a transplant before starting dialysis. This is called a pre-emptive transplant.

- Better day-to-day quality of life
- Fewer restrictions on food and fluids
- More freedom from dialysis schedules
- Longer survival for many suitable recipients

Who should and should not have it

A transplant may be considered if you have permanent, advanced kidney failure and are well enough for surgery and long-term anti-rejection treatment. Your assessment looks at your heart, lungs, blood vessels, infections, cancer history, other health conditions, and ability to manage medicines and follow-up.

Transplantation is not the right choice for everyone. It may be avoided when the operation or immune-suppressing medicines would create more risk than likely benefit.

A transplant may be delayed or ruled out because of:

Age alone does not decide eligibility. Transplant programs assess your overall health and expected benefit. Requirements can differ between programs.

A compatible donor kidney must also be available. Blood group, donor size, antibodies, and tissue compatibility are considered. A final crossmatch checks whether your immune system is likely to attack that donor kidney immediately.

- An active, serious infection
- Active cancer or cancer requiring further assessment
- Severe heart, lung, or blood vessel disease that makes surgery unsafe
- A health condition that is not stable enough for major surgery
- Current problems that would prevent medicines from being taken safely
- Substance use or another concern requiring treatment before transplantation

How to prepare

Your treating facility's own instructions take priority over general information. Follow them closely because plans differ for living-donor and deceased-donor transplants.

Before transplantation, you will have blood tests, scans, heart and lung assessments, and infection screening. Dental or other treatment may be needed to reduce infection risk. Keep routine vaccinations up to date as directed by your transplant team.

Review every medicine, supplement, and non-prescription product with the team. Blood thinners and some diabetes medicines may need special instructions. Do not stop a prescribed medicine unless the treating team tells you to.

You will be told when to stop eating and drinking. If you receive dialysis, the team will explain whether you need a session before surgery.

For a deceased-donor transplant, the hospital may call at any time. Keep contact details current and have a plan for travel. The operation can still be cancelled after arrival if testing shows that the kidney is unsuitable or the transplant is unsafe.

Arrange practical support for discharge, including transport, help at home, and frequent early clinic visits.

What happens during the procedure

You receive general anaesthesia, so you are unconscious and do not feel the operation. A breathing tube supports your breathing.

The surgeon makes a cut in the lower abdomen. The donor kidney is placed in the pelvis, usually on the right or left side. Its artery and vein are connected to blood vessels in your pelvis.

The ureter, the tube that drains urine from the kidney, is joined to your bladder. A temporary internal tube called a stent may be placed to keep this connection open while it heals.

The surgeon checks blood flow and closes the incision. A bladder catheter drains urine during early recovery. Drains may sometimes be used near the surgical area.

Recovery and what to expect afterward

Pain and soreness around the incision are expected. Pain medicine is provided, and discomfort should gradually improve. Tell the team if pain suddenly worsens or is not controlled.

You may start with fluids and then return to food as your bowel function recovers. Temporary

nausea or constipation can occur after anaesthesia and pain medicine.

You will be encouraged to get out of bed and walk early. This supports breathing, bowel function, and circulation. Avoid heavy lifting and strenuous activity until the incision has healed and your team approves it.

You cannot drive home. After discharge, do not drive while taking medicine that makes you drowsy or until you can turn, brake suddenly, and wear a seat belt comfortably. Wait for clearance from your transplant team.

Time away from work is often several weeks, but it is influenced by healing, kidney function, complications, and whether your work is physical. Your team can provide advice for your job.

Hospital recovery usually lasts several days. Some transplanted kidneys work immediately. Others take days or weeks to begin working well. Temporary dialysis may be needed during this period.

Risks and possible complications

Kidney transplantation is major surgery. Possible early complications include bleeding, blood clots, wound problems, infection, and reactions to anaesthesia.

Other transplant-specific risks include:

Anti-rejection medicines make it harder for your immune system to fight infection. They can also contribute to high blood pressure, diabetes, bone problems, and an increased risk of certain cancers. The specific risks differ between medicines.

Rejection does not always cause symptoms. Regular blood tests are therefore essential, even when you feel well. Some episodes can be treated successfully, but severe rejection may lead to loss of kidney function.

- Rejection, when the immune system attacks the donor kidney
- Delayed graft function, when the kidney is slow to work
- Narrowing, blockage, or leakage where the ureter joins the bladder
- Reduced blood flow caused by a narrowed or clotted blood vessel
- Return of the original kidney disease in the transplanted kidney

Results and follow up

The team measures urine output and checks blood tests soon after surgery. Creatinine, a

waste product in the blood, helps show how well the kidney is filtering.

If kidney function is slower than expected, you may need an ultrasound, additional blood tests, or a biopsy. During a biopsy, a small tissue sample is removed with a needle and examined for rejection or other damage.

Early follow-up is frequent. Visits become less frequent when kidney function and medicine levels are stable, but monitoring continues for life.

Take anti-rejection medicines exactly as prescribed. Missing doses can increase the risk of rejection. Tell the transplant team before starting new medicines or supplements because some can change anti-rejection medicine levels.

A transplanted kidney may work for many years, but no transplant is guaranteed to last for life. If it eventually fails, options may include dialysis, assessment for another transplant, or supportive treatment.

Alternatives

You can decide not to have a kidney transplant. The main alternatives have different benefits and burdens.

You can ask how transplantation compares with these options for your health, priorities, and likely waiting time.

- Haemodialysis: A machine filters your blood, usually on a regular schedule. It avoids transplant surgery and anti-rejection medicines but requires ongoing treatment and often stricter fluid and dietary limits.
- Peritoneal dialysis: Fluid placed in your abdomen removes waste through its lining. It can offer more flexibility at home but requires regular exchanges and carries a risk of abdominal infection.
- Conservative kidney management: Care focuses on symptoms, comfort, and quality of life without dialysis or transplantation. It does not replace lost kidney function and may mean a shorter life.
- Waiting for another donor kidney: You may decline a particular deceased-donor offer or postpone a living-donor transplant. This allows more time or another offer, but kidney function may worsen and waiting times are uncertain.

When to call your healthcare team

Routine follow-up includes planned blood tests, medicine-level checks, blood pressure monitoring, and transplant clinic visits. Contact the team if you cannot attend or miss an anti-rejection dose.

Contact your transplant team promptly for:

Seek emergency help for severe breathing difficulty, chest pain, fainting, uncontrolled bleeding, or signs of a severe allergic reaction. Follow any emergency instructions supplied by your transplant centre.

- Fever, chills, or feeling suddenly unwell
- Reduced urine output or a clear change in urine
- Increasing pain or swelling over the transplant
- Redness, warmth, discharge, or opening of the wound
- Vomiting or diarrhoea that prevents you keeping medicines down
- New swelling, rapid weight gain, or shortness of breath
- Possible exposure to a contagious infection

Common questions

Will I be asleep?

Yes. Kidney transplantation is performed under general anaesthesia, so you are unconscious during the operation.

Can I drive home?

No. You will stay in hospital for several days and need someone else to take you home. Resume driving only when your transplant team clears you and you can control the vehicle safely.

How painful is it?

Pain and tightness around the lower-abdominal incision are common at first. Medicine and gentle movement usually help, and discomfort should lessen as the wound heals.

When will I know whether the kidney is working?

Urine production and blood tests provide early information. Some kidneys work immediately, while others need days or weeks. Temporary dialysis does not necessarily mean the transplant has failed.

How long will the transplanted kidney last?

There is no fixed lifespan. Donor type, compatibility, rejection, infections, other health

conditions, and taking medicines consistently all affect how long it works.

Why are my old kidneys left inside?

Removing them would add surgery without benefit for most people. They are usually removed only when they cause problems or there is not enough space for the transplant.

Sources

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