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## **KIDNEY TRANSPLANTATION FROM A LIVE-RELATED OR CADAVERIC DONOR**

**Information about your procedure from  
The British Association of Urological Surgeons (BAUS)**

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This leaflet contains evidence-based information about your proposed urological procedure. We have consulted specialist surgeons during its preparation, so that it represents best practice in UK urology. You should use it in addition to any advice already given to you.

To view the online version of this leaflet, type the text below into your web browser:

[http://www.baus.org.uk/\\_userfiles/pages/files/Patients/Leaflets/Kidney transplant.pdf](http://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Kidney%20transplant.pdf)

### **Key Points**

- Kidney transplantation is a complex surgical procedure which provides the best quality of life for patients with chronic kidney failure
- You will need to take immunosuppressive drugs for life to prevent rejection of your transplant kidney
- Half of all kidney transplants are still working satisfactorily after 10 years
- Complications are common and varied, with some requiring removal of the transplant and a return to dialysis
- You should not have any immunisations that use “live” vaccine if you are taking immunosuppressive drugs

### **What does this procedure involve?**

Implantation of a donated kidney into your lower abdomen to restore kidney function.

This operation has been recommended because your own kidneys have failed. Your nephrologist (kidney specialist) will have discussed your condition with you and with personnel involved in the transplant programme.

## What are the alternatives?

- **Medical treatment for kidney failure** – using drugs, fluid restriction & other dietary alterations to control your production of bodily waste products
- **Peritoneal dialysis** – using the lining of your abdominal (tummy) cavity to draw waste products out of your circulation by putting dialysis fluid into your abdominal cavity
- **Haemodialysis** – creating a fistula or loop graft to allow dialysis needles to be put into an arm or leg vein

## What happens on the day of the procedure?

When an appropriately-matched kidney is available, we will contact you by telephone. You will be asked to report to the hospital without delay.

Your urologist/transplant surgeon (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent.

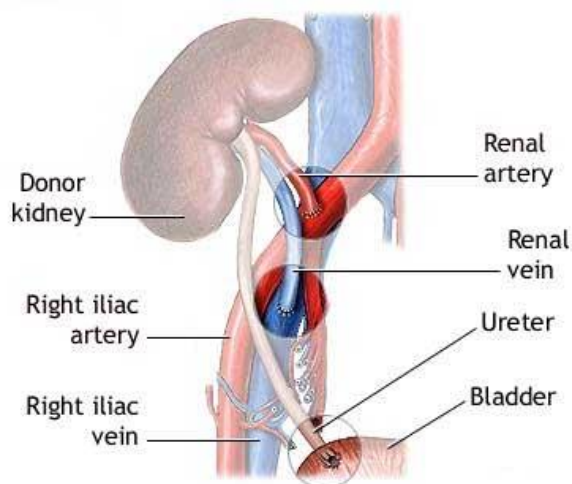
An anaesthetist will see you to discuss the options of a general anaesthetic or spinal anaesthetic. The anaesthetist will also discuss pain relief after the procedure with you.

We may provide you with a pair of TED stockings to wear, and we may give you a heparin injection to thin your blood. These help to prevent blood clots from developing and passing into your lungs. Your medical team will decide whether you need to continue these after you go home.

## Details of the procedure




- we normally carry out the procedure under a general anaesthetic
- you will usually be given an injection of antibiotics before the procedure, after you have been checked for any allergies
- we make a curved incision in the lower part of your abdomen (tummy), just above your groin
- we put a catheter through your urethra (waterpipe) into your bladder to measure your urine output; this is normally removed around five days later
- we connect the new kidney to the blood vessels which take blood to and from your leg











- we join the ureter of the transplanted kidney to your bladder
- we put a plastic stent into the transplant ureter to allow it to heal without leakage; this is normally removed six to 12 weeks after the procedure
- we usually put a drain down to the transplanted kidney to stop any fluid collecting; this drain is usually removed after three or four days
- we close your wound with clips, tissue glue or absorbable stitches that normally disappear after two to three weeks
- the procedure takes two to three hours to complete
- you can expect to remain in hospital for seven to 10 days after the procedure










### Are there any after-effects?

The possible after-effects and your risk of getting them are shown below. Some are self-limiting or reversible, but others are not. We have not listed very rare after-effects (occurring in less than 1 in 250 patients) individually. The impact of these after-effects can vary a lot from patient to patient; you should ask your surgeon's advice about the risks and their impact on you as an individual:

After-effect	Risk
The procedure does not cure the underlying condition that is responsible for your kidney failure	 All patients
Need for <a href="#">flexible cystoscopy</a> under local anaesthetic to remove your ureteric stent	 All patients
Need for multiple admissions, over months and years, for tests, scans and possible biopsies of your transplant kidney	 Almost all patients

Need for long-term immunosuppressive drugs which also have many side-effects <sup>1</sup>		Between 1 in 2 & 1 in 10 patients
Acute rejection of the kidney requiring drug treatment		1 in 3 patients (33%)
Bleeding requiring further surgery		1 in 20 patients (5%)
Narrowing of the join between the transplant ureter and your bladder requiring further surgery		1 in 20 patients (5%)
Failure of the kidney to work immediately requiring further dialysis		Between 1 in 10 & 1 in 50 patients
Infection in your wound or abdominal (tummy) cavity		Between 1 in 10 & 1 in 50 patients
Incision hernia (hernia in your scar) requiring further treatment		Between 1 in 10 & 1 in 50 patients
Development of a lymphocele (lymph fluid collection) requiring drainage or further surgery		Between 1 in 10 & 1 in 50 patients
Leakage of urine from the junction between the transplant ureter and your bladder requiring prolonged bladder catheterisation		Between 1 in 10 & 1 in 50 patients
Sudden spontaneous rupture of your kidney		Between 1 in 10 & 1 in 50 patients

<sup>1</sup> **Side-effects of immunosuppressive drugs include:** tremor (shaking), liver problems, hirsutism (abnormal hair growth), gum enlargement, high cholesterol, stomach ulceration, bone marrow suppression, diabetes, osteoporosis, poor wound healing, cataracts, hair loss, weight gain, high blood pressure, increased cancer risk (especially skin, lymph glands, cervix & breast)

Anaesthetic or cardiovascular problems possibly requiring intensive care (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death)	 Between 1 in 10 & 1 in 50 patients (your anaesthetist can estimate your individual risk)
Thrombosis (blockage) of the transplant blood vessels requiring removal of the transplant	 1 in 50 patients (2%)
Increased risk of cancer of the skin, lymph glands, cervix, breasts and other sites as a result of taking immunosuppressive drugs	 1 in 50 patients (2%)
Failure of the transplant in the long term requiring a return to dialysis	 Between 1 in 50 & 1 in 250 patients
Return of the original kidney disease in your transplant kidney	 Between 1 in 50 & 1 in 250 patients
Transmission of infection or cancer to you from the donor	 Between 1 in 50 & 1 in 250 patients
Persistent swelling of your leg on the side of the transplant kidney	 Between 1 in 50 & 1 in 250 patients

### What is my risk of a hospital-acquired infection?

Your risk of getting an infection in hospital is between 4 & 6%; this includes getting *MRSA* or a *Clostridium difficile* bowel infection. This figure is higher if you are in a “high-risk” group of patients such as patients who have had:

- long-term drainage tubes (e.g. catheters);
- bladder removal;
- long hospital stays; or
- multiple hospital admissions.

### What can I expect when I get home?

- you will be given advice about your recovery at home
- you will be given a copy of your discharge summary and a copy will also be sent to your GP

- any antibiotics or other tablets you may need will be arranged & dispensed from the hospital pharmacy
- a follow-up appointment will be made for you to have your ureteric stent removed using flexible cystoscope under local anaesthetic, six to 12 weeks after the procedure
- you should exercise (e.g. walking or cycling) as soon as you feel able but you should avoid extreme athletic exercise for at least 12 weeks
- you should not participate in any contact sports (martial arts, rugby) which carry the risk of getting a direct blow to your transplant kidney
- it may be several weeks before you can return to active work

## **Are there any other points to note after my transplant?**

Yes. Some general points which you may find helpful are listed below:

- **Quality of life**  
You will have a better quality of life after a kidney transplant than you would on dialysis. We expect five out of 10 transplanted kidneys (50%) to continue working satisfactorily after 10 years.
- **Anxiety and mood swings**  
These are very common and can put a lot of strain on your family. There are counselling services to help you with this, and your transplant team can provide you with more information.
- **Skin care**  
You have an increased risk of skin cancer if you take immunosuppressive drugs. You should never sunbathe or use a sun bed. Stay out of the sun during the summer months, and use a sunscreen on all exposed skin (SPF 25 or higher). Wear a wide-brimmed hat and, if possible, long sleeves.  
  
You should check your skin closely on a regular basis. If one spot looks different from others, or you have concerns that it is growing, contact your doctor immediately. Small skin cancers, if treated early, can be removed by minor surgery.
- **Dental health**  
It is advisable to have routine dental checks every six months and to practise good dental hygiene. Make sure that your dentist knows you have had a kidney transplant. You must have antibiotics before any invasive dental treatment.
- **Immunisation**

You should not have immunisation with a “live” vaccine. If you are planning to travel abroad, check in advance which vaccinations you need. If you are in any doubt which are suitable, please contact your transplant co-ordinator.

- **Your transplant donor**

Many people wish to find out more about their kidney donor. We can only give you a minimum of information (donor’s age and sex) but most donors’ families are very grateful to receive a letter from the recipient. Your transplant co-ordinator will advise you how to construct a letter of thanks, and will pass it on to the donor’s family.

- **Diet**

One of the major benefits of a kidney transplant is that you can enjoy a normal healthy diet. The following points should be helpful in managing your diet:

- avoid saturated fats;
- try low-calorie drinks if you start to gain weight;
- reduce the amount of salt you use in cooking;
- eat high-fibre foods to help fill you up;
- alcohol is fine in moderation, but it can interact with some of your medications;
- avoid grapefruit and grapefruit juice which interfere with some immunosuppressive drugs;
- do not eat dairy products made from unpasteurised milk; and
- increase your intake of calcium and vitamin D to prevent osteoporosis.

## **General information about surgical procedures**

### ***Before your procedure***

Please tell a member of the medical team if you have:

- an implanted foreign body (stent, joint replacement, pacemaker, heart valve, blood vessel graft);
- a regular prescription for a blood thinning agent (e.g. warfarin, aspirin, clopidogrel, rivaroxaban, dabigatran);
- a present or previous MRSA infection; or
- a high risk of variant-CJD (e.g. if you have had a corneal transplant, a neurosurgical dural transplant or human growth hormone treatment).

### ***Questions you may wish to ask***

If you wish to learn more about what will happen, you can find a list of suggested questions called "[Having An Operation](#)" on the website of the Royal College of Surgeons of England. You may also wish to ask your surgeon for his/her personal results and experience with this procedure.

### ***Before you go home***

We will tell you how the procedure went and you should:

- make sure you understand what has been done;
- ask the surgeon if everything went as planned;
- let the staff know if you have any discomfort;
- ask what you can (and cannot) do at home;
- make sure you know what happens next; and
- ask when you can return to normal activities.

We will give you advice about what to look out for when you get home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.

### ***Smoking and surgery***

Ideally, we would prefer you to stop smoking before any procedure. Smoking can worsen some urological conditions and makes complications more likely after surgery. For advice on stopping, you can:

- contact your GP;
- access your local [NHS Smoking Help Online](#); or
- ring the free NHS Smoking Helpline on **0300 123 1044**.

### ***Driving after surgery***

It is your responsibility to make sure you are fit to drive after any surgical procedure. You only need to [contact the DVLA](#) if your ability to drive is likely to be affected for more than three months. If it is, you should check with your insurance company before driving again.

### **What should I do with this information?**

Thank you for taking the trouble to read this information. Please let your urologist (or specialist nurse) know if you would like to have a copy for your own records. If you wish, they can also arrange for a copy to be kept in your hospital notes.



## What sources were used to prepare this leaflet?

This leaflet uses information from consensus panels and other evidence-based sources including:

- the [Department of Health \(England\)](#);
- the [Cochrane Collaboration](#);
- the [National Institute for Health and Care Excellence \(NICE\)](#);
- [Kidney Care UK](#); and
- the [National Kidney Foundation](#).

It also follows style guidelines from:

- the [Royal National Institute for Blind People \(RNIB\)](#);
- the [Information Standard](#);
- the [Patient Information Forum](#); and
- the [Plain English Campaign](#).

## Disclaimer

We have made every effort to give accurate information but there may still be errors or omissions in this leaflet. BAUS cannot accept responsibility for any loss from action taken (or not taken) as a result of this information.

### PLEASE NOTE

The staff at BAUS are not medically trained, and are unable to answer questions about the information provided in this leaflet. If you do have any questions, you should contact your urologist, specialist nurse or GP.