

Having a laparoscopic donor nephrectomy



Information for patients

Sheffield Kidney Institute (Renal Unit)



What is a donor nephrectomy?

A living donor transplant is when a person gives one of their kidneys to someone else, usually a relative or friend.

- We call the person who is giving their kidney a **living donor**
- We call the operation to remove the kidney a **donor nephrectomy**

We have written this leaflet about having a donor nephrectomy at Sheffield Kidney Institute (SKI). It gives you information about:

- The operation
- The benefits of this type of operation
- The risks
- The preparation before the operation
- What is done to make sure you are safe during and after surgery.

How is the kidney removed?

In Sheffield since 2005, we have been using keyhole surgery to remove the kidney. This type of operation is called **hand assisted (HA) laparoscopic nephrectomy**.

In the past, the kidney was removed after making a six inch cut below one side of the rib cage. This type of operation meant a longer time in hospital and often up to 12 weeks to fully recover. This is called an **open nephrectomy**.

How is HA laparoscopic donor nephrectomy carried out?

- The operation is carried out using a general anaesthetic so you will be asleep while your kidney is removed.
- A catheter is put into your bladder so that we can monitor how much urine your remaining kidney is making after the operation.



Wound sites after six weeks

- One cut is made, about 8 - 9 centimetres long, either along your abdomen (tummy) or below the rib cage. Your surgeon will discuss this with you in more detail before the operation. This cut is for the surgeon to hold the kidney in his hand during the operation and then to remove the kidney.
- Two or three holes about one to two centimetres long are made on the side of the tummy for the keyhole instruments to be put in your body.
- One of these instruments is a camera and the pictures are shown on a screen in the operating theatre. This means the surgeon can see inside your body to remove your kidney.
- At the end of the operation, dissolvable stitches are used to sew your wound together.

What happens to the kidney?

The kidney is removed and your blood is cleaned out of the kidney. The kidney is then stored in an ice bag in a kidney box until it is transplanted.

What are the benefits of HA laparoscopic donor nephrectomy?

The benefits of HA laparoscopic donor nephrectomy are:

- It is less painful than open nephrectomy.
- It allows you to recover more quickly, usually within 6 weeks.

What are the risks of HA laparoscopic donor nephrectomy?

In about 15% (15 in 100) of cases, donors have **minor problems** and a very small number need more treatment or in rare cases another operation. This may mean a longer stay in hospital or you may need to come back into hospital for treatment.

Most patients recover from the operation without any complications, but as with any type of surgery, there are some **risks**.

More common risks are:

- **Constipation.** You may feel constipated a few days after surgery due to your bowel being handled during the operation. You may need some laxatives or suppositories to help you open your bowels.
- **Bloating of the abdomen** from left over gas from the surgery which can cause stomach and shoulder pain and will get better itself.
- **Chest infection.** About 5% (5 in 100) of donors develop a chest infection. This is most likely to happen if you are overweight or smoke. This would be an excellent time to stop smoking and we strongly recommend you do before the date of your operation. We have a leaflet "Stop before your op" that tells you where to get help with this as we realise stopping smoking can be hard. Please ask if you would like a copy. If you do get a chest infection, this will be treated with antibiotics or chest physiotherapy.

- **Urine (water) infection.** Fewer than 2% (2 in 100) of donors get a urine infection. If you do develop a urine infection, this is treated with antibiotics.
- **Inability to pass urine** can happen after your catheter is removed. Usually a catheter is put back in and you will be observed for 24 hours and then another attempt is made to remove the catheter.
- **Seroma** or a **collection of fluid under the wound.** This usually gets better itself without treatment, but about 5% (5 in 100) of these may get infected and need antibiotics or surgical drainage to get better.
- **Infection.** About 1% (1 in 100) of donors can get an infection in their abdomen which needs another keyhole operation to wash out the infection.
- About 3% (3 in 100) of men can develop **testicular pain** on the same side as the operation. This may persist for a few weeks and need pain killers.
- **Haematoma or a collection of blood** under the wound happens in less than 5% (5 in 100) of cases and usually gets better without treatment.
- **Hernia.** Less than 2% (2 in 100) of donors develop a hernia around one of the scars. A hernia is a bulge of fat or part of an internal organ that protrudes into the abdomen due to weakness in the abdominal wall. Usually this has to be repaired by having another operation.

In rare cases, more serious complications can develop. These are:

Deep vein thrombosis (DVT) or blood clots in the legs that can develop after any type of operation. This blocks the flow of blood around your body.

The symptoms usually only affect one leg, and include:

- Pain
- Redness
- Swelling

Without treatment, long term complications can include having a painful swollen leg, leg ulcers and skin discolouration.

- **In rare cases**, a piece of blood clot breaks off and travels to the lungs and causes chest pain and severe breathing problems. This is called a pulmonary embolism (PE) and causes permanent lung damage and death in a small number of people.
- Some people may be at more risk of getting these, for example being over the age of 60, being overweight or obese, or having had blood clots in the past. When you are admitted to the ward, your doctor will look at your risk of developing a DVT, and may suggest further treatment to help stop this happening. You will also be given a leaflet about blood clots and what you can do to help stop these.
- **Blood loss** needing a blood transfusion.
- During the operation, there is a rare risk of **injury to the bowel**. In this case the operation cannot carry on.
- Injury to the **spleen** which then needs to be removed.
- There is a less than 3% (3 in 100) risk of needing to **convert to an open operation** when keyhole surgery may not be possible.

The open surgery involves making a cut under your rib cage, which can increase recovery time to three months.

- In extremely rare cases a donor can have severe complications during surgery leading to a disability or a need for regular haemodialysis treatment.
- The **risk of dying** after the operation is about 1 in 3000 (0.03%).

We must obtain your consent for any procedure or treatment beforehand. Staff will explain all the risks, benefits and alternatives in more detail before they ask for your consent. If you are unsure about any part of the procedure that is being suggested, please do not hesitate to ask for more information.

What happens before the operation?

If you are told you are a suitable donor, once an operation date has been set you will be invited to:

- **Attend "Transplant School" where you will:**
 - Speak to a previous donor and transplant recipient
 - Visit the ward you will be admitted to
 - Discuss with the Transplant Practitioner what will happen to you on the ward
 - Hear about your pain relief from the renal Pharmacist
- **See your surgeon and sign the consent form**
- **See the Living Donor Coordinator where you can:**
 - Ask any questions you have
 - Hand in your expenses claim form
- **Have a pre-operative assessment appointment . This appointment is to make sure you are fit for your operation. You will:**
 - See a Pre-Operative Sister
 - Have routine blood tests

- Have your blood pressure checked
- Have an ECG (heart) test

You **must** attend these appointments or the date of the operation may be delayed.

You **must** come for a final cross-match blood test with the Living Donor team, about one week before your operation.

You will be admitted to hospital at about 4.00pm on the evening before the surgery.

What happens when I am admitted to the ward?

- Your surgeon will come and see you to mark the site of the operation on your stomach.
- You will have to put on stockings to prevent blood clots in your legs. You will need to wear these for 6 weeks after the operation.
- You will have a blood thinning injection to reduce the risk of blood clots and then one every day while you are in hospital.
- You will only be able to have clear soup and fluids from midday on the day before your operation. This is because the surgeon needs your bowel to not be full, in order to operate using the laparoscopic technique.
- You will then be given a drip from midnight to keep you well hydrated for your surgery.
- You will be asked not to eat from midnight.
- You may drink clear fluids until 6.00am.
- After 6.00am you will not be allowed to eat or drink.

What happens on the day of my operation?

The nursing staff on the ward will guide you when and how to get ready for theatre. Members of the transplant team that you have already met, will come and see you before you go down to theatre.

Theatre staff will come and collect you from the ward at around 8.30am. A member of the transplant team will go with you to the anaesthetic room and stay with you until you are asleep.

Members of the transplant team will be in theatre for your operation and can update your relatives / friends throughout your operation if you wish.

What happens after the operation?

Once the operation is finished, you will be moved to the recovery ward. In order to monitor your condition you will have a:

- Blood pressure cuff
- Heart monitor
- Urinary catheter
- Oxygen mask
- A probe on your finger to measure your oxygen levels
- Very rarely, a wound drain
- You will be given pain relief through a system called 'patient controlled analgesia'. This means you will be given pain relief (usually morphine) through a drip and you can add extra doses when you need it, for example getting out of bed for the first time.

Once the staff in the recovery ward are satisfied that your condition is stable, you will be transferred back to the renal ward.

Once you are back on the ward:

- You can start drinking fluids a few hours after the operation.
- You can start your normal diet within 24 hours after the operation.

- The day after your operation, you will be encouraged to sit out of bed and start walking around the ward. This is important to help reduce the risk of developing blood clots or a chest infection. It can also help with any constipation and bloating you may have.
- Usually between 24 and 48 hours after the operation, the urinary catheter, drip and pain relief are taken down and you will be given tablets to control any pain. The nursing staff will monitor your pain levels to make sure the tablets are relieving any pain you may have.
- Most patients go home between 2-4 days after their operation

Before you go home, you will be given the leaflet "Going home after donating a kidney". This leaflet gives you more detailed advice on how to look after yourself after the operation.

Will I be followed up after going home?

You will have an appointment for the living donor clinic after 1 week, 6 weeks, and 6 months and then once a year.

We recommend life-long follow up to monitor your blood pressure and kidney function using a simple blood test and examination of your urine.

What if I do not have transport for clinic?

Transport can be provided for your clinic appointments until you are fit enough to use your usual way of getting to the hospital - normally after 6 weeks.

When can I go back to work?

You should plan to take 6 weeks off, but you may find you need to take longer - for example:

- If you develop any complications after the operation
- Or you have a manual job

You will be advised by your surgeon at your follow up appointments.

During this time, we advise:

- No heavy lifting or twisting
- No stretching or bending
- No major housework or gardening

This allows the wound to heal and reduces the risk of any wound complications.

When will I be able to drive?

We recommend you do not drive for at least 6 weeks after your operation as you need to be pain free on braking, and wearing a seat belt may be uncomfortable.

What do I do if I have any problems?

If you have any problems related to the surgery, please contact the Transplant Co-ordination team on Monday to Friday between 8.00am and 5.00pm.

Outside these times or if the transplant team is not available, call Renal Unit F Floor.

You will find contact numbers at the end of this leaflet.

Who do I contact if I want any further information?

For any questions or concerns, please contact the Living Donor Co-ordinator. The contact numbers are below.

Living Donor Co-ordinators

- 0114 271 5983

Transplant Co-ordination Team

- 0114 226 6055
- 0114 271 4643
- 0114 271 5138

Renal Unit F Floor

- 0114 226 6391



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