

Hand-assisted laparoscopic donor nephrectomy

This leaflet aims to answer your questions about having a hand-assisted laparoscopic donor nephrectomy. It explains the benefits, risks and alternatives, as well as what you can expect when you come to hospital. If you have any further questions, please speak to a doctor or nurse caring for you.

What is a hand-assisted laparoscopic donor nephrectomy?

It is an operation to remove a kidney from one person so that it can be transplanted into another person. It is the form of keyhole surgery that we use at Guy's and St Thomas' because it is safe and allows patients to recover relatively quickly.

What happens during a hand-assisted laparoscopic donor nephrectomy?

You will come into hospital early on the morning of surgery.

The operation takes place under general anaesthesia (while you are asleep). You can find more information about anaesthesia in our leaflet **Having an anaesthetic**. If you have not received a copy, please ask us for one.

The surgery can take about three hours. The surgeon makes a cut 7-8cm long (about the length of a credit card) in the middle or lower part of the abdomen (tummy), through which they place their sterile-gloved hand to hold the kidney while operating. Two or three smaller holes (smaller than a 5p coin) are made to one side of the abdomen and the instruments used in the operation are placed through these. Once the kidney is removed it is stored on ice ready to be transplanted.

While you are asleep for your operation you will have a catheter (a tube put into your bladder to drain the urine) inserted. This is usually removed the following day. You may also have a drain (a small plastic tube) left in your wound to drain any excess fluid – this will be removed before you go home.

Why should I have a hand-assisted laparoscopic donor nephrectomy?

If you wish to donate a kidney at Guy's and St Thomas', this is the most common type of surgery we offer as it strikes the best balance between safety and comfort for you. We have been doing this procedure since 2003.

What are the risks?

In most cases these operations happen without complications. However, about one in every six patients who have this type of surgery has some sort of problem afterwards. In almost all cases this is a relatively minor problem, but some people have more significant problems that need further treatment. This may lead to a longer hospital stay, or even a further operation in rare cases. Some of the more important problems are detailed below, together with the likelihood of them happening.

- Tissue fluid may collect under the wound, producing a lump called a seroma in 5 out of 100 cases. This usually disappears slowly without the need for further treatment.
- The surgical wound may become infected which might need treatment with antibiotics. This happens in around one in every 10 cases (10%).
- About one in every 15 men develops pain in the testicles following surgery. This usually affects the testicle on the same side as the operation and may persist for several days or a few weeks after surgery. This is usually treated with painkillers.
- A hernia (where tissue/organs within the abdomen bulge under the skin due to a weakness in the abdomen wall) can develop around one of the surgical scars. An operation to repair it may be needed in up to one in 20 people (5%).
- You might develop a urine infection, needing antibiotics. This affects around one in 30 people (under 4%).
- Patients can develop an infection within the abdomen, needing a further small operation to wash this out. This happens to about 1 in 33 people (3%).
- About one in every 35 people (under 3%) develops a chest infection after surgery. This could need treatment with antibiotics or chest physiotherapy. This is more likely to happen if you smoke or are overweight. If you currently smoke, we strongly recommend that you stop smoking at least six weeks before the date of your operation.
- It is not always possible to carry out the entire operation using keyhole surgery. The surgeon may need to make a larger cut in your abdomen to finish the operation. This may mean that you take a little longer to recover from the surgery. The chance of this happening is in one in 100 people (1%).
- Significant blood loss, resulting in the need for a blood transfusion, happens in about one in every 500 patients (0.2%).
- Small blood clots may form in the legs causing pain and swelling. This is called a deep vein thrombosis (DVT). This is more likely to happen if you smoke or are overweight. In rare cases (one in every 600 people) a piece of a clot may break off and travel up to the lungs which can be very serious and in some cases may be life-threatening or fatal. When you come into hospital you will be given a copy of our leaflet **Preventing hospital-acquired blood clots**. If you do not receive one, please ask us for a copy. After the operation you will be measured and fitted with anti-embolism stockings to reduce the risk of blood clots forming in your legs. You will also be given injections for a week to thin your blood.
- Nearby organs, such as the bowel or spleen, may be damaged. This is very rare (0.1%), but may mean that the spleen needs to be removed or that you need further surgery.
- Worldwide, the risk of dying following this type of operation is estimated to be one in 3,000 people. By comparison, the risk of dying after an appendectomy (appendix removal) is about six times as high.
- Your blood pressure may be slightly higher after you donate. Sometimes this will need treatment with tablets. Women of childbearing age may develop high blood pressure if they become pregnant. The risk for this is 2-3 times higher than if you had not donated one of your kidneys.

- There have been very rare cases of donors losing the function of their remaining kidney because of severe complications at the time of surgery. This is a very rare event and has only ever happened once in the UK, but could lead to you needing dialysis.
- Among otherwise healthy people, the risk of kidney failure after kidney donation is about 1 in 1,000 (0.1%). Your risk of developing kidney failure in the future can be influenced by other factors, such as high blood pressure, ethnicity, obesity and smoking. Any increased risk will be discussed with you when you see the doctor.

Risks to the transplanted kidney

There is a small chance that the kidney will not work when it is transplanted. This is usually due to a serious technical problem such as a blocked artery or vein. This happens in 1-2 in 100 kidneys that are transplanted (1-2%).

Most kidneys from living donors are transplanted into the intended recipient as planned, but very rarely the kidney cannot be used for the intended recipient once surgery has begun. Across the whole of the UK this has only happened twice in the last twelve years. It is very unlikely that this will happen to the kidney you donate, but it is your decision about what should then happen to your kidney. Your transplant coordinator and surgeon will help you make that decision and will record your wishes before the operation. We will give you a factsheet from the Human Tissue Authority (the Government regulator) with more information about the options.

Risks to the transplant recipient

Some problems that your recipient may experience in the early post-operative period include chest, wound or urine infection, bleeding (which may need a blood transfusion or a further operation), DVT or blood clots in the lungs, fluid collection around the transplanted kidney, a urine leak from the transplanted kidney, and delayed or sluggish kidney function.

All transplant recipients must take anti-rejection medication, and if there is any kidney rejection this medication may need to be increased. Anti-rejection medications cause an increased risk of infection (particularly viral infections) and cancer (particularly skin cancer). Your recipient will be given advice and medication if required, to reduce these risks.

At the end of the first year we expect that 96 out of 100 transplanted kidneys from living donors will still be working and 98 out of 100 transplanted recipients will still be alive. In recipients where transplantation is more complex success may be lower. For more information please visit this website or speak to one of the transplant team, [w: www.odt.nhs.uk/uk-transplant-registry/organ-specific-reports/](http://www.odt.nhs.uk/uk-transplant-registry/organ-specific-reports/) and click on 'Annual report on kidney transplantation'.

Are there any alternatives?

We recently started to offer robot-assisted laparoscopic donor nephrectomy as part of a pilot study. This is a laparoscopic technique that uses a robotic console to help your surgeon during the operation. If you would like more information about this procedure, please speak to your surgeon read the leaflet **Robot-assisted laparoscopic donor nephrectomy (RALDN)**.

There are other types of operations, such as open surgery (through a cut) or fully laparoscopic (keyhole) surgery, which are preferred in some other hospitals.

How can I prepare for a hand-assisted laparoscopic donor nephrectomy?

If you are a smoker, you should stop at least six weeks before the operation. We advise this because complications are more common in smokers. After you donate, it is very important that you don't take up smoking again. This will help protect your heart, lungs, and your remaining kidney.

If you are overweight, you should lose some weight before surgery because complications are more likely if you don't. The doctors looking after you will advise you what a healthy weight is for you. After you donate, it is important that you keep a healthy weight. This will help lower the risks of high blood pressure and kidney failure in the future.

We will send you information about how to prepare for your hospital visit with your admission letter. Please read this information carefully.

If you are on any medications, please keep taking these up until the day of surgery, unless we advise you otherwise.

Consent – asking for your consent

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves. If you would like more information about our consent process, please speak to a member of staff caring for you.

In addition, you will be asked to fill in a consent form regarding the fate of the kidney in the unlikely event that the kidney was out and we were unable to transplant it.

You may also be asked to participate in an audit or a research project around live donation. If this is the case, somebody will explain the project in detail to you at the time.

Will I feel any pain?

You will feel some pain after the operation. You will be given strong painkillers to help with this, and when you go home you will be given some to take with you.

It is quite common to feel bloated or constipated for a couple of weeks after the operation. It normally gets better by itself, but we can give you some medication to help if it is needed.

What happens after a hand-assisted laparoscopic donor nephrectomy?

Normally you will be able to sit up at the edge of the bed on the evening after the surgery, and you can eat and drink if you feel like it. The next day the catheter will be removed and you will be encouraged to sit out of bed and to start walking around the ward.

You will be given fluids into a vein in your arm before and after surgery which can sometimes cause ankle or leg swelling. This will disappear within a few days.

Most people are well enough to go home 2-5 days after surgery, although complete recovery can take up to three months.

What do I need to do after I go home?

You should plan to take about six weeks off work to recover from your surgery (or up to three months if you do manual work). We also advise you not to lift heavy weights for three months after the surgery to allow the deep part of the cut to heal and reduce the chance of you getting a hernia.

We recommend that you do not drive for 2-3 weeks after your operation. You should only drive again when you are free of pain and able to perform an emergency stop comfortably. You may also find that wearing a seat belt is uncomfortable at first. You should check with your insurance company to make sure you are covered to start driving again as they may refuse to meet a claim if they feel you have driven too soon.

What should I do if I have a problem after I have left hospital?

If you feel unwell, have any queries or experience any of the symptoms listed below from Monday to Friday, 9am-5pm, please call your donor coordinator (you should already have their contact details):

- increased pain to the wound area or in your abdomen
- excessive discharge of fluid from the wounds
- fever
- discomfort or burning during urination
- increased frequency of urination
- cloudy urine, or urine with an unusual smell
- leg pain or leg swelling
- chest pain or shortness of breath
- any other symptoms that you are worried about.

Outside of these times, please call Richard Bright Ward, **t:** 020 7188 8817 and ask to speak to the nurse in charge, or call Guy's Hospital, **t:** 020 7188 7188 and ask for the transplant surgery registrar on call. We would prefer that you come to us with any problem rather than go to your GP or to your local hospital.

Will I have a follow-up appointment?

You will be given a follow-up appointment for 2-4 weeks after the surgery to see a surgeon. Your live donor coordinator will also ring you during the first couple of weeks to check that you are well.

The first appointment is to check your wounds have healed up and that you are well. The date and time of this appointment will be given to you before you go home.

You will need to be seen every year in the kidney clinic or at your GP. We recommend life-long follow-up to make sure your remaining kidney is working well and that your blood pressure is within the normal range.

Contact us

If you have any questions or concerns, please contact the advanced nurse practitioner for living kidney donation, **t:** 020 7188 5688, Monday to Friday, 9am-5pm.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit **w:** www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748, Monday to Friday, 9am-5pm

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

NHS 111

This service offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

t: 111 **w:** www.111.nhs.uk

NHS website

This website gives information and guidance on all aspects of health and healthcare, to help you take control of your health and wellbeing.

w: www.nhs.uk

Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, please get in touch.

t: 0800 731 0319 **e:** members@gstt.nhs.uk **w:** www.guysandstthomas.nhs.uk/membership

Was this leaflet useful?

We want to make sure the information you receive is helpful to you. If you have any comments about this leaflet, we would be happy to hear from you, fill in our simple online form,

Leaflet number: 3104/VER4

Date published: February 2020

Review date: February 2023

© 2020 Guy's and St Thomas' NHS Foundation Trust

A list of sources is available on request