

# Kidney and ureter removal using keyhole surgery

## Urology Department

### Patient Information Leaflet

#### Introduction

This leaflet is about surgery to remove your kidney and ureter, the tube which drains urine from the kidney, using keyhole surgery. This is known medically as laparoscopic nephroureterectomy. The leaflet gives information on what the procedure involves, the benefits and risks of the operation and what happens after the operation.

We hope that this leaflet answers questions that you may have about your operation. However, if you would like more detailed information, please contact one of our urology clinical nurse specialists.

#### What are kidneys?

The kidneys are a pair of organs which lie in the back part of the abdomen (stomach area), one on either side of the spine (see figure 1). They are about 11 centimetres in length, five centimetres wide and weigh about 150 grams. The right kidney usually lies slightly lower than the left. They are described as being bean shaped and dark red in colour.

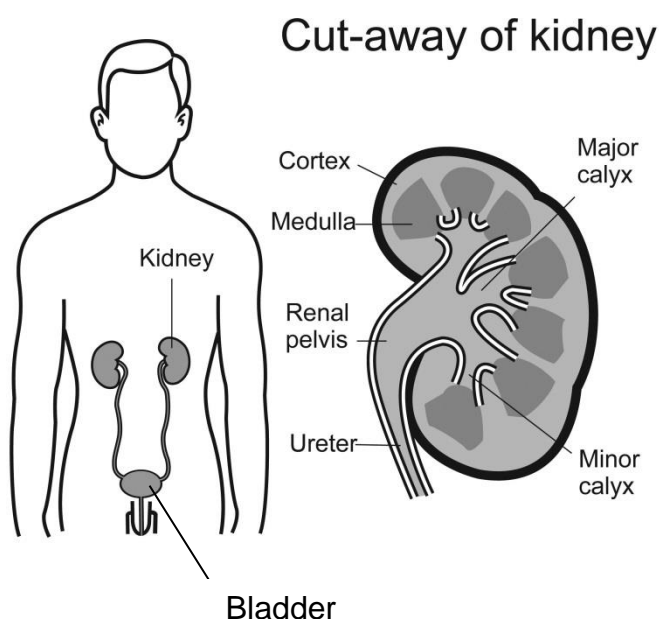


Figure 1 shows the position of kidneys in the body and a cut-away of a kidney

## What do kidneys do?

The function of the kidney is to form urine by taking out waste products from the blood. This then passes down the ureters into the bladder where it is stored until you pass urine.

The kidneys are vital to a person's health because they:

- maintain correct water content in the body
- get rid of waste products from the blood
- maintain electrolyte balance such as salt content in the body
- secrete a number of essential hormones

## What happens when one kidney is removed?

If one kidney is removed, the remaining kidney is able to do the work of two as long as it is healthy.

## What are the benefits?

Your consultant will have discussed why they are recommending that you have your kidney and ureter removed, and the benefits of this for your particular case. However, the most common benefits are:

- The kidney and ureter may not be working or only partially working; if left in place, they can be a source of infection or pain. Removal will stop the pain and chances of infection.
- Infection may have damaged the kidney and ureter – removing them will stop the chances of infection.
- A cancer arising in the kidney and ureter may have been diagnosed; the usual treatment for this is to remove them. This can help prevent the cancer from spreading.

## What are the risks?

All surgical procedures have some risks and it is important that we make you aware of these. The risks of this operation are:

### Common risks:

- Temporary pain in your shoulder tip
- Temporary bloating in your abdominal area
- Temporary insertion of a bladder catheter and wound drain
- The disease may come back somewhere else in the urinary tract. This would need regular examinations of the bladder using a telescope (thin metal tube with a camera on it) for follow-up

### **Occasional risks:**

- Bleeding
- Infection of the wound site or other infection
- Pain
- Hernia of the wound area – where a bulge or tear occurs due to weakness in this area. This will require surgery to repair it
- Need for additional treatment for cancer after surgery

### **Rare risks:**

- Heavy bleeding which may need surgery and/or a blood transfusion
- During the operation, the lung cavity may be entered – if this happens, we may need to insert a temporary drain
- Previous tests which have shown abnormal cells may eventually turn out not to be cancer
- Injury to organs such as the spleen, liver, other kidney, lung, pancreas, bowel, or blood vessels, which may mean the surgeon has to convert to open surgery during the operation, or you may need more surgery at a later date
- Anaesthetic or problems such as a chest infection, a blood clot on the lungs, stroke, deep vein thrombosis (DVT – blood clots in your veins), heart attack. This may mean you need intensive care after your operation
- You may need dialysis to stabilise your kidney function if your other kidney does not work very well
- Persistent urine leakage from the bladder – this may need long term use of a catheter (fine tube) to collect urine or further surgery

### **What are the alternatives to this procedure?**

You can discuss this in more detail with your urology consultant or specialist nurse. However, alternatives can include:

- observation – not having any treatment and waiting to see what happens with your condition
- open surgery – rather than keyhole surgery
- chemotherapy
- destruction of tumour using a telescope (only suitable in some cases)

## What happens before the procedure?

You will need to come to hospital the day of your surgery. Your admission letter will contain the date and any instructions you must follow before your operation.

If you are taking warfarin, aspirin or clopidogrel (Plavix®) on a regular basis, you must discuss this with your consultant because these drugs can cause increased bleeding after surgery. There may be a balance of risk where stopping them will reduce the chances of bleeding, but this can result in increased clotting which may also carry a risk to your health. Therefore, the risks and benefits of this will be discussed with you before your operation. We will tell you when you can safely start taking these medications again before you leave hospital.

If you smoke, try to cut down or preferably stop, as this reduces the risks of heart and lung complications during and after the operation. If you would like help with stopping smoking, please contact a member of the Hospital Stop Smoking Team on 01384 456111 ext. 2783.

**Your admission letter will contain guidance about when you can eat and drink before your operation.** You will be asked not to eat for six hours before surgery. You will be able to drink clear fluids until two hours before your operation. Clear fluids include water, black tea and coffee and squash. The ward staff will give you more specific guidance on when you can eat and drink when you come to hospital on the day of your operation.

### Pre-assessment

Before you have your operation, we will send you an appointment for pre-assessment. This is to assess your general fitness and to determine whether there are any reasons why you should not have the operation.

At this assessment, a range of investigations will be carried out such as:

- A blood test, if you take certain medications.
- You may have an ECG – a heart trace test. This is nothing to be alarmed about, just a routine test to check your heart.
- Your blood pressure, pulse and weight will be recorded.
- You will be screened for MRSA – a nasal and groin swab will be taken to see if you have any evidence of infection.
- A finger prick test to check your blood glucose levels.

You will have the opportunity to ask any questions or discuss any problems you may have.

At this assessment, please tell us if:

- You are diabetic
- You have a cold, cough or any type of infection
- You take any medications and what these are. You may need to stop taking some of these for a short period of time before you have the procedure.

Please be sure to tell your consultant before the procedure if you have any of the following:

- An artificial heart valve
- A coronary artery stent
- A heart pacemaker or defibrillator
- An artificial joint
- An artificial blood vessel graft
- A brain shunt
- Anything else that has been implanted such as metal pins
- A previous or current MRSA infection
- You have received a cornea transplant, a dural transplant in the brain or previous injections of human-derived growth hormone, as these can be associated with Creutzfeldt-Jakob Disease (CJD)

### **Giving consent**

We will explain the procedure to you and check that you understand what is to be done. If you are happy to go ahead, we will ask you to sign a consent form giving permission for the procedure to take place. Please ensure that you have discussed any concerns and asked any questions you may have, before signing the form.

### **What happens on the day of the operation?**

After a nurse has completed admission paperwork with you, members of the surgical team will come and see you. These may include the consultant, specialist registrar, house officer or named nurse.

We will give you an injection of a drug called Clexane. This will help to prevent thrombosis (clots) in the veins of your legs during and after surgery, in addition to elasticated stockings provided by the ward.

### **What happens during the procedure?**

Normally, we use a full general anaesthetic where you will be asleep throughout the procedure. Your anaesthetist will explain the anaesthetic options to you before your surgery.

The operation involves removal of the kidney and surrounding fat, for suspected cancer of the kidney, through several small (keyhole) cuts. Four to five small cuts are made in your abdomen. The surgeon puts a telescope, which is a small metal tube with a camera at the end, and operating instruments into your abdomen through the cuts. One of the cuts is enlarged to remove the kidney. Your lower ureter is removed at the same time either through one of the cuts or through your bladder.

A bladder catheter (a fine tube) is normally inserted during the operation to monitor urine output. Occasionally a drainage tube may be placed through the skin into the bed of the kidney, to drain fluid from the site of the operation.

## What happens immediately after the procedure?

After your operation, we will tell you how the procedure went and what you can and cannot do. You should:

- Let the staff know if you are in any discomfort.
- Feel free to ask any questions or discuss any concerns with the ward staff and members of the surgical team.
- Ensure that you are clear about what has been done and what should happen next.

We will give you a drink as soon as you recover from the anaesthetic. We will encourage you to move around as soon as you are comfortable, to help to prevent blood clots forming in your legs. The catheter will need to remain in place for up to 10 to 14 days to allow time for the bladder to heal. You should be able to go home a day or two after your operation.

## What happens when I leave hospital?

Before you leave hospital, we will:

- Give you advice about your recovery at home, including when you can start normal activities such as work, exercise, driving, housework and sex.
- Give you a contact number for if you have any concerns once you leave hospital.
- Tell you when your follow-up appointment will be and who will do this (the hospital or your GP).
- Tell you when you will be given the results of any tests being carried out on tissues or organs which have been removed.

When you leave hospital, we will give you a summary of your operation, known as a discharge summary. This holds important information about your operation. If you need to call your GP for any reason or to go to another hospital, please take this summary with you to allow the doctors to see details of your treatment. This is particularly important if you need to consult another doctor within a few days of leaving hospital.

## What should I expect when I get home?

It will be at least 14 days before the wound heals occurs but it may take up to six weeks before you feel fully recovered from the surgery. You can return to work when you are comfortable enough and your GP is satisfied with your progress.

Many patients have persistent twinges of discomfort in the wounds which can go on for several months.

## What should I look out for?

Contact our helpline on **01384 244282** if you develop any of the following:

- a high temperature or fever
- pain in your abdomen
- increased redness, throbbing or discharge (fluid) at the site of the wounds

## What else do I need to know?

It will be at least 14 to 21 days before the results on the removed kidney are available. It is normal practice for results such as these to be discussed in detail at a multidisciplinary meeting before any further treatment recommendations are discussed with you. We will be in touch with you and your GP after this meeting.

We will normally arrange a follow-up outpatient appointment for you for four to six weeks after the operation. At this meeting, we will discuss your results with you and give you a follow up plan. If you need any further treatment, this will be discussed with you.

You will usually need to have regular bladder inspections to check that the growth which involved your kidney is not affecting the bladder lining.

## Driving after surgery

It is your responsibility to ensure that you are fit to drive after your surgery. You do not normally need to notify the DVLA unless you have a medical condition that will last for longer than three months after your surgery and that may affect your ability to drive. However, you should check with your insurance company before returning to driving. Your doctors will be happy to provide you with advice on request.

## Medication

Please make sure before you come into hospital you have enough of your regular medication to take when you get home as it is unlikely that your regular medication will be changed.

Also, please make sure you have a supply of painkillers to take when you get home. We recommend paracetamol, if you can take it, or your usual painkillers (always read the label; do not exceed the recommended dose).

Getting medication from the hospital pharmacy can sometimes take a long time as they are very busy and this will delay you leaving hospital.

## Is there any research being carried out in this area?

Before your operation, your surgeon or specialist nurse will tell you about any relevant research studies taking place. Sometimes surgically-removed tissue is needed for this research. If this is the case, we will ask if you wish to take part by giving us permission to store your tissue for further study and research. If you agree, we will ask you to sign a special form to consent to this.

All surgical procedures, even those not currently the subject of active research, are subjected to strict clinical audits so that we can analyse our results and compare them with those of other surgeons. In this way, we can learn how to improve our techniques and our results. This means that our patients will get the best treatment available.

## Can I find out more?

You can find out more on kidneys from the following weblink:

### Kidney Research UK

<http://www.kidneyresearchuk.org/health-information/ckd-information-kidney-conditions>

## Contact information for urology clinical nurse specialists

If you have any questions, you would like more information, or if there is anything you do not understand about this leaflet, please contact:

Urology clinical nurse specialists on 01384 456111 ext. 2873 or

mobile 07787 512834 (8am to 4pm, Monday to Friday)

Ward C6 on 01384 244282

Russells Hall Hospital switchboard number: 01384 456111

**This leaflet can be downloaded or printed from:**

<http://dudleygroup.nhs.uk/services-and-wards/urology/>

If you have any feedback on this patient information leaflet, please email [patient.information@dgh.nhs.uk](mailto:patient.information@dgh.nhs.uk)

**This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.**

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