



## RECONSTRUCTION of the URETER

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

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.



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<http://rb.gy/8kcao>

### KEY POINTS

- The aim of the procedure is to repair a narrowed area in your ureter (the tube which transports urine from your kidney to your bladder)
- You will usually need to have a drainage tube and a ureteric stent to help the repair heal; the drain is normally removed after two to three days, and the stent after six weeks
- A radio-isotope scan, done after 12 weeks, will show how well your kidney is draining; in most patients, there is an improvement in drainage & function with relief of pre-operative pain
- In a few patients, the scan may show there is still narrowing or blockage at the level of the previous obstruction
- A few patients need further surgery if the narrowing persists after a further period of stenting

### What does this procedure involve?

This involves a number of alternative procedures to re-establish drainage of urine into the bladder when it has been interrupted because of scarring or damage to one of the ureters (the tubes which drain urine from the kidney to the bladder).

Sometimes, we can only decide which specific procedure is best for your particular problem at the time of your surgery.

## What are the alternatives?

- **Ureteric stenting** – for a more prolonged period of time
- **Insertion of a nephrostomy tube** (an external drainage tube put into the kidney through the skin of your loin)
- **Balloon dilatation** – stretching of the narrowing with a balloon-like instrument passed into your ureter from the bladder (without any open surgery)
- **Conservative management** – so that the kidney slowly loses its function spontaneously

## What happens on the day of the procedure?

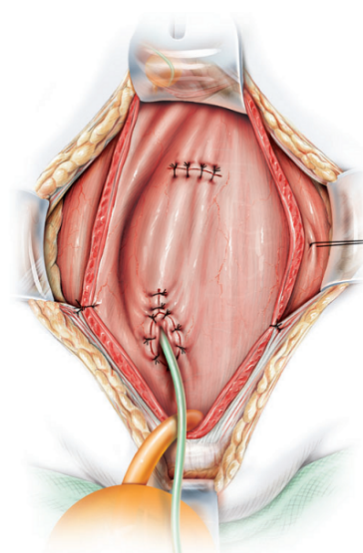
Your urologist (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent.

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 an 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 general anaesthetic (i.e. with you asleep)
- your anaesthetist may use an epidural or spinal anaesthetic as well, to reduce any pain after the procedure
- you will usually have antibiotics given into a vein, after a careful check for allergies
- we make an incision in the lower part of your abdomen (tummy), slightly towards the side of the narrowed ureter
- we repair the narrowing using a variety of techniques, including:
  - removing the narrow area and re-joining the ends



- re-implanting the ureter into your bladder (pictured above)
- implanting the ureter in a bladder flap rolled into a tube
- joining the blocked ureter to the ureter on the other side
- replacing the whole ureter with a segment of bowel

(we will discuss the choice of procedure with you, but it may not always be clear before the procedure exactly which type of reconstruction is best for you, so we may need to go through a range of options)


- we put a stent inside your ureter, across the reconstruction, to help healing
- we put a drain close to the surgical area; this is usually removed after two to three days
- we put a catheter into your bladder through your urethra (waterpipe) to help healing; this is usually removed after two to three weeks
- we close the incision with absorbable sutures










Following ureteric reconstruction, some urology units have introduced [Enhanced Recovery Pathways](#). These actually start before you are admitted to hospital. After your surgery, they are designed to speed your recovery, shorten your time in hospital and reduce your risk of re-admission.

We will encourage you to get up and about as soon as possible. This reduces the risk of blood clots in your legs and helps your bowel to start working again. You will sit out in a chair shortly after the procedure and be shown deep breathing/leg exercises. We will encourage you to start drinking and eating as soon as possible.

### 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
Recurrent infection in your urine requiring long-term antibiotics	 Between 1 in 2 & 1 in 10 patients

Decreased kidney function with time	 Between 1 in 2 & 1 in 10 patients
Infection in the surgical wound (especially if bowel has been used for the reconstruction)	 Between 1 in 2 & 1 in 10 patients
Chronic (long-term) pain in your pelvis or lower abdomen	 Between 1 in 10 & 1 in 20 patients
Failure to establish good drainage requiring repeat surgery	 Between 1 in 10 & 1 in 50 patients
Blood loss requiring transfusion or further surgery	 Between 1 in 10 & 1 in 50 patients
A temporary or long-term tendency for your blood to be more acidic than normal, requiring medicines to correct it (if a segment of bowel has been used for the reconstruction)	 Between 1 in 10 & 1 in 50 patients
Diarrhoea/vitamin deficiency/constipation, due to shortened bowel (if a segment of bowel has been used for the reconstruction)	 Between 1 in 10 & 1 in 50 patients
Scarring of the bowel requiring further surgery	 Between 1 in 10 & 1 in 50 patients
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)

Tumour formation in your bowel (if a segment of bowel has been used for the reconstruction)



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. Individual hospitals may have different rates, and the medical staff can tell you the risk for your hospital. You have a higher risk if you 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
- it will be at least six weeks before healing of the wound is complete, and it may take up to three months before you feel fully recovered from the surgery
- you may return to work when you are comfortable enough and when your GP is satisfied with your progress
- if you develop a temperature, increased redness, throbbing or drainage at the site of the operation, you should contact your GP immediately
- for the first three weeks, your urine will drain from the catheter into a bag; if you get urine infection or bladder urgency, you should contact your GP for medications to help
- we usually call you back after two to three weeks for removal of your urethral catheter; we sometimes organise a dye test before removal to be sure the bladder has healed
- after your catheter is removed, you may get pain in your kidney area when you pass urine, or pain in your bladder; this is due to the ureteric stent and usually settles quickly but, if you feel unwell or feverish, you should contact your GP to check for a urine infection

- we normally arrange to remove your stent after six weeks, usually under local anaesthetic
- we normally arrange a radio-isotope kidney scan 12 weeks after surgery, to assess the drainage of your kidney
- twinges of discomfort in your wound are very common and can continue for several months

## **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 Smoke-Free National 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, the medical or nursing staff can also arrange to file a copy in your hospital notes.

### **What sources have we 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](#); and
- the [National Institute for Health and Care Excellence \(NICE\)](#).

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

Whilst we have made every effort to give accurate information, 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 have any questions, you should contact your Urologist, Specialist Nurse or GP in the first instance.