



CYSTOSCOPY & RETROGRADE X-RAY STUDIES (URETERO-PYELOGRAPHY)

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.

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/Retrograde_ureterography.pdf

Key Points

- The aim of this operation is to take X-rays of the kidney & ureter by injecting radiological contrast fluid upwards from the bladder, through a telescope
- X-rays are then taken in the operating theatre
- If an abnormality is found, we may pass a small telescope (ureteroscope) up towards the kidney to have a direct look at any abnormal area
- You may have a temporary ureteric stent and, occasionally, a bladder catheter after the procedure

What does this procedure involve?

This involves taking X-rays of the kidney and/or ureter (the tube that carries urine from the kidney to the bladder) by injecting radiological contrast fluid (which shows up on X-ray) through a telescope put into bladder.

What are the alternatives?

- **Other radiological tests** – e.g. MRI scan, CT scan, ultrasound, antegrade pyelography (by puncturing the kidney with a fine needle) or intravenous urography
- **Observation** – no treatment, but monitoring of any change in your symptoms over a period of time

What happens on the day of the procedure?

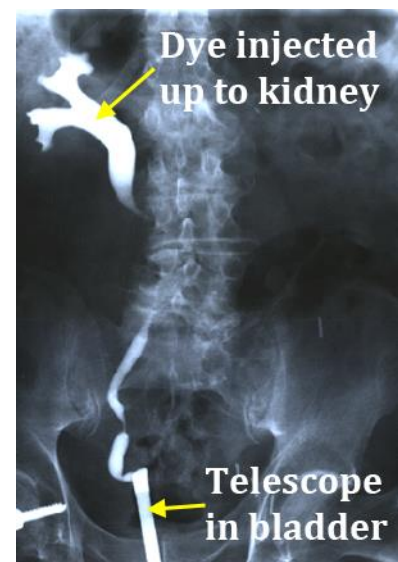
Your urologist (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent.

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 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 use a full general anaesthetic (where you will be asleep throughout the procedure but we may occasionally recommend a spinal anaesthetic (where you won't feel anything from the waist down))
- we usually give you an injection of antibiotics before the procedure, after you have been checked for any allergies
- we put a telescope into your bladder through your urethra (waterpipe) to inspect your bladder
- we pass a long, fine catheter into the ureter using X-ray guidance to check correct positioning
- we inject the contrast fluid through the catheter to outline the ureter and kidney; we often take X-ray images at the time (pictured right)
- if we find an abnormality in the kidney or ureter, we may pass a smaller telescope (ureteroscope) up towards the kidney and have a look at any abnormality
- if we see any abnormality in the kidney or ureter, we may biopsy it and/or treat it
- we may [put in a ureteric stent](#) at the end of the procedure; this is usually temporary
- occasionally, we put in a bladder catheter which is removed at an appropriate time following the surgery
- the procedure takes between 15 and 90 minutes to perform, depending on the complexity of the underlying problem





- most patients go home on the same day as their 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
Mild burning or bleeding on passing urine for a short time after the procedure	 Almost all patients
Temporary insertion of a ureteric stent which needs to be removed later	 Almost all patients
Permission for telescopic removal/biopsy of an abnormality, if found	 Almost all patients
Infection of the bladder requiring antibiotic treatment	 Between 1 in 10 & 1 in 50 patients
It may not be possible to pass a tube into the ureter so that alternative tests and treatment are needed	 Between 1 in 10 & 1 in 50 patients
Temporary insertion of a bladder catheter	 Between 1 in 10 & 1 in 50 patients
Delayed bleeding requiring removal of clots or further surgery	 Between 1 in 50 & 1 in 250 patients
Injury to the urethra (water pipe) causing delayed scar formation	 Between 1 in 50 & 1 in 250 patients

Injury to the ureter causing delayed scar formation	 Between 1 in 50 & 1 in 250 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 50 & 1 in 250 patients (your anaesthetist can estimate your individual risk)

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);
- 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
- you should drink twice as much fluid as you would normally for the first 24 to 48 hours, to flush your system through and reduce the risk of infection
- you may return to work when you are comfortable enough and when your GP is satisfied with your progress
- if you have had a stent put in, the stent may cause pain in your kidney area when you pass urine, or pain in your bladder; this usually settles quickly but, if you feel unwell or feverish, you should contact your GP to check for a urine infection. You can download further information about ureteric stents by [clicking here](#).
- if you have a stent, it will be removed after the procedure, usually under local anaesthetic; your urologist will let you know when this will be done
- if you develop a fever, pain in the area of the affected kidney, severe pain on passing urine, inability to pass urine or worsening bleeding, you should contact your GP immediately.

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, 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

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.