LAPAROSCOPIC (KEYHOLE) or OPEN DE-ROOFING OF A SIMPLE KIDNEY CYST

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/Deroof renal cyst.pdf

Key Points

- The aim of this operation is to remove one or more simple cysts from your kidney using open or keyhole surgery
- This procedure is only used for cysts that are benign (non-cancerous)
- Normally, we only do this after the cyst has been emptied (by puncturing it with a needle) to confirm that it is responsible for your symptoms
- Keyhole surgery uses three or four small incisions to access the cysts(s)
- Open surgery involves an incision under the bottom of your rib cage and is normally reserved for patients in whom keyhole surgery is not felt to be appropriate
- Keyhole surgery has the benefit of a quicker return to full activity after the procedure
- Further cysts can develop later and you may be offered ultrasound monitoring to check this

What does this procedure involve?

This involves surgical removal of one or more kidney cysts by keyhole surgery, after they have been shown to be responsible for your pain by emptying them with a needle.

Not all cysts are suitable for a keyhole approach. Open surgery requires a larger incision but the surgical principles remain the same.

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What are the alternatives?

- **Observation** – no action, especially if your symptoms are mild
- **Puncture & drainage of the cyst** – usually performed under local anaesthetic (Often relieves symptoms in the short-term but cysts often refill)
- **Sclerotherapy** – puncture and drainage (as above) followed by injection of an agent into the cyst which scleroses (shrivels) the exposed surface to prevent it from returning

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.

You will be seen by an anaesthetist who will discuss the anaesthetic. The anaesthetist will also discuss pain relief after the procedure with you.

You may be given a pair of TED stockings to wear, and a heparin injection to thin your blood. These help to prevent blood clots from developing and from passing into your lungs. Your medical team will decide whether you need to continue these after you go home.

Details of the procedure

- a full general anaesthetic is normally used and you will be asleep throughout the procedure
- we may give you an injection of antibiotics before the procedure, after you have been checked for any allergies
- we usually put in a bladder catheter during the operation, to monitor urine output
- we inflate your abdominal (tummy) cavity with carbon dioxide gas through a special needle if a keyhole approach is being used
- the operation is performed through several "keyhole" incisions
- if open surgery is being used, we make an incision just below your rib cage in your loin
- we expose your kidney so that we can cut away the roof of the cyst (pictured below) to prevent further fluid forming within it

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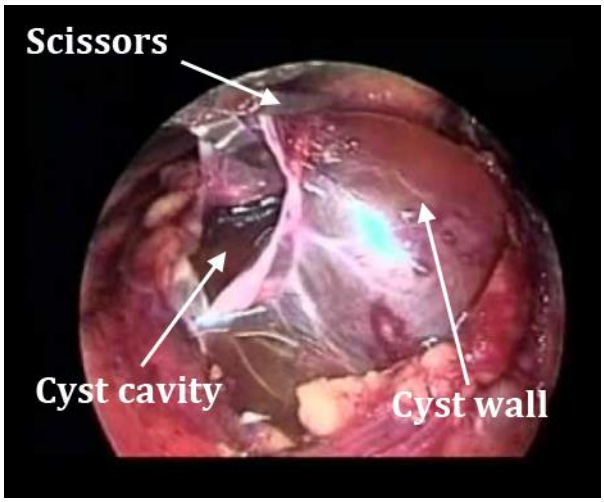
- we may fix a piece of fatty tissue into the cavity where the cyst was, to prevent the cyst from re-forming
- we may put a drain close to the kidney, to collect any fluid which forms around the surgical site
- if a drain is inserted, we connect the drainage tube to an external drainage bag for overnight monitoring



- we close keyhole incisions with absorbable sutures which do not require removal and normally disappear within two to three weeks
- if open surgery has been used, we close the wound with clips, staples or stitches which are usually removed after seven to 10 days
- you will be given fluids to drink immediately after the operation and we will encourage you to move as soon as you are comfortable (to help prevent blood clots forming in your legs)
- your wound drain and catheter are normally removed the morning after the procedure
- the average hospital stay is one day

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
Temporary shoulder tip pain due to irritation of your diaphragm by the carbon dioxide gas	 Almost all patients
Temporary abdominal bloating (gaseous distension)	 Almost all patients

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Bleeding, infection, pain or hernia in the incision, requiring further treatment		Between 1 in 10 & 1 in 50 patients
Bleeding needing conversion to open surgery or requring blood transfusion		Between 1 in 10 & 1 in 50 patients
Recognised (or unrecognised) injury to nearby local structures (blood vessels, spleen, liver, kidney, lung, pancreas, bowel) requiring more extensive surgery		Between 1 in 10 & 1 in 50 patients
Entry into your lung cavity requiring insertion of a temporary chest drain		Between 1 in 50 & 1 in 250 patients (your anaesthetist can estimate your individual risk)
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)
Further development of cysts which may cause similar symptoms		Between 1 in 50 & 1 in 250 patients

After removal of cysts by open surgery, the abdominal (tummy) wall below your scar may bulge; **this is not a hernia** but is caused by nerve damage. It can be helped by strengthening up the muscles of your abdominal wall. We can arrange for you to see a physiotherapist who will show you exercises to strengthen these muscles.

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);
- bladder removal;
- long hospital stays; or

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- 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 take 10 to 14 days to recover fully from the procedure and most people can return to normal activities after two to four weeks
- 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 from your loin wound or from any of the keyhole sites, you should contact your GP immediately
- twinges of discomfort in your loin are very common and can continue for several months; they do not mean that your cyst has returned

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;

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- 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.

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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.

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