

Information for Patients

Your Consultant Urologist has advised you that you need an operation to remove a stone from your kidney; this procedure is called a percutaneous nephrolithotomy (PCNL).

This leaflet explains:

Why do I need a PCNL?	2
What does the operation involve?	2
What are the risks and side effects?	2
Common risks	2
Occasional risks	2
Rare Risks	3
Before the operation	3
The day of your operation	3
How long will the operation take?	3
After the operation	4
Going home	4
At home	4
Who can I contact for help or more information?	4

Why do I need a PCNL?

There are several ways of treating kidney stones and the final decision to perform a PCNL will be determined by the size, number of stones and their position. The technique offers the opportunity to remove a large amount of stone in a single operation.

Less invasive procedures may require multiple attempts in order to remove stones completely.

Open operations to remove stones are now rarely performed.

What does the operation involve?

The operation is carried out under a general anaesthetic. In the first stage a small tube is inserted through the bladder up the ureter to the kidney. This tube comes through the urethra to the outside and is attached to a bladder catheter so that it does not become dislodged. You will then be repositioned on the operating table so that you are face down.

Dye is injected up the tube so that the kidney is visible on x-ray. The radiologist will then puncture the kidney through your side with a needle down which a wire is inserted. A balloon is passed over the wire and inflated to make a track into the kidney.

A plastic tube is inserted over the balloon and the balloon removed. Instruments can then be passed down the tube to break up and remove the stone. At the end of the procedure a small tube (nephrostomy) is left in the kidney which comes out through the same track.

What are the risks and side effects?

Any operation and anaesthetic carries risk. These risks are generally small and not doing the operation may pose a greater risk. Before you sign the consent form allowing the surgeon to perform this operation he or she will outline the risks.

Common risks

- Temporary insertion of a stent tube in the ureter to maintain drainage of the kidney.
- Transient blood in the urine.
- Transient fever.

Occasional risks

- Not all stones may be removed and additional surgery may be required.
- Bleeding requiring blood transfusion, < 5% of cases.
- Following a successful operation stones may recur in the future.

Rare Risks

- Severe bleeding requiring embolisation of blood vessels or as a last resort removal of the kidney
- Damage to other organs such as lung, bowel, liver or spleen requiring surgical intervention.
- Failure to establish access to the kidney necessitating further surgery.
- Severe infection causing septicaemia.
- Over absorption of the irrigating fluids used during the operation.

Before the operation

You will need to attend for a pre-op assessment appointment approximately 7-10 days before your surgery, having already filled out a health screening questionnaire. This is to check that you are fit and well enough to have your operation. You may have blood tests as well as other investigations such as a urine test, heart tracing (ECG) or chest x-ray at this appointment.

You will need to bring a list of your regular medications with you to this appointment. If you take Warfarin, you may need to come into hospital a few days before your operation or change the Warfarin over to an injection for a few days before you are admitted. You will be advised about this.

The day of your operation

You will usually be admitted on the day of your operation. You will receive a letter telling you what time to come into hospital and where to go. This letter will also advise you when you need to stop eating and drinking prior to your operation.

You will be advised whether to take your regular medications. You will see the anaesthetist and the surgeon in the morning before your operation whilst waiting for a bed to become available.

The ward staff will show you round the ward so that you are familiar with the facilities. They will also prepare you for your operation. You will be asked to put on a theatre gown and wear special stockings to reduce the risk of developing blood clots (DVT) in your lower legs.

How long will the operation take?

The operation usually takes about 2-3 hrs, but can vary depending on the individual case.

After the operation

You will wake up from your operation in the recovery room of theatres (although you may not remember this). The recovery room staff will look after you until you are ready to return to the ward.

You will have intravenous fluids (drip) into your arm that will give you fluid until you can drink normally. You can have some oral fluids fairly soon after the operation, but you should be drinking and eating normally by the next day.

You will return from theatre with a small drainage tube (catheter), to drain urine from the bladder. This is usually removed along with the ureteric tube on the first morning after surgery. You will also have a small nephrostomy tube coming directly out of the kidney that will also drain urine. An x-ray injecting dye down this tube will be planned for the third post-operative day and if the kidney is draining well the tube will be removed in the x-ray department.

There may be some leakage of urine for a short while after the tube has been removed but most patients will be discharged later the same day. Occasionally the x-ray shows that the kidney is not draining in which case you will be discharged with the drain in place to allow any internal swelling to settle. The nurses will teach you how to look after the tube and a repeat x-ray will be booked a week later.

Going home

Before going home you will be informed of the follow up arrangements. This will depend on whether or not the stone has been removed completely. If you are unsure, please ask the nurse who is looking after you.

You will also receive a follow up phone call from one of our Nurse Specialists to check on your progress at home.

At home

You are advised to avoid heavy lifting or driving for 2 weeks following surgery, however light activity such as walking is advised.

You should eat a healthy diet with plenty of fresh fruit and vegetables to keep your bowels regular.

You can return to work when you feel fit and able, depending on what sort of work you do. Most people should be back to full physical activity 2-4 weeks after surgery.

Who can I contact for help or more information?

Ward contact details if you have a problem after discharge:

Urology Outpatient Department: 01225 824819 (Mon-Fri 9am-5pm)
Robin Smith Ward 01225 824402 or 824802 (out of hours and weekend)