

PCNL (PERCUTANEOUS NEPHROLITHOTOMY)

PCNL (PERCUTANEOUS NEPHROLITHOTOMY) VIDEO



WHO IS SUITABLE FOR PERCUTANEOUS NEPHROLITHOTOMY (PCNL)?



Those experiencing symptoms related to kidney stones including

- Back or flank pain
- Sweating and nausea
- Blood in the urine

Those who have tried other non-surgical treatments that have not worked

Those who have kidney stones that are too large to pass without intervention

Percutaneous nephrolithotomy (PCNL) is generally reserved for stones larger than 1.5cm, multiple or

complex stones (staghorn)

WHAT ARE THE ADVANTAGES OF PERCUTANEOUS NEPHROLITHOTOMY (PCNL)?



Only a very small single skin incision (~1cm) is required for keyhole access


Gives the surgeon a direct view of the urinary tract

Very large stones are able to be cleared efficiently in one procedure

Stone fragments can be retrieved and analyzed to determine composition – this can assist in developing future stone prevention strategies

Can be performed as combined approach incorporating ureteroscopy with 2 surgeons for complex stones

HOW IS PERCUTANEOUS NEPHROLITHOTOMY (PCNL) PERFORMED?



The procedure is performed under general anaesthetic and generally takes 1-2 hours to complete, depending upon the size, number and position of the stones

Under xray guidance, a needle is passed directly into the kidney; the tract is then gently dilated to allow the insertion of a temporary sheath to allow direct access to the stone

A small telescopic instrument (nephroscope) is passed directly into the kidney

The stone is located and fragmented or can be disintegrated with holmium laser or ultrasound

Stone fragments are then removed by the surgeon

In most cases, a temporary soft rubber tube (nephrostomy) is left in place overnight to allow urine drainage and to minimize bleeding

In other cases, a temporary internal stent may be placed in the ureter in order to ensure good urine drainage

WHAT TO EXPECT AFTER PERCUTANEOUS NEPHROLITHOTOMY (PCNL)?



Most patients will remain in hospital for one night

If you have a stent in place, you will need to return to have it removed after a week or so – this is a very minor procedure performed under sedation with a small telescope (flexible cystoscope)

It is not uncommon to see some blood in the urine in the days following the procedure. You may also feel the urge to urinate frequently if you have a stent in place

Most patients will have some discomfort in the flank area for a few days following the procedure

The risk of major bleeding or kidney damage is uncommon

It is important to drink plenty of water to help with flushing the stone fragments out through the urine

Normal light activities can be commenced within 2-3 days

You should avoid any strenuous activity for 4 weeks following this procedure to minimize the chance of bleeding

PERCUTANEOUS NEPHROLITHOTOMY (PCNL) OUTCOMES



Percutaneous nephrolithotomy (PCNL) is a safe and

effective procedure for the treatment of large or complex kidney stones

Resolves the common symptoms associated with kidney stones

Percutaneous nephrolithotomy (PCNL) allows the vast majority of patients to be cleared of stones with one procedure

POST-OPERATIVE CARE INSTRUCTIONS



What to expect:

When you wake, you will have a small tube in place (nephrostomy tube) in your back/flank area. This is typically removed 1-2 days following surgery.

You may also have a temporary ureteric stent in place (internal), to assist your kidney to drain urine down into the bladder. This is typically removed 1-2 weeks following surgery.

You may also have a urinary catheter in place, which allows your doctor to monitor your urine output. This will be removed prior to discharge.

You can expect to have some pain in the flank area, which can be controlled with medication.

Return to activity:

Driving – no driving for at least 1-2 weeks, or until you are comfortable to do so

Work – you will require at least 1-2 weeks off work, possibly longer depending on your occupation

Nephrostomy Site Care (your nurse will assist with this)

The bag must be kept below the level of your kidney at all times

You may shower with your nephrostomy tube in place, however take care to pat the area dry immediately after showering. Do not take a bath/soak while the tube is in place

Lifting – avoid heavy lifting for 2 weeks following your procedure

Activities – walking is fine and encouraged following your procedure, however you should avoid strenuous activity and straining to open your bowels for 2 weeks following your procedure

Sex – avoid for 2 weeks following the procedure.

Pain Management:

You may take ibuprofen or paracetamol if you are experiencing discomfort. Stronger pain relief may be provided if necessary.

Head to your nearest hospital emergency department if you:

Have severe pain that cannot be controlled with medication

Notice that a large amount of urine is leaking from your nephrostomy site

Are unable to urinate

Are unwell with a high fever

Follow-Up Information:

Our rooms will contact you to arrange a follow-up appointment with your urologist, typically 1-2 weeks after your procedure.

Your follow-up appointment is on:

_____ at _____.

Contact Information:

If you have any questions or concerns that are not addressed here or in the procedure information available on our website

melbourneurologycentre.com.au contact our rooms on 1300 702 811 or [\[email protected\]](#)

Post-Operative information for this procedure can be found here: [PCNL \(Percutaneous Nephrolithotomy\) Post-Operative Care Instructions](#)

Written by [Dr. Shekib Shahbaz](#) and [Dr. Tony de Sousa](#)

Vincentini, F. C., Mendes Gomes, C., Danilovic, A., Chedid Neto, E. A., Mazzucchi, E., Srougi, M., (2009), Percutaneous nephrolithotomy: current concepts, Indian Journal of Urology, 25(1), [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2684301/>], accessed 25/02/21.

Ghani, K. R., Andonian, S., Bultitude, M., Desai, M., Giusti, G., Okhunov, Z., Preminger, G.M., de la Rosette, J., (2016), Percutaneous nephrolithotomy: Update, trends and future directions, European Urology, 70(2), [<https://www.sciencedirect.com/science/article/abs/pii/S03>], accessed 25/02/21.