

- **Ureterorenoscopy.** An ureteroscope will be passed into your bladder and affected ureter under x-ray guidance. Using a probe or laser the surgeon will then break the stones down and take them out. A ureteric stent may be left in place. The procedure will be done under General Anaesthesia.
- **Percutaneous nephrolithotomy (PCNL).** PCNL is an alternative procedure that may be used for larger stones. PCNL involves using a thin telescopic instrument called a nephroscope. An incision (cut) is made in your back. The nephroscope is passed through the incision and into your kidney. The stone is either pulled out or broken into smaller pieces using a laser or pneumatic energy.

Contact details

Emergency Ambulatory Care Unit

Telephone: Level 4 Ext. 7591

Level 5 Ext. 64002

Further reading

<http://www.patient.co.uk/health/kidney-stones>

<http://www.nhs.uk/conditions/kidney-stones/Pages/Introduction.aspx>

<https://www.kidney.org/atoz/content/kidneystones>

Kidney Stones

Patient Information Leaflet

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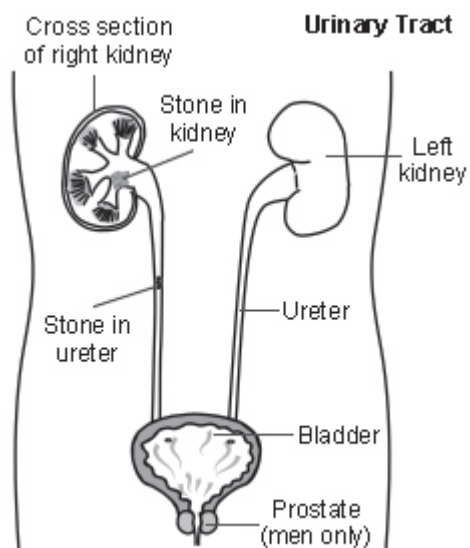
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Royal Sussex County Hospital

What are kidney stones?

Kidney stones can form within the kidney, within the ureter (the tube draining urine from the kidney) or in the bladder. They can be many different sizes and shapes. The reason why most kidney stones form is not known. Most stones are made of calcium (an electrolyte found naturally in our bodies). A stone may cause no problems but often it causes pain. Most kidney stones are small and pass out with the urine. Some stones become stuck in a ureter or kidney and cause persistent symptoms or problems. There are various treatment options to remove a stuck stone. About half of people who have a kidney stone develop another one at a later time in their life. Drinking plenty of water each day may prevent a recurrence.



What are the symptoms of kidney stones?

In some cases, a kidney stone lies in a kidney and causes no problems or symptoms. You may not be aware that a stone has formed.

If symptoms do occur, they include one or more of the following:

Pain from a kidney.

A stone that is stuck in a kidney may cause pain in the side of the abdomen.

Renal colic.

This is a severe pain which comes and goes and is caused by a stone that passes into the ureter (the tube that leads from the kidney to the bladder). The stone becomes stuck. The ureter squeezes the stone towards the bladder, which causes intense pain in the side of your abdomen. The pain may spread down into the lower abdomen or groin. You may sweat or feel sick due to the pain.

Blood.

You may see blood in your urine (urine turns red) caused by a stone rubbing against the inside of your ureter.

Infection.

Urine infections are more common in people with kidney stones. Infections can cause fever, pain on passing urine and increased frequency of passing urine.

What investigations are performed?

- A blood test will be carried out to check the function of your kidneys.
- A urine test will check for infection and the presence of blood.
- A CT scan of your Kidneys, ureters and bladder may be completed to view the stone and gauge an idea of the size.

If the stone is less than 5mm they are small enough to pass out with the urine in a day or so. You should drink plenty of fluids to encourage a good flow of urine. Strong painkillers are often needed to ease the pain until you pass the stone. You may be given medication to encourage the stone to pass such as Tamsulosin. No other treatment is usually needed.

What is the treatment?

If the stone is larger or become stuck causing persistent problems you may need further treatment:

- **Extracorporeal shock wave lithotripsy (ESWL).** This uses high-energy shock waves which are focused on to the stones from a machine outside the body to break up stones. You then pass out the tiny broken fragments when you pass urine.