NHS
Grampian

Stones in the urinary tract (urolithiasis)

Information for patients and carers

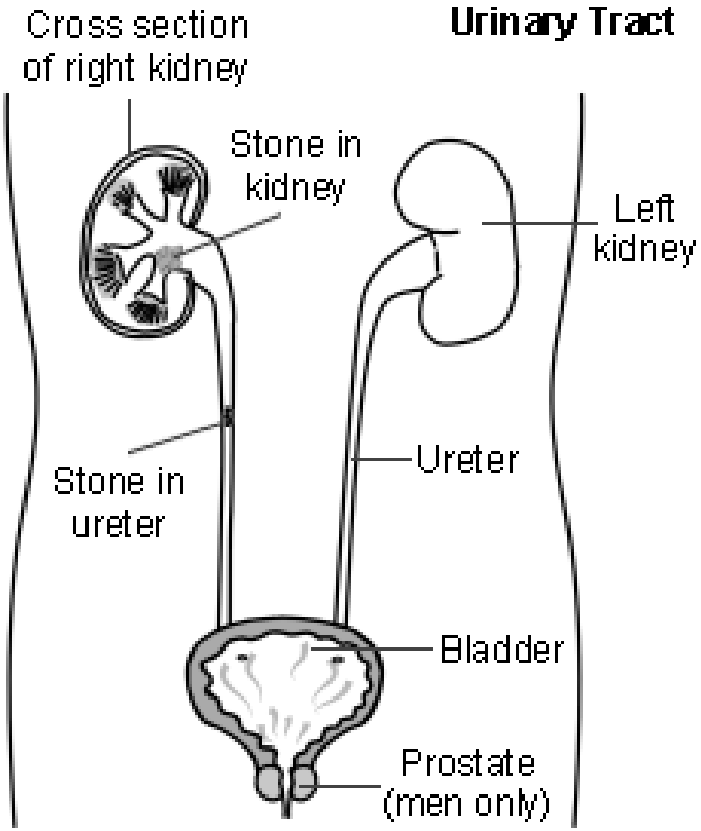

Diagram of the urinary tract

What has happened?

You have a stone in your urinary tract (in your kidney or ureter). Based on your assessment in the Emergency department, it is now safe for you to go home with the advice of taking plenty of fluids and regular painkillers.

This leaflet advises what to do after you leave hospital, when to seek further medical advice and what follow-up will be arranged.

What happens next?

If the stones are less than 5mm in size, most people pass them out with their urine. This may take 2 to 3 weeks. Drink plenty of fluids to encourage a good flow of urine.

We have referred you to the weekly Urology Stone Multidisciplinary Team Meeting. At this meeting, a team of stone specialists will review your clinical notes and investigations and decide what further treatment you might need for your stone/s. This may take 5 to 7 days

We will let you know about your treatment plan by letter or by telephone, or we might invite you (by letter) to a clinic to see a specialist. A copy of this will be sent to your GP.

Please read our information on dietary advice for people who tend to form stones to help reduce the chance of a stone forming in the future.

If your pain is worsening or unmanageable, you cannot pass urine or if you become feverish or otherwise unwell, please seek urgent medical attention.

About stone disease or urolithiasis

Kidney stones can form within the urinary tract, within the kidney, the ureter (the tube draining urine from the kidney) or in the bladder. They can be many different sizes and shapes.

You can see the kidney, ureter and bladder in the diagram on the inside front cover of this leaflet.

We don’t know why most kidney stones form. Most stones are made of calcium (a natural substance in our bodies). Some stones cause no problems, but others cause pain and blood in urine.

Most kidney stones are small and pass out with the urine. Some stones become lodged (stuck) in a ureter or kidney and cause persistent symptoms or problems. There are various treatments to remove these stones.

About half of people who have a kidney stone develop another one later in their life. Drinking plenty of water each day may prevent you from developing more stones.

What are the symptoms?

Sometimes, a kidney stone causes no problems or symptoms. You may not be aware that a stone has formed. If you do have symptoms, they can include one or more of the following -

- **Flank pain**
  A stone that is lodged in a kidney may cause pain in your side.

- **Renal colic**
  This is a severe pain which comes and goes and may spread down into your groin. It is caused by the ureter squashing a stone in your ureter, when trying to squeeze it towards the bladder. 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.

- **Frequency and severe urgency**
  You may have these symptoms with a stop and start sensation of your flow of urine. This might happen if the stone is about to pass into your bladder or pass out in your urine flow. Although these symptoms can be troublesome, it means that the stone has progressed and is on its way out of your body

- **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 tests might I have?

- A blood test will check how well your kidneys are working and to look for infection.
- A urine test will check for infection and the presence of blood.
- A CT scan (a type of X-ray) of your kidneys, ureters and bladder may be done to view the size and location of the stone.

What are the treatments available?

Strong painkillers are often needed to ease the pain until you pass the stone. Stones less than 5mm often pass on their own. Please do drink plenty of fluids as this can help flush the stone out of your body.

If the stone is larger or become lodged, causing persistent problems you may need further treatment, such as:

- **Extracorporeal shock wave lithotripsy (ESWL).**
  This uses shock waves focused on the stone from outside the body. You then pass out the tiny broken fragments of the stone in your urine
- **Ureteroscopy**
  A small telescope/camera is passed into your bladder and ureter under X-ray guidance. A laser is used to break the stones down and take them out. A ureteric stent (small tube) may be left in place to keep your ureter open. The procedure is done under General Anaesthesia so you are asleep.

- **Percutaneous nephrolithotomy (PCNL)**
  This is “keyhole surgery” and can be used for larger stones. An incision (cut) is made in your back and the scope is passed into your kidney. The stone is either pulled out or broken into smaller pieces using a laser.

Further reading

From Patient UK:

patient.info/kidney-urinary-tract/kidney-stones

From NHS website:

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

Useful link to British Association of Urological Surgeons website:

	**BAUS dietary advice** **https://www.baus.org.uk/_userfiles/pages/files/patients/leaflets/Stone%20diet.pdf**

Contact numbers

If you have any concerns, please contact your GP or NHS 24.

NHS24 ☎ 111

This leaflet is also available in large print.

Other formats and languages can be supplied on request. Please call Quality Development on 01224 554149 for a copy. Ask for leaflet 2148.

Feedback from the public helped us to develop this leaflet. If you have any comments on how we can improve it, please call 01224 554149 to let us know.

Please note that NHS Grampian is not responsible or liable for the quality of the information, resources or maintenance of external websites. Any advice on external websites is not intended to replace a consultation with an appropriately qualified medical practitioner.

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