

## Kidney Stones

Kidney stones are stone-like lumps that can develop in one or both of the kidneys. They are quite common and usually affect people aged between 30-60. Kidney stones tend to affect men more than women, with men being twice as likely to as women.

## How do Kidneys work?

The kidneys are two bean-shaped organs that are roughly four inches in length, which sit towards the back of the abdomen, on either side of the spine.

Kidneys remove waste products from the blood. The waste products drain from Kidney to the Bladder through a small tube called the Ureter and then leave the body as urine.

The waste products are usually dissolved in the fluids that form urine, but sometimes they can turn into crystals that collect around the inside of the kidney. The crystals may gather over time to form a hard stone-like lump.

You can help avoid getting kidney stones by making sure that you drink plenty of water each day and avoid getting dehydrated. It is very important to keep your urine diluted, in order to avoid waste products forming into kidney stones.

Kidney stones come in a variety of shapes, sizes and colours. Some are like grains of sand, while others can grow larger.

They can cause severe pain as they travel down the Ureter and often cause a small amount of blood to be detected in your urine test.

## Pain Control

You should have been given painkillers & anti-inflammatory tablets whilst in the Emergency Department and if your pain reduced or went away you will have been discharged home.

The pain from smaller kidney stones usually lasts a couple of days and goes when the stone has been passed.

## Tests

Tests that may be carried out if you have suspected kidney stones include:

- Blood tests - to check that your kidneys are working properly.
- Urine tests - to check for infection, pieces of stone and pregnancy in females.
- CT Scan – You may require a CT Scan of your Kidneys, Ureter & Bladder (CT KUB) as explained below. This depends on your age and whether your symptoms have improved.

## CT Scans & Follow-up

### Patients < 40 Years Old

We know that in patients under the age of 40, if pain improves significantly within the department it is likely that you have passed a small stone and the likelihood of requiring any further treatment is extremely low.

Therefore, you will be discharged without the need for a scan.

You will be given a urine sample bottle and a letter for your GP surgery. After 14 days you should hand in a urine sample and the letter to your GP surgery.

This is to make sure there is no longer any blood in your urine. If there is still blood in your urine you may be referred for further investigation as an outpatient.

### Patients > 40 Years Old or with ongoing symptoms

Almost all patients with suspected Kidney Stones over the age of 40 require a CT Scan to show whether or not you have a kidney stone. If a stone is found, the scan will show its size and location. It will also help us decide how likely it is to pass naturally.

If you attended the Emergency Department during normal working hours the scan will be done while you are in the department.

If you attend outwith normal working hours you will be allowed to go home if we manage to get your pain under control. You should return the following day at 09:00 for a Scan.

If you have ongoing pain, you will be admitted overnight to the Surgical Assessment Unit.

If you have a CT KUB which shows a stone, you will be referred to the Urology virtual stone clinic. You do not attend this appointment.

The Urology team at the Western General Hospital meet to discuss patients who have been referred to them, and one of the following will occur:

- The stone will pass naturally. A letter will be sent to your GP usually within 2 weeks and no follow up is required.
- You may be called back for a repeat scan to check on the position of the stone, or to discuss the possibility of further treatment.
- If the stone is thought to be too large to pass, you may be called for a procedure called lithotripsy - usually within 2-6 weeks.

Any queries regarding follow-up care should be taken up with your GP who can contact the Western General Hospital directly.

Please contact the Emergency Department on 0131 242 1300 if any concerns or questions.

Patient Label:

Date of Attendance:     /     /

As explained in the patient information leaflet we believe you have passed a kidney stone. Please collect a urine sample in 14 days time and take to your GP surgery. It is important that we make sure that you no longer have any blood in urine that may require further investigation.

GP Surgery

- Please dipstick this urine sample for Blood.
- If sample is positive for Blood please organise review by GP for consideration of referral for CT KUB as an outpatient.



**PLEASE ENCLOSE A RECENT KUB, ONE FULL LENGTH CONTRAST FILM AND ANY OTHER RELEVANT FILMS**

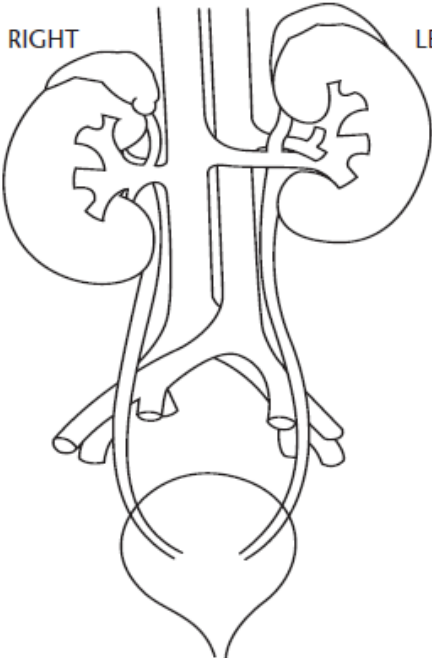
Date of Referral:        /        /	Received:
Surname / Title / Forenames (or ID label):	Referring Consultant:
Address:	Hospital:
	Referring Hospital Number:
Postcode:	C.H.I. Number:
Date of Birth:     /     /     Age: _____ Sex: ( <i>please circle</i> )     M / F	GP Address:
Tel: Home:                      Work:	Tel No.:

**Priority -** Urgent / Non Urgent

**Any physical disability or incapacity?**

YES / NO

**Height** \_\_\_\_\_ **Weight (Kg)** \_\_\_\_\_ (Max 156 kgs) **BMI** \_\_\_\_\_

<b>Present symptoms</b> Side: LEFT RIGHT Pain: YES NO Infection: YES NO Other Relevant Details/ Procedures: _____ Investigations: (specify) _____						<b>Stones</b> Please mark site and size in mm 	
<b>Previous Stone Treatment</b> Y/N - YEAR URS: YES NO PCN: YES NO OPEN: YES NO Lithotripsy: YES NO						Date: _____ Signature: _____ Bleep/Pager No: _____	
<b>Suitability for Treatment</b> Fit for major surgery: NO YES Diabetic: YES NO Hypertension: YES NO Cardiac problems: YES NO Anticoagulant Therapy: YES NO (including NSAID) Coagulation problems: YES NO Pacemaker: YES NO (If Yes, Type) _____ Implanted Electro Magnetic Device: YES NO							