

Lithotripsy Treatment for Kidney Stones

Scottish Lithotripter Centre (SLC)

Information for Patients

What is Lithotripsy?

Lithotripsy is a shockwave treatment which breaks your stone into sand-like particles which will be passed from the body in your urine. The Lithotripter machine breaks over 85% of all stones treated. The procedure uses focused shockwaves delivered through a water filled cushion placed against your side to break up the stone. The stone is targeted with the use of x-ray and ultrasound guidance. You will be lying flat for approximately 30 to 60 minutes while your treatment takes place.

Lithotripsy treatment does not actually remove the stone, disintegration occurs and particles of stone are passed out in your urine in the days following treatment.

Treatment is carried out as a day case and there is no need to fast prior to the procedure.

Why do I need Lithotripsy ?

You have been diagnosed with a kidney stone suitable for Lithotripsy treatment.

Your Doctor has referred you to the Scottish Lithotripter Centre (SLC) in Edinburgh for specialist treatment of your kidney/urinary tract stone(s). This is the main centre for this type of treatment in Scotland

Preparation

There are certain conditions when we will not be able to carry out your treatment.

Lithotripsy can cause bleeding /bruising in your kidney, this can be more serious if you are taking any blood thinning medication, ie. Aspirin, Warfarin, Clopidogrel(Plavax), Apixaban or Rivaroxaban(Xarelto).

You will need to stop taking these medications, before your appointment, if safe to do so.

If you are unsure please contact your own GP for advice as there may be reasons unknown to us why you should not stop taking this medication.

If safe to do so we recommend the following:

Aspirin, Clopidogrel, Plavax- Stop 7 days before your appointment.

Apixaban or Rivaroxaban(Xarelto), Stop 3 days before your appointment.

Warfarin- Stop 7 days before your appointment- Please contact your GP to arrange a blood test the day before your appointment.

If you are taking Dabigatran (Pradaxa) or any other blood thinning medication not listed please contact the department for advice.

Please contact the department for advice :

If you have a pacemaker or any other electronic device inside your body.

If you have a known urinary tract infection.

If you have any planned foreign travel within two weeks after your appointment.

Please bring someone with you for your appointment, we may require to give you stronger painkillers by injection which require you to be accompanied home and not to drive for 24 hours.

If you are unable to stop your medication or have any questions please contact the department.

What happens when you arrive for your Appointment

When you arrive in the department please report to the Lithotripsy reception. You will be asked to change into a gown (It is helpful if you bring your own dressing gown to wear) and to provide a urine sample. Please do not empty your bladder prior to your appointment.

You will then have up-to-date imaging normally an x-ray to determine the position of your stone prior to treatment. Stone position can often change and this allows careful planning of your procedure.

Our overriding concern is to ensure that when you have an x-ray, the benefits from making the right diagnosis or providing the correct treatment outweigh the very low risk involved with the x-ray itself. We make sure that this is the case before you have an x-ray. More information regarding x-ray will be available to you when you attend for your treatment.

Initial pre-assessments by a specialist radiographer and nurse are performed to determine if your stone is still in a suitable position for lithotripsy treatment and there are no reasons why treatment may be unsuitable for you (contraindications).

Consent

After your initial assessment and explanation of procedure you will be asked to give your consent to carry out the treatment, this may be verbal or written.

Please see listed complications on this information sheet

About the treatment

Treatment will normally last between 30 and 60 minutes.

During Treatment you may have a sensation like being flicked with an elastic band, you will hear and be aware of a tapping sensation, you may also feel a deeper discomfort in the kidney.

Patients experience of this varies, some feel little discomfort while others may require extra pain relief. A stronger painkiller can be given by injection only if required. However if you receive the stronger painkiller you must not travel home alone, drive or operate machinery for 24 hours. We ask that you have someone available to take you home.

How long will I be in hospital / clinic?

Be prepared to be in the department for 2-3 hours.

Immediate aftercare

Immediately after the procedure you will have a further x-ray to assess the outcome of the treatment and allow appropriate follow up to be decided.

Most patients will feel fine after the treatment although you may experience some discomfort in the area treated.

Care at home afterwards

If you require a stronger painkiller during the treatment, we ask that you have someone to take you home and to be with you at home.

It is important that you increase your fluid uptake following your treatment (2-3 litres water) This will encourage stone fragments to pass out of your system.

Your own normal pain relief can be taken as required, if pain persists contact your GP or NHS 24(111) for advice. Discharge advice will be given before you leave the department.

Follow-up

If follow up is required, this will be arranged before you leave the department and instructions given.

If we feel your treatment has successfully broken the stone, an x-ray will be organised in your local hospital by us to assess if the stone fragments have cleared. It is important for you to attend any follow up arranged.

Your imaging will be assessed by the SLC and you will be contacted by letter with the outcome.

What can go wrong?

Although a relatively safe form of treatment for stones, Lithotripsy is not without risk.

Please read the following risks/complications(Baus)

Common side-effects Between 1 in 2 & 1 in 10 patients

- Blood in your urine for a short period after the procedure, possibly 1-2 days.
- It is not unusual to experience pain as small fragments of stone pass.
- Need for further lithotripsy treatment to clear any remaining stone(s).
- Failure to break the stone.

Occasional side-effects Between 1 in 10 & 1 in 50 patients

- Urinary tract infection from bacteria released from the stone.
- Bruising or blistering of the skin at the site of shockwave entry.
- Stone fragments may get stuck in the ureter (the tube between the kidney and the bladder) causing a blockage. This may require hospital attendance and sometimes surgery to unblock the kidney or remove the stone fragment.

Rare side-effects Between 1 in 50 & 1 in 250 patients

- Kidney damage caused by severe bruising.
- Severe infection requiring admission to hospital for intravenous antibiotics and sometimes drainage of the kidney by a small drain placed through the back into the kidney or through the bladder into the kidney.
- Inadvertent damage to other organs such as pancreas, lungs, spleen, liver, bowel (rare).

Alternative treatments:

Ureteroscopic surgery performed with a telescope under general anaesthesia, breaking the stone with a laser.

Percutaneous (keyhole) surgery –a direct puncture through the skin into your kidney to remove stone.

Observation –if stones are less than 5mm there is a 95% chance they will pass without any intervention.

If alternative treatment is required this can be discussed with a Doctor during your visit.

Back to normal life

You may feel tired the following day but there are no restrictions on your normal day to day activities.

If you have been given an injection of stronger painkiller during your treatment you must not drive, operate heavy equipment or sign any legal documents for 24 hours.

Any more questions?

Please contact the department if you have any questions.

Further information and references according to British Association of Urological Surgeons(BAUS)

<http://www.nhsllothian.scot.nhs.uk/services/A-Z/ScottishLithotripterCentre/pages/default.aspx>

https://www.baus.org.uk/patients/information_leaflets/category/10/stone_procedures

https://www.baus.org.uk/patients/information/stone_disease_patient_advisory_group.aspx

Keeping your Appointment

If you cannot keep your appointment, or have been given one that is unsuitable, please change it by phoning the number on your appointment letter. Your call will give someone else the chance to be seen and will help us keep waiting times to a minimum.

Public Transport and Travel Information

Bus details available from:

Lothian Buses on 0131 555 6363 www.lothianbuses.co.uk

Traveline Scotland on 08712002233 or www.travelinescotland.com

Train details available from:

National Rail Enquiries on 03457 484 950 or www.nationalrail.co.uk

Patient Transport

Patient Transport will only be made available if you have a medical/clinical need. Telephone **0300 123 1236** *calls charged at local rate up to 28 days in advance to book, making sure you have your CHI Number available. Hard of hearing or speech impaired? Use text relay: **18001-0300 123 1236*** (calls charged at local rate). To cancel patient transport telephone 0800 389 1333 (Freephone 24 hour answer service).

Interpretation and Translation

If you require interpreting service please contact the department we will provide an appropriate interpreter. If you are having this procedure as an existing in patient, staff will arrange interpreting support for you in advance of this procedure. This leaflet may be made available in a larger print, Braille or your community language.

The Scottish Lithotripter Centre

Anne Ferguson Building

Western General Hospital

Crewe Road South

Edinburgh EH4 2XU

Contact Telephone Numbers –

Monday to Thursday: 8.30am - 4pm

Friday 8.30am- 2pm

0131 537 1602 or 0131 537 1604