

Lithotripsy (Extracorporeal Shock Wave Lithotripsy)

Information for patients



Why have I been given this leaflet?

You have been given this leaflet because you are due to come for lithotripsy treatment at the Churchill Hospital. Please read the leaflet before you come. A nurse specialist will go through it with you during your appointment and answer any questions you may still have.

What is Extracorporeal Shock Wave Lithotripsy?

Extracorporeal Shock Wave Lithotripsy (ESWL) is commonly referred to just as lithotripsy. This is a treatment which uses shock waves (pulses of energy) to break down stones in the kidney and urinary tract.

The shock waves are produced by a machine and are focused onto the stone using X-ray or ultrasound guidance. The waves pass through the skin and break up the stones into tiny fragments, which will come out when you pass urine.

Most people need more than one treatment to clear their stone(s).

What are the alternatives to this procedure?

Alternatives to this procedure include surgery or having no treatment and waiting to see whether the stones pass on their own.

The most suitable option will have been discussed with you at your consultation.

Preparing for lithotripsy

Can I eat and drink before the treatment?

You can eat and drink before the treatment.

Should I take my usual medicines on the day of treatment?

Most medicines can be taken as usual, but some medicines need to be stopped, such as:

Anticoagulants

If you take warfarin, this should be stopped five days before your lithotripsy appointment. You should have an INR check the day before your treatment. Please discuss with your doctor or the Urology Nurse Practitioners (on 01865 572 373) whether you need any heparin injections while you are off your warfarin.

If you are taking any other anticoagulant (such as apixaban, rivaroxaban, edoxaban or dabigatran) please contact the Urology Nurse Practitioners as soon as you have your appointment details. They will be able to tell you when to stop your medication before your lithotripsy.

Clopidogrel and other antiplatelet medicines should be stopped seven days before the treatment. If you are taking clopidogrel or another antiplatelet medicine because you have had coronary (heart) stents inserted within the last year, please contact the Urology Nurse Practitioners before stopping your medicine.

You can continue to take aspirin.

What do I need to bring with me?

Please bring:

- a list of your current medication
- dressing gown and slippers
- spare underwear (because your underwear will get wet during the treatment)
- a DVD to watch or a CD to listen to (there is also a selection of DVDs/CDs in the department).

What should I expect when I arrive?

Please come to the Reception in the Radiology (X-ray) department at the Churchill Hospital. You should expect to be in the department for approximately 2-3 hours from your appointment time (although on occasions it may be longer). This gives us time to carry out the treatment and to make sure you are well afterwards.

You will be given a specimen pot and asked for a urine sample. This is to check that you do not have a urine infection. If you do, this may mean we cannot go ahead with the lithotripsy until this has been treated.

You may have an X-ray to check the size and position of your stone(s). The nurse specialist will then explain the treatment to you and answer any final questions you may have. You will be asked to sign a consent form to confirm you are happy for the treatment to go ahead.

Before going in for the procedure you will be given medication to provide pain relief during the treatment. The nurse specialist will go through the medication with you after checking whether you have any allergies.

Whilst you are in the department a research nurse may talk to you about research to find out how and why people form kidney stones. This may involve you giving a sample of blood and collecting urine specimens. It is up to you whether you are involved in research and your decision will not affect your lithotripsy treatment.

What should I expect during the treatment?

The treatment usually lasts about 45 minutes and will be carried out either by a radiographer or sometimes a urology doctor.

You will be taken to the treatment room, where you will be met by the radiographer. You will be asked to lie on your back on the treatment table (sometimes you may be asked to lie on your front – this depends on where your stone is). The radiographer will check the position of your stone using either X-ray imaging or ultrasound scanning. You will need to lie still during these checks, so that they can get a clear image.

The radiographer will then pour a small amount of warmed water onto a plastic sheet underneath you. This means that your underwear will get wet. This is because the shock waves travel best through water rather than air. The shock waves are directed from below the treatment table.

The radiographer will make sure that you are comfortable, and will start your choice of DVD/CD.

You will hear a loud clicking sound as the shock waves start. This is usually uncomfortable and some people have described it as like being flicked with an elastic band. If you are finding the treatment too painful, please tell the radiographer. They can stop the treatment for a short while or reduce the power of the shocks.

During the treatment your kidney stone will be monitored several times, either by X-ray or ultrasound, to make sure that the shock waves are focused in the right place.

What should I expect after the treatment?

When your treatment is finished you can get dressed and will be offered some light refreshments.

The nurse specialist will give you a copy of the letter we send to your GP and will explain what happens next. If you need another treatment or a follow up X-ray this will be booked with you before you leave the department.

You should drink plenty of fluid (mainly water) following your treatment, to help flush out stone fragments. We recommend 2-3 litres per day. It can also be beneficial to be as active as you can following your treatment, to encourage stone fragments to pass.

You may get some bruising over the treatment area, which is quite normal and nothing to worry about.

You may get some blood in your urine for a day or two after your treatment. This is also normal and should fade and clear. To help with this you should make sure you are drinking enough fluid.

If you experience discomfort after the procedure you can take paracetamol or your usual pain relief, following the dosage instructions with the packaging.

What are the possible side effects of lithotripsy?

Most procedures have possible side effects. The following information is taken from the BAUS (British Association of Urological Surgeons) information leaflet (2016).

Common side effects (affecting more than 1 in 10 people)

- blood in your urine for up to 72 hours after the procedure
- pain in your kidney as small fragments of stone pass
- urinary infection due to bacteria released as the stone breaks
- bruising or blistering of the skin
- the need for further lithotripsy treatment
- failure to break stone(s), which may need alternative treatment, especially for very hard stones
- recurrence of stones.

Occasional side effects (affecting between 1 in 10 and 1 in 50 people)

- stone fragments may get stuck in the tube (ureter) between the kidney and the bladder, which require surgery to be removed.

Rare (affecting less than 1 in 50 people)

- severe infection requiring intravenous antibiotics and the need for drainage of the kidney through a small tube
- kidney damage (bruising) or infection needing further treatment
- damage to the pancreas or lungs by the shockwaves, requiring further treatment.

What should I look out for at home?

If you develop severe pain you must contact your GP, out of hours GP (or NHS 111) or go to your nearest Emergency Department.

You should look out for the following signs of a urine infection. If you have any of the following symptoms you should contact your GP or the out of hours GP (or NHS 111) urgently. It is important to start treatment for any urine infection as soon as possible.

Symptoms of a urine infection include:

- cloudy and offensive smelling urine
- pain when passing urine
- flu-like symptoms, such as shivering or a high temperature.

Where can I get further information?

Oxford Stone Group

Website: www.ndm.ox.ac.uk/osg/patient-information

British Association of Urological Surgeons

Website: www.baus.org.uk/patients/

How to contact us

If you are unable to come for your appointment, please contact the waiting list office:

Tel: **01865 234 444** (press 1 then 2)
(9.00am to 4.00pm, Monday to Friday)

To contact the Urology Nurse Practitioners:

Tel: **01865 572 373**
(8.00am to 4.00pm, Monday to Friday)

Please leave a message and we will call you back.

If you have a specific requirement, need an interpreter,
a document in Easy Read, another language, large print,
Braille or audio version, please call **01865 221 473**
or email **PALS@ouh.nhs.uk**

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February 2017

Review: February 2020

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