



**University
Hospitals Sussex**
NHS Foundation Trust

Lithotripsy treatment

Urology

Patient information

What is this information about?

This information is about a treatment for urinary tract stones called lithotripsy.

It explains:

- what lithotripsy is
- how to prepare for the treatment
- what happens when you have the treatment
- any possible side effects or risks.

Why have I been given this information?

You have been given this information because you have urinary tract stones that can be treated by lithotripsy.

Reading this information will help you to prepare for the procedure. You may also find it useful to share this information with anyone living with you or looking after you.

What is lithotripsy?

The full name for lithotripsy is Extracorporeal shockwave lithotripsy, or ESWL.

Lithotripsy is when special sound waves, or shockwaves, are directed through your skin and on to urinary tract stones. These shockwaves are made by a machine called a lithotripter. They are guided on to the stones using either ultrasound or x-rays.

The stones are broken up into tiny fragments which can then be passed out in the urine (pee).

The advantage of lithotripsy is that most stones can be treated this way. It means you do not have to have surgery or a general anaesthetic.

Do I have to prepare before I have this treatment?

Yes. Please do the following:

- Take painkillers one hour before your treatment begins. Suitable options include paracetamol, ibuprofen tablets, or diclofenac (Voltarol) suppositories.
- Bring spare underwear to your appointment.
- Eat and drink a normal amount before your appointment. Do not come to your treatment starved.
- Avoid foods that may cause excess gas for the two days before your treatment. Gas in the bowel can make it harder for the X-rays to clearly identify the stone. To help with this.

Food to avoid:

- Weetabix, Shredded Wheat, All Bran, Bran Cereals.
- Wholemeal flour, wholemeal bread.
- Cakes and pastries made with wholemeal.
- Lentils, pulses, beans, baked beans.
- All types of vegetables.
- Dried fruit, spicy food, pickles.
- Fizzy drinks.

Foods allowed:

- Cornflakes, rice krispies, rice.
- White bread, cakes, biscuits and pastry.
- Pastries made with white flour.
- Potatoes, root vegetables.
- Tinned fruit.
- Butter, Margarine.
- Clear soups, gravy, Oxo, Marmite, Bovril.
- Tea, coffee, coco, Horlicks.
- Sugar, jelly and honey.

Can I drive home after the treatment?

Please do not drive home after your first treatment.

It is a good idea to bring someone with you who can drive you home or arrange your own transport.

You can drive home after your second and third treatments.

What happens on the day of my treatment?

You will be asked to come to the Lithotripsy Centre at the Princess Royal Hospital in Haywards Heath.

When you arrive, follow the signs to the X-ray Department.

You will have your X-ray first and then make your way to Ansty Ward on the first floor. After checking in at the reception desk, please take a seat in the lithotripsy patients' waiting area, which is the first door on the right as you enter the ward.

You will be given an appointment time, but please be aware that some treatments may take longer than expected, so allow extra time.

A lithotripsy nurse will meet you on Ansty Ward and go through a few questions, including your current medications and allergies. You will also be asked to provide a urine sample. Your blood pressure will be checked, and please note that if it is not well controlled, we may need to cancel the procedure.

Be aware

Please let us know if you are planning or have already booked a holiday in the near future.

What happens during my treatment?

Each appointment can take up to an hour and a half.

You will be taken to the lithotripsy suite, located just inside the theatre complex on the first floor. You will need to change into one of our gowns.

You will be asked to lie on a special couch with a shallow puddle of warm water, which means your back will get wet—so it's a good idea to bring spare underwear. A towel will be provided for you to dry off at the end.

Stones are usually located using an X-ray scan. Typically, around 3,000 'shocks' are delivered to the stone. The machine starts at a very low power, which feels like a gentle flick on your back. The power is gradually increased and may become slightly uncomfortable. The machine also makes a loud clicking noise.

A member of staff will stay with you throughout the treatment. If it becomes too uncomfortable, the power can be reduced or the machine switched off.

Once the treatment is complete, you will be discharged, provided you feel well.

What should I expect after treatment?

Most people feel back to normal once the treatment is finished, but we generally advise taking the rest of the day off to rest at home. Many people are able to return to normal activities once they get used to the treatment.

Important points:

- Follow the advice sheet provided to you.
- Drink plenty of water afterwards—aim for around 2 litres a day—to help flush out small fragments of the stone.
- Passing urine may be uncomfortable, so keep paracetamol and ibuprofen at home to manage any pain.
- If the pain becomes severe or unbearable, go to A&E for further advice.
- It is normal to notice some blood in your urine for a few days after the treatment; this should gradually become lighter.
- Occasionally, you may be prescribed a short course of antibiotics to take home.

How many treatments of lithotripsy will I have?

Lithotripsy may require up to three treatment sessions, usually spaced 3 to 4 weeks apart.

Before leaving the department, you will be given your next appointment. Some people may need 2 to 3 treatments for each stone, especially if more than one stone is present.

What are the risks or side effects?

Lithotripsy is generally a very safe procedure. Most people do not experience any problems afterwards, though there are a few well-recognised side effects.

Common (more than 1 in 10 people will have these)

- Temporary blood in the urine, which is normal.
- Pain or discomfort as small fragments of the stone pass out.
- Urinary tract infection requiring antibiotics.
- The stone is not broken, meaning a different treatment may be needed.
- The stone(s) return.
- Bruising on the skin where the shockwaves pass through.

Occasional (between 1 in 10 and 1 in 50 people will have these)

Stone fragments becoming stuck in the ureter (the tube connecting the kidney to the bladder). This can cause pain and may require hospital treatment. Sometimes surgery is needed to unblock the kidney using an internal tube called a stent.

Rare (less than 1 in 50 people will have these)

- An infection requiring hospital treatment with intravenous antibiotics. Occasionally, the kidney may need to be drained using a small tube inserted through the back.
- Bleeding or bruising in and around the kidney, known as a haematoma.

What are the alternatives to lithotripsy treatment?

What are the alternatives to lithotripsy?

- Some stones may pass on their own, often with the help of medication to relax the urinary tubes.
- Surgery under general anaesthetic may be considered, including:
 - **Ureteroscopy:** A small telescope is passed through the natural urinary tubes to the stone, which is then destroyed and removed using a laser.
 - **PCNL (Percutaneous Nephrolithotomy):** A keyhole procedure where a telescope is inserted through a small cut in the back into the kidney. This is usually used for very large stones.
 - **Open surgery:** This is now rarely performed due to advances in minimally invasive techniques.

Can anyone have lithotripsy?

No. Some people should not have this treatment, including:

- Pregnant individuals.
- People taking anticoagulants (blood thinners) such as warfarin, clopidogrel, high-dose aspirin, apixaban, or rivaroxaban.
- People with pacemakers or internal defibrillators.
- People who have recently had a heart attack.
- People with untreated or uncontrolled high blood pressure.
- People with abdominal aneurysms or artificial blood vessel graft.

If you have a stent, you may be given an appointment to have it removed under local anaesthetic.

Who can I contact if I need further information or have any questions?

Lithotripsy unit

Please do not hesitate to contact **the Lithotripsy unit.**

Phone: 01444 441881 Ext. 68569

Monday to Friday 8am to 3.30pm
(answer machine service available).

Or phone the **Urology Department.**

Phone: 01444 441881 Ext. 65457

Please find the consent form for Lithoripsy on the next page.

This is an illustration for information purposes only.

Patient details (or pre-printed label)

Surname / family name _____ Male ☐ Female ☐

First names _____

Special requirements _____

(e.g other language, other communication method)

Date of Birth _____

NHS number (or other identifier) _____

Responsible health professional _____

Job title _____

Name of proposed procedure or course of treatment**Lithotripsy (Treatment of Renal Stones)**

Statement of health professional (to be filled in by health professional with appropriate knowledge of proposed procedure, as specified in consent policy – see also guidance on cover of consent pad, in Junior Doctor's Handbook and on intranet)

I have explained the procedure to the patient. In particular, I have explained:

The intended benefits: **To fragment the renal calculi.**

Serious or frequently occurring risks: 1.Discomfort 2.Pain 3.Blood in the urine
4.Urine Infection (sepsis) 5.Renal Colic 6.Kidney damage if stone is within the kidney
(haematoma) 7.Bruising 8.Surgery (Ureteroscopy).

Any extra procedures which may become necessary during the procedure☐ Blood transfusion _____☐ Other procedure (please specify) _____

I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

☐ The following tape/leaflet has been provided: **Information sent/given to patient prior to appointment and/or on arrival in the department.****This procedure will involve;**

Signed _____ Date _____

Name (PRINT) _____ Job Title _____

Contact details (if patient wishes to discuss options later) _____

Statement of interpreter (where appropriate)

I have interpreted the information above to the patient to the best of my ability and in a way in which I believe s/he can understand.

Signed _____ Name (PRINT) _____ Date _____

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This leaflet is intended for patients receiving care
in wHaywards Heath

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