

**Patient
Information**

Lithotripsy treatment for kidney stones

Introduction

This leaflet gives you information about having lithotripsy treatment for kidney stones.

What is lithotripsy?

Lithotripsy is a non-surgical method used to treat kidney and ureteric stones (these are stones in the tube that connects the kidney to the urinary bladder). The treatment uses shock waves to weaken and break down the stone to allow the urine to flow.

The mobile lithotripsy machine comes to Cheltenham General Hospital usually every 2 weeks.

Benefits of having lithotripsy treatment

The expected outcome of the treatment is that the kidney or ureteric stone is broken up enough to allow clearance. To clear a stone completely 2 to 3 treatments may be needed.

Lithotripsy treatment is only used to treat a stone that is already present; it cannot prevent new stones from forming.

Lithotripsy is performed as an outpatient procedure without the need for an anaesthetic.

Alternative treatments

Lithotripsy is the least intrusive way of treating kidney and ureteric stones.

Suitability for this treatment will depend on many factors including your general health, the location and the size of your stone. The Urology team will discuss the choices and alternative treatments with you.

Other options for managing kidney stones include:

- Surgery - removing the stone using key hole surgery, under a general anaesthetic (while you are asleep).
- Conservative management - deciding to observe the stone with regular X-rays. If the stone begins to cause symptoms such as pain, infection or bleeding or is increasing in size then we would recommend treatment.

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Department

Urology

Review due

November 2026

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Bleeding - the shockwaves passing through the kidney can cause the kidney to bleed. You will therefore see some blood in your urine after the treatment. This is normal and can last for several days. You are advised to drink 2 to 3 litres of water a day to help flush the kidney of any blood and grit. Serious bleeding from the kidney following this treatment is very rare.

Infection - kidney stones can put you at risk of developing an infection in your urine. Lithotripsy treatment can trigger an infection.

Your treatment will either be cancelled or you will be given antibiotics during treatment if an infection is suspected before treatment.

If you are unwell following treatment and suspect that you have an infection, please contact your GP.

Pain - you may feel bruised and uncomfortable after the treatment, this is normal. You can take pain relief such as paracetamol to help with any discomfort. Keep drinking water to flush out any grit that may have been left after the treatment. If the pain becomes severe, please contact your GP immediately as stronger pain relief may be needed.

Obstruction of the kidney - very rarely, a small piece of stone can break off following your treatment and cause the kidney to become blocked. If this happens, you may need to come into hospital and have a thin plastic tube (called a stent) inserted into the ureter (the tube that runs from the kidney to the urinary bladder). This will protect the kidney from becoming blocked.

Symptoms of obstruction of the kidney include severe pain, fever and a general feeling of being unwell. If you experience any of these symptoms, you should contact your GP or NHS 111 as soon as possible for advice.

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Before treatment

- You may eat and drink before your treatment, although we recommend a light meal only.
- Please try to make sure that you are not constipated for your treatment, as this can make locating the stone using X-ray or ultra sound more difficult.
- Do not bring any valuables with you.
- Allow 2 hours for your visit (although the actual treatment time is 20 to 30 minutes).
- You should have someone to collect you from the hospital after your treatment, as you may be unable to drive (due to the pain relief given).

Please let us know in advance if you:

- know that you are pregnant.
- have a pacemaker.
- are currently taking warfarin, rivaroxaban, apixaban or any other blood thinning medication, such as aspirin or clopidogrel.
- think you might have an infection in your urine or if you have a raised temperature.
- have a bleeding disorder.

Please confirm your appointment time

It is important that you confirm, by telephone, that you will or will not be attending your lithotripsy appointment. The telephone number is on your appointment letter and we ask that you contact us as soon as possible in order for us to make best use of the appointments we have available.

On arrival at the ward

The nursing staff will follow a quick admission procedure, when you will be asked some questions, have your blood pressure, pulse and temperature taken and asked to sign a consent form. The nurse will discuss your treatment with you and you will be able to ask any questions that you may have.

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Your treatment

The treatment is not painful, but some patients find it uncomfortable. To avoid any discomfort, you will be offered some pain relief medication before the treatment begins.

When your treatment is due, you will be taken to the treatment room and introduced to the lithotripsy technicians who will explain the procedure to you and answer any questions you may still have.

The technicians will ask you to lie on a specialised bed for the treatment, usually on your front. It is important that you keep as still as possible so that precise treatment can be given to the stone. When treatment begins, you will hear a clicking noise and feel a sensation similar to an elastic band being flicked on your back or front. During the treatment time, the power is slowly increased. If the treatment becomes too painful, please let the technicians know so they can adjust the level or stop the treatment.

We routinely use ultrasound to monitor the position of your stone during treatment. If your stone moves into the ureter (drainage pipe), then we may need to use X-ray to locate the stone during the treatment. The risks from the small amount of radiation used are small. The exposure is equivalent to 2 to 10 months of natural background radiation (depending on the number of X-rays and treatments needed).

After the treatment

Your blood pressure, pulse and temperature will be taken and you will be offered a hot drink.

Going home

You will be able to go home soon after treatment. You are strongly advised not to drive after having this treatment because of the strong pain relief you may have been given. Please arrange for someone to collect you and take you home.

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What to do when you get home

For the rest of the day after your lithotripsy, you are advised to take things gently and get plenty of rest.

Unless you have been told otherwise you should be able to return to your normal activities within 24 hours of leaving hospital. Walking is helpful in flushing out any stone fragment from your kidneys.

It is important that you drink 2 to 3 litres of fluid each day for 7 days. Increasing your fluid intake will flush out the kidneys and help any fragments of stone pass through.

How will you know if the treatment has been successful?

Once your lithotripsy treatment sessions are finished, an X-ray will be arranged at the time of your clinic review, about 4 to 6 weeks after your treatment. You will be sent an appointment in the post.

If your stone is still present, your urologist will discuss the options for further management with you.

Unfortunately, some people are prone to developing kidney stones. lithotripsy does not prevent the formation and growth of new stones. Further stones may require similar treatment.

Contact information

If you have any further questions about your lithotripsy treatment, please contact one of the following:

Admissions Coordinator

Tel: 0300 422 then 2988 or 4353 or 4246 or 8944
Monday to Friday, 8:00am to 4:00pm

Urology Nurse Specialist

Tel: 0300 422 5193
Monday to Friday, 8:00am to 5:00pm

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Alternatively, you can contact the hospital switchboard.

Gloucestershire Hospitals Switchboard

Tel: 0300 422 2222

When prompted ask for the operator then for your consultant's secretary. Please note that the secretaries will only be available Monday to Friday, 8:00am to 4:00pm.

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Making a choice

Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.



Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you are asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation

* Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial. Patient Education and Counselling, 2011;84: 379-85



<https://aqua.nhs.uk/resources/shared-decision-making-case-studies/>