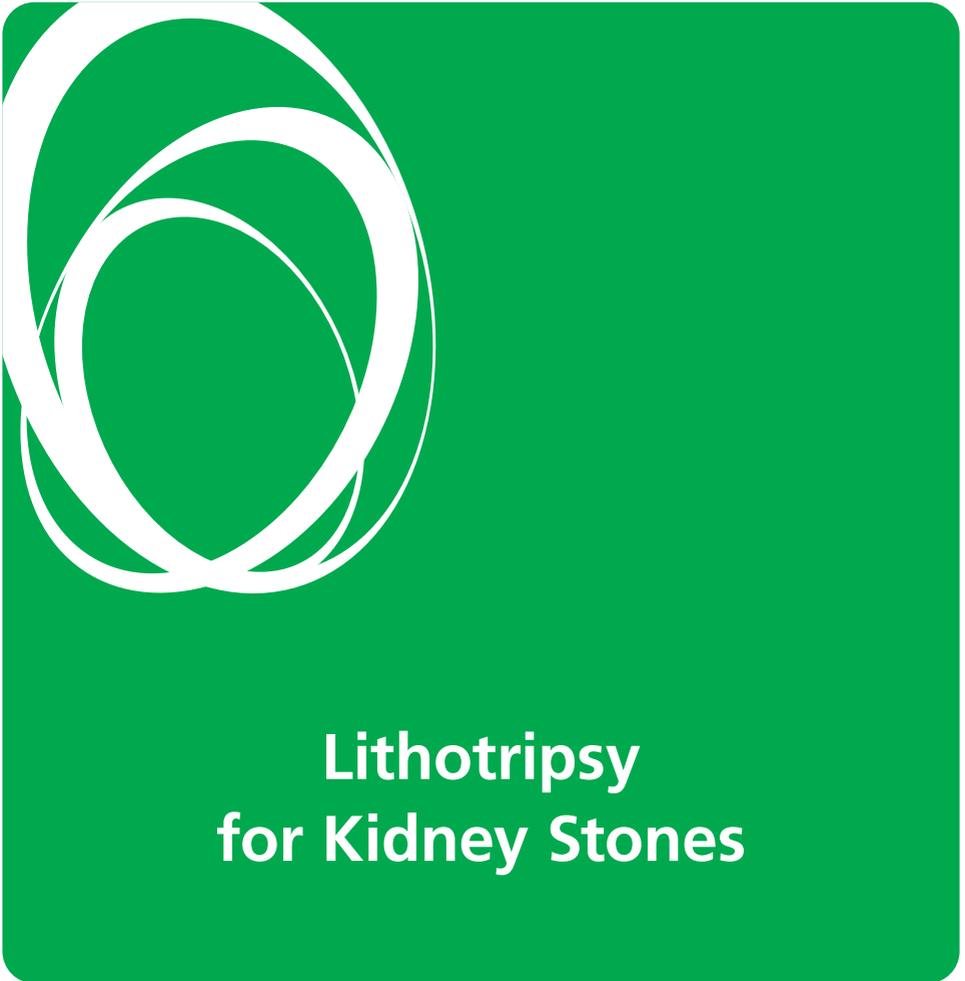




**University Hospitals Birmingham**  
NHS Foundation Trust



# **Lithotripsy for Kidney Stones**

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# Introduction

This leaflet tells you about the procedure known as Lithotripsy and serves to explain what is involved and the possible outcomes and complications. It is not meant to replace discussion between you and your consultant but can act as a starting point for such a discussion. Lithotripsy is likely to be a pre-planned procedure and you should have plenty of time to discuss it with your consultant before you decide to sign the consent form.

## What is Lithotripsy?

Extracorporeal shock wave lithotripsy (ESWL) is a procedure in which kidney and ureteral (tube draining urine from the kidney to the bladder) stones are broken into smaller fragments by shock waves. These small fragments can then pass out of the body naturally. This approach may leave you stone-free without surgical intervention or invasive procedures.



During lithotripsy, the stones are fragmented by high-energy shock waves created outside the body. The machine used to deliver the shock waves is called a Lithotripter.

- Stones in the kidney
- Stones in the ureter (tube draining urine from the kidney to the bladder)

## **Are there any contra-indications for this treatment?**

There are certain factors that would prohibit lithotripsy treatment such as:

- If you weigh over 120kg
- If you have had blood-clotting problems
- If you are pregnant

There may be other factors that your doctor will take into consideration before performing the procedure.

## **What are the alternative treatments for kidney stones?**

The majority of small stones within the kidney are fragmented by lithotripsy. However, a proportion of smaller stones and most large stones need other treatment methods using telescopes passed through the bladder or through a keyhole operation. Decisions regarding the best treatment option will be taken based on the size and position of your stone and the structure of your kidney.

## What preparation do you need before attending lithotripsy?

If you are taking a substance used to prevent blood clotting such as Aspirin, Warfarin or Clopidrogel, please discuss this with your Urologist prior to your appointment.

- If you have a pacemaker please let your Urologist know
- Continue other routine medications
- Do not eat anything four hours prior to the procedure (you can drink freely). If you are diabetic, please take your normal diet as suggested
- Someone else must drive you home after the procedure or accompany you on public transport. You should be able to drive again the next day if you feel well enough. Your treatment may be cancelled if you do not have a relative or friend to collect you after the procedure

## How is the procedure (ESWL) performed?

The procedure is done as an outpatient and it takes about an hour.

Tests will be performed beforehand, such as;

- An X-ray to determine the size and location of the stone
- Blood pressure
- An electrocardiogram (ECG), if there are any risk factors

You will be positioned on the Lithotripsy table and monitoring equipment may be connected. You will usually be prescribed a pain killer which will include one or more of the following; a needle may be inserted in a vein in your arm, a suppository or a tablet may be given.

The position of the stone will be located using an X-ray or Ultrasound scan. After confirming the position of the stone, painkillers will be given and the treatment started. You must lie still during your treatment. You will be able to request more medication if you experience any pain. After the treatment has finished, you will rest in the recovery area. You will be discharged home when you are comfortable.

## Will there be any pain afterwards?

Some minor abdominal discomfort is common after this procedure. You will be able to take regular analgesia that you can buy over the counter, such as Paracetamol or Ibuprofen. This should be taken for 24–48 hours.

## What are the complications?

It is likely that you will pass a small amount of blood in your urine for a few days after treatment. You may also experience some bruising on your back and an excessive need to urinate. You will be warned to watch for symptoms of infection such as fever and excessive pain. It is very important to drink plenty of water afterwards to help flush out the stone fragments following treatment. If you get symptoms of infection or if the pain is severe and persistent, please get in touch with either your GP or attend the accident and emergency department in your local hospital.

## How long do you need to stay off work?

The length of time between your return to work following this type of operation will depend on the type of work you do. Ask your consultant for advice with regards to returning to work and completing household activities.

Due to the sedative effects of the medications given, driving should be avoided for 24 hours after the procedure.

Following Lithotripsy, stone fragments may pass in the urine and may result in pain.

## When do you come back for follow up treatment?

Fragmented kidney stones may take a few weeks to pass in the urine. You will be asked to return for follow up in the clinic. For large stones, you may need this treatment more than once. On follow up visits, fragmentation and clearance of the stone will be checked by X-rays and further action may be planned based on the results.

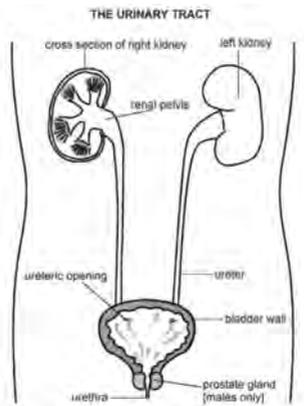
**It is important that you make a list of all medicines you are taking and bring it with you to all your follow-up clinic appointments. If you have any questions at all, please ask your surgeon, or nurse. It may help to write down questions as you think of them so that you have them ready. It may also help to bring someone with you when you attend your outpatient appointments.**

## Dietary advice for people with kidney stones

- Drink a minimum of four pints of water per day, enough to keep your urine a clear colour at all times
- Eat no more than two portions of meat a day (red meat, chicken and fish)
- Dairy products are good for you in moderation
- Reduce foods containing Oxalates (a chemical that combines with calcium in urine to form the most common type of kidney stone) for example spinach, rhubarb, nuts berries, chocolate, and wheat bran
- Reduce your salt intake, on and in your food

Your consultant may provide you with a more in depth diet sheet if necessary.

# The Urinary Tract



## Trust Contact Details

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## Acknowledgments

Originally produced by the Midlands stone network.



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