

# Having your kidney stones treated with lithotripsy

Department of Radiology

Information for Patients

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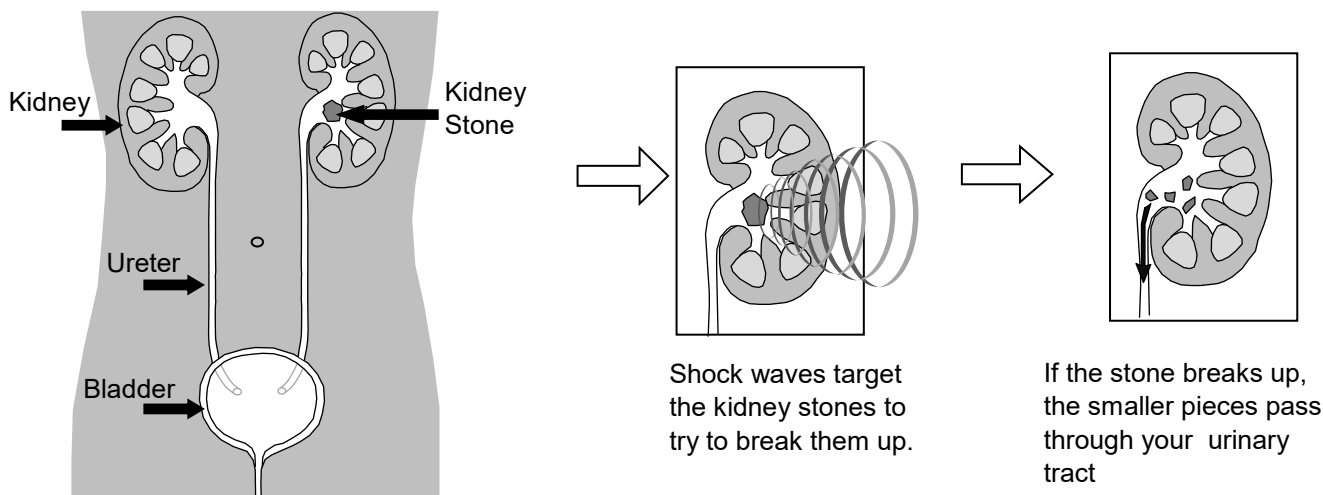
## Introduction

This leaflet tells you about the procedure called lithotripsy. It tells you what happens during the procedure and what the benefits and possible risks are.

## What is lithotripsy?

Lithotripsy is a procedure used to treat stones in the kidney and the tube that links the kidney with your bladder (ureter). The word lithotripsy means stone breaking. It is also called extracorporeal shockwave lithotripsy or ESWL for short.

The lithotripsy machine sends shockwaves (a type of sound wave) through the skin into the stones. The aim is to break up or crumble the stones into smaller, sand like particles that can pass out of your body later in your pee (urine). When these shockwaves are focused onto a hard and brittle substance like a stone and applied repeatedly they can weaken and break the stone. It is important to remember that the treatment simply breaks the stone into smaller pieces. It will not make the stone disappear.



**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

Visit [www.leicestershospitals.nhs.uk](http://www.leicestershospitals.nhs.uk) for maps and information about visiting Leicester's Hospitals  
To give feedback about this information sheet, contact [InformationForPatients@uhl-tr.nhs.uk](mailto:InformationForPatients@uhl-tr.nhs.uk)

## Why do I need lithotripsy?

Your doctor has found that you have a stone or group of stones in your kidney or ureter. Kidney stones can be painful and can cause infection or blood in your urine.

If nothing is done to take them out, the stones could

- keep growing
- damage your kidney
- block your ureter

## What are the benefits?

Lithotripsy is done as an outpatient procedure. This means that you can come into hospital, have the procedure, and go home the same day. This

- avoids the need for surgery and anaesthetic,
- reduces your hospital stay
- reduces the amount of time you will need to recover from the procedure.

## Can I take my normal medicines?

Yes, if you are on medication from your doctor, please keep on taking them. Please read the information on medications that thin your blood given below.

## Important information

If you have a small electronic device, that is implanted in the chest to help regulate heart function. (pacemaker) or if you are taking medication that thins the blood,

- please contact the urology assessment centre specialist nurses for advice as soon as possible on 0116 258 4635.

**Blood thinners are sometimes called anticoagulants. They include warfarin, clopidogrel (Plavix®), apixiban (Eliquis), rivaroxaban (Xarelto) and ticagrelor (Brilinta) or Dalteparin / heparin injections.**

## When you arrive at the urology assessment centre please tell the staff if:

- You have a pee (urine) infection
- You have a bulge or swelling in your aorta, the main blood vessel that runs from the heart down through the chest and tummy (called an aortic aneurysm)
- You have any allergies
- You have diabetes.
- There is any possibility that you may be pregnant.

## How do I get ready for the procedure?

You do not need to do anything special to get ready for your lithotripsy treatment.

You may eat and drink normally but please do not eat heavy meals just before your treatment. Please bring a snack with you. This is very important if you have diabetes.

Please bring someone with you who can drive you home.

There is a radio in the treatment room. If you have a mobile phone or other device with music on you can bring this to listen to your music.

If you have any trouble with walking, for example use a wheelchair or are not able to stand up (weight bear), please let us know before your appointment by phoning the urology nurses on 0116 258 4635.

## Before the procedure

**When you arrive** a specialist nurse will

- tell you what is going to happen.
- check your blood pressure
- ask you some questions about your health.

You may be asked to go to the radiology department for an X-ray of your tummy (abdomen) to check the position of your stone.

**Before your treatment**, your consultant or another urology doctor will see you. They will

- tell you about the risks and benefits of the lithotripsy treatment and any possible complications.
- make sure that you know the risks and complications that may happen with this treatment
- give you a chance to ask any questions.

After talking to your doctor, if you wish to have the lithotripsy treatment you will be asked to sign a consent form. When you sign this

- it means you have agreed to have the treatment
- that you understand why it is needed and the risks involved.
- You will be given a copy of the consent form to take away.

## What happens during the treatment?

- The radiographer and nurse will tell you what is going to happen. You can ask any questions you may have.
- Your blood pressure and pulse will be checked throughout the treatment.
- You will be taken to the changing cubicle and asked to take your clothes off and put on a pair of paper pants and a hospital gown.

- You will then be asked to lie down on the lithotripsy table either on your front or your back depending on where your kidney stone is. Some warm water will be poured under you to make sure that there is good contact between your skin and the lithotripsy machine.
- X-rays or ultrasound will then be used to find and target your kidney stone. This takes about 10 minutes. The lithotripsy machine will then be placed to treat your stone. It is important during the treatment to keep your breathing regular so that the stone stays in the target area.
- When the lithotripsy begins, you may feel the lithotripsy shockwaves. Some patients feel some pain during the treatment. Please tell us if you find this painful or uncomfortable.

During the treatment, shockwaves are sent to the stone at a rate of about 1 to 2 per second. The treatment lasts about 45 minutes. You will hear a clicking noise throughout the treatment.

## Is lithotripsy painful?

Lithotripsy can be painful or uncomfortable. The nurse will give you some painkillers before you start. These usually come in the form of tablets that you swallow and / or a medicine that you gently push into your bottom (called a suppository).

## What happens after the treatment?

- You will be asked to wait in the urology assessment centre for about 30 minutes. This is to make sure you feel okay before going home.
- If you are an outpatient you may go home the same day as your treatment. Before you leave you will be told of any follow up arrangements. You will be given an appointment letter. This includes an emergency contact number.

Follow up arrangements could include further lithotripsy, another X-ray in a few weeks or a follow-up appointment in the outpatient clinic.

**Do not drive for 24 hours.** Please make sure someone is available to take you home.

## What are the side effects?

Lithotripsy is a common procedure and generally thought to be safe. But, as with any medical procedure there may be side-effects and possible complications. Your urology doctor will talk to you about these. The side effects are usually short term. They can happen after a successful procedure. There can be:

- **Blood in the pee.** You may see blood in your pee for some days after the procedure. This is quite common and is because of the stones breaking up and moving.
- **Pain.** When small stone pieces move down from your kidney to your bladder or from your bladder to the outside (when you pee) they may cause you some pain. If you feel any pain you should take the same painkillers as you would for a headache. If this is not working, call the urology emergency admissions unit on 0116 258 8293.
- **Bruising on your back.** You may also have some redness in the area where the shockwaves were aimed at your skin. This may sometimes be tender or sore but will slowly become better.

## What to look out for when you are home

- You may see blood in your pee for some days as the stone pieces move or pass out of your body.
- Please drink extra fluids after the treatment. Try to drink between 2 to 3 litres (4 to 6 pints) per day. This will help the stone pieces to come out in your pee.

### If you get any of the following:

- **serious pain,**
- **a high temperature (fever)**
- **feeling ill**
- **blood in your pee that seems to be getting worse instead of clearing up**

### Please contact 1 of the following urgently:

**Weekdays, from 8am to 8pm**

- **Call the urology emergency admissions unit on 0116 258 8293.**

**Weekdays, after 8pm or any time at the weekend**

- **Call ward 28 on 0116 258 4623 (female patients)**
- **Call ward 29 on 0116 258 4247 (male patients).**

## Are there any risks?

- **Blockage caused by stone pieces.** Sometimes if the pieces of stone are big they can get stuck in the ureter (the tube that joins the kidney to the bladder). This may cause pain and affect the kidney's ability to pass out the pee. This may need more lithotripsy treatment or maybe an operation to take out the pieces.
- **Blockage caused by lots of small stone pieces.** This is called Steinstrasse which means "stone street". This may happen when a number of small pieces of stone are stuck in a line in the ureter. This can cause pain, feeling sick or being sick, and high temperature (fever). If this happens you may need an operation or another lithotripsy treatment.
- **Infection and fever.** Sometimes infection happens because bacteria are released as the stone breaks. You may need antibiotics to treat this.
- **More surgery.** Some very hard stones may not break. For some patients more invasive procedures or operations are needed if lithotripsy has not been successful in completely treating the stone.
- **Kidney damage (bruising or infection).** Normally the lithotripsy shockwaves travel through the body without causing lasting damage. There may be some damage to the kidney by way of bruising or infection. This can be permanent and can affect your kidney.

## Will the stone be broken in 1 treatment?

If your kidney stone is large or very hard you may need more than 1 session to break it up completely. How quickly a stone breaks up will depend upon its size, position and what it is made of.

## What if I need to talk to someone before the appointment?

If you have any questions or concerns or cannot come to the appointment please contact the urology assessment centre specialist nurses for advice on 0116 258 4635.

## What if I need to talk to someone after the procedure?

If you have any questions immediately after the procedure, please speak to staff in the urology unit.

If you have any questions or problems once you have left the hospital, please contact 1 of the following:

- the urology unit on phone number 0116 258 8293
- the NHS Helpline on phone number 111
- or your GP surgery

## Any questions?

If you have any questions you can write them down. This is to remind you to ask when you come for your treatment.

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔  
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل  
જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।

Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email [equality@uhl-tr.nhs.uk](mailto:equality@uhl-tr.nhs.uk)