mobile medical

Your Kidney Stone Treatment

Information for Patients


Nau mai,
haere mai,
welcome
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lithotripsy service

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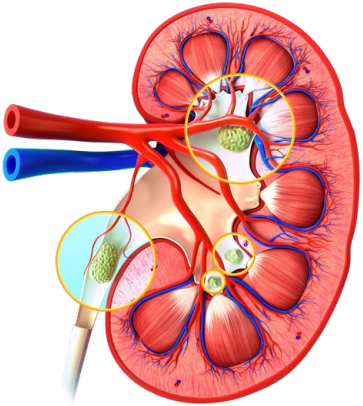
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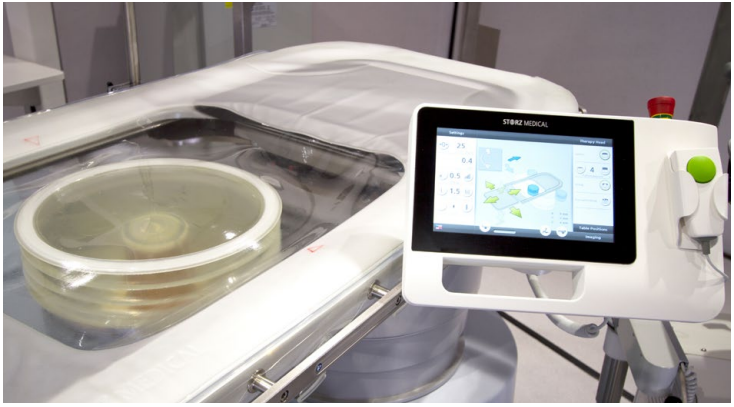
What are kidney stones?

A kidney stone is an accumulation of crystals. These crystals are formed in one or two ways – either from a decrease in urine volume and subsequent increase in urine concentration, or when urine contains an excess of certain substances. These substances can create small crystals which adhere to form kidney stones.

What is shock wave lithotripsy treatment?

Shock wave lithotripsy is a low-risk, non-invasive way of treating stones in the kidney or ureter.

Shock waves are focussed through the skin onto the kidney stone using x-ray or ultrasound images to target and pinpoint them. The waves break the stones into tiny pieces, allowing them to be passed out of the tinana (body) during urination.



Below: *The shock wave head. This is like a loud speaker generating pressure waves focussed on the stone.*

On treatment day

EATING AND DRINKING

You must arrive at the hospital with an empty puku (stomach) as specified in your general information pack. This will indicate how long before the treatment you must not eat or drink. **This could be several hours.**

ON ARRIVAL

You will arrive at the Day Stay recovery unit where nursing staff will admit you for treatment. You will be seen by the urologist and the anaesthetist either in the Day Stay unit, or when you come on board the lithotripsy unit. They will talk you through both your procedure and the use of anaesthesia. This is a good time to raise any concerns you may have. You will then be asked to sign the consent form enabling treatment to proceed.

THE LITHOTRIPSY TEAM

The treatment will be led by a urologist, supported by a local hospital anaesthetist, anaesthetic technicians, hospital nurse(s) and a medical imaging technologist (radiographer).

ON THE LITHOTRIPSY UNIT

Hospital staff will guide you onboard the unit to the waiting room when it's time for your procedure. If you would like a whānau (family) member to accompany you on the unit, initially they are welcome to do so.

From the waiting room you will see the treatment room, lithotripter and various items of equipment through the glass doors. Our radiographer will take you through to the treatment room.



Above: *The treatment room. Radiolographers are important assistants positioning patients and monitoring progress.*

on treatment day cont..

YOUR PROCEDURE

Firstly, the medical team will check that your previous x-rays are available, that everyone is clear where the stone is and make a final check to ensure you are fit to proceed.

The radiographer and urologist will position you on the table and line up the kidney stone using x-ray and/or ultrasound imaging.

Once you are sedated or anaesthetised the focussed shock wave treatment will begin and lasts around 45-60 minutes. During that time, regular images are taken of the stone to see if it is still correctly positioned and is fragmenting as expected.

After your treatment

RECOVERY

You will be taken from the lithotripsy unit to the hospital Day Stay recovery unit where nursing staff will monitor you following the procedure.

BEING DISCHARGED

You will be discharged once your urologist or the nurses decide you are fit to go home. If you feel groggy or māuiui (sick) due to the anaesthetic, you can remain onsite until you feel better.

PAPERWORK

You will be given a prescription for pain relief. Some patients may also be prescribed a course of preventative antibiotics. You will also be given a letter to take to your GP outlining your treatment details and may be given a form to arrange follow-up imaging of your kidney. This imaging will be completed in time for your follow-up urology clinic visit so that your treatment results can be assessed. (Sometimes further post-treatment imaging and further kidney stone treatment is required a few months later if some hard stone fragments remain and have not yet passed).

HEADING HOME

You must have someone available to drive you home as driving is not advised within 24 hours after anaesthesia or sedation. It is important to have an adult stay with you for 24 hours after the procedure.

TAKING CARE AFTER YOUR PROCEDURE

How quickly you recover will depend on the number, size and location of the stones. Most patients fully resume daily activities one or two days after treatment.

It is important to drink a sufficient amount of wai (water) for several days following treatment, as guided by your urologist/GP

The treated stone(s) may take up to several weeks to pass with your urine, and this may cause mild pain. You should contact your GP, urologist or local accident and emergency centre if the pain relief you have been prescribed is not relieving your discomfort.

THINGS TO WATCH OUT FOR

Your urologist will talk to you about what to expect after your treatment finishes. You may feel relieved when your treatment ends but you may still have post-procedure symptoms – generally speaking, these symptoms during recovery are mild. After your surgery, you may experience the following:

- Blood in the urine. This is usually an indication that you need to drink more fluids; by drinking more fluids will most likely cause the bleeding to settle down spontaneously
- Treatment can cause bruising to the kidney and pain to occur. If pain relief does not reduce discomfort, seek medical help
- Although infection is more likely to occur if you had an internal tubing (a stent) inserted pre-operatively to assist with kidney drainage, it can still develop occasionally. If you notice offensive-smelling urine, more frequent urination, a burning sensation when passing urine, nausea or fever, you should seek help from your GP, urologist or medical centre. A course of antibiotics will generally resolve this.

POST PROCEDURE FEEDBACK

Mobile Medical Technology would greatly appreciate receiving your feedback on the service you received and any complications you might have had following your experience on the mobile lithotripsy unit. We welcome our patients feedback to help us meet your needs and to further improve our service to you.

Our patients will be contacted via text message from Mobile Medical Technology; one will be sent two weeks following the procedure and another after six months. The text message will include a link that will take you through to the questions we require you to complete, this will only take a few minutes. We greatly value all our patients feedback.

Kidney stone prevention

SIGNS OF KIDNEY STONES

Pain is usually the first sign of a kidney stone. The pain usually begins when a stone moves into your urinary tract. This can be a sharp pain in your back, just below your ribs, it can spread around to the front of your tinana (body) and sometimes towards your groin.

Other symptoms include:

- blood in your urine
- nausea and vomiting
- shivers, sweating and fever
- cloudy or bad smelling urine if you have an infection
- 'gravel' in the urine, which is made of small uric acid stones
- an urgent need to pass urine.



WHAT ARE THE RISK FACTORS FOR KIDNEY STONES

In the majority of cases, the precise cause of a person's kidney stones remains unknown. However, the general factors that can increase the risk of developing kidney stones include:

- not drinking enough fluid, becoming dehydrated
- mineral imbalances in your tinana (body)
- some medicines used to treat other conditions such as diuretics and corticosteroids[1]
- if you have had a kidney stone, you have an increased chance of getting a second stone
- if you are male, kidney stones are more common in men
- urinary tract infections
- whānau (family) history of kidney stones.

SOME THINGS YOU CAN DO TO PREVENT KIDNEY STONES

- Maintain adequate hydration during the day
- Choose and prepare kai (foods) which are low in salt
- Some people may require more specific nutrition care. A dietitian experienced in kidney stone management can provide targeted nutrition therapy based on your type of stone, specific needs and stone risk factors.



Mobile Medical Technology – who we are

We have been operating a mobile lithotripsy service since 1995. In the last 25 years we have treated more than 15,200 patients.

In June 2021, we launched a brand new mobile lithotripsy unit. The new unit has been modernised with clinical upgrades, including a new anaesthetic machine and reticulated gas system, and a positive pressure vehicle ventilation system for a cleaner treating environment. The unit has a state-of-the-art Storz lithotripter MODULITH® SLX-F2 and is equipped with sophisticated x-ray and ultrasound imaging.



Right: *The procedure room inside the mobile lithotripsy unit. Take a virtual tour of the unit by visiting mobilemedical.co.nz/virtual-tour.*

Where we go

The unit travels on a regular circuit throughout Aotearoa New Zealand, providing treatment to public and private hospitals.

Sharing this mobile facility means treatment can be delivered cost-effectively, while also allowing patients to be treated in their own region by their own urologist.



EQuIP Accreditation

Mobile Medical Technology is proud to hold the EQuIP (Evaluation and Quality Improvement Programme) accreditation for the mobile lithotripsy unit.

The EQuIP national accreditation is set by industry leaders and involves a comprehensive assessment, organisation-wide survey and regular reviews of performance achievements and outcomes.

The nationwide accreditation reflects our commitment to consistent high standards of patient care. It also provides assurance that services offered by the mobile lithotripsy unit conforms to industry standards. Mobile Medical Technology strives for quality systems and processes and is pleased to obtain the successful accreditation.

To date more than 15,200 Aotearoa New Zealand patients have been treated on the lithotripsy unit.

The lithotripsy unit treats kidney stone patients at public and private hospitals nationwide.

COMMITMENT TO RESEARCH

The Mobile Medical Technology lithotripsy service is primarily aimed at providing urologists and their patients with access to non-invasive kidney stone treatment. Mobile Medical has also established the Urology Research Trust, which funds research into kidney disorders and their treatment in New Zealand.

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