

Ureteroscopic Stone Removal

Patient Information – Urology Service

What is a urinary tract stone?

Some of the body's waste products are removed in the urine. When urine becomes concentrated, crystals form. Most people simply excrete these crystals in their urine. In a small amount of people, the crystals stick together and form stones.

Urine normally has chemicals that stop stones forming. In some people with kidney stones, these chemicals do not work properly.

Urinary tract stones have nothing to do with gall bladder stones.

Ureteroscopic stone removal

This procedure called a ureteroscopy involves passing a small telescope up the ureter (tube for urine from the kidneys to the bladder) to remove the stone.

This procedure also includes cystoscopy (looking inside the bladder and x-ray screening).

What happens before my operation?

You have a stone that is visible on x-ray and that is suitable for removal by ureteroscopy. Your surgeon will discuss this treatment with you and go over other stone treatment options that are appropriate.

The surgery and outcomes will be explained to you by your surgeon before the surgery. When you feel comfortable that you understand what is to be done and have had all your questions answered, you will be asked to sign a consent form. This consent form should be signed by both yourself and your surgeon and forwarded to the hospital prior to your admission.

A blood test will need to be performed and a urine sample may need to be taken a few days prior to your surgery.

If you are over 60 years of age or have other medical conditions, you may also have an electrocardiogram (ECG) prior to surgery to check the health of your heart.

You will be advised when to stop eating and drinking before surgery. This includes water and chewing gum. You can swallow tablets with a small sip of water.

You should bring your own medications with you to hospital.

Please inform your surgeon if you are taking anti-coagulant (blood thinning) medication (e.g. warfarin, clopidogrel, dabigatran, rivaroxaban or ticagrelor), or any medication for diabetes. Your surgeon will advise when to stop and restart these medications. If you are taking aspirin, it is okay to continue taking this.

What happens on the day of my operation?

You will go to Christchurch Hospital on the day of your surgery. On arrival, the staff will guide you through what is required prior to your surgery.

You will have a clean hospital gown and protective stocking fitted.

An x-ray may be performed just before your surgery to check the position of your stone(s).

An IV (intravenous) line will be placed in a vein in your arm or hand that will be used to supply fluids or medications during the surgery.

You may be given a medication to prevent blood clots.

You will be encouraged to commence deep breathing and coughing exercises pre-operatively. This prevents any breathing complications or chest infection from occurring, following the surgery and anaesthetic.

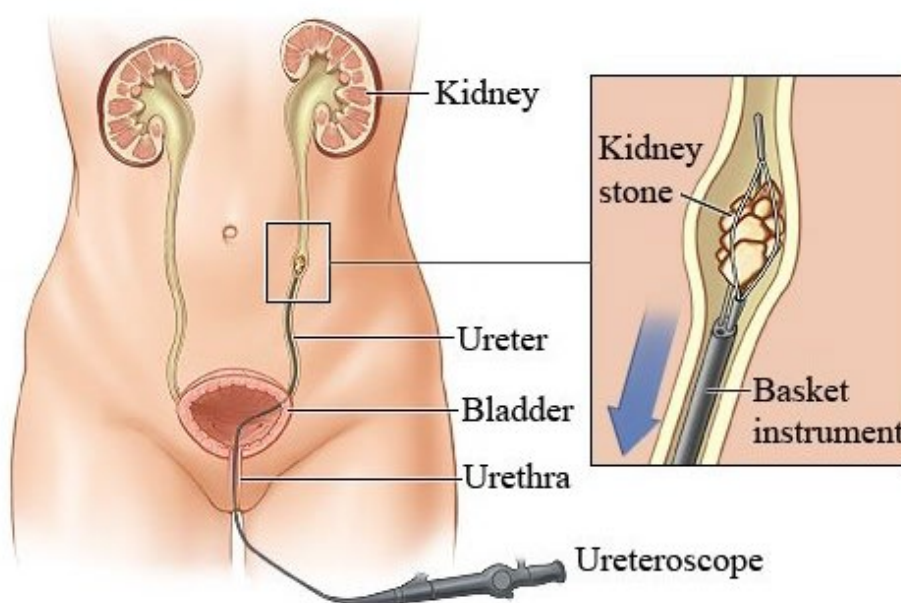
This operation is performed under general anaesthesia. The anaesthetist will see you before the surgery. A tube may be inserted into your throat to help you breathe while you are in a sleep-like state.

Just prior to your surgery, you may be given a pre-medication tablet to relax you. You may also be given an alpha blocker at the time of the stone treatment to relax the ureter and helps the passage of stone fragments.

What happens during my operation?

The surgeon passes a small instrument called a ureterscope through the urethra (tube from the bladder to remove the urine) and bladder into the ureter. This is done with the assistance of x-ray screening.

The surgeon then locates the stone and either removes it with a wire basket (see picture below) or shatters it with a laser. A stent (tube between the kidney and the bladder) may be left in the ureter for a few days to help the urine and any stone chips to flow out. You may also have a catheter (tube) in your bladder after the procedure.



What to expect after my operation?

You can expect to go home the same day as the operation. If you have a catheter in your bladder, this will be removed before you leave.

What to expect after discharge?

When you get home, you should drink twice as much as you would normally to flush your system through and minimise any bleeding. You should aim to keep your urine permanently colourless to minimise the risk of further stone formation.

You may experience pain in the kidney over the following 24 to 72 hours due to the swelling caused by insertion of the instrument or by the presence of a stent. Anti-inflammatory painkillers will help this pain, which normally settles after 72 hours.

If a stent is inserted, you will be informed before your discharge of when the stent needs to be removed. Stents can be removed by you if a string is attached or by cystoscopy at an outpatient's appointment.

Possible complications

All procedures have a potential for side effects. You should be reassured that, although these complications are well-recognised, most patients do not suffer any problems after a urological procedure.

Common (experienced by more than one in 10 patients)

- It is common to have blood in the urine
- It is common to have a raised temperature.

Occasional (experienced by between one in 10 and one in 50 patients)

- Occasionally more than one puncture site is required
- Not all stones may be removed
- Failure to gain access to the kidney resulting in the need for further surgery.

If you develop a fever, severe pain on passing urine, inability to pass urine, or worsening bleeding, please contact your GP immediately or visit the Emergency Department at your local hospital.

Small blood clots or stone fragments may travel from your kidney, resulting in renal colic. Renal colic may present as intense pain in the side of your abdomen, which may spread down into the lower abdomen or groin. In this event, please contact your GP immediately.

Follow-up

You will receive an appointment notification to attend the Urology Outpatient clinic. This is about six weeks after your surgery. A letter will also be sent to your own doctor about your operation.

Contact information

For more information about:

- Hospital and specialist services, go to www.healthnz.govt.nz/hospitals-services/hospitals/canterbury
- Your health and medication, go to www.healthnz.govt.nz/health-topics

For information on parking, how to get to the hospital, and visiting hours, please visit the [Christchurch Hospital](#) website.