
Extracorporeal Shockwave Lithotripsy (ESWL)

The Administration of shockwaves through the skin to fragment urinary tract stones

This patient information leaflet is drawn from the consensus panels of many worldwide urological societies, as a supplement to any advice that you may already have been given. Alternative treatments are outlined below and can be discussed in more detail with Dr Campbell.

What are the alternatives to this procedure?

Telescopic surgery, Percutaneous surgery, open surgery, observation to allow spontaneous passage.

Before the procedure

Please be sure to inform Dr Campbell in advance of your procedure if you have any of the following:

- ~ An artificial heart valve
- ~ A coronary artery stent
- ~ A heart pacemaker or defibrillator
- ~ An artificial blood vessel graft
- ~ A neurosurgical shunt
- ~ Any other implanted foreign body
- ~ Blood thinning medications, particularly
 - ~ Asasantin
 - ~ Aspirin
 - ~ Fish oil
 - ~ Iscover
 - ~ Persantin
 - ~ Plavix
 - ~ Warfarin
- ~ Angina
- ~ Hypertension
- ~ Diabetes
- ~ Recent heart attack

You will usually be admitted on the day of surgery. You may be asked to attend a pre-admission clinic 5–10 days before the procedure to assess your general fitness and to perform some baseline investigations.

If you are taking warfarin, Clopidogrel, iscover, asaantin, or persantin on a regular basis, you must discuss this with Dr Campbell because these drugs can cause increased bleeding after surgery. There may be a balance of risk where stopping them will reduce the chances of bleeding but this can result in increased clotting, which may also carry a risk to your health. This will, therefore, need careful discussion with regard to risks and benefits.

You will be asked not to eat or drink for 6 hours before surgery. Immediately before the operation, you may be given a pre-medication by the anaesthetist which will make you dry-mouthed and pleasantly sleepy.

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On arrival, an X-ray may be taken to confirm the presence of your stone(s).

Where do I go for my procedure?

The admissions section of the hospital at the appointed time, on the appointed day. The admissions section of the particular hospital will give you instructions well in advance of the operation.

If no contact has been made telephone Dr Campbell's secretary on (07) 3367 1608, and the problem will be addressed.

Do I need to do anything special before my procedure?

You will need to not drink or eat anything for 6 hours prior to the procedure.

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During the procedure

A full general anaesthetic (where you will be asleep throughout the procedure) will be used. Your anaesthetist will explain this type of anaesthetic to you.

In this procedure shockwaves are administered via ultrasound technology through the skin to fragment urinary tract stones into small enough fragments to pass naturally. The procedure involves either x-ray or ultrasound scanning to localise the stone(s).

The operation takes approximately 60 minutes to complete depending on the size of your stone(s).

The treatment will be monitored by Dr Campbell, a specialized radiographer and other members of the urological team.

Immediately after the procedure

Immediately after the treatment, you may feel quite drowsy. You will be taken back to the recovery area where the specialist nurse will perform routine post-operative checks. You will be offered food and a hot beverage prior to departure.

As soon as you have recovered from the treatment, you will be able to go home but you must bring someone with you to escort you home; you should not attempt to drive yourself because of the effects of the sedation.

Painkillers will be given to you before your discharge.

The average hospital stay is less than 1 day.

Are there any side-effects?

Most procedures have a potential for side-effects and these are outlined below. Please use the check circles to tick off individual items when you are happy that they have been discussed to your satisfaction:

Common (greater than 1 in 10)

- ~ Bleeding on passing urine for a short period after the procedure
- ~ Need for repeated ESWL treatments (15–20%)
- ~ Failure to fragment very hard stone(s) requiring an alternative treatment (less than approximately 14%)

Occasional (between 1 in 10 & 1 in 50)

- ~ Pain in the kidney as small fragments of stone pass after treatment (5%)
- ~ Stone fragments occasionally get stuck in the tube between the kidney and the bladder requiring hospital attendance and, occasionally, surgery to remove the stone fragments
- ~ Bruising or blistering of the skin in the loin or on the front of the abdomen
- ~ Urinary tract infection due to bacteria released from the stone during fragmentation, requiring antibiotic treatment (1%)

Rare (less than 1 in 50)

- ~ Kidney damage (bruising) or infection needing further treatment
- ~ Severe infection requiring intravenous antibiotics (less than 1%) and sometimes drainage of the kidney by a small drain placed through the back into the kidney

General side-effects of any procedure

Any operative procedure that involves regional (spinal) or general anaesthetic can have side-effects. These are explained in the leaflet on anaesthesia.

Hospital-acquired infection

- ~ Colonisation with MRSA (0.9%, 1 in 110)
- ~ Clostridium difficile bowel infection (0.2%; 1 in 500)
- ~ MRSA bloodstream infection (0.08%; 1 in 1,250)

(These rates may be greater in high-risk patients e.g. with long-term drainage tubes, after removal of the bladder for cancer, after previous infections, after prolonged hospitalisation or after multiple admissions)

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What should I expect when I get home?

When you get home, you should drink twice as much fluid as you would normally to flush your system through and minimise any bleeding or infection. Painkillers should be taken as necessary.

Some blood in the urine is normal for 48–72 hours. If you develop bruising/blistering in your loin or on your abdomen, simple skin creams will usually ease any discomfort and the bruising normally resolves within 7 days.

When you leave hospital, a discharge summary of your admission will be sent to your family doctor. This holds important information about your inpatient stay and your operation.

What else should I look out for?

If you develop a fever, severe pain on passing urine, inability to pass urine or worsening bleeding, you should contact Dr Campbell immediately. Small blood clots or stone fragments may also pass down the ureter from the kidney, resulting in renal colic; in this event, you should also contact Dr Campbell immediately.

For after hours emergencies Dr Campbell can be contacted on (07) 3367 1608.

The Wesley Hospital Emergency Centre (07) 3232 7333, and The Greenslopes Private Hospital Emergency Centre (07) 3394 7111 are other resources that are also available.

Are there any other specific points?

You will be informed before your discharge of any follow-up arrangements. This will usually involve a follow-up clinic appointment with a further X-ray prior to arrival.

If you have a stent in place, you may be given an appointment for removal of the stent in the Day Surgery Unit under local anaesthetic. If this is appropriate.

Is there any research being carried out in this field?

There is no specific research in this area at the moment but all operative procedures performed are subject to rigorous audit at monthly Audit & Clinical Governance meetings.

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Who can I contact for more help or information?

Dr Peter Campbell

Suite 9, level 9, Evan Thomson Building, The Wesley Hospital,
Chasely St,
Auchenflower, QLD 4066
(07) 3367 1608,
www.campbellurology.com.au

The Wesley Hospital, Urology Ward

451 Coronation Drive,
Auchenflower, QLD 4066
(07) 3232 7168
www.uhc.com.au/wesley

The Wesley Emergency Centre

451 coronation Drive,
Auchenflower, QLD 4066
(07) 3232 7333

Greenslopes Private Hospital, Continence Advisor

Newdgate St,
Greenslopes, QLD 4120
(07) 3394 7978
www.greenslopesprivate.com.au

Greenslopes Private Hospital Urology Ward

Newdgate St,
Greenslopes, QLD 4120
(07) 3394 7261
www.greenslopesprivate.com.au

Greenslopes Private Hospital Emergency Centre

Newdgate St,
Greenslopes, QLD 4120
(07) 3394 6777
www.greenslopesprivate.com.au

**The Queen Elizabeth II Jubilee Hospital,
Urodynamics Department**

Kessels Rd,
Coopers plains, QLD 4108
(07) 3275 6346

American Urological Association Foundation

1000 Corporate Blvd, Suite 410,
Linthicum, MD 21090
1800 828 7866
www.UrologyHealth.org

Thank you for taking the trouble to read this information sheet. If you are satisfied with the explanation of the test, please sign below and this leaflet will be filed in your chart.

If you wish to retain a copy for you own records, one will be provided.

I have read this information sheet and I accept the information it provides.

Signature

Date
