



Extracorporeal Shock Wave Lithotripsy (ESWL), with or without ureteral stent

What is ESWL?

It is an operation that uses shock waves focused through your body, onto a urinary tract stone, in an attempt to break it up into many small fragments.

This operation is performed in a hospital or surgery center under anesthesia, and the patient will go home the same day. There are no external incisions.

Alternatives to this procedure include watchful waiting, medical therapies, as well as other stone surgeries, discussed in the office if relevant.

Anticipated benefits include ultimate eradication of the urinary tract stones, though sometimes, for a number of reasons, complete treatment of the stone does not always occur, or is not always feasible, and may require additional surgery.

Ureteral stent. Sometimes, a stent is placed after ESWL in order to promote the passage of residual small stone fragments and ultimately protect the kidney in the immediate post-operative period. These stents are temporary and must be removed, typically in less than 2 weeks but sometimes longer. These must be removed in order to prevent stone encrustation, infection, or even kidney damage.

What are the risks and typical side effects?

Blood in the urine. There likely will be some bleeding following this surgery, typically into the urine. This may persist to some degree for up to several weeks, and is often fairly minimal. You should hydrate aggressively if bleeding becomes heavy. Rarely, this

surgery results in a significant hematoma around the kidney, requiring treatment. Bruising at the skin overlying the treatment site is common.

Infection. A preventative antibiotic is given prior to the surgery at the hospital, and urinary tract infection rates are usually less than 5%.

Pain and irritation. On occasion, stone fragments may be a bit large, and cause pain as they make their way out of the urinary tract. If a stent was placed, urinary bother such as frequency, urgency, incontinence, bladder or flank discomfort with urination may persist while the stent remains in place.

Anesthetic and other risks. Significant events such as heart attack, stroke, even death may occur as a result of any anesthetic, though such risks are extraordinarily low, especially if properly evaluated by your primary physician before surgery if indicated. Should you develop any pain or swelling of your lower legs and ankles following surgery, notify your doctor's office immediately, as this may indicate a blood clot in your leg (deep vein thrombosis or "DVT"). If a blood clot moves to the lung this could be immediately life-threatening, and usually presents with shortness of breath and/or painful breathing. Risks of diabetes or hypertension are debatable in the literature and would be extremely rare. Some stones do not break up entirely, or at all, and thus require repeat or alternative surgery.

What are preparations for surgery?

Please have nothing to eat or drink after midnight prior to your surgery. If you take blood thinners, your surgeon will discuss the cessation of this medication prior to your surgery. We ask that you clean your bowels prior, to allow best visualization of the stone at surgery.

What happens after the surgery?

Patients often go home the same day following surgery, and you will require someone to drive you from the hospital.

Resuming activities

You can go back to work when you feel able, usually within several days. You may drive when you feel able and are not under the influence of any medications.

Follow-up

Your doctor will arrange a follow-up visit, often to review a repeat x-ray and check on your progress.