

# **PATIENT INFORMATION GUIDE**

## **Lithotripsy Treatment**

### **What are Kidney Stones?**

Kidney Stones are crystal-like masses of salts, such as calcium oxalate, that form when the crystals precipitate in the urine inside the kidney. Stones can vary in size from a grain of sand to more than an inch in diameter. They build up gradually, and can be found anywhere in the urinary tract. A number of factors are thought to influence the development of kidney stones. Experts can only suggest the causes, which may include age, diet, climate, infection and metabolic disorders.

When stones grow too large to pass out of the body naturally, they can obstruct normal urine flow and may cause sudden and severe pain. Other symptoms include bloody urine, burning during urination, infection, nausea and vomiting. Permanent relief can only be gained by removal of the stones.

### **What is Extracorporeal Shockwave Lithotripsy?**

“Lithotripsy,” from the Greek meaning “stone crushing,” is a dramatic application of technology for treating stones in the kidneys, ureters and bladder. The term “extracorporeal” refers to the fact that the treatment is non-invasive, using shockwaves directed from outside the body. The stone to be treated is targeted with the use of x-ray or ultrasound. Multiple high-energy pressure waves are then focused on the stone until it breaks into tiny particles, which can be passed naturally from the urinary system.



### **What are the Benefits of Extracorporeal Shockwave Lithotripsy?**

A major benefit of extracorporeal shockwave lithotripsy is that it is a non-invasive procedure. Lithotripsy is usually performed on an outpatient basis with reduced treatment and recovery times. Historically, occurrence of complications is very low.

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### **What Happens Before the Lithotripsy Procedure?**

Minimal laboratory tests are required prior to your procedure. The tests will vary; however, depending upon the type of anesthesia, if any, you will receive during treatment, your age, any medical conditions you may have or any medications you take. Some medications must be discontinued prior to treatment.

Follow your physician's specific instructions regarding eating or drinking prior to your treatment. You will be informed by your physician about the procedure to be performed and you will be asked to sign an informed consent for this procedure.

### **What Happens During the Lithotripsy Procedure?**

Your treatment will typically proceed in the following manner:

- You will be comfortably positioned on the patient treatment table.
- An x-ray will be taken to determine the precise location of the stone(s).
- The shockwave applicator will be placed against the side of your body. The applicator will direct a series of wave impulses through your body, fragmenting the stones, until they are pulverized.
- While being treated with lithotripsy, your anesthesiologist or nurse will care for you to make sure that you are comfortable and safe during the treatment. The treatment will last 30 - 45 minutes.
- Mild soreness may occur at the treatment site after lithotripsy. In some instances, you may never know that you had lithotripsy.
- Your physician will follow the fragmentation process via video x-ray equipment and carefully monitor the entire procedure.

### **What Happens After the Procedure?**

- After the procedure, you will remain in the recovery area until the medication given during treatment wears off.
- You may have soreness in the back or flank area. This usually disappears after several days. The treatment can cause blotches or bruises on the back where the pressure wave enters the skin. These marks usually cause only minimal discomfort and should disappear in a short time.
- You will most likely have some pain after treatment, as the pulverized fragments of stone are passed down the tube from the kidney to the urinary bladder. Pain medication prescribed by your doctor should help with this discomfort.
- A small percentage of patients may have severe pain and/or obstruction from the failure of the stone fragments to pass.
- Your urine may have a red tinge for several days after treatment, but blood loss is usually minimal.
- Stone fragments should begin to pass within 24 hours of treatment, although a delayed passage is not unusual.
- If your stone is greater than one inch in diameter or if you have multiple stones that have an aggregate diameter greater than one inch, you may require more than one treatment.
- You will receive specific written aftercare instructions when you are ready to go home.
- Because you have received medications during your treatment, you must have someone drive you home.