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Mechanical Percussion, Diuresis, and Inversion (PDI) to assist passage of lower pole renal calculi after Extra-corporeal Shock Wave Lithotripsy

Shock wave lithotripsy will fragment stones into smaller pieces. These crumbs and sand particles can then pass through the ureters into the bladder, and then can be voided out with the act of urination.

Lower pole stones are more difficult to pass since the lower pole of the kidney is anatomically situated *below* the outlet of the kidney into the ureter. Since the stone fragments are heavier than urine, they tend to sit in the lower pole of the kidney which is referred to as the "anatomical waste basket of the kidney."

Certain maneuvers can help the passage of these lower pole fragments. My recommendation is as follows:

1. Drink about two eight-ounce glasses of water 30 minutes before the PDI.
2. Lie on your abdomen (prone) on a couch or bed, allowing your head and shoulders to be on the floor while your torso and legs remain on the couch or bed. This position flips the kidney over so the lower pole is no longer in a dependent position.
3. Have someone percuss over the flank. This involves rhythmic tapping (as if playing drums) to stir up the stone fragments. This should be continued for about ten minutes.
4. At the conclusion of the session, urinate into the strainer.
5. Repeat this daily until your post-operative film is obtained.

PDI is a valuable adjunct in assisting passage of lower pole renal stones. It is well worth your effort!