

Kidney Biopsy

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What is a kidney biopsy?

Kidney biopsies can be done in one of two ways. In an open biopsy an incision is made, and a surgeon removes a piece of kidney. This approach requires general anesthesia and a breathing tube. Usually a closed or needle procedure is performed. Younger children will usually require general anesthesia for this type of biopsy, but older children can be heavily sedated but breathing on their own when a special needle

is placed into the bottom portion of one kidney with guidance from ultrasound. The needle removes a piece of kidney about one-half inch long and slightly smaller across than a pencil lead. Usually 3 or 4 pieces of this size are needed to make a diagnosis. The types of kidney problems diagnosed with a biopsy affect both kidneys, so only one kidney must be tested.

Why is a kidney biopsy necessary?

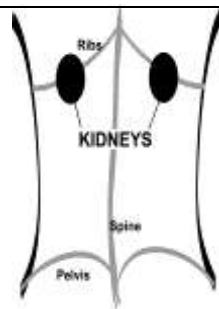
Some kidney problems can be diagnosed by other tests, but many forms of kidney disease can only be seen in samples from the kidney. Biopsy may be needed to determine the best treatment for a

disease as well. Before a biopsy, the reasons for it should be explained. The possible outcomes of not having the biopsy should be discussed as well.

What will happen during the biopsy?

Patients will have blood tests done no more than 3 days before a kidney biopsy. These tests will include clotting studies and measurement of platelets, the cells which help blood clot.

Patients having biopsies should have nothing to eat or drink for several hours before the procedure. After being admitted to the procedure area, the patient will be sedated through an IV or with gas by a mask. Once asleep, the patient will be placed face-down. Ultrasound will be used to mark the bottom part of one kidney, usually the left. The



area around this spot will be cleaned. While the ultrasound watches, a special needle will be placed into the kidney. Once done, ultrasound will be used to look for bleeding around the kidney. A bandage will be placed over the area. The patient will be rolled face-up and allowed to wake up.

Once awake, biopsy patients can eat and drink their usual diet and take medications.

Acetaminophen (Tylenol) is all that is necessary for pain control. Most patients will be able to go home later that day or the next morning.

What happens after kidney biopsy?

Any time a needle is placed into the body, there is a risk of infection and damaging something besides the target. Kidney biopsy is done with aseptic technique which virtually eliminates infection. Continuous ultrasound imaging makes damage to other organs unlikely.

Bleeding is the major risk. Even though blood clotting is checked before this procedure, there may still be bleeding. Bleeding is considered a problem if (1) blood collects near the kidney on ultrasound after the biopsy; (2) blood is seen in the urine with the naked eye on 2 or more voids after biopsy; or (3) the blood count falls after the biopsy. Even if problem bleeding occurs, it usually stops with bedrest. Rarely, bleeding may be so hard or last so long that a blood transfusion or surgical procedure will be needed. The risk of this happening is <1%.

Most biopsy patients go home a day or less after the procedure. The spot in the kidney where the biopsy was taken is weak for about 2 weeks and some activity may be restricted. In general, patients should avoid heavy lifting and contact activities. For most children and adolescents, the heaviest thing they carry is their backpack. Extra time between classes or help in and out of school may be needed. Contact activities include anything that may strike or jiggle the kidney. Football, wrestling, skateboarding, rollerskating, rollerblading, ice skating, weight lifting, and horseback riding are generally off-limits. Other activities may need to be restricted as well.

After 10 days to 2 weeks, the "scab" that has formed within the kidney will be shed, and there may be some blood visible in the urine. Do not panic if this happens. If there is blood on more than two voids, call the doctor for a blood test.