Renal biopsy – Patient Information

St George Hospital, Kogarah

What is a renal biopsy?

This is a special test to diagnose problems with your kidneys. In this procedure, tissue is obtained for testing from the kidney using a biopsy needle under local anesthesia. There are a number of reasons why your doctor may want you to have this test, including unexplained kidney failure or the presence of blood or protein in your urine. A biopsy is often required to make a precise diagnosis, which cannot be made with blood and urine tests and imaging such as CT scans or ultrasound.

Before the biopsy

Usually there is no need to fast before this procedure. We advise that you have a light breakfast on the morning of the procedure. The procedure is usually performed at the Day Medical Infusion centre at level 3E in the Kensington street building of the St George public hospital. Occasionally, in the case of the procedure being performed in the Radiology department, you may be asked to fast from the night before. If you are on insulin and have to fast overnight, some changes in the dose of insulin may be required and your doctor will discuss about this at the time of booking the biopsy. If you are taking medications such as aspirin, dipyridamole, clopidogrel, fish oil, anti-inflammatory pain medication or warfarin, these will need to be withheld a few days prior to the biopsy. Please discuss this with your doctor. You will be requested to have some blood tests before the biopsy to ensure that there are no major problems with going ahead with the procedure. Please bring all your medications with you on the day of the procedure.

During the biopsy

The test is usually done at the bedside and takes approximately 30 minutes. You will be lying flat on your stomach for this time (in the case of a native kidney biopsy). The procedure begins with an ultrasound of your kidneys. The skin is then cleaned and local anesthetic injected before a small incision is made. The local anesthetic numbs the skin and tract to minimize pain, though you may still feel a sense of pressure or 'pushing' in your back as the procedure is undertaken. A biopsy needle is then inserted into one of your kidneys to obtain tissue samples, with the assistance of ultrasound imaging. This procedure is typically repeated for a total of 2-4 needle passes to ensure enough kidney tissue is obtained for testing. Only one of your kidneys will be biopsied, usually the left (though the right may be selected based on individual anatomy or prior surgery). You will be awake for the procedure though light sedation may be administered at your doctor's discretion, after discussing with you. No stitches are required as the incision is very small.

In the case of a transplant kidney biopsy, you will be lying on your back and the rest of the biopsy procedure is similar to what is described above

After the biopsy

After the procedure you will be required to lie flat on your back for at least 4 hours. We strongly recommend not sitting up or getting out of bed during this time. After that you may sit up and gradually mobilize. This period of strict rest is intended to minimize any risk of bleeding. You will also have your blood pressure and pulse rate checked frequently following the biopsy. If you are well with no complications, as is often is the case, you may be able to go home by late afternoon. While no pain medications are needed after the biopsy, we may occasionally advice using paracetamol (Panadol) for mild pain once the effect of the local anesthetic wears off.

What are the risks?

With any procedure there are potential complications. The overall risk of complications after renal biopsy is 6.5% as observed from our data. The complications include bleeding into the urine or around the kidney, pain and allergic reactions. Fortunately, most complications settle with rest and observation. For bleeding complications, less than three in 100 patients will require a blood transfusion or an angiogram to stop the bleeding. Loss of a kidney or death as a result of renal biopsy are very rare complications (0.03 to 0.06%) as described in the medical literature.

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After discharge

Do not undertake heavy lifting for 7 days or any heavy physical exertion for 14 days. Avoid contact sports for 4 weeks and do not restart aspirin or other blood thinners for at least 3 days (or as advised by your doctor). Your doctor will advise you at the time of discharge about when you can safely restart these medications. If you develop any worrisome symptoms after you go home, such as severe pain, bleeding into the urine, light headedness or fever then you should contact your kidney specialist or the renal department (02 91133622) if it is during office hours. If these symptoms develop after hours you should present to the Emergency Department of the St George Hospital. Please be patient if things don't run on time. St George Hospital is a busy place and sometimes delays occur due to high workload or emergencies.