

# Renal (kidney) biopsy in the interventional radiology department

**This leaflet provides information about having a renal (kidney) biopsy including the benefits, risks and any alternatives. If you have any questions or concerns, please speak to a doctor or nurse caring for you.**

## What is a renal biopsy?

A renal biopsy (also called a kidney biopsy) is a medical test where a small sample of tissue is removed from your kidney with a needle, so that it can be examined under a microscope. It is done to diagnose and monitor certain kidney conditions, such as inflammation of the kidney (which can be due to various causes) and cancer of the kidney. It is also used to monitor kidney transplants.

## Who will be performing the biopsy?

A specially trained doctor called an interventional radiologist will perform the biopsy. The radiologist will use an ultrasound or CT (computed tomography) scanning machine to place the biopsy needle accurately into the kidney.

## What are the benefits of having a renal biopsy?

Having a renal biopsy will help your doctor to make a correct diagnosis so that you can receive suitable treatment.

## What are the risks of having a renal biopsy?

Complications of renal biopsy are rare. The most important is bleeding, and you are monitored after the biopsy to detect this. If there are signs that you may be bleeding a lot, you may need to go back to the radiology department for an ultrasound scan to see if there is a clot outside the kidney. In most cases, bleeding after a renal biopsy is minor and needs no special treatment.

If there is an unexpected amount of bleeding, you may need a blood transfusion, and in very rare cases a further special x-ray test, called an angiogram, is done to find the bleeding point. The bleeding can sometimes be stopped during the angiogram. Very rarely an operation to remove the kidney may be needed.

Visible blood can appear in the urine (haematuria) in 3–5% of cases. If you have persistent or bright red bleeding following your biopsy, you should go to your nearest Emergency Department immediately.

## Are there any alternatives?

A biopsy is usually performed when other tests have failed to tell us what is wrong. Without a biopsy, your doctor may not be able to advise on the best treatment for you. Your doctor should be able to tell you what changes in treatment could be made for your kidneys if you decide not to have a biopsy taken first.

## Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

## How can I prepare for the procedure?

- You will need to have a blood test about one week before the renal biopsy to check that your blood clotting is normal. This test is necessary as there is increased risk of bleeding after a procedure if your clotting tests are abnormal. Your doctor or clinical nurse specialist will tell you about this test and how to arrange it when they recommend the biopsy.
- Please let us know if you are taking any **medicines that thin your blood**, such as antiplatelet medicines (for example aspirin or clopidogrel) or anticoagulant medicines (for examples warfarin or rivaroxaban), as you may need to stop them temporarily before the procedure. Call the interventional radiology department for advice as soon as you get your appointment letter. Call **020 7188 5576** (for Guy's Hospital) or **020 7188 5479** (for St Thomas' Hospital).
- Let your doctor know about any medicines you are taking. Please let us know if you are taking any regular medicines (including anything you buy yourself over the counter or any herbal or homeopathic medicines) and if you have any allergies to any medicines.
- Take your other medicines as normal, unless your doctor or nurse tells you not to.
- You will usually be admitted on the morning of the biopsy, where a nurse or doctor will check that your medical condition has not changed since your last visit.
- Do not eat or drink anything (except water) for six hours before the procedure. You can drink water up to two hours before the procedure.

## What happens before the renal biopsy?

A small plastic tube (cannula) will be put into your arm. This means that we can give you a sedative during the procedure, if you need it.

You will be given the opportunity to ask the radiologist any questions you have. You will need to sign a consent form before the biopsy can take place.

## What happens during the renal biopsy?

All renal biopsies are done by a radiologist in the interventional radiology department using either an ultrasound machine or CT (computed tomography) scanner to view the kidney during the biopsy.

You will be asked to lie on your tummy. The skin on your back, just below the ribs, will be cleaned with an antiseptic solution and draped with sterile towels.

Local anaesthetic is then injected around the area from where the biopsy will be taken. This numbs the area, so you should not feel any pain. More local anaesthetic is then put into the muscles of the back. When the skin and tissues are completely numb, the doctor will use the ultrasound scanner to find the kidney and take the biopsy with a needle. You are usually asked to take a breath in, then hold it for a few seconds while the biopsy is taken. This is because the kidneys move slightly when you breathe in and out. You may need to repeat this a few times to make sure an adequate sample is obtained. You should not be aware of any pain but may feel a little pressure when the biopsy needle is used.

If it is a biopsy of a transplant kidney, you will be asked to lie on your back, and the local anaesthetic will be put into the skin and the tummy muscles that sit over the transplant. The biopsy will be taken in the same way.

Once the procedure is finished, the sample is sent to the laboratory for microscopic examination. The wound site is cleaned and a dressing put over it.

## Will I feel any pain?

The examination should be pain-free, though occasionally when a biopsy is being taken it may hurt. The position in which you will be asked to lie during the biopsy may be uncomfortable for a short period. If you experience any pain during the procedure, please tell the nurse and pain relief can be given to you.

You may have some pain or discomfort after the biopsy. You can take paracetamol tablets for the first day, following the instructions on the packet.

## What happens after the renal biopsy?

After the biopsy you will stay in the recovery room where you will rest in bed for a few hours and be kept under regular observation.

You will be able to eat and will be encouraged to drink plenty of fluids. We will provide light refreshment, such as tea or coffee, a sandwich and some fruit. If you have any special dietary requirements, you may wish to bring some food and drink with you. Unless you have been told not to, you should drink plenty of fluids after the biopsy.

The nurse will tell you when you can get up and move around. You will usually be allowed to go home later that day or on the morning after the biopsy.

## When will I receive the results?

The results will take about seven to 10 working days. You will need to make an appointment to see the doctor that referred you in order to pick up your results. If your referring doctor is based at Guy's and St Thomas', you can make an appointment before you leave the hospital.

## If I am a day patient, what do I need to do after I go home?

Patients who are otherwise healthy with good kidney function may be able to go home on the same day. You must pass urine and show no signs of bleeding before you are discharged.

If you do go home on the same day:

- Keep drinking lots of fluids. You need to drink two liters (three and a half pints) of liquid in the 24 hours after the biopsy.
- Rest for the remainder of the day and possibly for the next day, depending on your recovery. You can then resume your normal activities.
- Have someone to stay with you overnight.
- Eat normally.
- Take your usual pain relief, as prescribed, if you have any pain.
- Continue with your normal medication as prescribed.
- Keep a regular check on the biopsy site.
- Shower no sooner than 24 hours after the procedure, and bath no sooner than 48 hours after the procedure.

## What if I have a problem at home?

Please contact the interventional radiology department on **020 7188 5576** at Guy's or **020 7188 5479** at St Thomas', Monday to Friday, 9am to 5pm, if you need advice.

You may notice some bruising at the puncture site. Bleeding or swelling is rare, but if it does happen, lie down and **apply pressure** directly on the site for 10 minutes. If the bleeding or swelling continues after 10 minutes **go to your nearest Emergency Department**.

### Contact us

If you have any questions or concerns, please contact the interventional radiology department on **020 7188 5576** at Guy's or **020 7188 5479** at St Thomas', Monday to Friday, 9am to 5pm.

If you feel you need urgent medical attention or are worried about anything outside of our normal opening hours, please contact your GP, NHS Direct/111 or go to your nearest Emergency Department.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

### Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

**t:** 020 7188 8748 9am to 5pm, Monday to Friday

### Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

**t:** 020 7188 8801 (PALS) **e:** [pals@gstt.nhs.uk](mailto:pals@gstt.nhs.uk)

**t:** 020 7188 3514 (complaints) **e:** [complaints2@gstt.nhs.uk](mailto:complaints2@gstt.nhs.uk)

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