

# Information for patients and carers

## Kidney Biopsy

A decorative graphic at the bottom of the page consisting of three overlapping, wavy bands of blue. The top band is a light blue, the middle is a medium blue, and the bottom is a dark blue.

## What is a kidney biopsy?

A kidney biopsy is a procedure that involves the removal of small samples of the kidney to look at under a microscope. The microscope makes it possible to see the samples in greater detail in order to retrieve a diagnosis.

## Why is a kidney biopsy performed?

Some kidney problems can often be diagnosed by having blood or urine tests, ultrasound or CT scans. But in some patients with chronic kidney disease a correct diagnosis can only be made with a kidney biopsy. The biopsy may also show how quickly a disease is advancing. This will help to discover what is causing the problem with your kidneys and then help your consultant to decide on the best treatment for you.

A biopsy can also help explain why a transplanted kidney is not working properly.

The reason you need a biopsy will have been discussed with you in clinic by your consultant. In some cases it may be an urgent test done during a hospital stay.

## Preparation for the biopsy

Before having the biopsy, you should know why it is necessary, the benefits, and any risks involved. You will be asked to sign a consent form. Ensure you understand everything that has been discussed with you before you sign the consent form. You may want to write down a list of questions to ask the doctor about the biopsy.

You should take all your usual tablets that you would normally take, except for anti-coagulation medications and bring your usual medications or a list of what you take with you to hospital. If you are taking any anti-coagulant medications such as ASPIRIN, CLOPIDOGREL, TICAGRELOR or DIPYRIDAMOLE you should stop taking these drugs one week before your biopsy. If you are taking WARFARIN, APIXABAN (Eliquis), DABIGATRAN (Pradexa) or

RIVAROXABAN (Xarelto) or any blood thinning injections then your consultant will give you specific instructions about stopping these medications before your admission. If you have been started on any of these medications since your last appointment with your renal consultant, please contact your renal consultant's secretary to inform them of this.

If you have previously had severe bleeding after surgery or dental work in the past, please make sure that you tell the doctors about this before the biopsy.

It is important that you realise that some medicines are not recommended for patients who have a problem with their kidneys. These include painkillers such as Ibuprofen and Diclofenac, which are widely used and available without prescription. If you take any of these please discuss this with your renal consultant.

Precautions are taken to reduce the risk of complications by having blood tests taken prior to the biopsy. This includes checking that your blood clotting and full blood count levels are stable and there is no infection present. The doctor will also need to ensure your blood pressure is controlled. Ensure you take the medications prescribed to you by your doctor.

## What happens during the kidney biopsy?

You will attend the treatment room on ward 25 or the day case unit at Royal Preston Hospital and be seen by the nurses and a doctor there.

The doctor will check the consent form has been signed prior to the procedure, your blood tests have been done and that you are well enough for the biopsy to go ahead. You will have your observations checked to ensure your blood pressure is stable. You may also need to have a cannula inserted as a precaution.

When the doctor is ready to perform the biopsy you will be asked to lie flat on your abdomen on a bed or trolley with pillows positioned underneath your abdomen so that the doctor can see your kidneys

better with the ultrasound machine. You will also be given pillows positioned under your head so you are as comfortable as possible. The doctor will use an ultrasound machine to locate the exact position of the kidney they are going to take the biopsy from. An ultrasound scan enables the painless use of sound waves to create images of organs and structures inside your body. Lubricating jelly will be placed on the skin across the middle and sides of your back where your kidneys are located.

Once the position of the kidney has been identified, the skin will be cleaned and local anaesthetic injection is used to numb the area which may cause a slight sting when given.

If the biopsy is for a transplanted kidney, you will be asked to lie on your back and the doctor will locate the correct position of the kidney using the ultrasound machine and the local anaesthetic will be put into the skin where the transplant is positioned.

A very small piece of kidney tissue will then be taken using an automatic device with a biopsy needle attached to it that punctures the skin. The automatic device will make a loud clicking noise which is perfectly normal. Due to the local anaesthetic, you should not feel any pain when the biopsy needle is inserted; however you may feel some pressure. The whole procedure usually takes around 30 minutes.

There may be several people in the room alongside the doctor. A laboratory technician will be present to ensure that the biopsy sample is adequate by looking at it using a microscope before taking it to the laboratory for analysis. There will also be a nurse there to reassure you and to assist the doctor. There may also be a medical student or student nurse present.

## What happens after the biopsy?

Afterwards you will be asked to rest in bed for at least 6 hours. Initially you will need to be lying mostly flat on your back with pillows under your head unless you are physically unable to do so. You will gradually be able to sit upright after 4 hours.

In a transplanted kidney, you may be asked to lie on your side with a pillow supporting you where the biopsy has been taken.

It is routine practice to check your observations including your pulse and blood pressure frequently after the procedure. Your biopsy site will be monitored for any swelling or bleeding around the area. You may have some discomfort from the biopsy and if this is the case ask a member of nursing staff and mild pain relief can be prescribed and offered.

The nurses will also need to monitor all the urine you pass to check for any blood present which may indicate bleeding around the kidney. During this time you can eat normally and will usually be encouraged to drink plenty of fluids unless you are advised otherwise by the doctor.

If all these observations are satisfactory, the amount of blood visible in the urine is small and you have no abdominal pain, you will be allowed home later the same day. You cannot go home unless you have passed urine.

Sometimes you may need to stay in overnight for observation. It is advisable to bring an overnight bag with you in case you need to stay in. You should not drive on the day of your biopsy, so if you are discharged the same day you will need to arrange for a relative or friend to take you home. Transport can be arranged to the hospital and back home if this is not possible by contacting the Northwest Ambulance Patient Transport Service.

You should rest for 24 hours and avoid any heavy lifting or strenuous exercise for a week. Discuss with your doctor if you require any time off from work or if you have any questions or concerns, as this will be dependent on what job you do or where you work.

## **What are the possible complications of a kidney biopsy?**

Severe complications are rare; however there are situations where further monitoring and interventions may be required.

Regular observations are taken so the nurses can monitor any changes. You might not initially notice yourself if there are any concerns, so your vital signs may indicate this earlier.

Bleeding may come from the kidney or the puncture site. A small amount of visible blood in the urine is normal and will settle over a few hours, but if this becomes worse, the nurses will monitor and inform the doctors to investigate further. The same applies if you have any difficulty passing urine despite drinking plenty of fluids or if you are having any abnormal abdominal or back pain that also develops and increases in intensity. Tests may involve taking blood samples and performing an ultrasound of the kidney area that has been biopsied. This will indicate if there is any bleeding present around the kidney.

In some cases where the bleeding is significant, you may need to have a blood transfusion and attend the radiology department to have the bleeding stopped from the blood vessel that has been punctured during the procedure.

Following any complications, you will need to stay in hospital to be monitored closely.

## Your results

After the kidney sample is taken, it is sent to the laboratory and tested by the pathologists who will look at the sample to gain a diagnosis.

The results of the biopsy will be discussed with you at your next clinic appointment. If you are in hospital as an inpatient you may be given a provisional or confirmed diagnosis before you are discharged. If you had the biopsy as a day case then you will be sent an appointment through the post for a later date to discuss the biopsy results with your consultant in clinic.

## Contact details

Should you require further advice or information within 24 hours of your biopsy, please contact Ward 25 on **01772 522539** or contact your consultant's secretary.

If you have any concerns that you are not feeling well following discharge from hospital, you can also phone NHS 111 for their advice.

## Sources of further information

[www.lancsteachinghospitals.nhs.uk](http://www.lancsteachinghospitals.nhs.uk)

[www.nhs.uk](http://www.nhs.uk)

[www.accessable.co.uk](http://www.accessable.co.uk)

[www.patient.co.uk](http://www.patient.co.uk)

[www.nwas.nhs.uk](http://www.nwas.nhs.uk)

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