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Kidney Biopsy

Patient Information



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This leaflet is designed to answer some of the questions you may have about kidney biopsies. It will explain what to expect on the day of the biopsy as well as giving information on the possible risks and complications.

Before the biopsy a doctor will talk to you in detail about what will happen. This leaflet is not designed to replace this conversation. If you have any questions or concerns you should discuss them with your doctor. You should feel you have been given as much information as you need before agreeing to have the biopsy and signing the consent form.

What is a kidney biopsy?

A kidney biopsy is a small operation during which a special needle is used to take a tiny piece (sample) of one of your kidneys (or your kidney transplant) for further examination. The sample is examined under a microscope to look at your kidney in greater detail. The amount of kidney taken during a biopsy is around half the size of a matchstick and removing it will not affect how well your kidney works.

Why do I need a kidney biopsy?

Your kidney doctor may have suggested a biopsy because blood tests or urine samples have suggested that your kidneys (or your kidney transplant) may not be working normally. There may not be an obvious explanation for this and so a biopsy allows doctors to look closely inside the kidney to see where the problem may be. This may allow the doctor to find out the cause of the problem and plan the best treatment for you. Sometimes a biopsy is taken to see whether a treatment you have been already given for your kidneys is working.

How can I prepare for my biopsy?

You should tell your kidney doctor before the day of the biopsy if you are taking medication to thin your blood or make your blood less likely to clot.

There are lots of medications that do this, but common ones are aspirin, clopidogrel, warfarin, dabigatran, apixaban and rivaroxaban. These will need to be stopped before the day of your biopsy (usually a few days to one week beforehand).

You should not stop taking these medications without consulting your kidney doctor. They will tell you if and when you need to stop taking them and when you should start taking them again.

You will usually go to the hospital on the morning of your biopsy. The kidney team will tell you where to go and at what time – this may involve attending the kidney ward. You can eat, drink and take your medication as normal (except any blood thinning medication, as above). You should plan to have a light breakfast as your biopsy will involve you lying flat on your stomach or your back if you have a transplant.

You may need to have blood tests to check your blood levels and how well your blood clots, or these may have been done before the day of your biopsy.

Before you have your biopsy, a small plastic tube (a cannula) will be inserted into the back of your hand. Your cannula may be used to give you a medication called Desmopressin (DDAVP®). Desmopressin reduces the risk of bleeding after your biopsy, and is given slowly over 30-60 minutes. It may not be needed in every patient but you may still need the cannula in case you need to have any treatment after the biopsy.





What happens during the biopsy?

Your biopsy will be performed by a specialist. It may take place at your bedside, or you may go to a different part of the hospital for it.

During a biopsy on your own kidneys you will usually lie on your front as your kidneys are easiest to get to via the back. The doctor will clean the area with antiseptic then use an ultrasound machine to help insert the needle in the right place. They will inject local anaesthetic – this may sting for a second or two before going numb. They will then make a small cut (less than a centimetre long) in your lower back and insert the special needle to take the sample. The kidneys move as you breathe so the doctor will ask you to hold your breath for a few seconds whilst the sample is taken. You may hear a clicking sound as the sample is taken.

A biopsy of a kidney transplant is done the same way, but you will generally lie on your back and the doctor will do the biopsy close to the scar from your transplant operation.

The doctor may need to take two or three samples of kidney in order to ensure that there is enough for analysis. Once they are finished they will put a watertight dressing over the cut to keep it clean whilst it heals.

A biopsy usually takes around half an hour in total.

What happens after the biopsy?

Following your biopsy it is important to rest on your back in bed for a minimum of four hours.

The nurses will keep a close eye on your blood pressure and pulse. If you need to go to the toilet the nurses will give you a bottle or bedpan to use, so they can check whether there is blood in your urine. You should not get up until the nurses have told you it is safe to do so.

Usually you can go home that evening, as long as you have someone to stay with you, or you may stay until the following morning. You should not drive or take public transport to get home and so you may need to arrange a lift home with a friend or family member. You should avoid heavy lifting, contact sport or strenuous exercise for one to two weeks after the procedure. Provided you feel well you can usually return to work within a day or two.

There may be some discomfort as the local anaesthetic wears off and this usually settles within a few days. It is okay to take paracetamol for the discomfort, but do not take non-steroidal anti-inflammatory (NSAID) painkillers such as ibuprofen or diclofenac as these can damage your kidneys.





Are there any risks to having a biopsy?

The vast majority of kidney biopsies happen without any problems. There are some problems which may occur:

- **Blood in your urine.**

Usually this will stop by itself and needs no further action. You may have to stay in hospital a little longer until the doctors and nurses are happy the bleeding has stopped.

- **Blood transfusion.**

If the bleeding is heavier or continues for a longer period, you may need a blood transfusion.

- **Operation to stop the bleeding.**

If the bleeding is particularly heavy or is not stopping, you may need to go to the X-ray department (radiology). A wire can be inserted into the top of your leg and threaded up to your kidney so that a doctor can stop the bleeding directly ('embolisation').

- **Removal of the kidney or damage to other organs (very rare).**

If the bleeding from the kidney cannot be stopped or another organ is damaged accidentally, then you may need to have an operation to repair the damage. This may mean removing the bleeding kidney altogether.

- **Inadequate sample.**

In some cases the sample taken is not enough to make a diagnosis. Your kidney doctor will talk to you about repeating the biopsy if this is the case.

When will I find out the results?

The results of the biopsy will not be ready immediately and will usually be discussed at your next clinic appointment. If you do not have a clinic appointment then let the nurses or kidney doctor know before you go home.

Occasionally a biopsy is urgent or shows a result that requires treatment to start before your next appointment. If this is the case, the kidney doctors will contact you directly. You should make sure they have a current phone number for you before you go home.



If there are problems after the biopsy, they usually occur whilst you are still in hospital, however when you go home it is important to follow the contact advice that you will be given if:

- You have blood in your urine
- You are unable to pass urine
- You are having fevers (cold or hot sweats)
- You feel slight-headed or dizzy
- Any discomfort is worsening rather than getting better

If you feel particularly unwell you should call 999 or go to your nearest emergency department.



Where can I find out more information?

NHS Choices: www.nhs.uk/conditions/Biopsy

Patient View: www.patientview.org

- online access to your health records. Ask your renal unit for details about how to join.



 www.kidneycareuk.org

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