

Kidney Biopsy

This information leaflet will help you if your doctor advises you to have a kidney biopsy, also called a renal biopsy. Please read it as it is important to understand the procedure and risks involved before you sign the consent form.

What is a renal biopsy?

A renal biopsy is a test used to investigate kidney disease to find out what is causing it. A small sample of kidney is taken using a needle and sent to the pathology laboratory where it will be looked at in detail under a microscope.

Preparation

We may ask you to do a lateral flow test before you come in for your biopsy.

On arrival at the hospital, you will be shown to your bed. You will be seen by a nurse and a doctor who will ask you some questions and examine you. This is to ensure your medical condition has not changed since you were seen in clinic. A small cannula (needle) will be inserted into a vein in your hand. The doctor will take some time to discuss the procedure and risks involved, and you will then have the opportunity to ask questions before we ask you to sign the consent form.

- We will take swabs from your nose and throat to test for MRSA.
- We will check your blood pressure, pulse and temperature.
- You will usually have a blood test before the biopsy to test how well your blood is clotting.
- We will also ask you for a urine sample.

- We recommend that you do not eat two hours prior to the procedure, but you may continue to drink freely.
- If you are taking any of the following drugs, please discuss with a doctor on the kidney unit at least 10 days before the biopsy. These drugs will need to be stopped but an alternative medication may be required to prevent complications during this period.
 - **Aspirin** should be stopped 7 days before the biopsy
 - **Clopidogrel** should be stopped 10 days before the biopsy
 - **Warfarin** should be stopped 5 days before the biopsy
 - **Apixaban/Dabigatran/Edoxaban/Rivaroxaban** should be stopped 2 days before the biopsy.
 - **Ticagrelor/Prasugrel** should be discussed with a doctor on the kidney unit.
- All other medications should be taken as normal including on the day.

The test

Some kidney biopsies are carried out in the X-ray Department by a radiologist, but often they are performed by the nephrologist on the Renal Day Case Unit.

You will be asked to lie on your front unless you are a kidney transplant recipient, in which case we will ask you to lie on your back. Usually

only one kidney is biopsied. The skin over your kidney will be cleaned with disinfectant and the skin and muscle will then be injected with local anaesthetic. This may sting slightly and will then make the area numb.

The biopsy is then taken with a special needle. This should not be painful, but you may feel some pressure on your back at this point. It is usually necessary to repeat the biopsy two or three times to ensure enough kidney tissue is taken.

After the test

You will return to the ward after the biopsy has been taken. You will have to lie flat for 2 hours, and then remain in bed for a further 4 hours after the procedure. Your blood pressure and pulse will be measured frequently.

- You may wish to bring some music to listen to, or something to read or watch.
- We usually schedule the biopsy to be done early in the day, so you may be able to go home afterwards. However, you should bring an overnight bag just in case.
- You may wish to bring a packed lunch with you.

Benefits

The benefits of the biopsy include that we can find out what is causing your kidney disease, i.e. a diagnosis. It may help us indicate how quickly your kidney disease is developing and find the right treatment.

Risks

While serious complications are uncommon, there are risks, as with any procedure. We will tell you about them in this section.

It is common to experience a dull ache as the local anaesthetic wears off. Paracetamol, up to 8 tablets a day, can be taken for the discomfort. If the pain persists or is severe, you must contact your doctor.

There is a very small risk of infection in the wound after the biopsy.

Sometimes the biopsy sample is looked at under the microscope, but not enough can be seen to find out what is causing the kidney problem, i.e. make a diagnosis. Your nephrologist will then contact you to discuss whether we should do another biopsy.

The main risk of a renal biopsy is bleeding. You will be observed very closely so that any bleeding is detected and treated early.

In a small number of cases there may be some bleeding from the biopsy site, or your urine may be slightly blood stained or 'rosé' coloured. This is usually minor and soon stops and may occur in about 30 biopsies. If this happens, we usually recommend staying in hospital overnight as a precaution. More severe or prolonged bleeding may require the following:

- Requirement for blood transfusion in 1 in 100 cases.
- Requirement for further X-rays such as an angiogram and then treatment (embolisation of the kidney) to control bleeding in 1 in 300 cases.
- Requirement for the kidney to be removed in less than 1 in 10,000 cases.
- There is a risk of death from the biopsy but this is very rare.

Alternatives

There is no other test that will provide us with the same information as a biopsy. If a biopsy is not taken, you may end up taking treatment that is not necessary or has unnecessary risks.

Sometimes it is possible start treatment without a biopsy, but this is only recommended in certain cases.

Results

The results of the test will not be available immediately. Your nephrologist will either contact you at home or organise a clinic appointment to discuss your results.

If you have any questions, please ask the nurse or doctor who will see you before the biopsy.

On discharge

- We recommend that you do not drive for 24 hours after your biopsy.
- You should avoid exercise and heavy lifting for 48 hours.
- You may return to work the next day if you work in a non- physical job, but may need longer off work if you have a physically demanding job (speak to your GP).
- You should seek immediate advice on **01392 402515 or 01392 402591** if you experience the following:
 - your urine becomes more blood stained;
 - there is continual bleeding from the wound site;
 - your biopsy site becomes red or angry;
 - you develop a fever or temperature;
 - the biopsy is still painful after 3 days.

If you experience severe pain, dizziness and/or fainting following your biopsy you should phone an ambulance immediately on 999.

References

- National Kidney Foundation 2011 Kidney Biopsy
www.kidney.co.uk
- Bleeding complications of native kidney biopsy: a systematic review and meta-analysis, Corapi KM et al., Am J Kidney Dis. 2012 Jul;60(1):62-73.
- Systematic Review and Meta-Analysis of Native Kidney Biopsy Complications, Poggio ED et al., Clin J Am Soc Nephrol. 2020 Nov 6;15(11):1595-1602.

The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by Royal Devon staff undertaking procedures at the Royal Devon hospitals.

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