



Having a kidney biopsy

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Introduction

This information leaflet will help you if your doctor advises you to have a kidney biopsy, also called a renal biopsy. Please read it and talk to your doctors and nurses.

Reasons for a kidney biopsy

A biopsy is recommended when blood and urine tests show a problem with the way your kidneys work. A biopsy can give a diagnosis on the cause of the kidney problem, identify if the problem is advancing, and if so, how quickly. It can also help your doctors to advise on the best treatment for you.

The following problems are the most common reasons for a biopsy to be performed but not everyone with these problems needs a biopsy:

- protein in the urine (called proteinuria)
- blood in the urine (also called haematuria). A biopsy for haematuria is usually only suggested if there is also proteinuria present
- raised creatinine levels in the blood which identify problems with kidney function (causing a build up of waste products in the blood)

If you are being seen as an outpatient, your kidney doctor will usually discuss the reasons for doing a biopsy and what the procedure involves whilst you are in the clinic.

What is a kidney biopsy?

A kidney biopsy is a procedure in which one or two small pieces of tissue (about half a matchstick size each) are removed from your kidney using a special needle. As most kidney diseases affect both kidneys it is only necessary to take a biopsy from one of your kidneys (usually the left). The tissue

is then processed and examined using a microscope.

Biopsies can be taken from your own (native) kidney or from a transplant kidney.

What preparations are needed before a kidney biopsy?

Before having the kidney biopsy a number of tests are needed. You will have your blood pressure checked, a urine sample will be collected to make sure there are no signs of infection and you will have blood tests to see how well your blood clots. This is to reduce the risk of bleeding following the biopsy. If the biopsy is not urgent, you will attend a pre-screening clinic for these tests. If a biopsy is needed urgently, the tests can be performed when you are at the out-patient clinic or can be taken whilst you are an inpatient.

If any problems are detected, your kidney doctor will be informed and the problems dealt with before your biopsy.

If your blood pressure is too high on the day of the biopsy, the procedure may be cancelled, your medications altered and another date will be booked.

To lower the risk of bleeding, you will usually be asked to stop taking certain medications for a week before the biopsy. You should tell us if you take aspirin, ibuprofen, clopidogrel (Plavix), warfarin or dipyridamole (Persantin).

Before the biopsy is performed you will also need to have an ultrasound scan of your kidneys. Often this is done in advance of the biopsy date but sometimes it is done immediately before the biopsy on the same day. The ultrasound checks the position and size of your kidneys.

Where is the procedure carried out?

If you are coming in as a day case, you will usually be admitted to Ambulatory Care in the morning. You will be asked to put on a gown and then taken to the X-ray (Imaging) department for the biopsy. The doctor performing the biopsy will explain the procedure once more and ask you to sign a consent form. The biopsy procedure normally takes around 30 minutes and is usually done under local anaesthetic so you will be awake. You can have a light breakfast before you come in. If you think that you may need something to make you feel relaxed (sedation) for the procedure, you should discuss this with your kidney doctor beforehand.

How is the biopsy procedure done?

If you are having a biopsy taken from one of your own kidneys you will be asked to lie flat on your front with a cushion placed under your tummy for support. Getting into the correct position is an important part of the procedure and if you think that you may have problems lying on your front, tell your kidney doctor in advance. Once the position of kidney is located with the ultrasound machine, the site is marked, cleaned with an antiseptic solution and covered with a sterile towel. A local anaesthetic to make the area around the site feel numb will be injected into the skin. This will sting for a few moments at first and once the skin is numb more local anaesthetic will be injected around the kidney. Once the area is numb the biopsy needle will then be passed and the sample taken. As the kidneys move during breathing you will be asked to hold your breath for a few seconds while the biopsy is taken.

If you have a transplanted kidney, you will be asked to lie on your back for the biopsy. The procedure for a transplant biopsy is very similar but you do not need to hold your breath.

It may take several 'passes' with the biopsy needle to obtain enough tissue for diagnosis. You may feel a pushing sensation and it can be uncomfortable but it is not usually painful. Once the sample is obtained, pressure is applied over the site to stop any bleeding and a dressing is applied.

Occasionally it will not be possible to remove a suitable piece of kidney tissue. If this happens your doctor will discuss it with you and you may be asked to attend another appointment to have the biopsy done by a consultant radiologist (X-ray specialist).

What happens after the procedure?

After the biopsy you will be asked to rest in bed for at least 6 hours to reduce the risk of any bleeding. Bring a book or music to listen to. Your pulse and blood pressure will be monitored and the dressing checked for signs of bleeding. When you pass urine it will be tested for signs of bleeding. It is not uncommon for the urine to be bloodstained after the biopsy and this usually settles within 24 hours. You can eat and drink as normal after the procedure. As the anaesthetic wears off you may feel some pain or discomfort for which you can be given painkillers.

If you feel well after the biopsy and have no pain or bleeding, you can go home later that day. You must have someone to take you home and stay with you overnight. You should not drive home or for 2 days after the biopsy. Heavy lifting and strenuous exercise or contact sports should be avoided for 2 weeks after the biopsy. You can shower and bathe as normal once you are home.

What are the risks of having a kidney biopsy?

As with any procedure there are some risks or complications that may happen from having a kidney biopsy. These can include:

- back discomfort is experienced by 10% of people following a biopsy. This is caused by bruising around the kidney and will usually settle with painkillers and rest. If you get pain after the procedure, tell the nurses and doctors looking after you
- just over 3% of people have visible blood in their urine after a biopsy. Usually this settles by itself. In people who have visible blood in the urine, clots can form in the bladder and in around 2% of people a bladder catheter is required temporarily to help you to pass urine
- in less than 1 in 200 people, the bleeding may be heavy enough to require a blood transfusion
- in around 1 in 400 people, further intervention may be required to stop the bleeding. This usually takes place in the X-ray department and involves a procedure to block the bleeding kidney blood vessel by passing a tube up from the blood vessel in your groin

If complications occur it is usually in the first few hours after the biopsy whilst you are in hospital. It is rare for problems to occur later, however if you do experience any of the following please contact the hospital:

- bright red blood in your urine
- unable to pass any urine
- fever and temperature
- worsening pain in your back or front on the side of the biopsy
- feeling faint or dizzy

You should contact the Kidney Assessment Team (KAT) at the Queen Elizabeth Hospital Birmingham on 07887 985486 between 09:00-18:00, Monday to Friday and 09:00-16:00 on Saturday and Sunday. They will tell you what to do. Outside these hours call the hospital switchboard on 0121 627 2000 and ask to be put through to the renal registrar on call.

When will I find out the results of my biopsy?

For routine biopsies, a report is usually available 1-2 weeks later and your kidney doctor will have this when you come back to out-patients clinic. For urgent biopsies, a preliminary report will be provided on the same day or the following day although further details will usually come through a few days later. Your kidney doctor will tell you when to expect a report.

Where can I find further sources of information?

Further information can be obtained from:

The National Kidney Federation website www.kidney.org.uk

West Midlands Renal Network website www.wmrn.co.uk

Go online and view NHS Choices website for more information about a wide range of health topics

www.nhs.uk/Pages/HomePage.aspx



The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk or call 0121 627 7803

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