A guide to having a kidney function test for the assessment of glomerular filtration rate (GFR)

There are many types of diagnostic tests that can show information about the kidneys and their function.

This test is being carried out to assess how well your kidneys are working. The glomeruli are tiny filters in the kidneys and the test measures something called the ‘glomerular filtration rate’. The test estimates the volume of blood that is filtered by your kidneys over a given period of time. If these filters do not work properly then the kidney is said to have reduced or impaired function. This test is also used to determine your dosage for certain types of drug treatments.

Preparing for the test
From 10.00pm the night before the test, stop drinking anything containing caffeine including tea, coffee and Coke.

A light breakfast is recommended on the morning of the test, with fruit juice or water.

Continue to drink water at the rate of a glass an hour on the morning of the test.

What is involved in having a kidney function test?
It takes place in the Nuclear Medicine Department and may be performed as an inpatient or an outpatient.

The procedure is performed by nuclear medicine technologists, who will need to obtain your height and weight.

A small amount of radioactive Cr51 EDTA is injected into your bloodstream. We then calculate the rate at which it is removed by the kidneys.

The nuclear medicine technologist will arrange to take blood samples at 2, 3 and 4 hours after the injection.

Therefore the time of injection and the time blood samples are taken are very important.

Can I resume normal activities when I leave?
During and after the test you can carry on with your normal activities. You can eat and drink as normal. There are no restrictions to activities after the test.
When will I know the results?
Not straight away. Your blood samples will be measured overnight so that we can calculate how well your kidneys are working. We will send a report to the doctor who asked for the test. You will get the report when you see your doctor at your next outpatient appointment.

Are there any risks involved in having a kidney function test?
There have been no adverse reactions recorded for this test but you may have some bruising around the injection site.

Radiation risks
This test involves using radioactive materials and so has the usual risks associated with ionising radiation.

The amount of radiation used is roughly equivalent to that which you receive from natural background radiation in about 4 days. This adds very slightly to the risk of, for example, developing a cancer. However, as one in three of us will develop a cancer at some stage during our lives, the added risk is very small.

The doctor who referred you for this scan believes that the benefit of having the test is likely to be greater for you than any of the potential risks involved.

The risk may be considered greater if you are pregnant and you should inform the Nuclear Medicine Department if you are pregnant or you think you might be pregnant.

Tell your doctor if you are breastfeeding as the investigation may need to be delayed until you have stopped.

Are there any alternative treatment options?
Your consultant has recommended this procedure/treatment as being the best option. However, the alternative to this procedure is a Nuclear Medicine Renal Scan. If you would like more information about this, please speak to your consultant or one of the nurses caring for you.

There is also the option of not undertaking this investigation. The consequences of not having this investigation are that your consultant may not have a full understanding of the cause of your symptoms and hence may not be able to offer you the best appropriate management. If you would like more information, please speak to your consultant or a member of staff caring for you.

References

If you have any queries, or require further information please contact the Nuclear Medicine Department, Royal Derby Hospital on 01332 788197.