



Gloucestershire Hospitals
NHS Foundation Trust

Iohexol Glomerular Filtration Rate (IGFR) test

Introduction

You have been given this leaflet because we want to measure the level of kidney function of your child/young person.

This leaflet gives you information about the glomerular filtration rate (IGFR) test that is used to do this and what to expect. At Gloucestershire Hospital NHS Foundation Trust we use iohexol (harmless dye) to measure the IGFR of the kidneys to show us how well they are working.

Why is the test important?

The kidneys filter blood into 2 groups:

- nutrients and oxygen (which is needed and is good).
- toxins and waste (the bad stuff which needs to be removed).

There are about one million tiny filters, known as glomeruli, in each of the kidneys. The IGFR test, using iohexol, allows us to measure how much blood is passing through these filters.

The doctors have suggested this test because there may be a problem with your child's/young person's kidneys or because they are taking a medicine known to affect the kidneys. Knowing how efficiently their kidneys are working will allow the doctors to plan the most suitable treatment.

The day before the appointment

Your child/young person is asked to avoid the following:

- Tea
- Coffee
- Fizzy drinks
- Chocolate
- Ice cream
- Meat products

Day of the test

On the day of the test your child or the young person will be asked to arrive at the Emily Kent Unit at 10:00am. They should be able to return home by mid-afternoon. If their kidney function is lower, it may be necessary for them to stay in the unit for up to 6 hours after the test.

On arrival at the unit a nurse will record your child's/young person's height, weight and blood pressure. They may also be asked to provide a urine sample for testing.

If your child or the young person does not have a central venous device (either inserted into a vein or tunneled under the skin) or an implanted device (Port a Cath) which allows easy access to a patient's veins, then the iohexol injection (harmless dye) will be given into one arm and blood samples taken from the other.

Iohexol is used as it helps to create clear images in different parts of the body. In this case it helps the doctors to measure how well the kidneys are filtering.

A local anaesthetic cream will be applied to the area where the injection will be given or blood samples taken 30 minutes before the tests. This will help to numb the area so that the injection is less painful.

For patients with a double lumen Hickman line, a type of tunnelled central line, the iohexol injection will be given in the blue lumen and blood samples taken from the yellow lumen.

If the child/young person has a single lumen Hickman line or a Port a Cath, they will need to have the iohexol injection via a cannula (small flexible tube placed into a vein) because small amounts of drugs might remain in the line and would provide us with inaccurate results.

During the test period 3 blood samples will need to be taken. The nurse will take the first sample 2 hours after the iohexol injection and the second at 3 hours and the final sample 4 hours after the injection.

Going home

As soon as the test has finished and your child or the young person is eating and drinking normally, they will be able to go home.

Between samples, your child/young person will be free to leave the ward but must make sure that they return on time for the next injection. Otherwise, the results will not be accurate.

If your child or the young person has a high temperature (38°C or above) on the day of the test, we will rearrange for another time.

Risks

The dye is used in lots of other tests and often in larger doses. In rare cases, the dye can cause an allergic reaction. For this reason, the nurse will ask that your child/young person stays on the ward for 15 minutes after they have had the injection.

Please let the nurses know if your child or the young person is taking any medication when you arrive for their appointment. This is because the dye can interact with some medicines.

On very rare occasions, the dye can leak out of the vein during the injection (known as infiltration). If this happens, the nurse will stop the test immediately and monitor the child/young person closely. The test will then be rescheduled for another time.

What happens next?

By the end of the day, the dye should have passed out of the body and your child or the young person can return to their normal routine.

Contact information

If you have any questions, please ring Emily Kent Unit and ask to speak to a doctor or contact the Paediatric Oncology Nurse Specialists.

Emily Kent Unit

Tel: 07813 456570

Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.

Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?



These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation.

*Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial.

Patient Education and Counselling, 2011;84: 379-85



<https://aqua.nhs.uk/resources/shared-decision-making-case-studies/>



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