



# Glomerular Filtration Rate (GFR) Test

Information for families

2<sup>nd</sup> Edition

Great Ormond Street Hospital  
for Children NHS Trust

# This leaflet explains about the GFR test and what to expect when your child comes to Great Ormond Street Hospital to have one.

## What is a GFR test?

The test is used to show how well your child's kidneys are working. The test involves injecting a dye (called iohexol) into a vein and taking blood samples to measure how well the kidneys' drainage tubes are filtering out the dye.

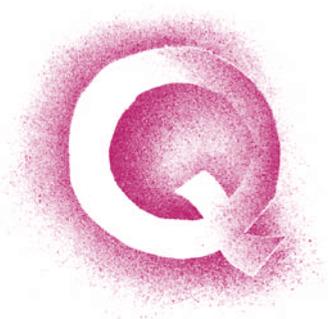
**We would prefer for your child not to drink or eat certain foods while the test is happening. These include: tea, coffee, fizzy drinks, chocolate, ice cream or meat. Your child should also avoid taking paracetamol or medicines containing paracetamol for 24 hours before the test. These can all affect the test results.**

## How long will it take?

You will usually need to arrive on the ward at 9am and you should usually be free to go home by mid-afternoon. Some patients may need to stay for longer (up to six hours after the injection) if their kidney function is lower.

## Why does my child need this test?

The doctor has suggested this test because they want to test how well your child's kidneys are working. This is particularly useful if your child has a disease that can affect the kidneys, if your child has been taking a kind of medication that is known to cause changes in the kidneys, or if they are going to receive certain medicines which rely on the kidneys to eliminate them from the body. The information from this test allows the doctors to plan your child's treatment better.



## **Are there any risks with this test?**

If your child has a temperature of 38°C or higher, we will reschedule the test for a later date as the results could be affected.

The dye used is a contrast media routinely used in lots of other tests. The dose for the GFR test is much smaller than that used for most other tests. The dye will be passed out of the body in the urine.

The dye can interact with medicines such as amiodarone and metformin. The test can sometimes still go ahead if your child is taking one of these (perhaps by missing a few doses) but it is important that you let the nurses know all of the medicines your child is taking.

On very rare occasions during the injection the dye can leak out of the vein and into the surrounding tissues. This is called infiltration. If this occurs the nurses will stop the test immediately and monitor the injection site closely. The test will be rescheduled for a later date.

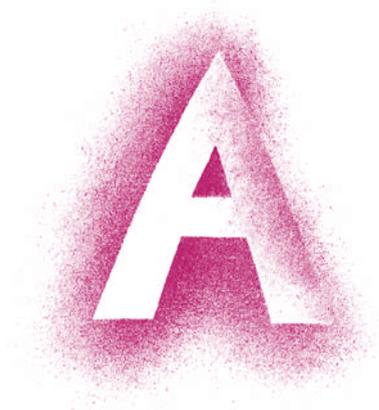
## **Are there any side effects?**

Your child may feel the dye being injected, but using local anaesthetic cream on the injection site will reduce any pain your child might feel.

The dye can very rarely cause allergic-type reactions, so it is important to remain on the ward for 15 minutes after the injection to monitor for this.

## **Are there any alternatives?**

The GFR test is a very safe way of checking how well your child's kidneys work. Other tests may be used along with a GFR to build up a complete picture.



## What happens before the test?

Once you have arrived on the ward, the nurses will measure your child's height, weight and blood pressure because the GFR result is related to growth. If your child is having this test to investigate existing kidney problems, he or she may also have a urine test before the dye is injected. The nurses will explain about the test to you and your child and answer any questions you may have.

## What does the test involve?

The test starts when your child has the first blood sample taken. After this, the nurse will inject the dye. Three hours after the injection, he or she will take another small sample of blood from your child, and then a final one four hours after the injection. To increase the accuracy of the test, the nurse will usually give the dye into one arm and take blood samples from the other.

- If your child has a double-lumen central venous access device, we will give the injection through one lumen and then take the blood for testing from the other.
- If your child has a single-lumen central venous access device, PICC or implantable port, we will give the injection into a vein and take the blood for testing from the central venous access device, PICC or port.
- If your child does not have a central venous access device as above, we will give the injection into a vein in one hand, and take the blood for testing from the other hand.

If your child is having the dye injected into a vein, we will put some local anaesthetic cream on your child's hand half an hour before the test starts. This will numb the area and reduce any pain your child might feel when the dye is injected, and the blood samples are taken.

## **What happens in between blood samples?**

You and your child will be free to leave the ward between the blood samples, but make sure that you allow plenty of time to return to the ward for the second and third ones. The accuracy of this test depends on the blood samples being taken on time. If your child needs to have other tests or investigations, we may arrange them for in between the blood samples if possible. This will save you coming to the hospital on another day.

## **What happens afterwards?**

When the nurses have taken the last blood sample, the test has finished. Your child will be able to start eating and drinking normally and you will be able to go home.

Please ask the nurse to check the date of your child's next outpatient appointment. We will give you the test results then, but if we need to take any action before the appointment, we will ring you.

## **When you get home**

By the end of the day, the dye should have passed out of your child and he/she can return to their normal routine.

**If you have any questions, please ring the ward and ask to speak to a doctor or nurse.**

## Notes

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Compiled by Kingfisher Ward  
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