

# Glucagon stimulation test for growth hormone (children)

## Information for parents and carers

This leaflet answers some of the questions you may have about your child's glucagon stimulation test. It explains the risks and the benefits of the procedure and what you can expect when you come to hospital. If you have any other questions or concerns, please do not hesitate to speak to the doctors or nurses caring for your child.

### **Confirming your child's identity**

Before your child has a treatment or procedure, our staff will ask you to confirm their name and date of birth and check their ID band, we will also ask you to confirm your address. If we don't ask these questions, then please ask us to check. Ensuring your safety is our primary concern.

## **What is a glucagon stimulation test?**

The glucagon stimulation test helps us to find out how well your child's pituitary gland is working.

The pituitary gland (called a master gland) sits at the base of the brain producing various hormones, including growth hormone (GH), which stimulates normal growth and development. Growth hormone is released only when blood sugar levels are relatively low or in response to certain stimuli. Glucagon stimulates growth hormone, so we use it in this test to check if the pituitary gland is making enough of the hormone.

## **Why does my child need this test?**

Your child needs this test to check whether their pituitary gland is releasing enough growth hormone.

## **What are the benefits?**

It may help us to confirm if your child is producing enough growth hormone.

## **What are the risks?**

Your child's blood sugar level could drop to an abnormally low level which could make them feel unwell or drowsy, so we will monitor them closely on the ward. If their blood sugar does drop too low, we will treat this. The nurses will stop the test if they are concerned about your child.

There is a small risk that your child's blood sugar level could fall when you get home, especially if they are refusing food and/or vomiting. This is called rebound hypoglycaemia. Symptoms include:

- vomiting
- irritability
- sweating
- pallor
- change of mood or behaviour
- tiredness
- generally not feeling well.

If your child has any of these symptoms you should go to your local Accident and Emergency Department. The risk of this happening is very low as we will give your child lunch before they leave hospital.

You can prevent rebound hypoglycaemia by giving your child regular carbohydrate snacks and sugary drinks to refill their energy stores. It is important to give them an adequate evening meal that includes carbohydrates such as pasta, rice, bread, potatoes or pizza.

## **Are there any alternatives?**

Yes. This test is widely used throughout the UK. There are other similar tests, but we use this one because it is the safest and most accurate.

## **Consent**

We must by law obtain your written consent to any operation and some other procedures beforehand. Staff will explain the risks, benefits and alternatives before they ask you to sign the consent form. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to speak with a senior member of staff again.

## **Does my child need to prepare for the test?**

Your child must not eat or drink anything – other than water – from midnight the night before the test. It is important to follow these instructions or we may have to cancel the test.

## **Children who are attending for reassessment**

The growth hormone should be stopped for four to six weeks prior to the glucagon test. You will be given more instructions on this by the doctors or nursing team.

### **On the day**

- If your child has any medical problems, particularly allergies, please tell one of the doctors.
- Please bring any medications your child is currently taking.

## **What happens before my child's test?**

We will admit them to the day case unit and allocate them a bed. We will do routine health checks, for example blood pressure, respiratory rate and temperature. We will check their height and weight.

A nurse or doctor will put a cannula (thin plastic tube) into your child's veins so they can take some blood samples. They will put cold spray or a local anaesthetic cream on the area before putting in the cannula so your child will not feel any pain.

Your child may feel tired and miserable during the test because they will not be allowed to eat as usual until test finishes. It is important to continue the test so we can get accurate results. Giving your child anything other than water may mean we need to stop the test and do it again at a later date.

## **What happens during my child's test?**

The test starts when the nurse takes the first small sample of blood from the cannula and then injects glucagon into your child's thigh or buttock.

The nurse will then take small samples of blood from the cannula every 30 minutes for three hours, to check your child's blood sugar and GH levels.

During this time your child will need to stay on the ward so they can be monitored.

## **How long does the test take?**

The test lasts three hours, but they may need you to stay in for up to two hours afterwards. We will also probably ask you to bring your child in at 8.30am. If you arrive late (after 9am), we may have to rearrange the test.

## **What happens after the test?**

Once the nurse has taken the last blood sample, your child can eat and drink as normal. The nurse will give them a choice of food and drink so they can replenish their blood sugar levels.

Your child will need to stay on the ward for around two hours after eating, so we can keep checking their blood sugar levels.

Once their sugar levels have returned to normal, the nurse will take out the cannula and you will be able to take your child home.

## **When will I get the test results?**

The results are usually available after a couple of weeks. All results are reviewed by the endocrine team (on a weekly basis). We usually give your child's test results at their next outpatient appointment at the hospital. However, if they need to start treatment before this appointment, we will contact you and their GP soon after the results have been reviewed at our weekly meeting.

## **More information**

Child Growth Foundation (CGF)

Tel: 020 8995 0257

[www.childgrowthfoundation.org](http://www.childgrowthfoundation.org)

## **Who can I contact with queries and concerns?**

If you have any queries or concerns after your child's test, contact the Paediatric Endocrine Clinical Nurse Specialists (Krystal and Sarah).

Tel: 020 3299 1922, 9am to 5pm, Monday to Friday

## **Sharing your information**

We have teamed up with Guy's and St Thomas' Hospitals in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at Guy's or St Thomas'. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

## **Care provided by students**

We provide clinical training where our students get practical experience by treating patients. Please tell your doctor or nurse if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

## **PALS**

The Patient Advice and Liaison Service (PALS) is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. The PALS office is located on the ground floor of the Hambleton Wing, near the main entrance on Bessemer Road - staff will be happy to direct you.

PALS at King's College Hospital, Denmark Hill, London SE5 9RS:

Tel: 020 3299 3601

Email: [kch-tr.palsdh@nhs.net](mailto:kch-tr.palsdh@nhs.net)

You can also contact us by using our online form at [www.kch.nhs.uk/contact/pals](http://www.kch.nhs.uk/contact/pals)

**If you would like the information in this leaflet in a different language or format, please contact PALS on 020 3299 1844.**