

Glucagon Test

This leaflet explains more about what a glucagon stimulation test is, including the benefits, risks and what you can expect when you come to hospital. If you have any further questions, please speak to a doctor or nurse caring for your child.

What is a glucagon stimulation test?

The glucagon test helps us to find out how well the pituitary gland is working. The pituitary gland, at the base of the brain, produces growth hormone. This is a “chemical signal” which stimulates normal body growth and development. In childhood, growth hormone is essential for normal growth.

How can I prepare for this test?

Sometimes your child will need some tablets or an injection before the test to prepare the pituitary gland for the test. The doctor will have given you instructions about this.

Please follow the instructions on the admission letter for time of arrival at the hospital. Your child should be free to go home by mid-afternoon.

To ensure reliable and accurate results, it is very important that your child has nothing to eat or drink from midnight the evening before the test. This means that he/she should not have breakfast or a drink on the morning of the test, except plain water. Once the test has been completed, usually by lunchtime, your child will be able to eat and drink normally. Lunch will be provided but if your child has a selective palate or requires a special diet then please bring something with you that you know he/she will eat. It is essential that he/she eats something before he/she can go home.

What happens during the test?

Your child will need to stay on his/her bed for the duration of the test. Your child should therefore go to the toilet before the test begins as once the test starts he/she will not be allowed to leave the bed – a commode or bottle will be provided if necessary.

Although toys and games are available on the ward you may wish to bring a few suitable toys, games or books to keep your child occupied for the morning. Please also ensure that your child wears loose comfortable clothing such as a T-shirt with lightweight trousers or shorts.

A local anaesthetic cream may be used to numb the area of skin where a small needle/plastic tube (cannula) is inserted into a vein in your child’s hand or arm and left in place for the duration of the test. If used, this needs to be applied 30-45 minutes before the insertion of the cannula.

What are the risks?

The test involves a series of eight blood tests taken every thirty minutes from the cannula. After the second blood test, your child will be given an injection of glucagon into a muscle in the leg, usually the upper thigh. This may make your child feel slightly sick, have tummy pain or

cause vomiting. Sometimes vomiting can persist and this will be monitored throughout the test. It should settle once the child has eaten and often a glass of milk is all that is required to settle the tummy. Occasionally an injection of an anti-sickness drug is required. If these symptoms do occur it will not be an indication to stop the test but there can be a delay in sending you home afterwards as your child will need to be eating well without any tummy pain or nausea before they can be discharged. Your child may feel tired and miserable during the test solely because he or she is not allowed to eat as usual.

Some children can have problems keeping their blood sugar normal after receiving glucagon, therefore your child's blood sugar is closely monitored throughout the test and if, at any time, the blood sugar appears to be too low, your child will be given a sugary drink and some food. If necessary, glucose can be given directly into a vein in order to bring the blood sugar back to normal.

Your child will be watched very closely throughout the test by an experienced senior nurse. The nurse will stop the test if they have any concerns about your child.

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

These are the symptoms of mild hypoglycaemia:

- nausea
- irritability / change of mood or behaviour
- sweating and pallor
- tiredness / floppiness
- generally not being well.

Severe hypoglycaemia can lead to loss of consciousness and fitting.

In the event of hypoglycaemia, if your child does not improve after feeding or is unable to take or keep down food, you should seek urgent medical attention at your local Accident and Emergency department. You can also call St George's Hospital switchboard on 020 8672 1255 and ask to speak to a member of the Paediatric Endocrine team. You will need to tell them that your child has undergone a glucagon stimulation test.

You can prevent rebound hypoglycaemia by giving your child regular carbohydrate snacks and sugary drinks to refill his or her energy stores. It is important to give a high carbohydrate meal for tea-time, such as pasta, rice, bread, potatoes or pizza, as well as a milky, sugary drink with a biscuit before bedtime.

It can take one to two weeks for the laboratories to analyse your child's blood samples as there are so many chemicals to check.

If your child's test results are normal, you will be informed and your child will be reviewed at his/her next routine outpatient appointment at the hospital. If a second growth hormone stimulation test is needed, the clinical nurse specialist will contact you and arrange a further date. If there is any concern with the results or if treatment is needed to be started soon an urgent appointment will be arranged in clinic.

Contact us

Please contact the paediatric endocrine clinical nurse specialist on either 0787 659 7062 or 0778 685 6764 (Monday to Friday 8.30am to 4.30pm) if you have any questions about this.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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