

## Endocrine Department

# Growth Hormone Test      Information for parents and carers

### Introduction

This leaflet aims to provide you with some information about Endocrine Tests; what they involve and how long they take.

Endocrine tests measure the amount of hormones produced by the body. Hormones are responsible for the control of body functions as well as growth and development.

### Growth Hormone

Growth hormone is essential for normal growth and is made by the pituitary gland (located at the base of the brain). It is then released into the blood stream and it travels to the body's tissues helping with growth and development.

Normal levels of growth hormone in the blood change from hour to hour and are very difficult to assess. Growth hormone is released by a series of 'spurts' throughout the day and night especially during sleep. A number of special tests allow us to look at individual hormone levels or all the hormone levels together.

To detect and measure the levels of growth hormone, blood must be taken when a surge of growth hormone has been provoked. Otherwise blood would need to be taken at very frequent intervals.

### Growth Hormone Tests

Growth hormone tests or provocation tests stimulate the release of growth hormone from the pituitary gland. There are a number of growth hormone tests:

- An **Insulin Tolerance Test** involves injecting a calculated amount of insulin into the vein and then taking a series of blood tests over the morning.
- A **Glucagon Stimulation Test** involves an intra-muscular (IM) injection usually into the upper thigh or buttock followed by a series of blood tests over the morning.
- An **Arginine Stimulation Test** involves a calculated dose of arginine being given into the vein over 30 minutes by a pump device followed by a series of blood tests over the morning.

All these tests stimulate the release of growth hormone from the pituitary gland. The Insulin Tolerance Test and Glucagon stimulation tests work by altering the level of blood sugar in the body. Your Consultant will decide upon the test needed for your child.

### What will happen?

For all endocrine tests we give drugs to stimulate the pituitary gland to produce growth hormones. We then take blood samples at timed intervals to measure the growth hormone level. This is to check that the pituitary gland is working properly.

## How will it happen?

The most convenient way to give the drugs and take the samples is by placing a plastic needle (cannula) with a valve (tap) attached into a vein. This is usually on the back of the hand or elbow. We can apply a local anesthetic cream on the back of the hand or elbow before doing the test to prevent pain or discomfort. We will wait for the cream to work, before inserting the cannula.

## Can my child eat and drink before the test?

Your child should **not** have anything to eat or drink for eight hours before the test and this includes chewing gum. However they may drink any amount of plain unflavored water.

Young babies should **not** have anything except water for four hours before the test.

## How long will the test take?

The test should last approximately four hours throughout the course of the morning. Once the cannula is in place your child can sit in an arm chair, watch TV or DVD's. Lunch will be offered to your child after completion of the test.

## Are there any side effects?

Your child may feel uncomfortable especially if they are having an Insulin Tolerance Test. They may complain of feeling hot and sweaty and will feel very hungry. Blood glucose levels are monitored closely throughout these tests. If hypoglycaemia (a drop in blood glucose levels) occurs it will be treated promptly with a sugar based drink and your child closely monitored.

## How do I prepare my child?

It is important to talk to your child about the test, explaining everything as simply as possible.

## What should we do if we cannot attend the appointment?

If the date or time is not convenient please contact either the Medical Day Case Unit (D2) reception and another appointment will be arranged. If the appointment is not needed please let us know as soon as possible and we will offer this appointment to another patient.

Medical Day Case Unit reception: **0151 282 4763** or **0151 252 5428**  
Monday – Friday 8.00 am – 5.00pm.

## For further information

Please telephone the Endocrine Nurse Specialists on: **0151 252 5534**  
Monday – Friday 08:00 am - 5:00 pm or leave a message on the answer machine.

This leaflet only gives general information. You must always discuss the individual treatment of your child with the appropriate member of staff. Do not rely on this leaflet alone for information about your child's treatment. This information can be made available in other languages and formats if requested.

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