

## Who to contact

Please contact your local nurse or hospital doctor if you need more advice.

Doctor's name:.....

Contact number:.....

Nurse's name:.....

Contact number:.....

SPEG MCN is a network of health-care professionals in Scotland who have a particular interest in the care of children and young adults who have endocrine conditions.

Produced by SPEG NMCN Nurses sub-group.

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If you require an alternative format please contact:

[NSS.EqualityDiversity@nhs.scot](mailto:NSS.EqualityDiversity@nhs.scot)

Telephone 0131 275 6000

BSL Contact Scotland BSL [Contact Scotland \(contactscotland-bsl.org\)](http://contactscotland-bsl.org)

## For more information, contact:

Scottish Paediatric Endocrine Group (SPEG) Network  
National Network Management Service  
Email: [NSS.speg@nhs.scot](mailto:NSS.speg@nhs.scot)

[www.speg.scot.nhs.uk](http://www.speg.scot.nhs.uk)



## Insulin tolerance test (ITT)

### Information for patients, parents and carers



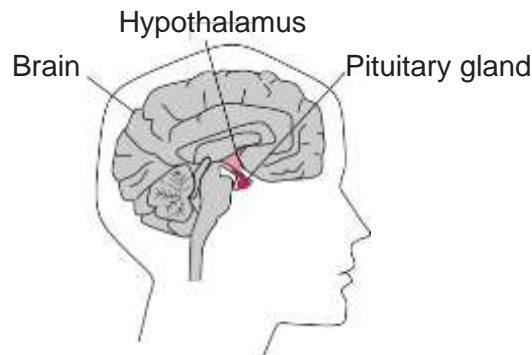
We have arranged for your child to have an investigation to measure hormones made by the pituitary gland. Your child should expect to be in the ward for around six hours.

Growth hormone (GH) is one of the hormones produced from the pituitary gland that we will measure. It is only produced intermittently, mostly during the night, so a blood sample during the day on its own is not helpful. Hormone levels can be affected by exercise, stress, sleep and puberty.

This test stimulates the body to produce growth hormone and cortisol (the body's natural steroid), which can then be accurately assessed and measured.

## How does the test work?

To stimulate the release of GH and other hormones from the pituitary gland, we will give your child a measured amount of insulin. This makes the blood-sugar levels drop, which allows us to measure hormone levels in the blood.



## What happens on the day of the test?

Please make sure that your child has **nothing to eat or drink from midnight the night before the test**. Eating and drinking will affect the test results. If your child has anything to eat or drink, we will not do the test. Your child will not be able to eat or drink during the test. We will give them a meal and drinks once the test is finished.

## Procedure for the test

To do the test, we will need to insert a small plastic tube (cannula) into a vein in your child's arm or hand. For this test we will offer your child some numbing cream (or an alternative) to make this more comfortable.

The cannula will stay in place for the whole of the test. This allows us to give the insulin and collect the blood samples throughout the test. We will remove it before your child goes home.

Shortly after we give the dose of insulin, your child's blood sugar will be low. The most common symptoms of low blood sugar are:

- drowsiness;
- hunger;
- shaking;
- perspiration (sweating); and
- irritability.

The symptoms are quickly reversed by giving a sugary drink.

## After the test

Following the test your child must have a meal or something to eat before leaving the hospital. We recommend a quiet day (no sporting activities). You should encourage your child to eat regularly for the rest of the day and have snacks between meals.

The test results will not be available immediately, but we will discuss them with you at your next clinic appointment (if we have not already contacted you before then).

## Possible side effects

Side effects are very rare. Experienced staff are always present to deal with these if they happen.