

# ENDOCRINE TESTING UNIT

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## **Patient Information Sheet – Insulin Tolerance Test**

Your doctor has referred you to the Endocrine Testing Unit (ETU) for an Insulin Tolerance Test.

### **What is an insulin tolerance test (ITT)?**

The insulin tolerance test or insulin stress test is designed to see how your pituitary gland (a small gland that lies just under the brain) functions under stress. Your pituitary gland normally produces several hormones, two of these are:

- ACTH (adreno-cortico-trophic hormone) which stimulates the adrenal glands (above the kidneys) to make the hormone cortisol. Cortisol is a steroid hormone that is vital for health. Its functions include:
  - Helping to regulate blood pressure
  - Helping to regulate the immune system
  - Helping to balance the effect of insulin and blood sugar levels
  - Helping the body respond to stress
- GH (growth hormone) effects childhood growth and adult body composition as well as the functioning of several body systems.

The insulin tolerance test will assess how much ACTH, cortisol and growth hormone is produced when your body is under stress. This 'stress' will be induced by injecting a small amount of insulin to cause a lowering of your blood glucose (hypoglycaemia), under very controlled conditions. Your Endocrinologist will use the results of this test to determine if these hormones are being produced in sufficient quantities naturally or if they need to be replaced by medication.

You **should not** have this test if you have epilepsy, ischaemic heart disease such as angina or previous heart attack or stroke.

### **How do I prepare for this test?**

- You **must have nothing to eat or drink** (except water) **from midnight** the night before the test
- If you are taking steroid medication, such as prednisone or cortisone, you should omit your dose 24 hours prior to the test.
- You should not take your other medications on the morning of the test unless otherwise advised by the booking nurse

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- Bring your medications with you to take on completion of the test.
- Bring a sandwich and a fruit juice to have after the test
- Arrange for a relative or friend to drive or accompany you home

## **What will happen during the test?**

The test will usually commence around 8.30am and may take up to 4 hours.

When you arrive at the ETU the endocrine registrar will discuss the test with you and have you sign a consent form. You will be required to lie down on a bed for the duration of the test. The ETU nurse will insert a cannula into a vein in your arm to enable blood samples to be collected. After the first blood sample, a small amount of insulin will be given through the cannula. This will cause your blood sugar level to drop so we can measure your stress hormone response. During this short time you may have symptoms of low blood sugar, such as feeling sweaty, dizzy, vague or uncomfortable. The nursing staff and doctor will be constantly monitoring your blood sugar level and symptoms. These symptoms can be easily reversed if necessary by administering intravenous glucose or by eating. Your blood sugar will continue to be monitored by the nursing staff for 2 hours. Occasionally if your blood sugar does not fall within 45 minutes of the test commencing, you may require a second dose of insulin.

Once the test is completed you may have something to eat and drink, and the cannula will be removed. You should arrange for someone to drive or escort you home as you may feel tired after the test.

## **Are there any side effects or complications from an insulin tolerance test?**

There are usually no side effects from this test except perhaps a small bruise where the cannula is inserted. You may also feel a little tired after the test.

A very low blood sugar may induce decreased consciousness or seizures. You will be constantly monitored by 2 registered nurses and a Doctor to prevent this occurring.

No adverse events have occurred in the ETU due to insulin tolerance tests.

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

The results of the test will be available after a couple of days. Your Endocrinologist will contact you regarding the results and any whether any changes to your treatment are required.

## **What if I have any questions?**

You will have the opportunity to ask questions of the doctor prior to the test. If you would like to change any arrangements please contact the ETU Nurse Unit Manager on phone 92958231.