

# Insulin stress test



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## **Who is this leaflet for?**

This leaflet is for patients who have received an appointment to have an insulin stress test at the Medical Day Unit (MDU) at Royal Cornwall Hospital. Your appointment letter will give the time you need to arrive on the MDU.

## **What is an insulin stress test?**

This is a test to check how effectively your pituitary gland is working. It measures how well your pituitary gland is regulating two hormones called growth hormone and cortisol.

## **Why do I need it?**

This test is performed on request of your Consultant Endocrinologist. It will help your Consultant to diagnose any problem with your pituitary gland and plan any treatment you may need.

## **What is the pituitary gland?**

It is a small gland in the base of your brain, a few inches behind the bridge of your nose. It plays a major role in controlling your body's hormone production.

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

### **Blood tests:**

You will need to arrange a '9am cortisol' blood test at your GP surgery, this will need to be performed between 8am and 9am in the morning. This test needs to be completed within 4 weeks of the date of your Insulin Stress test. If this 9am cortisol is not completed your Insulin Stress test date will be delayed.

## **Eating and drinking:**

You must **NOT** eat or drink anything from midnight on the day of your test.

## **Medication:**

You should **NOT** take either hydrocortisone or levothyroxin medication prior to your test, any other medication you can take as normal. Please bring your medication with you to the test so you can take once the test is completed.

## **What will the test involve?**

On your arrival at MDU a nurse will show you to your bed or chair and complete the necessary paperwork. The nurse will also explain the procedure to you and ask for your verbal consent.

1. You will need to put on a hospital gown and lie on a bed.
2. We will insert two cannulas (small plastic tube) into each of your arms. This will allow us to give medication through one cannula and take blood samples from the other.
3. Before we start, we will take baseline blood samples (and any additional blood tests your consultant has requested).
4. We will give you an infusion of insulin, which is administered via a pump. The pump will ensure you have the right amount of insulin to reduce your blood sugar to a very low level. This will stimulate your pituitary gland to produce hormones.
5. We will take regular blood samples at ½ hourly intervals, and measure your blood sugar levels every 15 minutes. This involves pricking your finger to get a very small amount of blood.

6. When your blood sugar is low enough to stimulate your pituitary gland the insulin pump will be stopped.
7. When the insulin pump has been removed the nurse will assess whether it is safe for you to eat and drink straight away.

### **How long will it take?**

The test itself will last 3-4 hours, but you should allow 7 hours for your appointment.

### **What happens afterwards?**

When the test is complete we will remove your cannulas and give you some lunch and a drink. You will need to rest in bed on MDU for two hours to make sure you are fully recovered.

When you are allowed to get up, there are shower facilities available if you wish (please bring your toiletries with you).

As you will not be discharged until you are fit, you should be able to drive home safely (although you may prefer to arrange a lift).

### **Are there any risks or complications?**

You may feel unwell with shaking, sweating, and feeling hungry, tired and sleepy when your blood sugar is at a low level.

When the insulin infusion is stopped, your blood sugar will return to normal and you should feel better. As this may take up to 2-4 hours, we can give you a glucose injection, if necessary, to return your blood sugar back to normal level. You will also need to have something to eat before leaving the hospital.

## **Are there any alternatives?**

A possible alternative to the insulin stress test is a glucagon test. Your consultant endocrinologist will have assessed you and, taking into account your medical history and current medical condition, decided that an insulin stress test is the most appropriate test for you.

## **What if I don't have the test?**

If you feel that you do not want this test, you can decide against it. However, this may prevent accurate diagnosis of your condition and affect your future treatment. If you do decide against the test, please inform the MDU as soon as possible so that we can give your appointment to someone else.

## **When will I get my results?**

Your consultant will receive and review your results, and either write to your GP or discuss them with you at a clinic appointment.

## **General information**

- Please note that Royal Cornwall Hospitals Trust has a no smoking policy. This applies across the site to all the buildings and grounds.
- Car parking charges also apply.

## **Any questions?**

We hope to make your stay as pleasant as possible.

If you have any queries or concerns, please contact the Medical Day Unit on 01872 253836 or:

Endocrine Nurse Specialist  
Cornwall Diabetes and Endocrine Centre  
Royal Cornwall Hospital  
Truro  
TR1 3LJ

Tel: 01872 254561 / 07823326070

### **Further information**

For further information contact:  
The Pituitary Foundation  
Tel: 0845 450 0376  
[www.pituitary.org.uk](http://www.pituitary.org.uk)

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

