

## **PATIENT INFORMATION SHEET – INSULIN STRESS TEST**

Your doctor has recommended that you take this test to help with the diagnosis and the management of your condition. Please read the information below carefully and ask us about anything that is not clear or if you would like more information.

### **WHAT IS AN INSULIN STRESS TEST?**

This test will tell us if your pituitary gland (at the base of the brain) is producing enough growth hormone, and/or properly regulating your production of cortisol (a natural steroid hormone). In adults, a lack of growth hormone sometimes reduces their quality of life. It may also affect their body composition (the amounts of fat and muscle in the body), with a tendency to have more fat and less muscle. Cortisol is produced by the adrenal glands, which are just above the kidneys, in response to instructions from the pituitary gland. A problem with either of these glands can result in low cortisol levels. Cortisol has many vital roles in maintaining normal healthy functioning, and is a very important part of the response to 'stress' of any kind, including other illnesses.

### **WHAT DO I NEED TO DO TO PREPARE FOR THE TEST?**

Please have nothing to eat or drink except water for 10 hours before the test. The doctor who will perform the test will advise you beforehand about whether or not to take your regular tablets and medicines on the morning of the test.

### **IS ANY DRUG OR MEDICINE USED DURING THIS TEST?**

You will be given an injection of insulin. This is a natural hormone used to treat patients with diabetes. In this test insulin is used to make your blood sugar levels fall lower than normal for a short time. This is a stress for your body and should stimulate a growth hormone and cortisol response.

### **HOW LONG WILL THE TEST TAKE AND WHAT DOES IT INVOLVE?**

The test will take a full morning. After lunch you will be free to go home. We advise you not to drive until two hours after the test has finished.

On your arrival in the morning you will have (or have had previously) an ECG (heart tracing) to check that this is normal. We will weigh you so that we can work out the correct dose of insulin for you. A small plastic tube will be inserted into a vein in your arm. We will use this to take blood samples and to give you the injections. After we have taken the first blood samples, we will give you the injection of insulin. We measure your response to the test through blood samples that we will take over the next two hours.

### **WHAT ARE THE POSSIBLE RISKS OR SIDE EFFECTS OF THIS TEST?**

When your blood sugar levels fall lower than normal you are likely to experience some side-effects. You may feel a bit light headed, dizzy, shaky, flushed, sweaty or notice a racing heart. Some people find this quite uncomfortable but others say that it is not too bad. The side effects should only last a short time (up to 15 minutes). You may feel a bit tired after the test. Very rarely the test may cause a faint or a fit: the doctor will have all the necessary treatments available in the unlikely event of this occurring.

### **WHAT WILL HAPPEN AFTER THE TEST?**

You will have lunch and your blood sugar will be checked to be sure it is normal. You will then be free to go home, but we advise you not to drive until two hours after the test has finished. We will send your blood samples to the laboratory for analysis. When your results are available, the endocrinologist will discuss these with you. This will usually be at your next clinic appointment. They will advise you about whether you need growth hormone and/or cortisol hormone replacement therapy.

### **WHERE AND WHEN CAN I HAVE THE TEST?**

This test can be organised only by appointment at Basildon Hospital Pathology Department or by the Endocrine Team at Basildon Hospital. You will be informed of when and where your test will be done by the doctor who will organise it for you.

### **WHO DO I CONTACT IF I HAVE ANY QUESTIONS?**

If you need any more information, please telephone the laboratory on [01268 524900](tel:01268524900) extension [3030](tel:01268524900) or [3015](tel:01268524900) or ask your GP.

### **Patient self-help groups and further information:**

#### **The Pituitary Foundation**

PO Box 1944  
Bristol BS99 2UB  
[www.pituitary.org.uk](http://www.pituitary.org.uk)  
[0845 450 0376](tel:08454500376)

#### **The UK Addison's Disease Self Help Group**

[www.adshg.org.uk](http://www.adshg.org.uk)

#### Disclaimer

The information in this leaflet is for guidance purposes only and is in no way intended to replace professional clinical advice by a qualified practitioner.