

Information for patients and carers

Glucagon Stimulation Test

Endocrinology

Three horizontal, wavy bands of blue color at the bottom of the page, with the top band being a lighter shade of blue and the bottom band being a darker shade.

What is a glucagon stimulation test?

This is a diagnostic test to assess if your pituitary gland is producing sufficient amounts of growth hormone and cortisol.

Why do we need growth hormone in adulthood?

Growth hormone (GH) controls the amount of fat, muscle and water present in the body. Bone structure and heart function are also influenced by GH. Our general well-being is also thought to be controlled by GH.

Why do we need cortisol?

Cortisol is one of the body's main steroid hormones which is vital for life. It enables us to cope with stresses such as illness, infection, surgery/traumas. It also regulates blood pressure, the body's fluid balance and metabolises fats, carbohydrates and proteins.

Preparation for the test

You will need to fast from midnight the day before your test. You may drink water.

If you are on replacement steroid tablets you must stop taking these 24 hours prior to the test. Take the normal morning dose the day before your test and then omit further steroid tablets until after the test is completed.

What the test involves

The test starts at approximately 9am as cortisol levels are generally higher in the morning. The nurse will need to insert a cannula (narrow tube) into a vein in your arm so that blood samples can be taken. The first blood sample is taken approximately 30 minutes after the cannula

has been inserted. This is because cortisol levels will be slightly higher immediately following insertion of the cannula. A dose of glucagon (this is to increase growth hormone and cortisol levels) will then be given subcutaneously (into the skin). Samples of blood will then be obtained from the cannula. The test will take approximately 4 hours to complete. You will need to recommence previous steroid therapy on completion of the test.

Side effects

You may experience mild nausea (feeling sick) and occasional vomiting. It may occur during the test and may persist until shortly after the test has been completed.

Results

Your results will be discussed with you at your next clinic appointment. However, you can contact the endocrine specialist nurse prior to this if you are concerned.

Contact details

Should you require further advice or information please contact

Endocrine Specialist Nurse: **01772 523533**

Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.patient.co.uk

www.accessable.co.uk

www.lancsteachinghospitals.nhs.uk/veteran-aware

www.pituitary.org.uk

www.labtestsonline.org.uk

All our patient information leaflets are available on our website for patients to access and download:

www.lancsteachinghospitals.nhs.uk/patient-information-leaflets

Lancashire Teaching Hospitals NHS Foundation Trust is not responsible for the content of external internet sites.

Lancashire Teaching Hospitals is a smoke-free site. Smoking is not permitted anywhere on any of our premises, either inside or outside the buildings. Our staff will ask you about your smoking status when you come to hospital and will offer you support and advice about stopping smoking this will include Nicotine Replacement Therapy to help manage your symptoms of withdrawal and the opportunity to speak to a nurse or advisor from the specialist Tobacco and Alcohol Care Team. If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone **08081962638**

Please ask a member of staff if you would like help in understanding this information.

This information can be made available in large print, audio, Braille and in other languages.

Our patient information group review our leaflets regularly, if you feel you would like to feedback on this information or join our reading group please contact on email address:

patientexperienceandinvolem@LTHTR.nhs.uk

Department: Endocrinology

Division: Medicine

Production date: February 2025

Review date: February 2028

JR 1268 v1