

Insulin tolerance test to diagnose low cortisol or growth hormone

Information for patients

Your endocrinologist has asked for us to arrange an insulin tolerance test. This is a test to assess how much cortisol (stress hormone) and/or growth hormone you can produce.

The test will take about 2 hours, but you should expect to be in the metabolic unit for about 4 hours in total.

Preparing for the test

- If you are taking hydrocortisone or prednisolone tablets please do not take these on the morning of the test but bring it with you
- If you are taking an oestrogen (HRT or combined contraceptive pill) you will need to stop this 6 weeks before the test. It is essential that you consider other forms of contraception if this is needed
- If you are taking 'steroid' creams or inhalers please contact your endocrinologist as you may need to stop these temporarily
- Please do not eat anything from midnight before the test. You may drink water
- We would recommend against driving after the test so please arrange some transport home.

During the test

- The nurse will weigh you and take a blood sample to check that it is safe to continue with the test
- We will arrange a heart tracing if you have not had one in the last three months
- A small plastic needle will be placed in your arm to take blood samples
- The nurse will administer insulin. Insulin lowers your blood glucose level which should stimulate cortisol and growth hormone release
- You may need a second dose of insulin if your blood glucose does not respond enough to the first dose.

Are there any risks for me?

- During the test you will experience symptoms of hypoglycaemia (low blood sugar), which can include dizziness, shakiness, blurred vision, sweating and/or anxiety. The severity of the symptoms felt during the test varies with everyone
- During the test you will be monitored by a registered nurse to ensure that you remain safe and once sufficient hypoglycaemia is achieved it will be reversed, and you will be given something to eat and drink.

After the test

- The cannula will be removed
- We will give you something to eat and make sure that your blood glucose level returns to normal
- Following the test it is likely you will feel tired. It is advisable to eat regularly for the rest of the day and avoid strenuous exercise for 24 hours.

Are there any risks or complications?

- During the test as your blood glucose falls you may experience symptoms of a low blood glucose level. These include feeling shaky, clammy, sweaty, hungry, your heart racing and tiredness. These symptoms will improve after you have some glucose to eat or drink
- Very rarely a low glucose level can cause you to have a fit (seizure). If you have had a fit or a seizure before we will not do the test - please let the team know about this
- There will be a doctor and/or nurse present during the test and so if your glucose level does fall treatment will be administered. The risk of serious complications of the test is very low.

Is there an alternative to the test?

The insulin tolerance test is one of the best tests to assess your cortisol and growth hormone production, but other tests may be considered if you have had a seizure before or have problems with your heart. If you would like to discuss this, please get in touch with your endocrinologist.

When will I get my results?

The test results should be back within 1 week. It may take slightly longer for a results letter to get back to you but if you have not heard back from your endocrinologist please do get in touch.

If you are unable to make the date and time provided, please let us know so that we can find an alternative more convenient day for you.