

You are booked to come in for a : LONG SYNACTHEN TEST (LST)

What is a long synacthen test?

A long synacthen test looks to see if your adrenal glands are producing enough of certain important hormones. A hormone is a chemical which is made in one part of the body but passes into the bloodstream and has effects on other parts of the body. You have two adrenal glands. They are small glands, and lie just above each kidney. One of the hormones produced by the adrenal glands is cortisol. The amount of cortisol that is made is controlled by another hormone called adreno-cortico-trophic hormone (ACTH for short). ACTH is made in the pituitary gland (a small gland that lies just under the brain). ACTH passes into the bloodstream, is carried to the adrenal glands, and 'stimulates' the adrenal glands to make cortisol.

Cortisol is a steroid hormone and is vital for health. It has many functions which include:

- helping to regulate blood pressure.
- helping to regulate the immune system.
- helping to balance the effect of insulin in regulating the blood sugar level.
- helping the body to respond to stress.

When the adrenals fail to produce enough cortisol this is called Addison's disease. A one-off measurement of blood cortisol is not good enough to diagnose Addison's disease as it may be low from time to time in normal people. Therefore, if Addison's disease is suspected, a special stimulation test is usually needed to confirm the diagnosis. The adrenal gland can be 'stimulated' by an injection of a drug similar to ACTH. If the adrenals are normal, then blood samples taken shortly after this injection should show a rise in cortisol. Blood levels of cortisol may rise further over 24 hours if the adrenals have the potential for further improvement. If your adrenal glands are not working properly or are suppressed by your medications you do not have an adequate rise in blood cortisol following the injection, even after 24 hours.

How should I prepare for the test?

You need to stop any oral oestrogen therapy or implants 6 weeks prior to test as this can affect the test results. This includes the oral contraceptive pill (in which case you must take alternative precautions to avoid pregnancy) or HRT. If you are taking hydrocortisone tablets you should not take any of these after 9am, 24 hrs prior to the test. If you are using any other forms of steroid medication (other, tablets, inhalers, creams etc) please discuss this with the endocrine team before the test as they may need to be discontinued for a period if possible. You do not need to fast overnight before the test.

What will happen during the test?

You should come to the ward on the date of the test, by 9am. You will have a bed to lie down in throughout the test. A cannula (a small needle with a tube attached for taking blood samples) will be placed in a vein in your arm. After the first blood sample has been taken from the cannula you will be given an injection of synthetic ACTH hormone into the muscle of your arm or thigh. Further blood samples will be taken from the cannula at 30 minutes, one hour, two hours, four hours, eight hours and twenty-four hours. Once the test is completed, the cannula will be removed and you will be able to go home.

What happens after the test?

When the results of the blood tests are available they will be reviewed by the endocrinology team. You will be notified by letter and your GP will also be informed of the results. If there are any changes to be made to your treatment or further tests that need to be organized, these will be outlined in the letter or someone from the department may contact you by telephone.

What if I have any questions?

You will see a doctor on the day of your test who should be able to answer your queries. If you have any questions before or after your test please leave a message and contact number with the endocrine department at the Hospital where your test is booked. Someone will call you back to discuss things.