

Arginine Growth Hormone Stimulation Test

Background

Growth hormone is made by the pituitary gland of the body. This happens in little bursts mainly at night. Arginine will stimulate the pituitary gland to make growth hormone. The growth hormone can then be measured in the blood to see how much your child can make.

Arginine is a building block of protein. It is used as a dietary supplement for some protein disorders. It is used worldwide in tests for growth hormone.

Key points

Your child will:

- Need to fast for 6-8 hours before the test
- Stay fasting until the end of the test (can drink water)
- If your child is unwell (fever, vomiting or diarrhoea), please phone the Day Treatment Unit on 6456 3772 to cancel and rebook.

The test will be arranged for first thing in the morning. Then your child will fast while awake for as short a time as possible. The fasting time may vary. The fasting time will have been discussed with you by your doctor.

Arrival

Please go to the Day Treatment Unit. It is on the first floor at Clinic E. Take the Yellow or Pink lifts.

The Arginine Growth Hormone Stimulation Test

Once admitted a local anaesthetic cream will be applied. This cream is applied to your child's hand and/or inner elbow. This cream will numb the skin. This cream takes about an hour to work. An intravenous line can then be put in without causing any pain.

A needle is used to insert the intravenous cannula. Once in the vein the needle is taken out. A plastic tube is left lying in the vein. This plastic tube should not cause any pain. Once in, it stays in for the whole test.

At the start of the test a baseline blood sample is taken. Then the Arginine is given slowly through the plastic tube over 30 minutes. Four blood samples are taken at 15 minute



intervals. The blood samples are taken using the plastic tube. The blood samples are then sent for testing to measure the growth hormone levels.

Possible side effects of Arginine are:

- Flushing
- Nausea
- Vomiting
- headache

To avoid the side effects, the Arginine is given slowly. It is rare for Arginine to cause a severe allergic reaction (anaphylaxis). This is why the test is only carried out in hospital.

After all the samples are taken, your child will be given lunch, the intravenous line is removed and they can go home if well. The test takes about two to two and half hours.

Results

The results will be sent to your Doctor in 2-3 weeks. You will receive these results at your next Endocrine Clinic or private endocrine appointment, or your doctor may phone you.

This document can be made available in alternative formats on request for a person with a disability.

Child and Adolescent Health Service
15 Hospital Avenue, Nedlands, WA, 6009
Telephone: (08) 6456 2222
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Government of **Western Australia**
Child and Adolescent Health Service

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