Growth Hormone Stimulation Test - Outpatient

A growth hormone stimulation test is done to find out if the pituitary gland is releasing growth hormone (GH) in the right amounts. The pituitary is a small gland (about the size of a pea) in the brain. It releases hormones that affect growth into the bloodstream. Medicine will be used to stimulate the pituitary gland to release growth hormone into the blood.

The medicines used with your child are L-arginine (EL AR jah neen) and:

- Clonidine (KLON uh deen)
- Glucagon (GLU ka gon)
- Cortrosyn (COR tro sin)*

* Cortrosyn does not stimulate the release of growth hormone. It will allow your doctor to know if the pituitary gland is making the right trigger to produce a stress hormone called cortisol. Sometimes both growth hormone and other hormones may not be made as they should be.

Samples of blood are then taken and sent to the laboratory. In the lab, the growth hormone levels in the blood are measured.

The night before the test

- At the time of the test, your child should be free of any illness.
- Your child should have nothing to eat or drink after midnight the night before the test, except tap water. This means NO breakfast, breath mints, chewing gum, flavored or bottled water.
- Your child should not take any medicine before the test unless your doctor tells you the medicine may be given. You may bring the medicine with you to the test so it may be given when the test is finished.
- Your child should go to bed at the usual time.

For Outpatient Use Only

Child's name

APPOINTMENT:
Date _______ Time _________

Please bring your child to:
- Crossroads Registration
  First floor, Main hospital.
  700 Children’s Dr.

Please come 15 minutes early to allow time to register.
The night before the test, continued

- Be sure to tell the doctor if your child has any allergies or reactions to medicine, food preservatives or dyes. Tell the doctor about the allergy and its effects on your child. Effects include rash, hives, itching, shortness of breath, wheezing, coughing, swelling of face, lips, tongue or throat or any other symptoms involved.
- Be sure to tell the doctor if your child has recently or is currently taking steroids.

The day of the test

- Your child should feel well and not have a fever the day of the test.
- He or she should come to the clinic dressed comfortably. It would be best if your child wears a short-sleeved shirt to the test.
- Bring books, toys or games for your child to use during the test. We have a TV with a DVD player, so feel free to bring a movie.

How the test is done

The test will be done in the Infusion Clinic (Picture 1). This test may take up to 6 hours. Parents are asked to stay with their child during the test. Since we have limited seating, family members other than 2 parents may be asked to sit in the waiting room during the test.

- The nurse will start an IV (intravenous line). The nurse may offer to put lidocaine-prilocaine cream on your child’s arm before starting an IV. The cream will start to work about 20 minutes after it is put on. It is used to decrease the pain from starting IV’s.
- A sample of blood will be drawn from the IV. The IV will be used to draw blood samples and to give the L-Arginine and Cortrosyn.
- Clonidine is a pill that is taken by mouth. Glucagon is another medicine, given by injection just under the skin in the upper arm. Your child’s doctor will choose which medicines to use for the test.
- Blood samples will be drawn for growth hormone studies every 30 minutes for up to 4 hours. Your child should not feel any discomfort when blood is drawn, since it will be drawn from the existing IV. The total amount of blood is small (about 5 teaspoons).
After the test

When the test is over, your child may have his or her regular foods. Feel free to bring a snack with you for your child to eat after the test.

- Have your child drink plenty of liquids the rest of the day.
- Your child's doctor will contact you about the test results and plan for medical care.

Side effects of medicines

**Cortrosyn**: Rarely, Cortrosyn can cause a flushing, warm feeling in the face and a metallic taste in the mouth.

**Clonidine**: Because clonidine lowers blood pressure, the most common side effect is feeling dizzy and lightheaded. Your child should not attend school and should not take part in any sports or exercise, especially swimming, for the rest of the day. Children should rise slowly after sitting or lying down and be extra careful climbing stairs. Your child may also feel very sleepy for a few hours or have dry mouth, dry eyes or blurry vision. These side effects can last up to 24 hours. Your child should avoid activities that require him or her to be alert or have clear vision. Your child should be fine the following day after a good night’s sleep.

**L-Arginine**: This medicine can cause low blood sugar, which can also make your child lightheaded or nauseated. Side effects from L-Arginine are rare and usually pass by the time your child goes home.

**Glucagon**: This medicine can also cause low blood sugar, which can lead to nausea and vomiting. After the test has been completed, a snack or meal will help to make your child feel better.

Parent information for Crossroads Registration

**Crossroads Registration** is located on the main level near the Crossroads Welcome Desk, between the Crossroads elevators and the Tower elevators. Follow the Blue Path to the Crossroads lobby where the Green Path meets the Blue Path.

The **Infusion Clinic can be accessed from the Tower elevators** (between Crossroads Registration and Urgent Care along the Blue Path). Take the Tower elevators to **level 4** and **turn right into Suite D**.

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These three parking options are available:

- Park in the **Hospital Garage on Children’s Drive**. Once inside, turn right and follow the Blue Path. It meets the Green Path at the Crossroads Registration Area.

- Park in the **Outpatient Care Garage on 18th Street**. Enter the hospital and follow the Blue Path. It meets the Green Path at the Crossroads Registration Area.

- Use the **valet parking on Children’s Drive or 18th Street**. Enter the hospital and follow the Blue Path. It meets the Green Path at the Crossroads Registration Area.

If you have any questions, contact the department of Endocrinology, or call ____________.