



[Home](#) → [Medical Encyclopedia](#) → Growth hormone suppression test

URL of this page: //medlineplus.gov/ency/article/003376.htm

Growth hormone suppression test

The growth hormone suppression test determines whether growth hormone (GH) production can be suppressed by taking a specific amount of glucose (called a glucose load).

How the Test is Performed

At least three blood samples are taken.

The test is done in the following way:

- The first blood sample is collected between 6 a.m. and 8 a.m. before you eat or drink anything.
- You then drink a solution containing glucose (sugar). You may be told to drink slowly to avoid becoming nauseated. But you must drink the solution within 5 minutes to ensure the test result is accurate.
- The next blood samples are usually collected for 1 to 2 hours after you finish drinking the glucose solution. Sometimes they are taken every 30 or 60 minutes.
- Each sample is sent to the laboratory right away. The lab measures the glucose and GH levels in each sample.

How to Prepare for the Test

Do not eat anything and limit physical activity for 10 to 12 hours before the test.

You may also be told to stop taking medicines that can affect the test results. These medicines include glucocorticoids such as prednisone, hydrocortisone, or dexamethasone. Check with your health care provider before stopping any medicines.

You will be asked to relax for at least 90 minutes before the test. This is because exercise or increased activity can change GH levels.

If your child is to have this test done, it may be helpful to explain how the test will feel and even demonstrate on a doll. The more familiar your child is with what will happen and why, the less anxiety the child will feel.

How the Test will Feel

When the needle is inserted to draw blood, some people feel moderate pain. Others feel only a prick or stinging. Afterward, there may be some throbbing or slight bruising. This soon goes away.

Why the Test is Performed

This test checks to see if a high level of GH can be suppressed by taking a glucose load. If it cannot, this may lead to gigantism in children and acromegaly in adults. It is not used as a routine screening test. This test is only done if you show signs of increased GH.

Normal Results

Normal test results show a GH level of less than 1 ng/mL. In children, GH level may be increased due to reactive hypoglycemia.

Normal value ranges may vary slightly among different laboratories. Some labs use different measurements or test different samples. Talk to your provider about the meaning of your specific test results.

What Abnormal Results Mean

If the GH level is not changed and stays high during the suppression test, your provider will suspect gigantism or acromegaly. You may need to be retested to confirm the test results.

Risks

There is little risk involved with having your blood taken. Veins and arteries vary in size from one person to another and from one side of the body to the other. Taking blood from some people may be more difficult than from others.

Risks of having blood drawn are slight, but may include:

- Excessive bleeding
- Multiple punctures to locate veins
- Fainting or feeling lightheaded
- Blood accumulating under the skin (hematoma)
- Infection (a slight risk any time the skin is broken)

Alternative Names

GH suppression test; Glucose loading test; Acromegaly - blood test; Gigantism - blood test

References

Kaiser U, Ho K. Pituitary physiology and diagnostic evaluation. In: Melmed S, Auchus RJ, Goldfine AB, Koenig RJ, Rosen CJ, eds. *Williams Textbook of Endocrinology*. 14th ed. Philadelphia, PA: Elsevier; 2020:chap 8.

Melmed S. Acromegaly. In: Robertson RP, ed. *DeGroot's Endocrinology*. 8th ed. Philadelphia, PA: Elsevier; 2023:chap 6.

Review Date 11/6/2023

Updated by: Neil K. Kaneshiro, MD, MHA, Clinical Professor of Pediatrics, University of Washington School of Medicine, Seattle, WA. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

Learn how to cite this page



Health Content
Provider
06/01/2028

A.D.A.M., Inc. is accredited by URAC, for Health Content Provider (www.urac.org). URAC's [accreditation program](#) is an independent audit to verify that A.D.A.M. follows rigorous standards of quality and accountability. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s [editorial policy](#), [editorial process](#), and [privacy policy](#).

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed medical professional should be consulted for diagnosis and treatment of any and all medical conditions. Links to other sites are provided for information only – they do not constitute endorsements of those other sites. No warranty of any kind, either expressed or implied, is made as to the accuracy, reliability, timeliness, or correctness of any translations made by a third-party service of the information provided herein into any other language. © 1997-2025 A.D.A.M., a business unit of Ebix, Inc. Any duplication or distribution of the information contained herein is strictly prohibited.



National Library of Medicine 8600 Rockville Pike, Bethesda, MD 20894 U.S. Department of Health and Human Services

National Institutes of Health