

Prolactin blood test

 mountsinai.org/health-library/tests/prolactin-blood-test

Prolactin is a hormone released by the pituitary gland. The prolactin test measures the amount of prolactin in the blood.

How the Test is Performed

A fasting blood sample is needed.

How to Prepare for the Test

No special preparation is necessary.

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 a slight bruise. This soon goes away.

Why the Test is Performed

Prolactin is a hormone released by the pituitary gland. The pituitary is a small gland at the base of the brain. It regulates the body's balance of many hormones.

Prolactin stimulates breast development and milk production in women. There is no known normal function for prolactin in men.

Prolactin is usually measured when checking for pituitary tumors and the cause of:

- Breast milk production that is not related to childbirth (galactorrhea)
- Decreased sex drive (libido) in men and women
- Erection problems in men
- Not able to get pregnant (infertility)
- Irregular or no menstrual periods (amenorrhea)

Normal Results

The normal values for prolactin are:

- Men: less than 20 ng/mL (425 µg/L)
- Nonpregnant women: less than 25 ng/mL (25 µg/L)
- Pregnant women: 80 to 400 ng/mL (80 to 400 µg/L)

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

What Abnormal Results Mean

People with the following conditions may have high prolactin levels:

- Chest wall injury or irritation
- Presence of nipple rings
- Disease of an area of the brain called the hypothalamus
- Thyroid gland does not make enough thyroid hormone (hypothyroidism)
- Kidney disease
- Pituitary tumor that makes prolactin (prolactinoma)
- Other pituitary tumors and diseases in the area of the pituitary
- Abnormal clearance of prolactin molecules (macroprolactin)

Certain medicines can also raise prolactin level, including:

- Antidepressants
- Butyrophenones
- Estrogens
- H2 blockers
- Methyldopa
- Metoclopramide
- Opioid medicines
- Phenothiazines
- Reserpine
- Risperidone
- Verapamil

Marijuana products can also raise prolactin level.

If your prolactin level is high, the test may be repeated in the early morning after an 8-hour fast.

The following can temporarily increase prolactin levels:

- Emotional or physical stress (occasionally)
- High-protein meals
- Intense breast stimulation
- Recent breast exam
- Recent exercise

Interpretation of an abnormally high prolactin blood test is complicated. In most cases, your provider will need to refer you to an endocrinologist, a doctor who specializes in hormone problems.

Risks

There is little risk in 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.

Other risks associated with having blood drawn are slight, but may include:

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

References

Chernecky CC, Berger BJ. Prolactin (human prolactin, HPRL) - serum. In: Chernecky CC, Berger BJ, eds. *Laboratory Tests and Diagnostic Procedures*. 6th ed. Philadelphia, PA: Elsevier Saunders; 2013:910-911.

Guber HA, Oprea M, Rusell YX. Evaluation of endocrine function. In: McPherson RA, Pincus MR, eds. *Henry's Clinical Diagnosis and Management by Laboratory Methods*. 24th ed. Philadelphia, PA: Elsevier; 2022:chap 25.

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.

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