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Medical Encyclopedia: Prolactin

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Alternative names

PRL

Definition

This is a blood test that measures the amount of the hormone prolactin.

How the test is performed

Blood is drawn from a vein on the inside of the elbow or the back of the hand. The puncture site is cleaned with antiseptic, and an elastic band is placed around the upper arm to apply pressure and restrict blood flow through the vein. This causes veins below the band to fill with blood.

A needle is inserted into the vein, and the blood is collected in an airtight vial or a syringe. During the procedure, the band is removed to restore circulation. After the blood has been collected, the needle is removed, and the puncture site is covered to stop any bleeding.

In an infant or young child, the area is cleansed with antiseptic and punctured with a sharp needle or lancet. The blood may be collected in a pipette (small glass tube), on a slide, onto a test strip, or into a small container. A cotton pad or a bandage may be applied to the puncture site, if bleeding does not quickly stop.

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, while others feel only a prick or stinging sensation. Afterward, there may be some throbbing.

Why the test is performed

Prolactin is a hormone released by one of the pituitary glands. Prolactin stimulates breast development and milk production in women. There is no known normal function of prolactin in men.

Serum prolactin is usually measured when checking for pituitary tumors and the cause of irregular menstrual periods, infertility, impotence, and galactorrhea (breast milk production not related to childbirth).

Normal Values

The normal values for prolactin are as follows:

- Males and nonpregnant females: 0 to 20 ng/ml
- Pregnant women: 10 to 300 ng/ml

Note: ng/ml = nanograms per milliliter

What abnormal results mean

People with the following conditions may have elevated prolactin levels:

- Prolactinomas (a pituitary tumor that makes prolactin)
- Other pituitary tumors and diseases
- Hypothalamic disease
- Hypothyroidism
- Kidney disease
- Chest wall trauma or irritation

Certain medications can also raise prolactin levels, including estrogens, tricyclic antidepressants, metoclopramide, phenothiazines, butyrophenones, reserpine, methyldopa, and H2 blockers.

If your prolactin levels are elevated, the test may be repeated in the early morning following an 8-hour fast.

What the risks are

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

Special considerations

- Because veins and arteries vary in size from one patient to another and from one side of the body to the other, obtaining a blood sample may be more difficult in some people than in others.
- Stress, recent exercise, and a recent breast examination can temporarily increase prolactin levels.

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