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Estradiol blood test

An estradiol test measures the amount of a hormone called estradiol in the blood. Estradiol is one of the main types of estrogens.

How the Test is Performed

A blood sample is needed.

How to Prepare for the Test

Your health care provider may tell you to temporarily stop taking certain medicines that may affect test results. Be sure to tell your provider about all the medicines you take. These include:

- Birth control pills
- Antibiotics such as ampicillin or tetracycline
- Corticosteroids
- DHEA (a supplement)
- Estrogen
- Medicine to manage mental disorders (such as phenothiazine)
- Testosterone

Do not stop taking any medicine before talking to your doctor.

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

In women, most estradiol is released from the ovaries and adrenal glands. It is also released by the placenta during pregnancy. Estradiol is also produced in other body tissues, such as skin, fat, cells bone, brain, and liver. Estradiol plays a role in:

- Growth of the womb (uterus), fallopian tubes, and vagina
- Breast development

- Changes of the outer genitals
- Distribution of body fat
- Menopause

In men, a small amount of estradiol is mainly released by the testes. Estradiol helps prevent sperm from dying too early.

This test may be ordered to check:

- How well your ovaries, placenta, or adrenal glands work
- If you have signs of an ovarian tumor
- If male or female body characteristics are not developing normally
- If your periods have stopped (levels of estradiol vary, depending on the time of month)

The test may also be ordered to check if:

- Hormone therapy is working for women in menopause
- A woman is responding to fertility treatment

The test may also be used to monitor people with hypopituitarism and women on certain fertility treatments.

Normal Results

The results may vary, depending on the person's sex and age.

- Male: 10 to 50 pg/mL (36.7 to 183.6 pmol/L)
- Female (premenopausal): 30 to 400 pg/mL (110 to 1468.4 pmol/L)
- Female (postmenopausal): 0 to 30 pg/mL (0 to 110 pmol/L)

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 result.

What Abnormal Results Mean

Disorders that are associated with abnormal estradiol results include:

- Early puberty (precocious puberty) in girls
- Growth of abnormally large breasts in men (gynecomastia)
- Lack of periods in women (amenorrhea)
- Reduced function of the ovaries (ovarian hypofunction)
- Problem with genes, such as Klinefelter syndrome or Turner syndrome
- Rapid weight loss or low body fat

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.

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

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

Alternative Names

E2 test

References

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