

# Estradiol (Blood)



## Does this test have other names?

E2

## What is this test?

This test measures the amount of estradiol (E2), the form of estrogen made mainly by the ovaries.

E2 plays a key role in the development of the female reproduction system, including the uterus, fallopian tubes, vagina, and breasts. Women have higher amounts of E2 during their reproductive years and almost none after menopause.

Other estrogens include estrone and estriol. Estrone is the main estrogen made during menopause.

In men, E2 is secreted in moderate amounts by the testes throughout life.

## Why do I need this test?

You may need this test if your healthcare provider thinks you have a problem caused by high or low levels of E2. These problems include:

- Menstrual problems
- Ovarian tumors
- Gynecomastia, a noncancerous growth of the glandular breast tissue in males
- Menopausal symptoms
- Breast cancer

You may also have this test if you are being treated with assisted reproductive technology (ART) for infertility. Or you may have the test if your healthcare provider is monitoring your hormones during ART.

In adolescents, this test may be done to diagnose early puberty.

## What other tests might I have along with this test?

Your healthcare provider may also order other tests, depending on what they suspect. These tests may include:

- Follicle-stimulating hormone (FSH) and luteinizing hormone (LH) for menopausal problems and treatment
- FSH, thyroid-stimulating hormone/free thyroxine (TSH/FT4), and prolactin, a hormone needed for breastmilk production, if your periods have stopped
- FSH and LH for early puberty
- TSH, prolactin, FSH, and LH for both male and female infertility issues

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider

what your test results mean for you.

Results are given in picograms per milliliter (pg/mL). Normal levels for estradiol are:

- 30 to 400 pg/mL for premenopausal women
- 0 to 30 pg/mL for postmenopausal women
- 10 to 50 pg/mL for men

If your results are lower, it may mean you have ovarian failure, also called early menopause, or low estrogen from rapid weight loss or anorexia.

If your results are higher, it may suggest a tumor of the ovary, testes, or adrenal glands.

## How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

## Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

## What might affect my test results?

Taking birth control pills or hormone therapy may affect your results.

## How do I get ready for this test?

You don't need to prepare for this test. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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