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Calcitonin blood test

The calcitonin blood test measures the level of the hormone calcitonin in the blood.

How the Test is Performed

A blood sample is needed.

How to Prepare for the Test

There is usually no special preparation needed.

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

Calcitonin is a hormone produced in C cells of the thyroid gland. The thyroid gland is located inside the front of your lower neck above the collar bones. Calcitonin helps control the breakdown and rebuilding of bone.

A common reason to have the test is if you have had surgery to remove a thyroid tumor called medullary thyroid cancer. The test allows your health care provider to evaluate if the tumor has spread (metastasized) or has come back (tumor recurrence).

Your provider may also order a calcitonin test when you have symptoms of medullary cancer of the thyroid, or multiple endocrine neoplasia (MEN) syndrome, or a family history of these conditions. Calcitonin may also be higher in other tumors, such as:

- Insulinoma (tumor in the pancreas that produces too much insulin)
- Lung cancer
- VIPoma (cancer that usually grows from islet cells in the pancreas)

Normal Results

A normal value is less than 25 pg/mL (25 picograms per milliliter) for males and less than 20 pg/mL for females.

Women and men can have different normal values, with men having higher values.

Sometimes, calcitonin in the blood is checked several times after you are given a shot (injection) of a special medicine that stimulates calcitonin production.

You will need this extra test if your baseline calcitonin is normal, but your provider suspects you have medullary cancer of the thyroid.

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

What Abnormal Results Mean

A higher-than-normal level may indicate:

- Insulinoma
- Lung cancer
- Medullary cancer of thyroid (most common)
- VIPoma

Higher-than-normal levels of calcitonin can also occur in people with kidney disease, smokers, and higher body weight. Also, it increases when taking certain medicines to stop stomach acid production.

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

Serum calcitonin

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