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Beta-carotene blood test

The beta-carotene test measures the level of beta-carotene in the blood.

How the Test is Performed

A blood sample is needed.

How to Prepare for the Test

Follow your health care provider's instructions about not eating or drinking anything for up to 8 hours before the test. You may also be asked not to eat anything with vitamin A (carotene) for 48 hours before the test.

Your provider may also tell you to temporarily stop taking medicines, such as retinol, which may interfere with test results.

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 and slight bruising. This soon goes away.

Why the Test is Performed

Beta-carotene is found in certain foods. It breaks down to become vitamin A in the body.

Your provider may order this test if you have signs that your vitamin A level may be too low, such as:

- Bones or teeth that do not develop correctly
- Dry or inflamed eyes
- Feeling more irritable
- Hair loss
- Loss of appetite
- Night blindness
- Recurring infections
- Skin rashes

The test can also be used to help measure how well your body absorbs fats.

Normal Results

The normal range is 50 to 300 mcg/dL or 0.93 to 5.59 micromol/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 results.

What Abnormal Results Mean

A higher than normal level may be due to taking too much vitamin A (hypervitaminosis A).

Beta-carotene deficiency may occur if you are malnourished. It can also occur if your body has trouble absorbing fats through your digestive tract such as with:

- Long-term (chronic) lung disease called cystic fibrosis
- Pancreas problems such as swelling and inflammation (pancreatitis) or the organ not producing enough enzymes (pancreatic insufficiency)
- Small intestine disorder called celiac disease

This test plays a valuable role in diagnosing vitamin A deficiency. But the test results must be evaluated along with other clinical findings.

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

Carotene test

References

Mason JB, Booth SL. Vitamins, trace minerals, and other micronutrients. In: Goldman L, Cooney KA, eds. *Goldman-Cecil Medicine*. 27th ed. Philadelphia, PA: Elsevier; 2024:chap 199.

Markell M, Siddiqi HA. Vitamins and trace elements. In: McPherson RA, Pincus MR, eds. *Henry's Clinical Diagnosis and Management by Laboratory Methods*. 24th ed. Philadelphia, PA: Elsevier; 2022:chap 27.

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