

Name of the test

Folate

Alternative name(s) of the test

Folic acid

What is this test used for?

Folate is also known as vitamin B9. It is essential for human health – it plays an important role in DNA synthesis and repair processes.

Folate is not produced in the body, so it should be supplied by the diet. It is found in a wide variety of foods including green leafy vegetables, dried beans, liver, nuts, citrus fruits. In some countries wheat flour is fortified with folate (folate is added to flour as a supplement), which decreases the risk of folate deficiency. The name “folic acid” refers to this supplement added to foods.

Adults have about 3 months' worth of folate stored in the body.

Folate levels can be measured in either serum (serum folate) or in red blood cells (RBC folate). For screening purposes, the serum levels are evaluated; RBC folate testing is not routinely performed.

Pregnant women need an increased amount of folate. It is essential for normal development of a fetus – folate deficiency during early pregnancy increases the risk of neural tube defects (for example, spina bifida).

In adults folate deficiency may cause fatigue, headaches, dementia. The main manifestation of folate deficiency is megaloblastic anemia without neurological changes (unlike vitamin B12 deficiency).

When is the test ordered?

This test is mainly ordered when a patient is diagnosed with megaloblastic anemia.

It can be also performed in the following conditions:

- when a patient has some signs of folate deficiency
- to monitor the condition of the patient with diagnosed folate deficiency
- to evaluate the effectiveness of treatment for folate deficiency
- when a patient has malabsorption, as this condition may cause folate deficiency

Folate test is often ordered with vitamin B12 test.

Folate deficiency may be caused by:

- inadequate intake
- malabsorption
- increased need – for example, a human body needs more folate during pregnancy, lactation, infancy. Patients with hemolytic anemia also need an extra amount of B9.

The elderly have an increased risk of folate deficiency.

How is this test performed?

A blood sample is taken from a vein.

How to prepare for the test

Fasting is required 8 hours prior to the test. Some medications may affect the test results, so it is important to consult with a doctor.

Interpretation of results

The test results should be interpreted by a doctor.

Generally, normal levels of folate mean that the patient doesn't have folate deficiency.

Lower than normal levels of folate suggest its deficiency.

Low levels of folate may be due to:

- malabsorption
- alcoholism
- some medications, for example methotrexate, omeprazole, phenytoin, etc.
- inadequate intake
- cancer