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## Folate-deficiency anemia

Folate-deficiency anemia is a decrease in red blood cells (anemia) due to a lack of folate. Folate is a type of B vitamin. It is also called folic acid.

Anemia is a condition in which the body does not have enough healthy red blood cells. Red blood cells provide oxygen to body tissues.

### Causes

Folate (folic acid) is needed for red blood cells to form and grow. You can get folate by eating green leafy vegetables and liver. However, your body does not store folate in large amounts. So, you need to eat plenty of folate-rich foods to maintain normal levels of this vitamin.

In folate-deficiency anemia, the red blood cells are abnormally large. Such cells are called macrocytes. They are also called megaloblasts, when they are seen in the bone marrow. That is why this anemia is also called a type of megaloblastic anemia.

Causes of this type of anemia include:

- Too little folic acid in your diet
- Hemolytic anemia
- Long-term alcoholism
- Use of certain medicines (such as phenytoin [Dilantin], methotrexate, sulfasalazine, triamterene, pyrimethamine, trimethoprim-sulfamethoxazole, and barbiturates)

The following raise your risk for this type of anemia:

- Alcoholism
- Eating overcooked food
- Poor diet (often seen in the poor, the older people, and people who do not eat fresh fruits or vegetables)
- Pregnancy
- Weight loss diets

Folic acid is needed to help a baby in the womb grow properly. Too little folic acid during pregnancy may lead to birth defects in a baby.

# Symptoms

Symptoms may include:

- Fatigue
- Weakness
- Headache
- Pallor
- Sore mouth and tongue

## Exams and Tests

Your health care provider will perform a physical exam. Tests that may be done include:

- Complete blood count (CBC)
- Red blood cell folate level

In rare cases, a bone marrow aspiration may be done.

## Treatment

The goal is to identify and treat the cause of the folate deficiency.

You may receive folic acid supplements by mouth, injected into muscle, or through a vein (in rare cases). If you have low folate levels because of a problem with your intestines, you may need treatment for the rest of your life.

Diet changes can help boost your folate level. Eat more green, leafy vegetables and citrus fruits.

## Outlook (Prognosis)

Folate-deficiency anemia most often responds well to treatment within 3 to 6 months. It will likely get better when the underlying cause of the deficiency is treated.

## Possible Complications

Symptoms of anemia can cause discomfort. In pregnant women, folate deficiency has been associated with neural tube or spinal defects (such as spina bifida) in the infant.

Other more severe complications may include:

- Curly graying hair
- Increased skin color (pigment)
- Infertility
- Worsening of heart disease or heart failure

## When to Contact a Medical Professional

Contact your provider if you have symptoms of folate deficiency anemia.

# Prevention

Eating plenty of folate-rich foods can help prevent this condition.

Experts recommend that women take 400 to 800 micrograms (mcg) of folic acid every day before they get pregnant and through the first 3 months of their pregnancy.

## References

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Updated by: Todd Gersten, MD, Hematology/Oncology, Florida Cancer Specialists & Research Institute, Wellington, FL. Review provided by VeriMed Healthcare Network. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

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