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**Folate Deficiency**

Folate, or folic acid, is a type of B vitamin. It helps to:

Make DNA.

Repair DNA.

Produce red blood cells (RBCs).

Folate is a water-soluble vitamin. It dissolves in water and isn’t stored in the fat cells. This means that the subject need to keep taking folate, as his body can’t develop a reserve. People release excess amounts of water-soluble vitamins in their urine.

Certain drinks and foods, such as [citrus juices](https://www.healthline.com/nutrition/citrus-fruit-benefits) and [dark green vegetables](https://www.healthline.com/nutrition/foods/spinach), are particularly good sources of folate. Not eating enough folate can lead to a deficiency in just a few weeks. Deficiency may also occur due to disease or genetic mutation that prevents the absorbing or converting folate to its usable form.

**Symptoms of folate deficiency**: The symptoms of folate deficiency include:

* fatigue
* gray hair
* [mouth sores](https://www.healthline.com/health/mouth-sores)
* tongue swelling
* growth problems

The symptoms of anemia that occur due to folate deficiency include:

* persistent fatigue
* [weakness](https://www.healthline.com/symptom/muscle-weakness)

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* Lethargy
* [pale skin](https://www.healthline.com/health/paleness)
* [shortness of breath](https://www.healthline.com/symptom/shortness-of-breath)
* [irritability](https://www.healthline.com/symptom/irritable-mood)

**Causes folate deficiency**

The causes of folate deficiency include:

**Diet**

A diet low in fresh fruits, vegetables, and fortified cereals is the main cause of folate deficiency. In addition, overcooking the food can sometimes destroy the vitamins. Folate levels in the body can become low in just a few weeks if subject don’t eat enough folate-rich foods.

**Disease**

Diseases that affect absorption in the gastrointestinal tract can cause folate deficiencies. Such diseases include:

* [Crohn’s disease](https://www.healthline.com/health/crohns-disease)
* [celiac disease](https://www.healthline.com/health/celiac-disease-sprue)
* certain types of [cancers](https://www.healthline.com/health/cancer)
* severe [kidney problems](https://www.healthline.com/health/kidney-failure) that require [dialysis](https://www.healthline.com/health/dialysis)

**Genetics**

Some people have a genetic mutation that hinders their body from properly and efficiently converting dietary or supplemental folate to its usable form, [methylfolate](https://www.healthline.com/health/pregnancy/mthfr).

**Medication side effects**

Certain medications can cause folate deficiency. These include:

* phenytoin (Dilantin)
* trimethoprim-sulfamethoxazole
* methotrexate

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* sulfasalazine

**Excessive alcohol intake**

[Alcohol](https://www.healthline.com/health/alcohol/effects-on-body) interferes with folate absorption. It also increases folate excretion through the urine.

**Folate deficiency diagnosis**

Folate deficiency is diagnosed with a blood test. Doctors will often test the folate levels of pregnant women during their [prenatal checkups](https://www.healthline.com/health/pregnancy/first-prenatal-visit-tests).

**Complications of folate deficiency**

Folate is required for the normal production of RBCs. Complications of a deficiency may include:

* [megaloblastic anemia](https://www.healthline.com/health/megaloblastic-anemia), which means the RBCs are larger than normal and not fully developed
* low levels of [white blood cells](https://www.healthline.com/health/wbc-count) and platelets
* serious birth defects in the [spinal cord](https://www.healthline.com/symptom/deformity-of-spine) and brain of a developing fetus, which are called neural tube defects

**Treatment of folate deficiency**

Treatment involves increasing the dietary intake of folate. also can take a folate or folic acid supplement. Those with a genetic mutation that affects folate absorption, known as [MTHFR](https://www.healthline.com/health/mthfr-gene), need to take methylated folate in order to avoid deficiency.

Folate is frequently combined with other B vitamins in supplements. These are sometimes called vitamin B complexes.

**Prevention of folate deficiency:** Eat a nutritious diet to prevent folate deficiency. Foods that contain high amounts of folate include:

* leafy, green vegetables, such as broccoli and spinach

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* Brussels sprouts
* peas
* citrus
* fruits, such as [bananas](https://www.healthline.com/health/bananas-essential-nutrients) and melons
* tomato juice
* [eggs](https://www.healthline.com/nutrition/10-proven-health-benefits-of-eggs)
* [beans](https://www.healthline.com/nutrition/beans-101)
* legumes
* mushrooms
* asparagus
* kidney
* [liver meat](https://www.healthline.com/health/food-nutrition/organ-meats)
* poultry
* pork
* shellfish
* wheat bran
* [fortified cereals](https://www.healthline.com/health/food-nutrition/fortified-and-enriched-foods)

The recommended folate dose is 400 micrograms per day. Women who may become pregnant should take a folate supplement. Folate is critical for normal fetal growth. People who take medications known to cause folate deficiency should take a supplement as well, but it’s important to check with the doctor first.

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