

# Folate Facts

## What is folate?

Folate is a general term for the various forms of the B vitamin. The parent form is folic acid.

## Why is folate being added to food products?

- The U.S. Food and Drug Administration (FDA) implemented this action because research suggested that additional folate will help prevent neural tube birth defects, which are the most common disabling birth defects. Folate also has the potential for reducing heart disease.

- Folate-fortified breads and flour products have been on store shelves since January 1998.

- This is the first time since 1943 that the FDA has ordered fortification of the food supply. First flour, and then products made with flour, were fortified with three B vitamins (thiamin, riboflavin, niacin) and iron at the start of World War II to help ensure healthy men and women for the armed services.

## How is folate linked to birth defects?

- Folate is necessary for the development of the neural tube that encloses the spinal cord.

When the neural tube fails to close properly, infants are either still-born or suffer disabilities such as paralysis and incontinence. Neural tube defects affect 3,000 pregnancies each year in the United States. Hispanic women have a higher rate of neural tube defect-affected pregnancies than non-Hispanic women.

- Because the neural tube is formed in the first month of pregnancy, women must have a sufficient supply of folate before becoming pregnant.

- Fortification increases average folate intake for women by about 100 micrograms per day. Women still need to eat the right foods or take supplements to reduce their risk of an affected pregnancy.

- The U.S. Centers for Disease Control and Prevention report a 36 percent reduction in neural tube defects since the introduction of fortification.

## How is folate linked to heart attacks and strokes?

- Four B vitamins (folate, riboflavin, B-6, and B-12) are needed to help prevent a buildup of homocysteine in the blood.

- Scientific research has identified a strong correlation between elevated homocysteine levels and coronary heart disease/stroke.

- Homocysteine levels have been shown to decrease with increased consumption of folate, B-6, and B-12.

## How much folate do I need?

For adults, an average daily intake of 400 micrograms of folate will help maintain normal homocysteine levels as well as prevent neural tube defects in newborns. (See list of food sources on the next page.)

## What happens if I get too much folate?

Too much folate in the diet can mask signs of vitamin B-12 deficiency which is common in older adults as a result of poor absorption of the vitamin due to reduced production of stomach acid or to pernicious anemia. Excessive folate intake is unlikely through dietary intake alone. However, it could result from overuse of supplements.



## Food sources of folate

## Amount of folate

½ cup raw chopped broccoli	31 micrograms
½ cup boiled broccoli	39 micrograms
1 medium orange	40 micrograms
½ cup raw chopped spinach	54 micrograms
¼ cup wheat germ	80 micrograms
1 cup orange juice	110 micrograms
½ cup boiled kidney beans	115 micrograms
½ cup cooked dark green leafy vegetables such as spinach	130 micrograms
½ cup boiled black beans	130 micrograms
½ cup boiled chickpeas	140 micrograms
½ cup cooked lentils or legumes	180 micrograms
3½ ounces cooked chicken liver	770 micrograms
1 cup fortified breakfast cereals	100 to 400 micrograms

### For more information

Contact your local ISU Extension and Outreach office.

[www.extension.iastate.edu/families/staff-nutrition-health](http://www.extension.iastate.edu/families/staff-nutrition-health)

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