

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 occur in one of every 1,000 pregnancies.

- 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 National Center for Health Statistics reports a 25 percent reduction in neural tube birth defects between 1995-2002 related to folate 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. Homocysteine is the amino acid that is emerging as a new risk factor for atherosclerosis and the heart attacks and strokes that result.

- 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.

- It is estimated that at least 13,500 deaths annually from coronary artery disease may be prevented if Americans consumed more folate. According to the American Heart Association, folate fortification may have contributed to a 10 to 15 percent decrease in stroke and ischemic heart disease that occurred after fortification.

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.

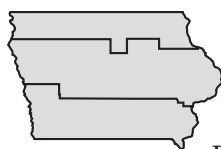
Food sources of folate

½ cup raw chopped broccoli
½ cup boiled broccoli
1 medium orange
½ cup raw chopped spinach
¼ cup wheat germ
1 cup orange juice
½ cup boiled kidney beans
½ cup cooked dark green leafy vegetables such as spinach
½ cup boiled black beans
½ cup boiled chickpeas
½ cup cooked lentils or legumes
3½ ounces cooked chicken liver
1 cup fortified breakfast cereals

Amount of folate

31 micrograms
39 micrograms
40 micrograms
54 micrograms
80 micrograms
110 micrograms
115 micrograms
130 micrograms
130 micrograms
140 micrograms
180 micrograms
770 micrograms
100 to 400 micrograms

Where can I get more information?



Contact your local ISU Extension office, or one of these ISU Extension nutrition and health field specialists

Northern Iowa:

Nancy Clark (515) 295-2469
nanclark@iastate.edu
(Buena Vista, Calhoun, Emmet, Kossuth, Palo Alto, Pocahontas, Sac)

Fran Passmore (563) 568-6345
fpassmor@iastate.edu
(Allamakee, Bremer, Buchanan, Chickasaw, Clayton, Delaware, Dubuque, Fayette, Howard, Winneshiek)

Denise Wyland (712) 472-2576
dwyland@iastate.edu
(Cherokee, Clay, Dickinson, Lyon, O'Brien, Osceola, Plymouth, Sioux)

Central Iowa:

Paulelda Gilbert (515) 576-2119
pgilbert@iastate.edu
(Greene, Hamilton, Hardin, Humbolt, Marshall, Tama, Webster, Wright)

Susan Klein (515) 261-4213
sklein@iastate.edu
(Boone, Dallas, Jasper, Madison, Marion, Polk, Poweshiek, Story, Warren)

Renee Sweers (712) 276-2157
rsweers@iastate.edu
(Carroll, Crawford, Ida, Monona, Woodbury)

Jan Temple (319) 337-2145
mjtemple@iastate.edu
(Benton, Iowa, Johnson, Linn)

Jill Weber (319) 234-6811
jrweber@iastate.edu
(Black Hawk, Butler, Cerro Gordo, Floyd, Franklin, Grundy, Hancock, Mitchell, Winnebago, Worth)

Southern Iowa:

Barbara Anderson (641) 682-5491
bjanders@iastate.edu
(Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Mahaska, Monroe, Van Buren, Wapello, Washington)

Pat Anderson (712) 482-6449
pander@iastate.edu
(Audubon, Cass, Fremont, Harrison, Mills, Montgomery, Page, East Pottawattamie, Shelby)

Patricia Steiner (319) 754-7556
psteiner@iastate.edu
(Des Moines, Henry, Lee, Louisa, Washington)

Vera Stokes (563) 359-7577
vstokes@iastate.edu
(Cedar, Clinton, Muscatine, Scott)

Susan Uthoff (319) 377-9839
x1uthoff@iastate.edu
(Clinton, Jackson, Jones, Linn)

Revised by Ruth Litchfield, extension nutritionist. Originally prepared by Wendy S. White, assistant professor of human nutrition and a registered dietitian; Treva Blumenshine, communication graduate assistant; and Diane Nelson, communication specialist.

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