# How to Prevent Folate Deficiency on a Gluten-Free Diet

### What is folate / folic acid?

Folate is a <u>water-soluble B vitamin</u><sup>1</sup> found naturally in foods. Folic acid is a synthetic form of folate used in nutritional supplements.

Folate is necessary for normal red blood cell formation, the metabolism of nucleic acids including DNA and the synthesis of important amino acids (proteins) that support cardiovascular health.

## What causes folate deficiency?

The most common cause of folate deficiency is eating a diet that lacks foods rich in folate. A deficiency of vitamins B1, B2 and B3 can also lead to folate deficiency.

People with Celiac disease, especially those just diagnosed, often experience malabsorption of vital nutrients due to damaged intestinal microvilli. This puts Celiacs at higher risk of folate deficiency.

In 1998 the United States Food and Drug Administration mandated that enriched wheat flour had to be fortified with folic acid. Flour is fortified with folic acid primarily to prevent a very severe birth defect called neural tube defect which causes spina bifida.

Gluten-free flour manufacturers are not required to fortify their products with folic acid.

### Gluten-Free Foods that are High in Folate

- Beans including garbanzo, black, lima, pinto, navy, kidney
- Leafy green vegetables
- Asparagus
- Lentils
- Orange juice and citrus fruits
- Animal protein including poultry, pork, liver and shellfish

# **RDAs for Folate - Dietary Folate Equivalents (DFE)**

- Infants...0-6 months...65 mcg/day
- Infants...7-12 months...80 mcg/day
- Children...1-3 years...150 mcg/day
- Children...4-8 years...200 mcg/day
- Children...9-13 years...300 mcg/day
- Adolescents...14-18 years...400 mcg/day
- Adults...19 and older...400 mcg/day
- Pregnancy...all ages...600 mcg/day
- Breast-feeding all ages...500 mcg/day

mcg=micro milligrams