Folic Acid to Prevent Neural Tube Defects

Folic acid deficiency is the primary preventable cause of neural tube defects.

What Are Neural Tube Defects?
Neural tube defects are malformations of the cranium (brain and skull) or spine (spinal cord and backbone) that can occur in fetuses during early pregnancy. These malformations occur when the neural tube, an important embryonic structure, does not close properly. The 2 major types of neural tube defects are anencephaly (affected infants are born without parts of their brain or skull) and spina bifida (part of the spinal cord protrudes through an opening in the back).

Because neural tube defects are often severe, treatments are limited. Infants born with anencephaly do not survive more than a few weeks, and those born with spina bifida have varying levels of disability, including weakness and paralysis, and problems with bowel and bladder function. Therefore, prevention is very important.

What Is Folic Acid?
Folate, or vitamin B9, is found in many foods, including leafy greens, fruits, nuts, beans, eggs, dairy, seafood, and meat. Folic acid refers to the synthetic form of folate that is found in supplements and added to fortified foods.

Folate deficiency refers to folate levels that are too low. Low levels of folate may be due to inadequate dietary intake, poor intestinal absorption, medication use that interferes with folate function, and impaired folate metabolism.

Pros and Cons of Taking a Folic Acid Supplement
Pros of taking folic acid include a lowered risk of fatal neural tube defects, particularly in individuals whose diets are not high in folate. Many studies have provided solid evidence to support this benefit.

Cons of taking folic acid are minimal because there are no major negative side effects to taking a folic acid supplement.

Who Should Take a Folic Acid Supplement?
According to the US Preventive Services Task Force, individuals who are planning or able to become pregnant should take a folic acid (or folate) supplement of 400 to 800 µg (micrograms) daily; these doses are often included in prenatal multivitamins. Ideally, a supplement containing folic acid should start 1 month prior to conception and be continued through the first trimester of pregnancy.

FOR MORE INFORMATION
US Preventive Services Task Force
www.uspreventiveservicestaskforce.org/uspstf/topic_search_results?topic_status=P

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