

# Spina Bifida

**P**renatal care is an important step in preventing many birth defects. Besides regular prenatal visits to your doctor, good nutrition, including supplementing your diet with vitamins and minerals, helps reduce the risk of certain birth defects.

In fact, you should start taking **folic acid**, one of the B vitamins, before you become pregnant. Getting the recommended daily amount of folic acid before you become pregnant and during your pregnancy reduces the risk of **spina bifida** (see below) and other **neural tube defects** (birth defects that affect the development of the brain and spinal cord).

An article in the June 20, 2001, issue of JAMA reports on the decrease in the number of neural tube defects in the United States that appears to be related to the addition of folic acid to all enriched grain products. The United States Food and Drug Administration mandated that all **enriched grain products** (breads, pastas, rice, flour, and cereals that are enriched with supplemental vitamins) include folic acid supplementation as of January 1998.

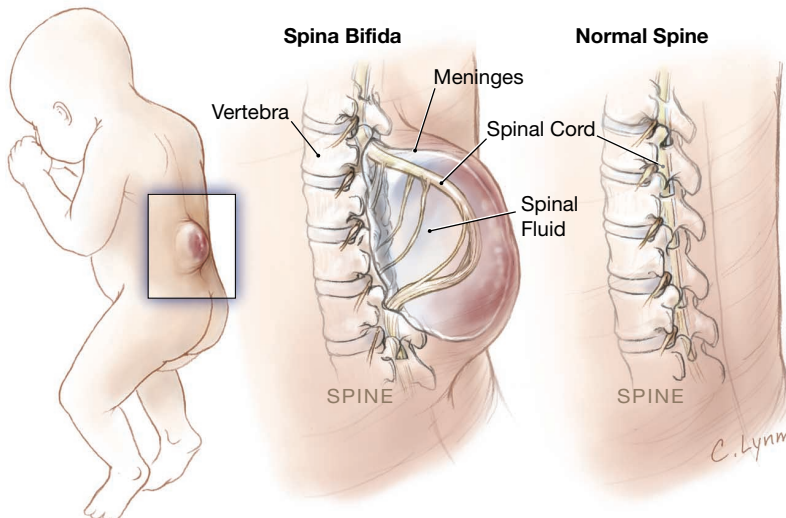
## WHAT IS FOLIC ACID?

**Folic acid** (sometimes referred to as folate) is one of the B vitamins. It is recommended that any woman who could possibly become pregnant supplement her diet daily with 400 micrograms (0.4 milligrams) of folic acid. It is important that you get the recommended daily allowance of folic acid before you become pregnant because by the time pregnancy is confirmed, the baby's brain and spinal cord have already started to develop.

## WHAT ARE NEURAL TUBE DEFECTS?

**Neural tube defects** are birth defects that occur in the early stages of fetal development when the cells for the brain and spinal cord form a tubelike structure known as the **neural tube**. The entire nervous system develops from this structure. Neural tube defects can involve the brain, spinal cord, **meninges** (covering membranes), skull, and spine.

**Spina bifida**, a common neural tube defect, occurs when **vertebrae** (the bones of the spine that protect the spinal cord) do not close completely around the part of the spinal cord that they are meant to protect. This can cause the unprotected part of the spinal cord to protrude through the spinal defect. Although the spinal defect can sometimes be repaired through surgery, nerve damage that may have occurred because of this malformation may be permanent.



## FOR MORE INFORMATION

- National Center on Birth Defects and Developmental Disabilities  
Centers for Disease Control and Prevention  
770/488-7160  
888/232-6789 (toll free)  
e-mail: flo@cdc.gov  
www.cdc.gov/ncbddd/folicacid
- March of Dimes  
914/997-4764 (TTY)  
888/663-4637 (toll free)  
e-mail: resourcecenter@modimes.org  
www.modimes.org
- Spina Bifida Association of America  
202/944-3285  
800/621-3141 (toll free)  
e-mail: sbaa@sbaa.org  
www.sbaa.org

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at [www.jama.com](http://www.jama.com). A JAMA Patient Page on prenatal care was published on May 27, 1998.

Sources: National Center on Birth Defects and Developmental Disabilities (Centers for Disease Control and Prevention), National Institute of Neurological Disorders and Stroke, March of Dimes, Spina Bifida Association of America, AMA Complete Guide to Your Children's Health, AMA Home Medical Library

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