Folate and the Prevention of Neural Tube Defects
Top 10 facts about folic acid that your female patients of childbearing age should know

1. Neural tube defects (NTD) are common and serious birth defects that can affect any baby. NTDs occur very early in pregnancy and affect the brain and spinal cord. The most common NTD is spina bifida, or “open spine.” Mild cases may cause only partial paralysis or problems with bowel or bladder control. Severe cases can result in brain damage, stillbirth or infant death.

2. Many NTDs are preventable. Up to 70% of NTDs can be prevented if female adolescents and women who can become pregnant consume 400 micrograms (mcg) of folic acid daily at least a month prior to conception and during the first trimester of pregnancy.

3. Folic acid is a B vitamin that is necessary for DNA synthesis. DNA is required for rapid cell division and organ/tissue formation that occurs in a developing baby.

4. Folic acid can only help prevent NTDs during the first weeks of pregnancy, usually before a woman even knows she’s pregnant. Since 50 percent of pregnancies are unplanned, all women who are sexually active and of child-bearing age should consume folic acid every day.

5. Two thirds of women in the United States report consuming insufficient levels of folic acid. There are three ways to get enough folic acid:
   - Take a vitamin supplement containing 400 mcg folic acid daily.
   - Eat a fortified breakfast cereal daily which contains 100% of the recommended daily value for folic acid.
   - Increase consumption of folate-rich foods and foods fortified with folic acid.

6. Foods that are rich in folate (the natural form of folic acid) include:
   - fortified breakfast cereals; enriched grain products (check labels);
   - legumes such as pinto beans, navy beans, kidney beans, lentils and garbanzo beans;
   - orange juice;
   - green vegetables.

7. A woman who has had a prior NTD-affected pregnancy is at high risk for recurrence and should see a physician before planning another pregnancy. Such a woman will need a prescription for a higher dosage of folic acid (4.0 milligrams is recommended).

8. Women at higher risk for NTD-affected pregnancies are those who:
   - have insulin dependent diabetes;
   - use anti-seizure medication;
   - are obese (BMI > 30);
   - were exposed to high temperatures in early pregnancy (i.e., prolonged high fevers and hot-tub use);
   - have a poor diet (deficient in high quality protein and with limited fruits and vegetables).

9. Other potential health benefits of folic acid intake include reducing risks related to heart disease, stroke and some kinds of cancer. Risk of other birth defects (facial clefts, heart problems, limb abnormalities) may be lowered also.

10. Health care professionals should use the Wisconsin Division of Public Health publication Folate and Eating Right for Women of Childbearing Age (PPH 4725 English and PPH 4725S Spanish) to provide nutrition guidance to their female patients. This publication may be ordered by sending a DMT-25 requisition form to the Division of Public Health, Nutrition Section, P.O. Box 2659, Madison WI 53701-2659. The DMT-25 requisition form may be obtained by calling (608) 266-9824.
Professional Reading and Resources List

Reading:


Resources:
American Academy of Pediatrics: www.aap.org 141 North west Point Blvd., Elk Grove, IL  60007, (847) 228-5005

American Dietetic Association: www.eatright.org 216 West Jackson Blvd., Chicago, IL  60606-6995, (800) 366-1655

American Society for Nutritional Sciences: www.faseb.org 9650 Rockville Pike, Bethesda, MD  20814-3998, (301) 530-7050

Centers for Disease Control and Prevention, National Center for Environmental Health, Birth Defects and Developmental Disabilities: www.cdc.gov 4770 Buford Highway NE, Mailstop F-45, Atlanta, GA  30341, (770) 488-7160

March of Dimes Birth Defects Foundation, Resource Center: www.modimes.org 1275 Mamaroneck Avenue, White Plains, NY 10605, (914) 997-4748/4720


Endorsed by:

State Medical Society of Wisconsin
Physicians Working Together, Advancing the Health of the People of Wisconsin