FAMILY GENETICS UPDATE

Preventing Neural Tube Defects

For Couples at Increased Risk

Taking folic acid (a simple B vitamin) every day can decrease the chance of having a baby with a neural tube defect (NTD). This is especially true if you are at increased risk to have a baby with an NTD.

Who is at increased risk to have a baby with an NTD?

- Women who have had a previoubaby with an NTD,
- Individualwho themselvehave an NTD,
- Women with diabetes,
- Women who are taking anticonvulsant medication (medicine to control seizures), especially valproic acid (valproate).

For most couples who have had one baby with an NTD, the chance of having another baby with an NTD is about 3%. Taking folic acid every day can decrease this chance. Because some couples will have a different risk, you should review your own chances with your health care provider or a genetic counselor.

What are neural tube defects?

Neural Tube Defects (NTDs) are birth defects that include spina bifida, anencephaly, and encephalocele. These problems are caused by a mistake in the formation of the developing spine and brain (the neural tube) during the first 28 days of pregnancy.

What is folic acid?

Folic acid (also called folate, or folacin), is a B vitamin present in may foods like leafy green vegetables, orange juice, and dried beans and peas. It is important in the formation of the brain and spinal cord. However, it is extremely difficult to eat enough folic acid in the diet to prevent NTDs.

When should I start taking folic acid?

You need to start taking the folic acid at least one month prior to conception and continue taking it through the third month of pregnancy. Starting to take the folic acid after you find out you are pregnant may be too late. This is because most women do not know they are pregnant until after the neural tube is formed, when the folic acid is no longer effective in preventing NTDs.

How much folic acid should I take?

- Women at increased risk who are planning a pregnancy - 4.0 mg every day,
- Women at increased risk who are not specifically planning a pregnancy - 0.4 mg every day.

It is important that you take the folic acid every day because it may not be effective if taken irregularly. Continue taking the folic acid until your first pregnancy visit when your health care provider will advise you about pregnancy vitamins.

Women taking 4.0 mg/day should do so under the care of a health care provider, since the folic acid may hide the signs of vitamin B12 deficiency, a rare medical problem. Talk with your health care provider about the best way to take the 4.0 mg dose. Folic acid is available both by prescription and over-the-counter. It is also contained in most multiple vitamins.

Do not take the larger dose of 4.0 mg/day by increasing the dose of multiple vitamins, because this may result in harmful levels of other vitamins.

Common questions about folic acid and Neural Tube Defects:

Q: **"Folic acid" sounds dangerous. Is it bad for me or my baby?**

A: No, Folic acid, or folate, is needed for your body to form red blood cells and for you baby to develop normally. It is especially important for the formation of a baby's spine and brain.

Q: **I eat a very healthy diet with lots of green vegetables and other foods rich in folate. Do I still need a supplement?**

A: Yes. For example, to get 4.0 mg of folic acid, you would have to drink at least 80 glasses of orange juice or eat at least 100 servings of broccoli. some women do get 0.4 mg per day by diet alone. A nutritionist can help you plan a high folic acid diet.

Q: **I have a child with spina bifida. If I had taken folic acid, could I have prevented this condition?**

A: Folic acid can prevent NTDs about 50% of the time. However, for reasons that are not completely understood, different women need to have different amounts of folic acid to give them the lowest possible risk. Folic acid reduces, but does not completely eliminate your risk.

Q: **I found out that I'm pregnant. Is it too late to begin taking folic acid?**

A: It depends on how far along you are. To be sure, start taking the 0.4 mg dose right away, and discuss the issue with your pregnancy care provider at your first visit.

Q: **Is there any way to find out whether a baby has an NTD before birth?**

A: Yes. For couples at increased risk to have a baby with an NTD, there are several choices including amniocentesis, ultrasound and a blood test. Contact your pregnancy care provider for more information.

Where can I get further information?

Contact your health care provider, a genetic counselor, spina bifida clinic, or the March of Dimes.

Resources in the Pacific Northwest

Genetics Clinic Referrals

Alaska

907/269-3430

Idaho

208/334-2235 x258

Oregon

971/673-0272

Washington
253/395-6743

March of Dimes Offices

Alaska

Alaska Chapter
907/276-4111

Idaho

Idaho Chapter
208/336-5421

Oregon

Greater Oregon Chapter
800/811-0805

Washington

Washington State Chapter
206/624-1373

Spina Bifida Clinics

Oregon

Eugene
CDRC Spina Bifida Clinic
541/346-3575

Portland
CDRC Spina Bifida Clinic
503/494-8307

Shriner's Hospital for Crippled Children
503/241-5090

Washington

Seattle
Children's Hospita Medical Center
Birth Defects Clinic
206/987-2665

Spokane
Shriner's Hospital for Crippled Children
509/623-0400

This fact sheet is available from:

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