

Pregnancy and Nutrition: Spina Bifida and Folic Acid

Why is folic acid important?

Women who take folic acid supplements and eat a diet rich in folate before becoming pregnant and during the first few weeks of pregnancy have a smaller chance of having a baby born with a Neural Tube Defect or NTD. NTDs are a group of serious birth defects. Spina bifida is the most common NTD.

If you are a woman of child-bearing age (between 14-50 years), to help prevent NTDs you should take 0.4 milligrams (400 micrograms) of folic acid every day from a vitamin supplement.

You should also eat a healthy diet that includes good sources of folate every day. The amount of folic acid in supplements may range from 0.4 to 1.0 milligram, but you should not take more than 1.0 milligram without consulting with your health professional/family doctor.

If you take folic acid in a multivitamin supplement, be sure it does not contain more than 10,000 IU of *preformed** vitamin A. Too much *preformed* vitamin A could increase the risk of birth defects.

Preformed vitamin A is often listed as vitamin A acetate or succinate or palmitate. Beta-carotene is **not preformed vitamin A.*

Although folic acid helps to prevent NTDs when taken before and for the first three months of a pregnancy, you should continue to take folic acid supplements and to eat foods high in folate throughout your pregnancy.

Folic acid is important for your health and for the unborn baby's overall growth and development.

Folate is one of the B Vitamins found in foods. Folic acid is the form of folate found in vitamin supplements. Folate and folic acid are important for healthy growth of an unborn baby. They are important for the normal development of a baby's spine and brain.

What are Neural Tube Defects (NTDs)?

Neural Tube Defects, or NTDs, are serious birth defects that occur when tissues and bone around the brain and spine of the fetus do not develop properly.

Persons with spina bifida have varying degrees of paralysis, which can affect the legs, the bladder, and/or bowel function. They need lifelong medical attention. The most seriously affected babies are stillborn or do not survive long after birth.

When do NTDs happen?

NTDs happen to the newly developing embryo in the third and fourth week after conception (the first or second week after the first missed period). This could be before you know or even suspect that you are pregnant. For folic acid to be useful in preventing NTDs, you must take folic acid supplements at least three months **before** becoming pregnant and **during** the first three months of pregnancy.

What increases your risk of having a baby with an NTD?

Women at highest risk of having an NTD birth are those who have a close relative who has had an NTD baby. Women who have had

a previous NTD baby are 15 times more likely to have another NTD baby than the general population. If you or your partner has an NTD this also increases your risk of having a baby with an NTD.

Other people at higher risk include members of certain ethnic groups, women with diabetes, and women taking certain seizure medications. If any of these apply to you, you should see your family doctor when you are planning a pregnancy. You may be advised to take a higher amount of folic acid.

However, it is believed that about 95 percent of all NTD pregnancies happen to women with no family history of NTD or history of a previous affected pregnancy.

How common are NTDs?

Health Canada estimates that there are at least 800 NTD pregnancies per year. Some of these fetuses are aborted, either spontaneously or by medical procedure. About 400 NTD births happen in Canada every year, which is an average of one NTD birth per 1,000 newborn babies.

British Columbia has an average of about 22 cases of NTD every year. About half of these cases could probably be prevented if women took folic acid supplements and ate foods rich in folate before they got pregnant and during their pregnancies.

For more information about NTDs please talk to your family doctor or local public health nurse.

How can you get more folate from your diet?

All women who could become pregnant should follow Canada's Food Guide to Healthy Eating for a healthy, well-balanced diet.

Good dietary sources of folate are:

- Cooked dried beans, peas, and lentils
- Spinach, asparagus, romaine lettuce, beets, broccoli, corn, peas, tomato juice, vegetable juice cocktail, Brussels sprouts, gai-lan, bok choy
- Orange juice, canned pineapple juice, cantaloupe, honeydew, canned grapefruit juice, banana, raspberries, grapefruit, strawberries
- Enriched grain products like pasta, cereals, bread; whole grain breads and cereals
- Peanut butter, sunflower seeds

For more nutrition information, call Dial-A-Dietitian at 604-732-9191 or 1-800-667-3438 to speak to a registered dietitian.



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