



# Pregnancy and Nutrition: Folate and Preventing Neural Tube Defects

## What are folate and folic acid?

Folate is a B vitamin found naturally in foods.

Folic acid is the form of folate found in vitamin supplements and fortified foods. Fortified foods, also called enriched foods, are foods that have specific nutrients added to them.

Folate is needed for a healthy pregnancy. It can be in the form of folate or folic acid.

## Why is folate important?

Your body uses folate during your pregnancy to make blood cells and to help your baby grow.

Folic acid also lowers the risk of your unborn baby having a neural tube defect (NTD). NTDs are a group of serious birth defects that affect a baby's spinal cord, brain and skull. Some babies with severe NTDs are stillborn or do not survive long after birth. Spina Bifida is the most common NTD.

NTDs happen when the tissues and bone around the brain and spine do not grow well. NTDs can happen in the third and fourth week after conception (the first or second week after your first missed period). This could be before you know that you are pregnant.

## How common are neural tube defects?

The Spina Bifida and Hydrocephalus Association of BC reports that 1 in every 750 children born each year in Canada are born with a neural tube defect.

## How can I reduce my baby's risk of being born with an NTD?

To reduce your baby's risk of being born with a NTD, take a multivitamin with folic acid and eat foods high in folate every day for 2 to 3 months before you become pregnant and throughout your pregnancy.

Since many pregnancies are unplanned, it is important for all women who could become pregnant to consider taking a daily multivitamin with folic acid, including women who are breastfeeding.

## What increases my risk of having a baby with a neural tube defect?

You are at higher risk of having a baby with an NTD when:

- you or your male partner already had a baby with an NTD or a pregnancy affected by an NTD;
- you have a family member with an NTD;
- you are part of an ethnic group (e.g. Northern China, Celtic, or Sikh) where NTDs are more common;
- you have epilepsy, obesity, diabetes, gastrointestinal conditions such as Crohn's or active Celiac disease, gastric bypass surgery, advanced liver disease, or receive kidney dialysis;
- you struggle with drug or alcohol use; or
- you are taking medications that interfere with your body's use of folic acid (e.g., anticonvulsants, methotrexate, sulfasalazine, triamterene, or trimethoprim - as found in cotrimoxazole).

If you are at higher risk of having a baby with an NTD, talk to your doctor, midwife or other health care provider. You may need to take a supplement with more folic acid each day.

### How much folate do I need each day to reduce the risk?

All women 14 to 50 years of age who could become pregnant need to eat foods that are high in folate and take a supplement with 400 mcg (400 µg or 0.4 mg) of folic acid every day. If you take a multivitamin, check that it includes this amount of folic acid. If you become pregnant, take a multivitamin with folic acid every day during your pregnancy and continue for as long as you are breastfeeding. A multivitamin with folic acid also gives you other nutrients important for a healthy pregnancy. When you choose a multivitamin, pick one that also has vitamin B12. Vitamin B12 works with folate to make DNA.

Some multivitamins contain more than 400mcg of folic acid. A slightly larger dose of folic acid is not dangerous, but too much folic acid can cause health problems. Don't take a multivitamin with more than 1000 mcg (1000µg or 1mg ) of folic acid unless your doctor or midwife has told you to. If you do choose to take a multivitamin along with other supplements, be careful that the total amount of folic acid is not more than 1000mcg a day.

A health care provider might suggest a larger dose of folic acid if you are at higher risk of having a baby with an NTD. If you are at a higher risk, talk to your health care provider about what amount of folic acid is right for you.

### How can I get more folate from my diet?

Common food sources of folate include:

- legumes such as cooked dried beans, peas, lentils and edamame (green soybeans);

- dark green vegetables such as asparagus, avocado, spinach, broccoli, romaine lettuce, beets, Brussels sprouts, green peas, gai-lan, and bok choy;
- oranges and orange juice; and
- wheat germ, sunflower seeds, yeast extract like marmite, and peanuts.

Although liver and liver products (e.g. liverwurst spread and liver sausages) are high in folate, they are also very high in vitamin A. Too much vitamin A may cause birth defects, especially during the first trimester. The safest choice is to limit these foods during pregnancy. If you choose to eat liver or liver products, have no more than 75g (2 ½ ounces) per week.

In Canada, folic acid must be added to white flour, enriched pasta and enriched cornmeal. Other foods that may contain added folic acid include breads, buns, cookies, crackers, pasta, and ready-to-eat cereals.

### For More Information

For more information about folate, eating a balanced diet, or spina bifida, visit the following resources:

- [HealthLinkBC File #68g Folate and Your Health](#)
- Eating Well with Canada's Food Guide: [www.canada.ca/en/health-canada/services/canada-food-guides.html](http://www.canada.ca/en/health-canada/services/canada-food-guides.html)
- Spina Bifida and Hydrocephalus Association of British Columbia: [www.sbhabc.org](http://www.sbhabc.org), or call 604-878-7000