

Pregnancy and folic acid (folate): Preventing neural tube defects

What are folate and folic acid?

Folate is a B vitamin found naturally in foods.

Folic acid is a form of folate. It's used in vitamin supplements and fortified foods. Fortified foods, also called enriched foods, are foods that have specific nutrients added to them.

Why is folate important for my health?

Folate helps make healthy new cells. If you do not get enough folate, you could get anemia. People who have anemia feel tired or weak, and may have a racing heartbeat and trouble catching their breath.

Why is folate important for my baby?

Folate lowers the risk of your unborn baby having a neural tube defect (NTD).

The neural tube is the part of a growing baby that becomes the brain and spine. NTDs happen when this tube does not close completely and the brain or spine are not fully formed. The most common NTDs are:

- Spina bifida: when the spine does not close
- Anencephaly: when the brain and skull are missing some parts

Some NTDs cause babies to be stillborn or to have lifelong disabilities.

How can I lower my baby's risk of being born with a neural tube defect?

NTDs can happen during the very early weeks of pregnancy, when you may not know that you are pregnant. This is why it's important for all people who could become pregnant to get enough folic acid.

At least 3 months before becoming pregnant:

Take a daily multivitamin with 400 microgram (mcg) (0.4 milligram (mg)) of folic acid.

After becoming pregnant: Continue to take your multivitamin every day during your pregnancy and for 4 to 6 weeks after, or for as long as you are breastfeeding.

If you could become pregnant, or are pregnant or breastfeeding, take a multivitamin with 400 mcg (0.4 mg) of folic acid every day.

What should I look for when choosing a multivitamin with folic acid?

Choose a daily multivitamin that has 400 mcg (0.4 mg) of folate in the folic acid form. You'll find this information on the supplement label, which shows the specific form(s) and amount of folate. This may be shown as:

Folate (Folic acid)..... 400 mcg

Supplements may contain other forms of folate that are described as naturally occurring, active or methylated. However, there is no evidence showing that these forms of folate can prevent NTDs. Folic acid is the only form of folate proven to reduce the risk of NTDs.

General tips:

- Always check the label to confirm the daily dose
- Read and follow the instructions
- Choose a supplement that has a Natural Product Number (NPN). An NPN means the supplement meets Health Canada's safety standards for natural health products

Talk to a dietitian, pharmacist or your health care provider if you have questions about the specific form or amount of folate in a supplement.

Can I take too much folic acid?

Too much folic acid may cause health problems. Do not take more than 1000 mcg (1 mg) of folic acid from fortified foods and supplements each day unless your health care provider told you to.

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

You might need a larger dose of folic acid if you are at higher risk of having a baby with an NTD.

Talk to your health care provider about how much folic acid is right for you if:

- You or your male partner have a family history of NTDs or had a pregnancy affected by NTDs
- You have diabetes, obesity, gastrointestinal conditions such as Crohn's or Celiac disease, gastric bypass surgery, advanced liver disease or receive kidney dialysis
- You struggle with drug or alcohol use
- You are taking anti-epilepsy medications or medications that interfere with your body's use of folic acid (such as chloramphenicol, methotrexate, metformin, sulfasalazine, phenobarbital, phenytoin, primidone, triamterene or barbiturates)

Can I get enough folate from food?

Eating foods with natural folate and foods fortified with folic acid is not enough to lower the risk of NTDs. To protect against NTDs, take a daily multivitamin with folic acid. Supplements should be taken in addition to a well-balanced diet, not in place of it.

Food sources of folate include:

- Dried beans, lentils and peas

- Edamame (green soybeans)
- Green vegetables such as asparagus, cooked broccoli, bok choy, gai lan, green peas, raw kale, cooked spinach and raw romaine lettuce
- Avocado, oranges and papaya
- Wheat germ and sunflower seeds

Although liver and liver products (such as 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. If you choose to eat liver or liver products during the first trimester, have no more than 75 grams (2.5 ounces) per week.

Foods fortified with folic acid include:

- White flour
- Enriched pasta
- Some breakfast cereals
- Simulated meat products

Foods fortified with folic acid will list folate on the nutrition facts table. The amount of folate is shown as DFE, or dietary folate equivalents. DFE accounts for differences in how the body absorbs folate and folic acid.

For more information

- Spina Bifida and Hydrocephalus Association of British Columbia: www.sbhabc.org or call 604-878-7000
- Public Health Agency of Canada: Your Guide to a Healthy Pregnancy www.canada.ca/en/public-health/services/health-promotion/healthy-pregnancy/healthy-pregnancy-guide.html

For more HealthLinkBC File topics, visit www.HealthLinkBC.ca/more/resources/healthlink-bc-files or your local public health unit. For non-emergency health information and advice in B.C. visit www.HealthLinkBC.ca or call **8-1-1** (toll-free). For the deaf and hard of hearing, call **7-1-1**. Translation services are available in more than 130 languages on request.