



Taking prenatal vitamins can help ensure that you have a healthy pregnancy. Folic acid is one of the most important. It is best to start taking it a month before you become pregnant, and keep taking it for the first 3 months of your pregnancy.

## What is folic acid?

Folic acid is an important B vitamin that helps make healthy new cells. Studies show that taking folic acid can improve your chances of having a healthy baby. This vitamin can help reduce certain kinds of birth defects. These are called “neural tube defects” (NTDs). They affect the developing baby’s brain and spinal cord.

Your baby’s brain and spine may begin forming even before you know for sure that you are pregnant. The neural tube is a

structure that forms the brain and spine very early in pregnancy (about 3 to 4 weeks after you became pregnant). If your body has the right amount of folic acid before you become pregnant, the neural tube usually forms normally. If you are low in this vitamin, sometimes these kinds of birth defects may occur:

- **Spina bifida:** In this condition, the developing baby’s spinal cord does not close properly. Some of the blood vessels and nerves are outside the body, rather than protected by the skin. Damage to the nerves can cause weakness or loss of feeling in the legs and other problems like trouble going to the bathroom normally. Babies born with spina bifida may have lifelong disabilities, but not all children have the exact same level of difficulties.
- **Anencephaly:** This is the most severe form of NTD, and it is rare. It occurs when the brain and the top of the skull do not develop normally. Babies with anencephaly may die before birth or be stillborn (born dead). Babies with anencephaly cannot survive after birth.

This is why getting enough folic acid *before* you become pregnant is so important.

## How do I know if I am getting enough folic acid in my diet?

The easiest way to make sure that you are getting enough of this important vitamin is to take a multivitamin containing at least 400 micrograms

(0.4 mg) of folic acid every day, whether you are planning a pregnancy or not. Fortunately, almost all multivitamins made in the U.S. now require 400 micrograms of folic acid.

Half of all U.S. pregnancies are unplanned. The Centers for Disease Control and Prevention (CDC) recommends that *all women between the ages of 15 and 45 take a multivitamin containing folic acid every day*. Taking a multivitamin with folic acid every day can prevent up to 70 percent of neural tube defects.

## What foods contain folic acid?

Eating a healthy, well-balanced diet is good for your health and helps provide you with folic acid, too. Leafy green vegetables like spinach and broccoli, citrus fruits and fruit juices like orange juice, and dried beans and legumes such as black beans and lentils contain the natural form of folic acid. Many foods, including breakfast cereals, whole wheat breads, pasta, and flour are now fortified with folic acid. To make sure you are getting enough folic acid every day, doctors recommend a multivitamin with folic acid in addition to a healthy diet.

## Who is at risk for having a baby with an NTD?

Every woman has a small chance of having a baby with a neural tube defect (NTD). Some women have a higher than average risk of having a baby with these kinds of birth defects.

These include women who...

- are taking certain medications, such as Tegretol and Depakote which are sometimes prescribed to control seizures (convulsions), and to treat other conditions
- have insulin-dependent diabetes
- have an NTD themselves, or have a partner (the father of the baby) with an NTD
- are obese
- are Hispanic

It is even more important for these women to make sure they are taking a multivitamin with at least 400 micrograms (0.4 mg) of folic acid every day.

Be sure to talk to your doctor or other health care professional about whether you are at higher than average risk of having a baby with an NTD and how much folic acid you should take.

## How do I know if I need extra folic acid?

Women who have had a pregnancy affected by an NTD, or who have given birth to a baby with a neural tube defect, need to take higher amounts of folic acid during pregnancy. If this has happened to you, you need to take 4 milligrams of folic acid every day. It is best to take folic acid alone, and not a multivitamin, to be sure you are getting the right amount.

## When should I take folic acid?

Any woman of childbearing age (15 to 45) should take folic acid every day. If you are planning on getting pregnant, this is especially important. Because the baby's neural tube can form before you know that you are pregnant, taking folic acid is the best way to be sure you have a healthy baby.

If you don't already take a multivitamin with folic acid every day, start at least one month before becoming pregnant. Keep taking folic acid through the first 3 months of your pregnancy. This will give you the best protection against neural tube defects.

If a neural tube defect has already occurred in a developing baby, taking folic acid will not fix the problem. Even so, if you find out that you are pregnant and are not already taking a multivitamin with folic acid, start taking it right away.

## Are there other benefits of taking folic acid?

New research suggests that taking folic acid may reduce the chance of some other birth defects such as cleft lip and palate and heart defects. Folic acid is a vitamin that may promote good health for all adults. It helps to make healthy red blood cells. It may reduce the risk of heart disease, stroke, and some cancers, like colon cancer.

## How can I remember to take a multivitamin every day?

Routines are easier to establish when they are easy to do. So try to keep your new multivitamin habit simple. Try to combine taking your vitamins with something else you do every day.

For example, take one multivitamin with folic acid around the same time that you:

- brush your teeth
- have your morning juice or tea
- read the morning paper

If your multivitamin upsets your stomach, try taking it with a meal, before bedtime, or take a vitamin made with only folic acid.

### Other resources

- Connect to our Web site at **kp.org** to access health and drug encyclopedias, interactive programs, Healthy Living classes, and much more.
- Check your *Kaiser Permanente Healthwise Handbook*.
- Contact your Kaiser Permanente Health Education Center or Department.

### Other Web sites

- American College of Obstetricians and Gynecologists at **acog.org**
- March of Dimes at **marchofdimes.com**
- Centers for Disease Control at **cdc.gov**

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