

## HEALTH MATTERS

# Preconception Care: Folate and Beyond

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### What is preconception care?

Preconception care means taking steps toward healthy living before you become pregnant. Healthy living can include:

- Eating a healthy diet
- Taking folic acid supplements
- Avoiding alcohol during pregnancy
- Avoiding chemicals, such as:
  - Bisphenol A (BPA)
  - Methylmercury
  - Polychlorinated biphenyls (PCBs)

### Why is preconception care important?

Living a healthy lifestyle before you get pregnant improves your chances of having a successful pregnancy and a healthy baby. Since 50% of all pregnancies in the US are unplanned, it is important to take steps toward healthy living even if you are not planning to become pregnant.

### Why are folate and folic acid important?

Consuming both folate (a naturally occurring vitamin) and folic acid (the synthetically produced form of folate) can prevent neural tube defects (NTDs), such as spina bifida. NTDs can lead to stillbirth or death soon after birth. To help prevent NTDs, women should consume folate and folic acid before the neural tube closes. This closure happens early in pregnancy, at a time when women may not even know they are pregnant, so it is important for women to start consuming folate and/or folic acid before they become pregnant.

### How can I make sure that I get enough folate and folic acid in my diet?

Most women don't get enough folate or folic acid in their diet. Cooking reduces folate in foods, and a low carbohydrate diet may reduce folic acid intake.

In addition to recommending a healthy diet, your health care provider may also recommend that you take folic acid supplements before you become pregnant. The recommended dose of folic acid supplementation is 400 mcg/day. This amount can be taken either as a multivitamin or as a tablet that contains only folic acid, and is the recommended dose as an addition to a diet rich in folate. Some birth control pills now also include folic acid in their formulations.

#### What are some sources of folate and folic acid?

Folate can be found in:

- Lentils
- Asparagus
- Spinach
- Romaine lettuce
- Black beans
- Broccoli
- Peanuts
- Orange Juice
- Enriched breads
- Enriched pastas

Folic Acid can be found in:

- Fortified breakfast cereals
- Enriched breads
- Enriched pastas
- Prenatal vitamins
- Multivitamins
- Some oral contraceptives (e.g., Drospirenon, Ethinylestradion, Methyltetrahydrofolate)

## How much alcohol is safe to drink during pregnancy?

Avoid drinking any alcohol during pregnancy (including beer and wine coolers). Drinking alcohol during pregnancy increases the risk that your baby will be affected by fetal alcohol syndrome (FAS).

## Are there some chemicals that I should avoid before and during pregnancy?

Yes. Some chemicals in the environment end up in some foods and drinks and can be harmful to your reproductive health, especially in the first three months of pregnancy. Some of these chemicals are Bisphenol A (BPA), Methylmercury and Polychlorinated biphenyls (PCBs).

## What is Bisphenol A (BPA)?

Bisphenol A (BPA) is used to make plastic food containers and packaging, hard plastic water bottles, and medical equipment. BPA can leak into canned foods and beverages. It interferes with the normal function of hormones in the body and is especially harmful during the first three months of pregnancy.

### How can I reduce my exposure to BPA?

Avoid:	Use:
<ul style="list-style-type: none"> <li>Plastic food containers and packaging (PVC #3, Styrofoam #6 and BPA #7)</li> <li>Hard plastic water bottles that don't specify "BPA-free"</li> <li>Canned foods, such as vegetables, soups, fruits, meat products, fish, and desserts</li> <li>Certain canned beverages, such as meal replacement shakes</li> </ul>	<ul style="list-style-type: none"> <li>Glass containers, especially for microwaving food</li> <li>Non-polycarbonate plastic or glass bottles</li> <li>Fresh or frozen fruits and vegetables</li> </ul>

## What is Methylmercury?

Mercury is a mineral that is found naturally in the air and in oceans and streams. As humans, we are commonly exposed to a poisonous form of mercury, called methylmercury, by eating certain types of fish. If a developing fetus is exposed to methylmercury, there may be long term health consequences. These consequences include delays in development, blindness, and cerebral palsy.

## What are Polychlorinated biphenyls (PCBs)?

Polychlorinated biphenyls (PCBs) are poisonous chemicals that are found in oceans and streams. They build up in the fatty tissue of fish. Research

### How can I avoid methylmercury and polychlorinated biphenyls (PCBs)?

Do:	Don't:
<ul style="list-style-type: none"> <li>Limit the amount of fish you eat on a weekly basis</li> <li>Trim fat from fish before cooking</li> <li>Eat fish that are known to have low or no levels of methylmercury—trout, salmon, tilapia, sardines</li> </ul>	<ul style="list-style-type: none"> <li>Eat fish that are known to have high levels of methylmercury—shark, swordfish, king mackerel and tilefish</li> <li>Eat more than 2 cans of light tuna per week</li> <li>Eat more than 2/3 can per week of white albacore tuna</li> </ul>

has shown that PCBs alter the normal function of hormones and can contribute to low birth weight in children of mothers who eat contaminated fish.

## Where can I find out more about...?

### Folic Acid Supplementation:

- US Department of Health and Human Services <http://www.womenshealth.gov/faq/folic-acid.cfm>
- National Institutes of Health. Dietary supplement fact sheet: folate <http://ods.od.nih.gov/factsheets/folate.asp>
- March of Dimes. <http://www.marchofdimes.com/1151.asp>

### Alcohol:

- Centers for Disease Control and Prevention. Alcohol use and pregnancy. [http://www.cdc.gov/ncbddd/factsheets/FAS\\_alcoholuse.pdf](http://www.cdc.gov/ncbddd/factsheets/FAS_alcoholuse.pdf)
- National Institute on Alcohol Abuse and Alcoholism. Drinking and your pregnancy [http://pubs.niaaa.nih.gov/publications/DrinkingPregnancy\\_HTML/pregnancy.htm](http://pubs.niaaa.nih.gov/publications/DrinkingPregnancy_HTML/pregnancy.htm)

### Food Contaminants:

- Natural Resources Defense Council. Chemicals in plastic bottles: how to know what's safe for your family. <http://www.nrdc.org/health/bpa.pdf>
- Environmental Protection Agency. EPA's Roadmap for mercury. 2009. <http://www.epa.gov/mercury/executivesummary.htm>
- What you need to know about mercury in fish and shellfish. <http://www.epa.gov/waterscience/fish/advice/>
- Environmental Working Group: Food Guide <http://www.ewg.org/ourfood>
- Physicians for Social Responsibility: Healthy Fish, Healthy Families. <http://www.psr.org/resources/healthy-fish-healthy.html>