

PATIENT EDUCATION



The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Pregnancy • EP001

Nutrition During Pregnancy

Healthy eating is important during pregnancy. Good nutrition is needed to meet the added demands on your body as well as those of your growing baby. Although it may take a little effort, planning and eating healthy meals and snacks during pregnancy will have major benefits for you and your baby. If you have not been eating a healthy diet, pregnancy is a great time to change old habits and start healthy new ones.

This pamphlet explains

- *good nutrition and how to plan healthy meals*
- *the five food groups and key vitamins and minerals*
- *weight gain*
- *special nutrition concerns*

Good Nutrition

While you are pregnant, the foods you eat give you the *nutrients* you need to fuel your body's activities and help your baby grow. Eating a variety of healthy foods is the best way to give you and your growing baby the nutrition you both need. You also can get nutrients from pills containing vitamins and minerals (also called "supplements").

Planning Healthy Meals

Planning healthy meals during pregnancy is not hard. The United States Department of Agriculture has made it easier by creating www.choosemyplate.gov.

This web site helps everyone from dieters and children to pregnant women learn how to make healthy food choices at each mealtime. Healthy eating benefits not only you and your baby but also sets up good eating habits for your entire family.

With MyPlate, you can get a personalized nutrition and physical activity plan by using the "SuperTracker" program. This program shows you the foods and amounts that you need to eat each day during each *trimester* of pregnancy. The amounts are calculated according to your height, prepregnancy weight, due date, and how much you exercise during the week. The amounts of food are given in standard sizes that most people are familiar with, such as cups and ounces.

The Five Food Groups

To get an idea of how MyPlate works, Table 1 shows the foods that a pregnant woman of normal weight before pregnancy should eat for each trimester of pregnancy. You will notice that food is broken down into the following five groups:

1. **Grains**—Bread, pasta, oatmeal, cereal, and tortillas are all grains. Make one half of them whole grains. Whole grains are those that have not been processed and include the whole grain kernel. They include oats, barley, quinoa, brown rice, and bulgur. Products made with these foods also count as whole grains. Look for the words "whole grain" on the product label.
2. **Fruits**—Fruits can be fresh, canned, frozen, or dried. Juice that is 100% fruit juice also counts. Make one half of your plate fruits and vegetables.

3. **Vegetables**—Vegetables can be raw or cooked, frozen, canned, dried, or 100% vegetable juice. Use dark, leafy greens to make salads.
4. **Protein foods**—Protein foods include meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds. Include a variety of proteins and choose lean or low-fat meat and poultry.
5. **Dairy**—Milk and products made from milk, such as cheese, yogurt, and ice cream, make up the dairy group. Make sure any dairy foods you eat are pasteurized. Choose fat-free or low-fat (1%) varieties.

Oils and fats are another part of healthy eating. Although they are not a food group, they do give you important nutrients. During pregnancy, the fats that you eat provide energy and help build many fetal organs and the placenta.

Table 1. Daily Food Choices

Here is the recommended daily food intake for a pregnant woman who is a normal weight and gets less than 30 minutes of exercise each day.

	<i>First Trimester</i>	<i>Second Trimester</i>	<i>Third Trimester</i>	<i>Food Examples</i>
Total calories per day	1,800	2,200	2,400	
Grains	6 ounces	7 ounces	8 ounces	1 ounce is 1 slice of bread, ½ cup of cooked rice, ½ cup of cooked pasta, 3 cups of popped popcorn, or 5 whole wheat crackers
Vegetables	2½ cups	3 cups	3 cups	2 cups of raw leafy vegetables count as 1 cup
Fruits	1½ cup	2 cups	2 cups	One large orange, 1 large peach, 1 small apple, 8 large strawberries, or ½ cup of dried fruit count as 1 cup of fresh fruit
Dairy foods	3 cups	3 cups	3 cups	1 cup is two small slices of swiss cheese or ½ cup of shredded cheese
Protein foods	5 ounces	6 ounces	6½ ounces	1 ounce of lean meat, poultry, or seafood; 1 egg; 1 tablespoon of peanut butter; ½ ounce of nuts or seeds; or ¼ cup of cooked beans count as 1 ounce
Fats and oils	5 teaspoons	7 teaspoons	7 teaspoons	Olives, some fish, avocados, and nuts
"Empty" calories	No more than 161 calories	No more than 266 calories	No more than 330 calories	These calories come from added sugars and solid fats that provide little nutritional value

Oils in food come mainly from plant sources, such as olive oil, nut oils, and grapeseed oil, and can be found in certain foods, such as some fish, avocados, nuts, and olives. Most of the fats and oils in your diet should come from plant sources. Limit solid fats, such as those from animal sources. Solid fats also can be found in processed foods.

Key Vitamins and Minerals

Vitamins and minerals play important roles in all of your body functions. During pregnancy, you need more folic acid and iron than a woman who is not pregnant (see Table 2). Taking a prenatal vitamin supplement can ensure that you are getting these extra amounts. A well-rounded diet should supply all of the other vitamins and minerals you need during pregnancy.

Folic Acid

Folic acid, also known as folate, is a B vitamin that is important for pregnant women. Before pregnancy and during pregnancy, you need 400 micrograms of folic acid daily to help prevent major birth defects of the baby's brain and spine called *neural tube defects*. Current dietary guidelines recommend that pregnant women get at least 600 micrograms of folic acid daily from all sources. Many foods contain folic acid, such as fortified cereal, enriched bread and pasta, peanuts, dark green leafy vegetables, orange juice, and beans. It may be hard to get the recommended amount of folic acid from food alone. For this reason, all pregnant women and all women who may become pregnant should take a daily vitamin supplement that contains folic acid. If you have already had a pregnancy affected by a neural tube defect or if you are taking an antiseizure

Table 2. Key Vitamins and Minerals During Pregnancy

<i>Nutrient (Daily Recommended Dietary Amount)</i>	<i>Why You and Your Baby Need It</i>	<i>Best Sources</i>
Calcium (1,300 mg for ages 14–18 years; 1,000 mg for ages 19–50 years)	Builds strong bones and teeth	Pasteurized milk, cheese, and yogurt; sardines; dark, leafy greens
Iron (27 mg)	Helps red blood cells deliver oxygen to your baby	Lean red meat, poultry, fish, dried beans and peas, iron-fortified cereals, prune juice
Vitamin A (770 micrograms)	Forms healthy skin and eyesight; helps with bone growth	Carrots, dark green leafy vegetables, sweet potatoes
Vitamin C (85 mg)	Promotes healthy gums, teeth, and bones; helps your body absorb iron	Citrus fruit, broccoli, tomatoes, strawberries
Vitamin D (600 international units)	Builds your baby's bones and teeth; helps promote healthy eyesight and skin	Sunlight, fortified milk, fatty fish such as salmon
Vitamin B ₆ (1.9 mg)	Helps form red blood cells; helps body use protein, fat, and carbohydrates	Beef, liver, pork, ham, whole-grain cereals, bananas
Vitamin B ₁₂ (2.6 micrograms)	Maintains nervous system; needed to form red blood cells	Meat, fish, poultry, milk (vegetarians should take a supplement)
Folic acid (600 micrograms)	Helps prevent birth defects of the brain and spine	Dark green leafy vegetables, orange juice, beans, fortified cereals, enriched bread and pasta, nuts

medication, you should take a higher daily dose of folic acid (4 mg) as a separate supplement beginning 1 month before trying to become pregnant and during the first 3 months of your pregnancy.

Iron

Iron is used by your body to make a substance in red blood cells that carries oxygen to your organs and tissues. During pregnancy, you need extra iron—about double the amount that a non-pregnant woman needs. This extra iron helps your body make more blood to supply oxygen to your baby. The daily recommended dose of iron during pregnancy is 27 mg, which is found in most prenatal vitamin supplements. You also can eat foods rich in a certain type of iron called heme iron. Heme iron is absorbed more easily by the body. It is found in animal foods, such as red meat, poultry, and fish. Non-heme iron is found in vegetables and legumes, such as soybeans, spinach, and lentils. Although it is not as easily absorbed as heme iron, non-heme iron is a good way to get extra iron if you do not eat animal foods. Iron also can be absorbed more easily if iron-rich foods are eaten with vitamin C-rich foods, such as citrus fruits and tomatoes.

Calcium

Calcium is used to build your baby's bones and teeth. All women, including pregnant women, aged 19 years and older should get 1,000 mg of calcium daily; those aged 14–18 years should get 1,300 mg daily. Milk and other dairy products, such as cheese and yogurt, are the best sources of calcium. If you have trouble digesting milk products, you can get calcium from other sources, such as broccoli; dark, leafy greens; sardines; or a calcium supplement.

Vitamin D

Vitamin D works with calcium to help the baby's bones and teeth develop. It also is essential for healthy skin and eyesight. All women, including those who are pregnant, need 600 international units of vitamin D a day. Good sources are milk fortified with vitamin D and fatty fish such as salmon. Exposure to sunlight also converts a chemical in the skin to vitamin D. Many people do not get enough vitamin D. If your health care provider thinks you may have low levels of vitamin D, a test can be done to check the level in your blood. If it is below normal, you may need to take a vitamin D supplement.

Pregnancy and Weight Gain

The amount of weight gain that is recommended depends on your health and your *body mass index (BMI)* before you were pregnant (see box "How Much Weight Should You Gain During Pregnancy?"). If you were underweight before pregnancy, you should gain more weight than a woman who was a normal weight before pregnancy. If you were overweight or obese before pregnancy, you should gain less weight.

How Much Weight Should You Gain During Pregnancy?

Prepregnancy Weight	Body Mass Index	Weight Gain (pounds)
Underweight	Less than 18.5	28–40
Normal weight	18.5–24.9	25–35
Overweight	25.0–29.9	15–25
Obese	30 or more	11–20

Data from Institute of Medicine. Weight gain during pregnancy: reexamining the guidelines. Washington, DC: The National Academies Press; 2009.

The amount of weight you should gain differs by trimester. During your first 12 weeks of pregnancy—the first trimester—you may gain only 1–5 pounds or none at all. In your second and third trimesters, if you were a healthy weight before pregnancy, you should gain between one half pound and 1 pound per week. During this stage, you will need to consume about 300 extra *calories* per day. That is equal to the amount of calories in a glass of skim milk and half of a sandwich. Have healthy snacks on hand, such as yogurt or fresh fruit, which can give you the extra calories you need during the day.

Overweight and obese women are at an increased risk of several pregnancy problems. These problems include *gestational diabetes*, high blood pressure, *preeclampsia*, *preterm* birth, and *cesarean delivery*. Babies of overweight and obese mothers also are at greater risk of certain problems, such as birth defects, *macrosomia* with possible birth injury, and childhood obesity. If you are overweight or obese, you and your health care provider will work together to develop a nutrition and exercise plan. If you are gaining less than what the guidelines suggest, and if your baby is growing well, gaining less than the recommended guidelines can have benefits, such as decreased risks of needing a cesarean delivery and of having a very large baby. If your baby is not growing well, changes may need to be made to your diet and exercise plan.

Special Concerns

As you plan how you will eat healthfully during your pregnancy, it is important to keep in mind a few special issues.

Caffeine

Although there have been many studies on whether caffeine increases the risk of *miscarriage*, the results are unclear. Most experts state that consuming fewer than 200 mg of caffeine (one 12-ounce cup of coffee) a day during pregnancy is safe.

Remember that caffeine is found not only in coffee, but also in teas, colas, and chocolate. Make sure you count these sources in your total caffeine amount for the day.

Special Diets

If you have special dietary needs, you need to keep them in mind as you plan your pregnancy diet. For example, if you are a vegetarian, make sure you get enough protein from foods such as soy milk, tofu, and beans and that your intake of iron, vitamin B₁₂, and vitamin D is sufficient. If you are *lactose intolerant*, you can get calcium from sources other than dairy products or buy lactose-free products. Talk with your health care provider about your dietary needs and how you can adapt them to pregnancy.

Fish and Shellfish

Omega-3 fatty acids are a type of fat found naturally in many kinds of fish. They may be important factors in your baby's brain development both before and after birth. To get the most benefits from omega-3 fatty acids, women should eat at least two servings of fish or shellfish (about 8–12 ounces) per week and while pregnant or breastfeeding.

Some types of fish have higher levels of a metal called mercury than others. Mercury has been linked to birth defects. To limit your exposure to mercury, follow a few simple guidelines. Choose fish and shellfish such as shrimp, salmon, catfish, and pollock. Do not eat shark, swordfish, king mackerel, or tilefish. Limit white (albacore) tuna to only 6 ounces a week. You also should check advisories about fish caught in local waters.

Food Safety

Pregnant women can get food poisoning like anyone else. However, food poisoning in a pregnant woman can cause serious problems for both her and her baby. Vomiting and diarrhea can cause your body to lose too much water and can disrupt your body's chemical balance. Several types of bacteria can cause food poisoning. It is important to contact your health care provider as soon as possible if you have these signs and symptoms.

Listeriosis is a type of foodborne illness caused by bacteria. Pregnant women are 13 times more likely to get listeriosis than the general population. Listeriosis can cause mild, flu-like symptoms such as fever, muscle aches, and diarrhea, but it also may not cause any symptoms. However, it can lead to serious complications for your baby, including miscarriage, stillbirth, and premature delivery. If you think you have eaten food contaminated with these bacteria (for instance, if you have eaten food that has been recalled due to a listeriosis outbreak in your area) or if you have any of the symptoms of listeriosis, contact your health care provider. *Antibiotics* can be given to treat the infection and to protect your unborn baby. To help

prevent listeriosis, avoid eating the following foods during pregnancy:

- Unpasteurized milk and foods made with unpasteurized milk, including soft cheeses such as feta, queso blanco, queso fresco, Camembert, brie, or blue-veined cheeses, unless the label says "made with pasteurized milk"
- Hot dogs, luncheon meats, and cold cuts unless they are heated until steaming hot just before serving
- Refrigerated pâté and meat spreads
- Refrigerated smoked seafood

In addition, follow these general food-safety guidelines:

- Wash food. Rinse all raw produce thoroughly under running tap water before eating, cutting, or cooking.
- Keep your kitchen clean. Wash your hands, knives, countertops, and cutting boards after handling and preparing uncooked foods.
- Avoid all raw and undercooked seafood, eggs, and meat. Do not eat sushi made with raw fish (cooked sushi is safe). Food such as beef, pork, or poultry should be cooked to a safe internal temperature.

Finally...

Eating well during your pregnancy is one of the best things you can do for yourself and your baby. Start now on balancing healthy eating with maintaining a healthy weight to give your baby the best start in life.

Glossary

Antibiotics: Drugs that treat certain types of infections.

Body Mass Index (BMI): A number calculated from height and weight that is used to determine whether a person is underweight, normal weight, overweight, or obese.

Calories: Units of heat used to express the fuel or energy value of food.

Cesarean Delivery: Delivery of a baby through surgical incisions made in the mother's abdomen and uterus.

Gestational Diabetes: Diabetes that arises during pregnancy.

Lactose Intolerant: Being unable to digest lactose, a sugar found in many dairy products.

Macrosomia: A condition in which a fetus grows very large.

Miscarriage: Loss of a pregnancy that occurs before 20 weeks of pregnancy.

Neural Tube Defects: Birth defects that result from incomplete development of the brain, spinal cord, or their coverings.

Nutrients: Nourishing substances supplied through food, such as vitamins and minerals.

Preeclampsia: A disorder that can occur during pregnancy or after childbirth in which there is high blood pressure and other signs of organ injury, such as an abnormal amount of protein in the urine, a low number of platelets, abnormal kidney or liver function, pain over the upper abdomen, fluid in the lungs, or a severe headache or changes in vision.

Preterm: Born before 37 weeks of pregnancy.

Trimester: Any of the three 3-month periods into which pregnancy is divided.

This Patient Education Pamphlet was developed by the American College of Obstetricians and Gynecologists. Designed as an aid to patients, it sets forth current information and opinions on subjects related to women's health. The average readability level of the series, based on the Fry formula, is grade 6-8. The Suitability Assessment of Materials (SAM) instrument rates the pamphlets as "superior." To ensure the information is current and accurate, the pamphlets are reviewed every 18 months. The information in this pamphlet does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice, may be appropriate.

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The American College of Obstetricians and Gynecologists
409 12th Street, SW
PO Box 96920
Washington, DC 20090-6920