

Nutrition During Pregnancy When You Have Diabetes

What you need to know

This handout is for pregnant women who have diabetes. It gives important information about healthy food choices and supplement needs during pregnancy.

Food Choices

A healthy diet is important when you are pregnant. If you also have type 1, type 2, or gestational diabetes, your food choices are especially important, both for your health and for your baby's growth and development.

Blood Sugar and Your Insulin Needs

Your insulin needs will change during your pregnancy:

- **Around 9 to 11 weeks:** Your insulin needs will decrease. You will tend to have more morning sickness and may eat less.
- **During the 2nd and 3rd trimesters:** The hormones your body produces will likely increase your insulin needs.

Effects of Blood Sugar on Your Baby

If your blood sugars are too high, it can affect your baby's growth and development. It can cause your baby to grow too big and have blood sugar issues. This can cause problems at birth. Keeping your blood sugar levels within your goal range will help your baby grow normally.

Note: If you have gestational diabetes, you will need to be tested for diabetes again 6 to 12 weeks after your baby is born.



Talk with your diabetes care provider if you have any questions about diabetes and your pregnancy.

How to Keep Your Blood Sugar Stable

- Instead of eating 3 large meals, eat 3 smaller meals and 3 snacks each day.
- Do **not** skip any meals or snacks.
- Include a protein food with all meals and snacks.
- Keep your diet consistent. This means eating about the same amount of food at the same time every day. This will:
 - Help you avoid blood sugars that are too high or too low
 - Help your doctor prescribe the best insulin doses for you, if you are on insulin
- Include a variety of raw, fresh fruits and vegetables in your diet. These foods contain natural fiber, which can help improve blood sugar control.
- Limit salt and high-fat “junk” foods.
- Read the nutrition labels on foods and drinks:
 - Check the serving size. A package of food may contain more than 1 serving.
 - Check the total carbohydrate grams.
 - Ask your dietitian if you have any questions about food labels.

Talk with your healthcare provider to learn more. We are here to help you have a safe and healthy pregnancy for you and your baby.

Weight-Gain Goals

Your weight-gain goals depend on your *body mass index* (BMI) before you became pregnant. During your clinic visit, your dietitian will go over how to calculate your BMI. If you are expecting multiples (twins, triplets, or more), your weight-gain goals will be different.

The table below gives basic weight-gain goals for different BMI numbers. Ask your provider about your specific weight-gain goals.

BMI Before Pregnancy	BMI (kg/m ²)	Total Weight Gain	Rate of Weight Gain for 2nd and 3rd Trimesters
Underweight	Lower than 18.5	28 to 40 pounds	1 to 1.3 pounds a week
Normal weight	18.5 to 24.9	25 to 35 pounds	0.8 to 1 pounds a week
Overweight	25.0 to 29.9	15 to 25 pounds	0.5 to 0.7 pounds a week
Obese	30.0 or higher	11 to 20 pounds	0.4 to 0.6 pounds a week

Table adapted from “Weight Gain During Pregnancy: Reexamining the Guidelines,” 2009. Used with permission from the National Academy of Sciences, courtesy of the National Academies Press, Washington, D.C. (www.nap.edu/catalog.php?record_id=12584)

Carbohydrates

For a healthy pregnancy, about half of your calories should come from complex carbohydrate foods. These include fruits, vegetables, whole grains, milk, and yogurt.

When you eat carbohydrate foods by themselves, it can cause a rapid rise in your blood sugar. For better blood sugar control, do not eat carbohydrate foods by themselves. **Always eat protein, fat, and fiber foods with your carbohydrate foods.** This slows digestion, so the carbohydrates enter your blood more slowly. The result is a gentle rise in blood sugar after eating.

Fats

- Oils: olive, avocado, canola, peanut, sesame
- Flax and chia seeds
- Avocado
- Nuts and seeds

Proteins*

- Eggs
- Meat: Chicken, turkey, lean beef, pork
- Nuts
- Cheese
- Fish and other seafood
- Tofu
- Natural peanut butter or other nut butters

**Please refer to Food Safety section that starts on page 6 for more information about how to select and prepare protein foods.*

Foods to Avoid

Avoid eating foods that are high in simple carbohydrates. Even when you eat them with protein and fat, these foods can make your blood sugar too high:

- Fruit juices, soda pop, hot chocolate, blended coffee drinks, and other sweetened drinks
- Honey, maple syrup, agave, and sugar
- Desserts
- Sugary cereals

Sugar Substitutes

For a healthy diet, it is best to limit sugar substitutes. According to the Food and Drug Administration (FDA), it is safe for pregnant women to use **moderate** amounts of saccharin (Sweet and Low), aspartame (Equal), acesulfame potassium (Ace-K and Sweet One), sucralose (Splenda), neotame (Newtame), advantame, steviol glycosides (Stevia), and Luo Han Guo fruit (monk fruit) extracts.

Meals and Snacks

Talk with your dietitian about your specific meal plan needs during pregnancy. See “Sample Meals and Snacks for One Day” on page 10.

Breakfast

Pregnancy hormones have their greatest effect in the morning. This can make blood sugars harder to control in the morning.

For best blood sugar control:

- A high-protein breakfast that includes a whole grain and fat source often leads to best blood sugar control. High-protein breakfast foods include eggs, cheese, plain Greek yogurt, and natural nut or seed butter.
- Limit your complex carbohydrates at breakfast to 30 grams (2 servings).
- If your blood sugar is hard to control, you may need to limit your breakfast carbohydrates to 15 grams.
- Avoid refined sugary cereals, fruits, and juices. Save the fruit for later in the day, to eat in small amounts.
- Limit milk at breakfast to 4 ounces (½ cup) or substitute unsweetened nut milks.

Snacks

Snacks should contain 15 to 30 grams (1 to 2 servings) of complex carbohydrates, plus protein and fat.

Lunch and Dinner

You may eat 45 to 60 grams (3 to 4 servings) of complex carbohydrates with protein and fat at lunch and dinner.

Fluids

- Drink at least 8 glasses (8 ounces each) of fluids each day. That is equal to 2 quarts, or 64 ounces. Most of this fluid should be water. Water helps keep blood sugars lower and is good for you and your baby. Sipping water throughout the day will help you reach this goal.

- Limit caffeine to 1 cup or less a day.
- Limit diet drinks to 1 or less a day.

Vitamins and Minerals

Take a prenatal supplement every day. A prenatal supplement can help ensure that you and your baby are getting the nutrients you need. Buy a prenatal supplement that contains:

- 200 mg calcium
- 400 to 800 mcg folic acid
- 400 IU vitamin D
- 15 mg zinc
- 27 mg iron
- 200 mg DHA
- At least 150 mcg iodine (220 to 250 mcg is advised in pregnancy)

If You Are Vegan

If you follow a vegan diet, add these supplements to the list above:

- 2 mg of vitamin B12
- 300 mg *choline bitartrate*, which you can buy at most stores that sell vitamins and supplements
- 500 mg calcium supplement, taken 2 times a day

Calcium

Calcium is needed during pregnancy for bone health and other vital functions. The foods that are highest in calcium are milk, cheese, yogurt, cottage cheese, and nut milks that have calcium added. Other foods such as broccoli, kale, seafood, tofu, sesame seeds, white beans, and almonds provide calcium in smaller amounts.

If you cannot eat at least 4 servings daily of high-calcium foods every day, talk with your provider about whether you need a calcium supplement. You need about 1,200 to 1,500 mg of calcium a day.

Vitamin D3

When you are pregnant, you need plenty of vitamin D3 (*cholecalciferol*) to help your baby's bones grow strong. Your body produces some vitamin D when sunlight touches your bare skin. But each person's skin absorbs sunlight differently. And, some people may wear clothing that covers most of their skin. Others may live in areas where there is not very much sunlight.

Talk with your OB provider about your vitamin D intake. Ask about the benefits of your taking a vitamin D3 supplement.

Iron

Your body uses iron for healthy blood and to carry oxygen to your cells. During pregnancy, the amount of blood in your body increases by about half (50%). This means you need a lot of iron while you are pregnant.

Your baby needs iron for their blood, too. Babies need to store up enough iron to last for 6 months after birth.

You need about 30 mg of iron a day during pregnancy. You can get iron by eating red meats, poultry, fish, eggs, enriched breads, beans, some nuts and seeds, and some leafy greens. Your provider will check your iron level through blood tests and suggest an additional iron supplement if needed.

Tips:

- Do **not** eat iron-rich foods and calcium-rich foods at the same time. Iron and calcium “compete” for absorption. Also, take your calcium and iron supplements about 1½ hours apart so that your body absorbs them best.
- Vitamin C helps your body absorb iron.
- The *tannins* in black, green, and white tea also block iron absorption.

Folic Acid

Folic acid is needed to make new blood cells and to keep blood cells healthy. Growing babies use folic acid to make their blood, nervous system, and other vital organs.

Foods that are rich in folic acid are dark green vegetables, legumes, whole grains, and peanuts. Eat foods with high folic acid in addition to taking your prenatal vitamin.

Choline

Choline is an important nutrient during pregnancy. It helps your baby’s brain develop. Food sources of choline include whole eggs, beef, chicken, fish, kidney beans, milk, potatoes, and broccoli. If you can, eat 1 to 2 eggs a day, for both the protein and choline content.

Food Safety

During pregnancy, you have a higher chance of getting infections and illnesses from certain foods. To avoid becoming ill:

- Wash your hands before, during, and after you prepare food.
- Keep the area where you prepare and cook food clean.
- Wash all fruits and vegetables before you cut, cook, or eat them. This includes “pre-washed” salad greens and whole melons.

- Keep leftovers in the refrigerator.
- Keep meat, fish, and poultry in the refrigerator until you cook them.
- Keep raw meat, fish, and poultry separate from all other foods. Use a separate cutting board for them.
- Put food in the refrigerator right after cooking and serving.
- Do **not** eat cooked food and food that needs to be stored in the refrigerator if it has been out of the refrigerator for more than 2 hours.
- Avoid keeping food in the “danger zone,” 40°F to 140°F (4.4°C to 60°C). Bacteria grow easily in this range of temperatures.
- Avoid eating foods from salad bars, deli counters, buffets, sidewalk vendors, and food carts.

Cooking Temperatures

Fully cook eggs and meats. Avoid eating raw or undercooked meat, fish, or poultry. Be sure to heat:

- Fish and beef roasts to 145°F (62.8°C)
- Eggs and meats (including pork) to 160°F (71.1°C)
- Poultry breast to 170°F (76.7°C)
- Whole poultry to 180°F (82.2°C)
- Hot dogs or deli meat until steaming, about 165°F (73.9°C)

Foods to Avoid

Avoid eating these foods. They carry a higher risk for foodborne illness:

- Unpasteurized milk or juice.
- Unwashed fruits or vegetables.
- Soft, “raw,” or unpasteurized cheeses. Some of these are feta, Brie, Camembert, blue-veined cheeses, and Mexican-style cheeses such as *queso fresco*, *queso blanco*, *panela*, and others. Check the label. These cheeses are OK to eat if they are made with pasteurized milk.
- Refrigerated smoked seafood, unless it has been cooked, such as in a casserole. Refrigerated smoked seafood such as salmon, trout, whitefish, cod, tuna, or mackerel is often labeled as “nova-style,” “lox,” “kippered,” “smoked,” or “jerky.”
- Foods made with raw or undercooked eggs such as cookie dough, Caesar salad dressing, and homemade ice cream.
- Refrigerated patés or meat spreads.

- Hot dogs or luncheon meats, unless they are reheated until they are steaming hot, to about 165°F (73.9°C)
- Raw or undercooked fish such as sushi, seared tuna, raw oysters, and ceviche.
- Raw sprouts.

To learn more about food safety during pregnancy, visit the Foodsafety.gov website: www.foodsafety.gov/risk/pregnant/index.html.

Listeria

Listeria are harmful bacteria that can grow in your refrigerator at temperatures most other bacteria in food cannot. It causes an illness called *listeriosis*. It can be present in cold, ready-to-eat foods and unpasteurized milk and milk products, as well as raw vegetables. To avoid listeria, please refer to the “do not eat” list above.

Methylmercury in Fish

Methylmercury is a metal that can be found in certain fish. At high levels, it can harm an unborn baby or young child’s developing nervous system.

- It is safe to eat up to 12 ounces a week of low-mercury fish and shellfish. These include shrimp, light canned tuna, salmon, pollock, and catfish.
- Do **not** eat large fish that live a long time, such as shark, tilefish, king mackerel, and swordfish.
- To learn more, ask your provider for the “Healthy Fish Guide,” or visit the Washington State Department of Health website: www.doh.wa.gov/CommunityandEnvironment/Food/Fish/WomenandChildren.

Biotoxins in Shellfish

Eating contaminated shellfish can cause serious illness or death. Before you eat fish, crab, lobster, or other shellfish, check to make sure the waters it lived in are safe. To learn more:

- Visit the Washington State Department of Health website: www.doh.wa.gov/shellfishsafety.htm.
- Call the Shellfish Safety Hotline at 800.562.5632.

Toxoplasma

Toxoplasma is a harmful parasite. It causes *toxoplasmosis*, an illness that can be hard to detect because it may not have any symptoms. Toxoplasma can be found in raw and undercooked meat, unwashed fruits and vegetables, soil, dirty cat litter boxes, and outdoor places where cat feces can be found.

To avoid toxoplasma:

- If you have a cat, have someone else change the litter box. If you have to clean it, wash your hands with soap and warm water afterward.
- Wear gloves if you garden or handle sand from a sandbox, and wash your hands afterward.
- Do **not** get a new cat while you are pregnant.

Exercise and Activity

- Exercise is good for you and your baby. It can help ease aches and pains, improve circulation, and prepare you for a healthy delivery.
 - Try to get 30 minutes of activity every day, even if it is just walking around the block.
 - It is usually safe to keep doing your normal exercise program early in pregnancy. Do not overdo it.
 - Be sure to drink plenty of water.
 - It may be hard to exercise without discomfort later in pregnancy. Do what is comfortable without excess strain. Check with your pregnancy care provider for the best activities if you have any concerns.
- It is safe to continue sexual activity.
- Avoid hot tubs, saunas, and hot yoga.

Sample Meals and Snacks for One Day

Breakfast

2 servings of carbohydrates (30 grams)

- 1 to 2 scrambled eggs ^(V) with spinach, peppers, and onions
- 2 slices (1 ounce each) whole-grain toast ^(GF) with butter ^(V)
- Avocado slices
- 1 cup coffee, tea, or water

^(V) *For vegan meal:* Instead of eggs, use 1 serving tofu. Use vegan butter or nut butter on your toast.

^(GF) *For gluten-free meal:* Use gluten-free bread.

Morning Snack

1 serving of carbohydrates (15 grams)

- ½ cup hummus
 - Raw vegetable sticks
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Lunch

4 servings of carbohydrates (60 grams)

- Sandwich or salad: 2 to 3 ounces of protein, lettuce or spinach leaves, tomato or other vegetables, and 2 slices (1 ounce each) whole-grain bread ^(GF)
- 1 serving fruit
- ½ cup raw vegetable sticks
- 1 cup milk ^(V)

^(V) *For vegan meal:* Drink unsweetened soy milk instead of milk.

^(GF) *For gluten-free meal:* Use gluten-free bread.

Afternoon Snack

1 serving of carbohydrates (15 grams)

- 1 small piece of fruit or 1 cup fresh berries
 - 1 to 2 ounces nuts (about 1 handful)
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Dinner

3 to 4 servings of carbohydrates (45 grams)*

- 3 ounces lean meat ^(V), grilled or baked (3 ounces of meat is about the size of the palm of your hand)
- ⅔ cup cooked brown rice ^(V)
- 1 cup steamed vegetables with butter ^(V)
- 1 cup milk ^(V)

* *For a 60-gram carbohydrate meal:* Add 1 fruit serving.

^(V) *For vegan meal:* Use 1 cup cooked lentils or other dried beans instead of meat and decrease rice to ⅓ cup. Add oil to vegetables instead of butter. Drink unsweetened soy milk instead of milk.

Evening Snack

1 serving of carbohydrates (15 grams)

- 1 to 2 ounces cheese ^(V) (1 ounce of cheese is about the size of your thumb)
- 5 to 7 whole-wheat crackers ^(GF)

^(V) *For vegan snack:* Use 2 tablespoons nut butter instead of cheese.

^(GF) *For gluten-free snack:* Use gluten-free crackers.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Maternal and Infant Care Clinic: 206.598.4070