EDUCATION

Living With Diabetes

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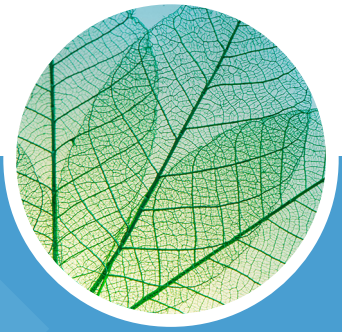


Allina Health

Common Questions and Answers

Can I catch diabetes from someone else?

You cannot catch diabetes, or give it to a friend, relative or neighbor.

Why did I get diagnosed with diabetes in American but not in my home country?

- You may be eating different food than you did in your home country.
- You may not be as active as you were in your home country. (For example, perhaps you did a lot of walking in your home country.)
- Your level of stress may be different than it was in your home country.

How can I be physically active or exercise in the winter when it's cold and icy outside?

- Walk the stairs inside an apartment building.
- Walk indoors at a shopping mall.
- Join a fitness center like the YMCA/YWCA. Start a class with friends.
- Join an online fitness class (yoga, aerobics) that you can do in your home.
- Try joining a league or group such as soccer.
- Talk to recreation programs and sports facilities to see if they can offer times for women and girls to exercise separate from men and boys.

Diabetes Overview

Diabetes is a lifelong disease that cannot be cured but it can be controlled. Having diabetes means that your body is having problems using the energy from the foods that you eat. This energy comes from all foods including carbohydrates (starches and sugars), proteins and fat. After you eat, the food is turned into glucose that is used by your cells for fuel.

It is important to remember that carbohydrates have the biggest effect on glucose levels. With diabetes, your body has trouble moving the glucose from your blood into your cells. This causes the glucose level in your blood to rise.

Keeping your blood glucose as close to normal as possible can help you feel better and give you more energy. Good control also helps you avoid problems with your eyes, heart, kidneys, nerves and blood vessels.

How Diabetes Affects Your Body

There are several types of diabetes. Type 1, type 2 and gestational diabetes are the three most common types.

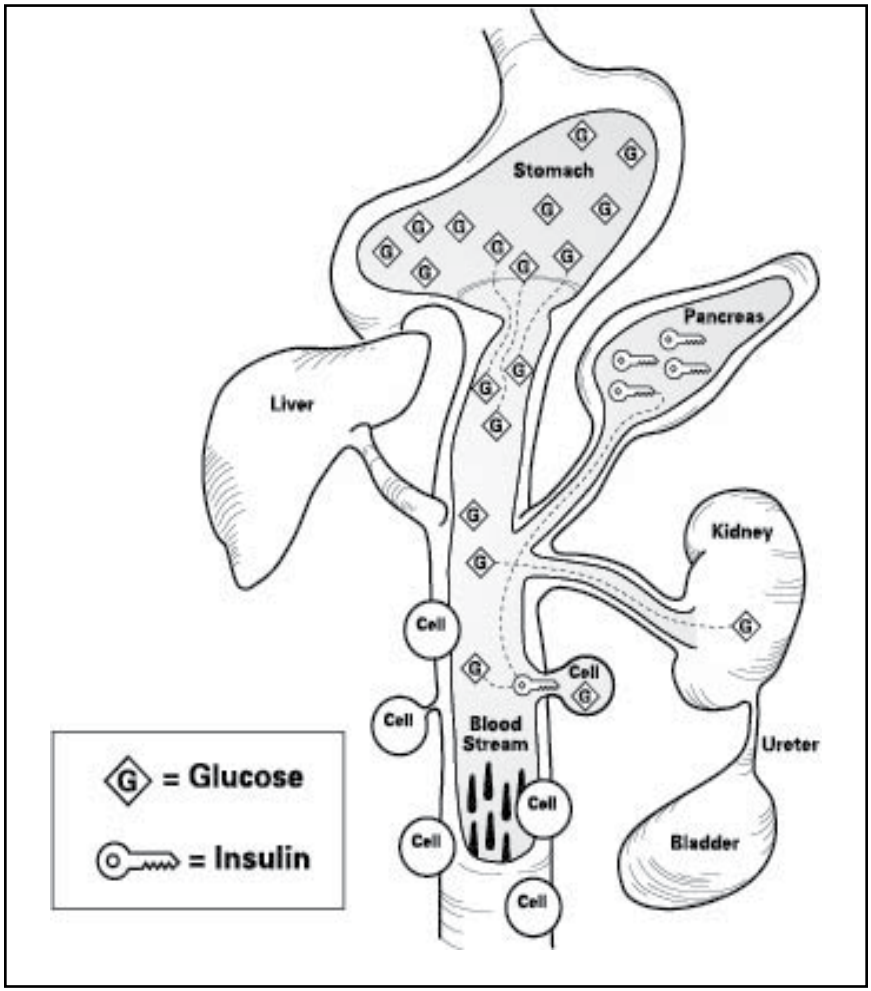
- **Type 1:** Your pancreas makes very little or no insulin. Your body needs insulin to move glucose from your blood into your cells for energy.
- **Type 2:** Your pancreas still produces some insulin, but your body does not use it like it should. This is called insulin resistance.
- **Gestational:** Your pancreas does not make the extra insulin that is needed during pregnancy.

When insulin does not work correctly, the glucose from food stays in your blood (instead of moving into your cells). You may have the following symptoms:

- increased thirst
- frequent urination
- less energy
- unexplained weight loss
- dry skin
- blurred vision
- hunger
- frequent yeast infections
- sores that do not heal.

How Insulin Works

Insulin acts like a key, opening cells so glucose can enter to provide a source of energy. Insulin is like the key to a car. A car needs fuel to run, but the key provides the spark that releases the fuel. In your body, insulin is used to "spark" the use of glucose as fuel in your cells.



Insulin helps your body use glucose for energy.

Tools for Managing Your Diabetes

Food

- Eat 3 well-balanced meals a day.
- If meals are more than 4 to 5 hours apart, eat a small snack.
- Eat a bedtime snack so that your body has enough energy while you sleep.
- Do not skip meals or snacks. Your body will make up for the lack of glucose by "asking" the liver to produce extra glucose. This can make controlling your blood glucose even harder.
- Ask for help if you have questions or need advice about your food choices.

Physical activity

Check with your health care provider before starting an exercise program.

- Start slowly to avoid injury.
- Choose activities you will enjoy.
- Get physically active every day.

Stress management

Stress increases blood glucose and can cause problems with your blood glucose control.

- Think about what causes stress for you.
- Find healthy ways to help you cope with stress.
- Ask for help if you need it.

Medicine

There are many medicines that help control blood glucose. Your health care provider will choose the best medicines for you if you need them. It is common for your medicine needs to change.

Monitoring blood glucose

Regular testing will tell how your food, physical activity and medicines are working.

Recommended blood glucose levels:

Before meals	After meals	Bedtime
Between 80 to 130 mg/dL	2 hours after meals: less than 160 to 180 mg/dL	Between 100 to 140 mg/dL

Check your blood glucose:

- ❑ before breakfast
- ❑ after breakfast
- ❑ before lunch
- ❑ after lunch
- ❑ before dinner
- ❑ after dinner
- ❑ before bedtime
- ❑ other _____

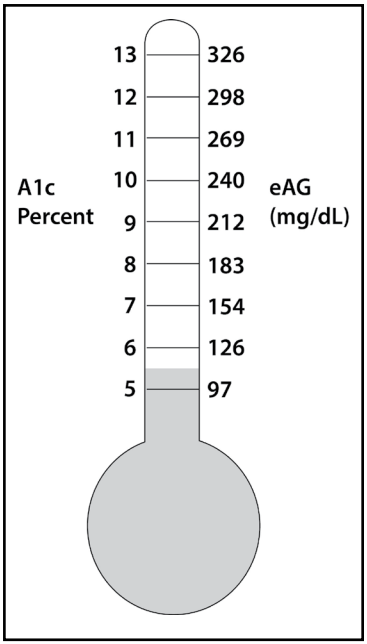
Write the number and the time of your test in your blood glucose record book. **Important:** Bring your blood glucose record book to all of your appointments with your health care provider and diabetes educators. Ask your diabetes educator for a record book.

Regular A1c tests

The A1c is a blood test that reflects average blood glucose level over the past 2 or 3 months. Research has shown that eye, kidney and nerve damage from diabetes is directly related to the A1c level.

Fingerstick blood glucose testing is valuable for hour-to-hour or day-to-day management of your diabetes. But an A1c level gives an overall picture of your diabetes control and your risk of problems (complications). You need both types of testing to manage your diabetes well.

Your health care provider may give your A1c results in estimated average glucose (eAG) instead of a percentage. eAG is measured in mg/dL, which is what you are used to seeing on your meter. Use the drawing to understand your A1c test results.



This drawing compares A1c results with eAG results, which are reported as mg/dL.

The Allina Health diabetes program recommends:

- an A1c test at least twice a year, more often if test results are higher than your test goal
- a test goal of less than 7 percent.

How the test works

Glucose in your bloodstream attaches to hemoglobin in red blood cells and stays there. Red blood cells live for about 120 days. The higher your blood glucose is, the more glucose is attached to hemoglobin. The A1c test measures the percentage of hemoglobin with glucose attached (called altered hemoglobin).

High A1c test results

If your A1c test results are high, you and your health care provider need to work together to lower your glucose level. Your health care provider may recommend treatment plan changes such as:

- different medicines
- a different food plan
- more physical activity
- a plan to manage stress
- more frequent health care visits.

Lowering your A1c by even 1 percent can reduce your risk of diabetes problems (complications) by 30 percent.

Food — Eating Healthy

You can make a difference in your blood glucose control through your food choices. Balancing what, when and how much you eat will help manage your blood glucose levels.

Understanding how food affects your body

There are no good or bad foods. The foods you eat fall into three main groups:

- **Protein:** Protein is important for healing, building muscle, strengthening your immune system, helping your body recover from stress and more!
- **Fat:** Fat is a major source of energy for the body. It also helps the body absorb important vitamins.
- **Carbohydrate:** Carbohydrates give your body energy.

Learning to count carbohydrate choices

A carbohydrate choice is a serving that contains about 15 grams of carbohydrate. For most people with diabetes, a healthful meal plan has 3 to 5 (45 to 75 grams) carbohydrate choices at a meal and 0 to 2 (0 to 30 grams) carbohydrate choices for snacks.

Important:

- According to the American Diabetes Association, it is best to consume about the same amount of carbohydrate choices at each of your meals. For example, if you have 4 carbohydrate choices at breakfast, try to have 4 carbohydrate choices at lunch and 4 carbohydrate choices at dinner.
- Your health care team can help you determine the right amount of carbohydrates for you to have at each snack. This will depend on:

  — the type of diabetes you have

— how often you have low blood glucose

— your body weight

— your physical activity level.

- Eat your meals and snacks every 4 to 5 hours to help even out your blood glucose level. Do not skip meals. If you do, your body will make extra glucose to compensate. This can make controlling your blood glucose even harder.

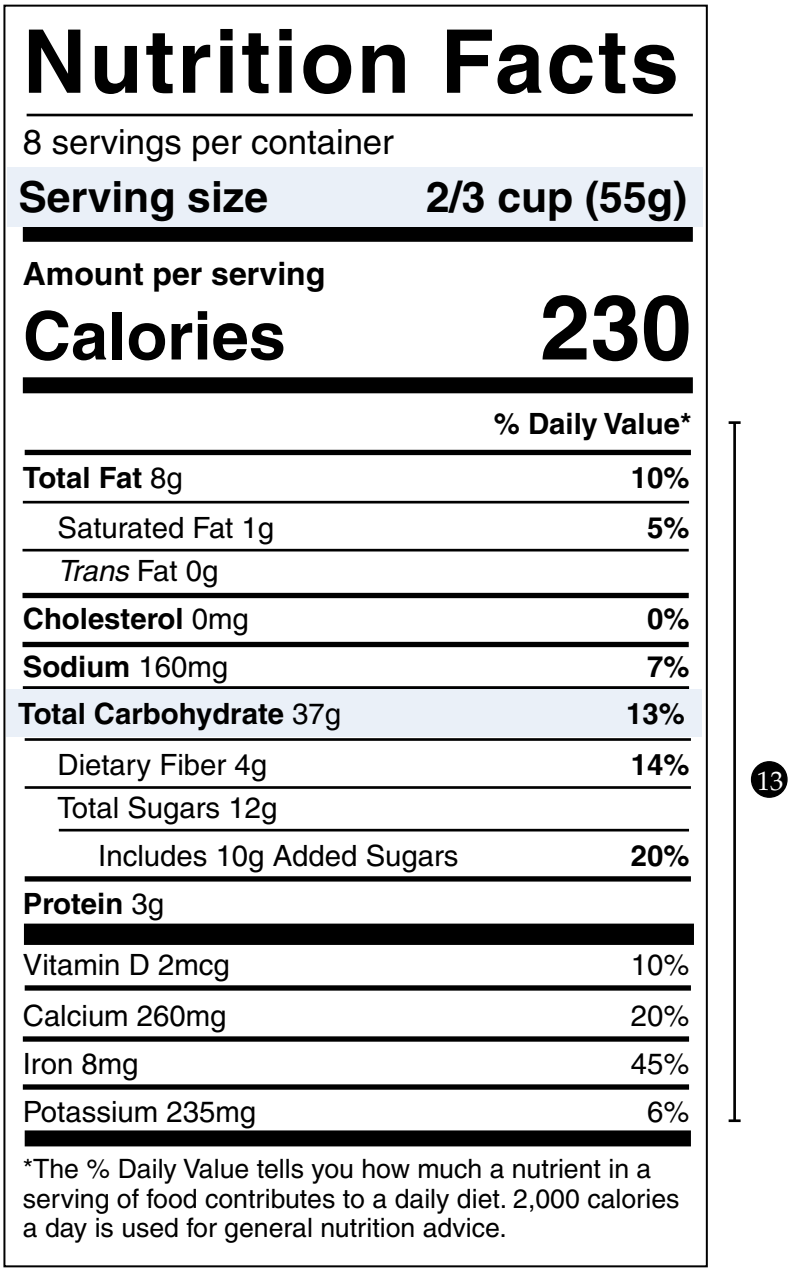
Grams of carbohydrate	Number of carbohydrate choices
0 to 5	0
6 to 10	½
11 to 20	1
21 to 25	1 ½
26 to 35	2
36 to 40	2 ½
41 to 50	3
51 to 55	3 ½
56 to 65	4
66 to 70	4 ½
71 to 80	5

Quick Carbohydrate Guide

The following lists give examples of some foods that are equal to one carbohydrate choice or 15 grams of carbohydrate.

Breads and Flours	
■ 1 slice bread (1 slice) ■ 1 flour tortilla (6 inches) ■ one-half English muffin	■ 1 4-inch pancake ■ one-half hamburger bun
Cereals, Grains and Pasta	
■ ½ cup cooked and unsweetened cereal	■ ⅓ cup cooked pasta or rice (brown, white)
Starchy Vegetables, Beans and Lentils	
■ ½ cup beans, peas, corn, yams (sweet potatoes) or mashed potatoes	■ 1 cup butternut squash
Fruit and Fruit Juices	
■ 1 small fresh fruit ■ ½ cup canned fruit in juice ■ ¼ cup dried fruit (raisins, banana)	■ 1 cup cubed melon or whole berries ■ ⅓ cup 100% fruit juice ■ 1 cup tomato juice
Milk, Yogurt and Non-dairy Milk and Yogurt	
■ 1 cup fat-free, 1% or 2% milk ■ 1 cup soy milk	■ ¾ cup plain or artificially sweetened yogurt

Snacks and Sweets	
■ 10 to 15 tortilla chips ■ 2-by-2-inch unfrosted cake ■ 1 3-inch cookie ■ ½ cup ice cream	■ ¼ cup sherbet, sorbet or gelato ■ 1 tablespoon jam, jelly, table sugar or honey
Convenience and Combination Foods	
■ ½ cup casserole (hot dish) ■ ½ cup pasta or potato salad	■ 1 cup soup: broth type ■ ½ cup soup: cream type



Source of label: U.S. Food and Drug Administration

How to Read Food Labels

Use the nutrition label to understand the following.

1. **Serving size:** The serving size lists the amount of food in one serving and the number of servings in one package.
2. **Calories:** Calories are a measure of energy released by a food or beverage.
3. **Total fat:** Total fat includes all types of fat (saturated, unsaturated, trans). Fat is a major source of energy for the body. It also helps the body absorb important vitamins.
4. **Saturated fat:** Saturated fat raises LDL ("bad") cholesterol. Reduce saturated fats to help protect your heart.
5. **Trans fat:** Trans fats may increase LDL ("bad") cholesterol and decrease HDL ("good") cholesterol, which increases your risk for heart disease. Eat as little trans fats as possible. Avoid foods that contain "partially hydrogenated" oils.
6. **Cholesterol:** Foods from animals (meat, fish, eggs, cheese, butter) have cholesterol. Your body produces enough cholesterol for important functions such as digesting fats, making hormones and building cell walls.

❼ **Sodium:** Your body needs sodium to help its organs function well and fluids to be in balance. Sodium (salt) is typically used to add flavor and increase the amount of time foods stay fresh. A healthy amount of sodium to consume each day is 2,300 milligrams (mg) or less.

❽ **Total carbohydrate:** Carbohydrates give your body energy. However, too many can raise your blood glucose.

❾ **Fiber:** Fiber is the part of food that cannot be broken down during digestion. Because it moves through your body "undigested," it plays an important role in keeping your digestive system moving and functioning well.

❿ **Total sugars:** This is the total amount of natural sugars such as lactose (sugar in milk) or fructose (sugar in fruit) and added sugars.

⓫ **Added sugars:** Added sugars are sugars added during the making (processing) of foods. Examples include sugar, honey, pure cane sugar, cane sugar, corn syrup, molasses, brown sugar, agave syrup, maple syrup — and more! Studies have shown consuming more than 10 percent of your total daily calories from added sugar makes it less likely that you will meet your nutrient needs (while staying within your calorie goal). Remember to read the ingredients list to look for sources of sugar!

⓬ **Protein:** Protein is important for healing, building muscle, strengthening your immune system, helping your body recover from stress and more!

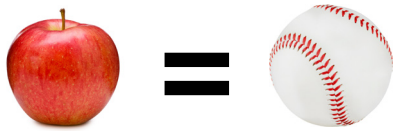
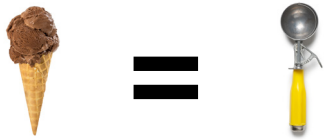
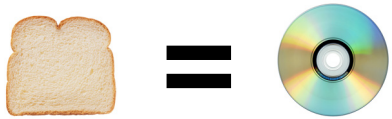
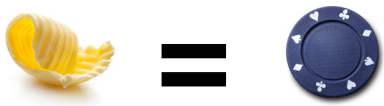
⓭ **Percent (%) daily value:** Your body needs more of some nutrients (calcium, dietary fiber, potassium) and less of others (total fat, saturated fat, sodium, added sugars) to function at its best. The % daily value will help you know how much of that nutrient your body needs. In general for each nutrient:

— 5% daily value or less is considered low

— 20% daily value or more is considered high.

Understanding Portion Sizes

When a food scale or measuring cups aren't handy, you can still estimate your portion. Remember:

3 ounces of meat is about the size and thickness of a deck of playing cards.	
1 medium apple or 1 cup of raw vegetables is about the size of a baseball.	
1 ounce of cheese is about the size of 4 stacked dice.	
½ cup of ice cream or ½ cup of cooked pasta is about the size of an ice cream scoop.	
1 slice of bread or 1 6-inch tortilla is about the size of a DVD.	
1 teaspoon of butter is about the size of a poker chip.	

Making Good Vegetable, Protein and Fat Choices

Vegetables

One serving of the following vegetables (½ cup cooked or 1 cup raw) has about 5 grams of carbohydrate. Three servings of vegetables at a meal or snack equals 1 carbohydrate choice.

- alfalfa sprouts
- artichokes
- asparagus
- beans (green, Italian, waxed)
- bean sprouts
- broccoli
- Brussels sprouts
- cabbage
- cauliflower
- celery
- collard greens
- cucumber
- eggplant
- endive
- greens
- lettuce
- mushrooms
- mustard greens
- peppers
- radishes
- spinach
- squash: summer
- Swiss chard
- zucchini

One serving of the following vegetables (½ cup cooked or 1 cup raw) has more than 5 grams of carbohydrate but not enough to be considered a starchy vegetable.

- beets
- carrots
- jicama
- kohlrabi
- leeks
- okra
- onions
- parsnips
- pea pods
- pumpkin
- rhubarb
- rutabaga
- squash: spaghetti
- tomatoes
- turnips

Protein

Most adults need about **6 to 8 ounces of meat** (weight after cooking) each day. Think of this as one small and one medium serving each day.

Fat

You need to eat fat for good health. Fat provides energy and important nutrients. It is important to choose foods that have healthful fats. (See the "Types of Fats in Food" chart on the next page.)

Unhealthful fats can clog blood vessels which can cause a heart attack or stroke. A general rule is to use 1 to 2 teaspoons of fat at each meal.

Types of Fats in Food			
Monounsaturated (most healthful)	**Polyunsaturated (healthful)**	**Saturated (not healthful)**	**Hydrogenated and partially hydrogenated trans fats (not healthful)**
■ avocados ■ most nuts ■ olive, avocado and peanut oil ■ peanut butter (natural or trans fat-free) ■ tub margarine (trans fat-free with liquid oil as first ingredient)	■ fatty fish (tuna, salmon, trout) ■ sunflower, corn and soybean oils ■ walnuts	■ coconut and palm oils ■ fatty meats ■ high-fat milk and cheese ■ lard ■ butter	■ crackers, cookies, cakes, doughnuts, pastries ■ fried fast food and chips ■ many pre-packaged or prepared foods ■ shortening and stick margarine

Sample Meal Plans

Dinner examples with 4 carbohydrate choices

- 1 pork chop
- 1 small baked potato = 2 carbohydrate choices
- 1 teaspoon margarine
- ½ cup coleslaw
- 1 cup watermelon cubes = 1 carbohydrate choice
- 1 cup (8 ounces) fat-free milk = 1 carbohydrate choice

or

- 3 meatballs with ½ cup sauce = 1 carbohydrate choice
- ⅔ cup pasta = 2 carbohydrate choices
- green salad with 1 tablespoon dressing
- 1 cup strawberries = 1 carbohydrate choice
- coffee, tea or diet soda

or

- 1 cup stir-fry (meat, sauce and vegetables) = 1 carbohydrate choice
- ⅔ cup steamed rice = 2 carbohydrate choices
- 1 cup raspberries = 1 carbohydrate choice
- coffee, tea or diet soda

Snack examples without carbohydrate

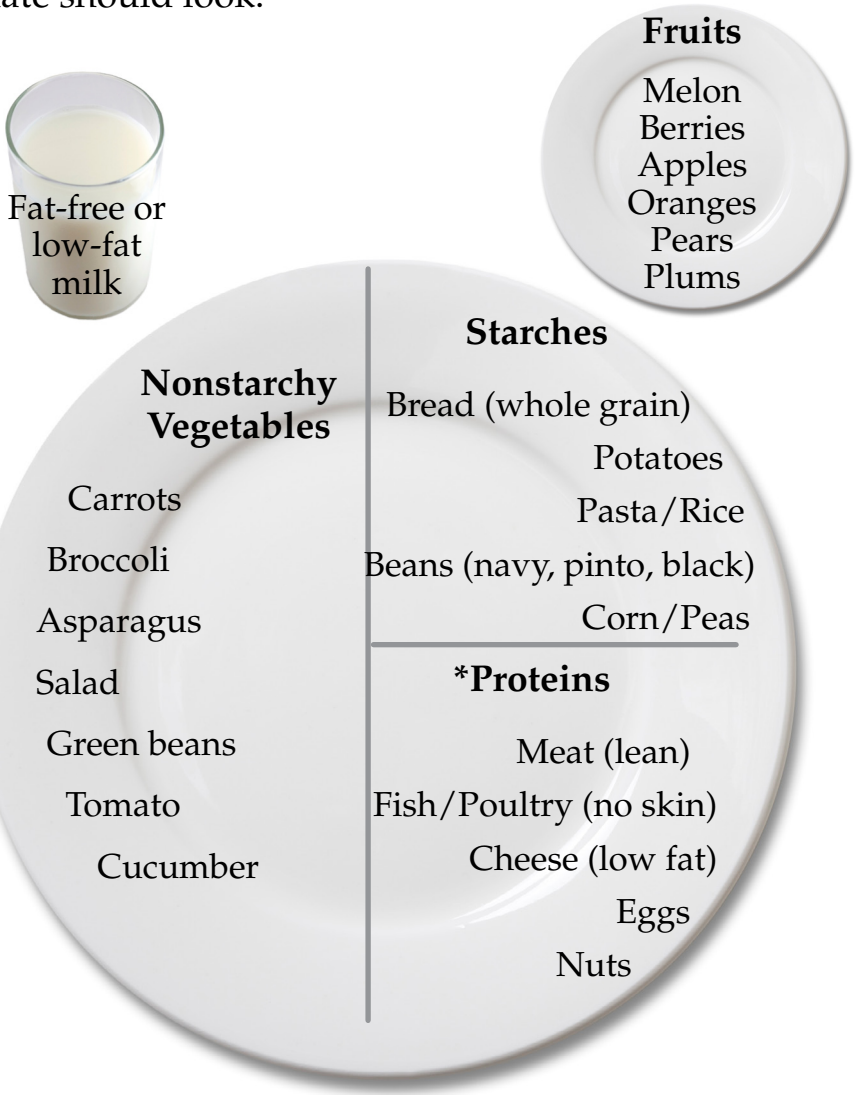
- 1 piece string cheese
- 8 almonds or cashews
- 1 ounce lean, low-sodium deli meat with 1 ounce Swiss or cheddar cheese
- 2 ounces lean meat such as chicken breast
- nonstarchy vegetables such as bell peppers, carrots, celery or cucumbers

Snack examples with carbohydrate

- 1 piece fresh fruit with string cheese = 1 to 2 carbohydrate choices
- 1 cup fat-free milk and 3 graham crackers = 2 carbohydrate choices
- 6 ounces artificially sweetened yogurt = 1 carbohydrate choice
- 1 (3-inch) cookie = 1 carbohydrate choice
- 3 cups microwave light popcorn = 1 carbohydrate choice
- 1 granola bar (15 to 20 carbohydrate grams) = 1 carbohydrate choice
- 15 mini pretzel twists = 1 carbohydrate choice

What Should You Put on Your Plate?

When you are planning your meals, try to think about what your plate should look like. Use the example below to help you think about how your plate should look.

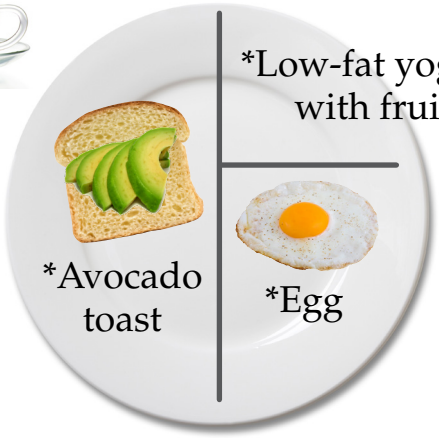


***For people following a vegetarian or vegan diet, beans are a main source of protein. (One-fourth cup of cooked beans or peas counts as 1 ounce of protein.)**

Sample Meals and Snacks

At breakfast:

Tea



Important

Make sure to include healthful fats with each meal and snack. Examples of foods with healthful fats include:

- olive oil
- peanut butter (natural)
- avocado
- dairy products (low-fat milk or yogurt).

Foods that contain healthful fats are noted with a star (*) in the sample meals and snacks.

At lunch:

*Low-fat milk

Watermelon

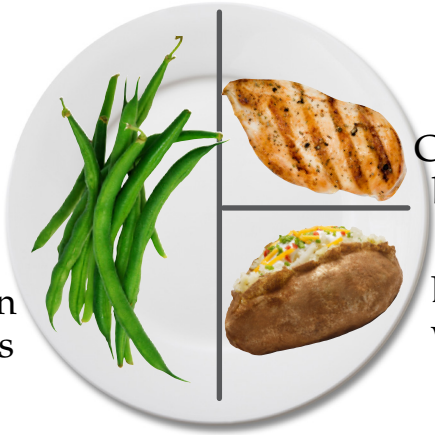
Turkey sandwich

Baby carrots

At dinner:

Water

Berries



Chicken breast

Green beans

Baked potato with *low-fat sour cream

For a snack:

Vegetables with *hummus

Physical Activity and Exercise

Physical activity and exercise are important for everyone, but especially for people with diabetes. They can lower your glucose level and help your body use insulin better.

Activities are things you do each day such as walking to your car, making a meal, doing a hobby or housework. They keep your body moving throughout the day.

Exercises are physically-exerting activities done to make your muscles, heart and lungs stronger. They must go above and beyond what you do in your daily routine. For example, going to the grocery store is not exercise but going to the mall to intentionally walk would be considered exercise.

Exercise guidelines

- Check with your health care provider before starting a program.
- Avoid outdoor exercise in very hot or cold temperatures.
- Start your exercise slowly by stretching and warming up (a slow pace of exercise for 5 minutes). Finish your exercise by cooling down (a slower-paced exercise for 10 minutes).
- Do not exercise if you have type 1 diabetes and your blood glucose is more than 250 mg/dL.

- If you take insulin or sulfonylurea, carry candy or glucose tablets with you during exercise to use if your blood glucose gets below 80 mg/dL or if you have symptoms of low blood glucose.
- Check your blood glucose before and after exercise if you take insulin or a sulfonylurea. If your glucose level is less than 100 mg/dL before you start to exercise, have a piece or fruit, ½ cup of fruit juice or any other food that can give you 15 grams of carbohydrate.
- If you have low blood glucose two times a week before or after exercise, be sure to check with your health care provider or diabetes educator to see if you need a change in your diabetes medicine.
- Check your feet for signs of blisters, redness or injury. Do not exercise until your feet have healed.

Types of exercise

- **aerobic (cardiorespiratory):** Aerobic exercise continues for a period of time (at least 10 minutes) without rest. In order to be considered "aerobic," an exercise must cause you to experience one or more of the following:

  — make you mildly short of breath

  — increase your heart rate

  — cause you to sweat.

- **strength training:** Strength training applies resistance to your muscles which can increase strength, reduce body fat and improve bone health. It is important that you increase the amount of resistance over time.
- **balance exercises:** Balance exercises can help to improve your steadiness, reaction time and mobility. Examples include dancing, yoga, Tai Chi and even standing on one leg.
- **stretching:** Stretching can help to improve flexibility and reduce joint and muscle stiffness. Being more flexible will help you move more freely to do your daily activities.

Food and Physical Activity Diary

Use the physical activity diary on the next page to write down the food you eat and the physical activity you do. You can make copies of the diary or keep track of the information in a notebook.

Food and Physical Activity Diary **Date: _____**

Meal	Food or Beverage	Amount	Carb Choices per Serving	Physical Activity or Exercise
Breakfast				
Lunch				
Dinner				
Snacks				

Medicines

Some people need to take pills to help control blood glucose levels. These are not insulin, but they do help your body use its own insulin. Your health care provider will decide what pill or pills will be most helpful to you. At some point your health care provider may change your pills for better blood glucose control.

Important things to know about your diabetes pills include:

- the name and amount to take
- when to take them
- how they work
- side effects
- special warnings.

Insulin (Injectable)

Insulin is a hormone that is made by the pancreas. If your pancreas does not make any insulin or does not make enough insulin, your health care provider may want you to take injections (shots) of insulin. It is common to take more than one type of insulin.

Things to remember

- The timing of insulin injections and meals is important to controlling your blood glucose levels. Ask your health care provider or diabetes educator to review your individual plan with you.

- Take your insulin every day, even if you are feeling sick.
- Do not change the amount of insulin that you take without talking to your health care provider or diabetes educator (unless you have been trained to do so).
- Ask your health care provider or diabetes educator about how to safely dispose of used sharps (needles, syringes and lancets).

Hypoglycemia or Low Blood Glucose

Hypoglycemia means that your blood glucose is low — generally below 70 mg/dL*. Symptoms occur quickly and need to be treated as soon as possible.

***Low glucose levels vary from person to person, so it is important to ask your health care provider or diabetes educator what is too low for you.**

Causes	Prevention
Not enough food	Eat all your meals and snacks on time.
More physical activity than usual	Avoid exercise during diabetes medicine peak time.
Drinking alcohol without food	Always eat a snack or meal when you drink alcohol.
Too much diabetes medicine	Take only the dose that has been prescribed.

Symptoms

Mild (one or more of the following):

- sweating
- shaking
- feeling weak and tired
- feeling anxious or nervous
- racing heart
- feeling hungry
- having a mild headache
- tingling sensation around lips and tongue

More severe:

- glassy eyes or staring
- slurred speech
- confusion
- staggering walk

Very severe (rare):

- loss of consciousness
- seizures

Treatment

- Test your blood glucose as soon as you feel symptoms.
- If your level is low, eat or drink 15 grams of carbohydrate. Examples include:
  - — ½ cup of fruit juice (you don't need to add sugar)
  - — ½ cup of regular soda
  - — 7 to 8 pieces of candy
  - — 1 tablespoon of honey or sugar
  - — 2 tablespoons of raisins
  - — 3 large marshmallows
  - — 1 cup of fat-free milk
  - — 4 glucose tablets
  - — 15 grams of glucose gel.
- Retest your blood glucose every 15 minutes until your blood glucose is above 80 mg/dL without symptoms.

Food needs after a hypoglycemic event

After a hypoglycemia event, you may need more food:

- If your next meal or snack is less than 1 hour away, don't make any changes.
- If your next meal or snack is 1 to 2 hours away, eat a piece of fruit, **or** 6 saltines, **or** drink 1 cup of fat-free milk, **or** eat any food that contains 15 grams of carbohydrate.
- If your next meal or snack is more than 2 hours away, eat a piece of fruit plus 1 cup of fat-free milk, **or** 1 cup of fruit juice **or** any food that contains 30 grams of carbohydrate.

> **Tip:** It is best to be safe. It will not harm you if you take some glucose even if you just suspect that your blood glucose is low.

Things to remember

Do not subtract what you eat to treat hypoglycemia from your next snack or meal. This food is needed to keep your blood glucose in a better range.

Also, if you have unexplained hypoglycemia often (two times in 1 day or 2 days in a week), call your health care provider or diabetes educator.

Insulin, hypoglycemia and driving

If you take insulin, always check your blood glucose before you drive.

- Do not drive if your blood glucose is lower than 80 mg/dL.
- If your blood glucose is between 80 and 100 mg/dL, eat 10 to 20 grams of fast-acting glucose.
- Increase your carbohydrates for longer drives.
- Always keep a fast-acting carbohydrate (glucose tablets, candies, fruit juice) in your vehicle.

Tip

A medical identification bracelet or necklace with "Diabetes" on it can help people help you if you can't help yourself. Although not as easily noticed, you can carry a card in your purse or wallet that says you have diabetes.

Hyperglycemia or High Blood Glucose

Hyperglycemia means that your blood glucose is above your target range and you need to take action to lower it.

Causes

- too much food
- not enough diabetes pills or insulin
- not enough physical activity
- surgery
- steroid medicine
- illness
- infection
- physical or emotional stress

Symptoms

- increased thirst
- frequent urination
- less energy
- blurred vision
- hunger

Treatment

- Follow your food and activity plan.
- Check your blood glucose regularly.
- Check your urine for ketones if recommended.
- Notice any signs of illness or infection.

Call your health care provider or diabetes educator if your blood glucose is over 250 mg/dL for 2 to 3 days in a row. You may need a change in your treatment.

Target Blood Glucose Ranges:

Fasting: _____

2 hours after meals: _____

Bedtime: _____

Sick Days and Diabetes

It is important to remember that illness may cause blood glucose levels to rise. Monitoring your blood glucose more often when you are sick can prevent problems. It is a good idea to teach someone else to do the test just in case you need help when you are sick.

What you can do

- Always take your insulin or oral (by mouth) diabetes medicine. Do not stop taking diabetes medicine without advice from your health care provider, nurse or diabetes educator.
- For people with type 1 diabetes, test urine for ketones if your blood glucose is more than 250 mg/dL. If ketones are present, test blood glucose and urine ketones every 3 to 4 hours.
- **If your blood glucose is more than 200 mg/dL, drink at least ½ to 1 cup of sugar-free liquid every hour.**
- **If your blood glucose is less than 200 mg/dL, some of your liquids should contain carbohydrate.**

- When you do feel like eating again, the extra liquids should be sugar-free. Start with carbohydrate-containing foods that are easy to tolerate every few hours, such as:
  - — ½ cup cooked cereal
  - — 6 saltine crackers
  - — 3 graham crackers
  - — ½ cup custard, yogurt, sherbet or pudding.
- Test your blood glucose every 4 hours during the day and at least once during the night.
- Keep a record of the times and numbers of your blood glucose and urine ketones.
- Have someone at home with you or tell someone that you are sick so he or she will check on you.

When to call your health care provider

- Your blood glucose is more than 250 mg/dL for 2 tests in a row **and** urine ketones are positive for 2 to 3 consecutive checks.
- Your blood glucose is consistently very high (more than 300 mg/dL) even though there are no urine ketones present
- You have questions about how much insulin or oral (by mouth) diabetes medicine to take.
- You are unable to eat or drink because of upset stomach, throwing up or both.

- You have been throwing up more than 6 hours or have had more than 5 episodes of diarrhea in 1 day.
- You have a temperature higher than 101 F or a high temperature that lasts longer than 48 hours.

Preventing Diabetes Problems (Complications)

Over time, diabetes-related risk factors such as high blood glucose, high blood fats and high blood pressure can damage your blood vessels. This damage can lead to long-term (chronic) problems (complications) that can affect your heart, kidneys, eyes and nervous system.

To prevent or delay long-term problems of diabetes:

- Keep your blood glucose and blood pressure in your target range.
- Your eyes can be damaged if blood glucose levels are too high. The damage is called retinopathy.
  - — Have regular eye exams.
  - — Call your health care provider if you have any vision changes (flashes of light, floating black spots, double or blurred vision or eye pain).

- Your kidneys can be damaged if small blood vessels begin to leak. The damage is called nephropathy and can cause kidney failure.
  - — Call your health care provider if you have protein in your urine, or any signs of a kidney or bladder infection or problems urinating (low back pain, fever, frequent urination, burning sensation while urinating or blood in the urine).
- Your heart and major arteries can be damaged if blood flow to your heart, brain or legs is decreased.
  - — Maintain a healthy weight.
  - — Do not use tobacco.
  - — Take medicine as prescribed.
  - — Call your health care provider if you have slow healing sores on your legs and feet, cold feet, loss of hair on your feet, red feet when they dangle, leg pain that stops with rest or chest pain (angina).

- Your nerves can be damaged by high blood glucose. Peripheral neuropathy is damage to nerves in your arms and legs (numbness, tingling, burning, pain, foot deformities). Autonomic neuropathy is damage to nerves that control heartbeat, blood pressure, digestion, urination and sexual function.
  - — Do not use tobacco.
  - — Call your health care provider if you have numbness, tingling, burning, arm or leg pain, loss of balance or muscle mass, foot problems, heavy sweating or dry skin, bladder problems, or feeling faint or dizzy when you stand.

Caring for Feet, Skin and Teeth

You need to take extra care of your feet and legs. High blood glucose can cause damage to the nerves and blood vessels in your feet and lower legs. You also need to take care of your skin and teeth to prevent infection. Diabetes can cause problems with how the blood flows, how infections heal and how nerves are able to carry signals to various parts of the body.

Caring for your feet

- Look at your feet every day to check for sores, cuts, cracks or blisters.
- Use a hand mirror (or ask a family member) to check the bottoms of your feet.

- Wash your feet with slightly warm water every day.
- Do not soak your feet because this will dry them out and might cause problems like cracking.
- Always check inside shoes for worn areas or objects that could cause a sore on your foot.
- Use lotion or cream for dry skin but do not use it between your toes.
- Cut toenails straight across and smooth out sharp edges.
- Wear proper shoes and socks even when indoors.
- Protect your feet from hot or cold. Don't use heating pads or hot water bottles on your feet.

Caring for your skin

- Bathe or shower every day using mild soap and slightly warm water.
- Use lotion or cream for dry skin but do not use it between your toes.
- Use sunscreen whenever you are in the sun.

Caring for your teeth

- Brush at least 2 times a day and always before you go to sleep.

- Floss each day to help remove plaque from between your teeth.
- Get your teeth cleaned and checked by a dentist every 6 months.
- Do not use any form of tobacco. This decreases blood flow and causes gum problems.

Tobacco and Diabetes Problems (Complications)

Using tobacco makes diabetes harder to control. People who do not use tobacco use less insulin and other medicine to keep diabetes under control.

How tobacco affects you

Tobacco:

- damages and narrows blood vessels
  — This can lead to infections and amputations.
- increases insulin resistance
  — This can raise your blood glucose.
- increases blood pressure
  — This can lead to stroke or heart disease.
- makes your blood vessels and arteries "sticky," which can block blood flow
  — This raises your risks for heart disease, kidney disease, retinopathy (eye disease that causes blindness) and nerve damage (peripheral neuropathy).

Resources for quitting

- Quit Partner
  - 1-800-QUIT-NOW (1-800-784-8669) or quitpartnermn.com
  - My Life, My Quit™ (ages 13 to 17): text "Start My Quit" to 36072 or call 1-855-891-9989 to talk with a coach
  - American Indian: 1-833-9AI-QUIT or aiquit.com
  - Spanish: 1-855-DEJELO-YA (1-855-335-3569) or quitpartnermn.com/es
  - asiansmokersquitline.org
- online tobacco cessation support
  - smokefree.gov
- American Lung Association/Tobacco Quit Line
  - 651-227-8014 or 1-800-586-4872
- financial aid Nicotrol® inhaler
  - 1-844-989-PATH (7284)
  - pfizerrxpathways.com
- Plant Extracts aromatherapy
  - 1-877-999-4236
  - plantextractsinc.com

Guidelines for Diabetes Care

You are the most important member of your health care team. Talk about your diabetes care with your health care provider. This will help him or her find problems in the early stages when they are more treatable.

Exams

Type of exam	How often
Visit with your health care provider — includes diabetes treatment plan review, foot exam, height, weight and blood pressure check*	every 3 to 6 months, based on health status
Retinal eye exam	every year
Foot exam	every year or more often if there is a problem
Diabetes education update	every year
Dental visit	every 6 months
*** Talk about the use of aspirin, ACE inhibitors and a statin.**	

Tests

Type of test	How often	Target range
A1c blood test	You should have this test at least 2 times a year, more often if A1c goals are not met.	less than 7 percent for most people
Microalbuminuria (kidney)	every year for most people	30 mcg/mL or less
Blood pressure	every visit	139/89 mm Hg or less

Shots (Immunizations)

Type of immunization	How often
Flu shot	every fall
Pneumonia vaccine	One time, although some people may need a second dose. Ask your health care provider.
Tetanus	every 10 years
Hepatitis B vaccine	One time, a series of 3 shots for ages 19 to 59 years old within 6 months.

Pregnancy and Diabetes

Important

See your health care provider as soon as you think you may be pregnant.

Preparing for a healthy pregnancy begins with excellent care of your diabetes before you conceive. Good blood glucose control 3 to 6 months before conception helps promote fertility and helps prevent birth defects or chances of a miscarriage.

Don't stop using birth control until your diabetes is in good control. Good control is measured by two things:

- a near-normal A1c level (ideally around 6)
- near-normal blood glucose levels fasting, before meal(s) and 2 hours after meal(s).

Insulin is the medicine that is used to control blood glucose during pregnancy. If you are taking diabetes pills and are planning a pregnancy, talk with your health care provider before you stop taking your birth control.

Your health care provider will tell you if and when you must stop taking your diabetes pills. Together, you will also make a plan about when you will start taking insulin.

If you are on any other medicines, be sure to check with your health care provider to see if they are safe to use during pregnancy.

Take a multivitamin that contains folic acid before and during pregnancy.

A pregnancy and diabetes care plan often includes:

- a meal plan to improve blood glucose control and to provide proper nutrition
- a schedule for when to test your blood glucose
- blood glucose goals
- physical activity plan
- diabetes medicine checks and change in insulin as needed.

If you need, your health care provider can give you information on how to quit using tobacco and avoid drinking alcohol.

Carbohydrate Guide for Traditional Cultural Foods

The following lists give examples of traditional cultural foods that are equal to 1 carbohydrate choice or 15 grams of carbohydrate.

Hmong			
Starch	**Amount**	**Starch**	**Pes tsawg**
Cellophane or mung bean noodles, cooked	¾ cup	Peev choj, uas siav	¾ khob
Rice vermicelli or noodles, cooked	½ cup	Fawm los sis khob poob, uas siav	½ khob
Rice soup	¾ cup	Kua dis	¾ khob
Taro, cooked	⅓ cup	Qos tsw ha, uas siav	⅓ khob
Starchy vegetables	**Amount**	**Cov Zaub uas Muaj Starch**	**Pes tsawg**
Yard long beans, pods and seeds, cooked	½ cup	Taum lag, taum mog thiab noob taum, uas siav	½ khob
Milk	**Amount**	**Mis Nyuj**	**Pes tsawg**
Condensed milk	½ cup	Mis nyuj hauv kos poom	½ khob
Fruits	**Amount**	**Txiv Hmab Txiv Ntoo**	**Pes tsawg**
Guava, medium	1	Txiv cuab thoj, tsis loj tsis me	1 lub xws luag
Jackfruit, raw	½ cup	Txiv moj mib, nyoo	½ khob

Russian			
Breads	**Amount**	**Хлеб и хлебные изделия**	**Количество**
Blini (crepe)	1	Блинчик тонкий (без начинки)	1
Potato pancake	½ pancake	Картофельные оладьи	½
Pelmini (dumplings)	2 small	Пельмени	2 небольшого размера
Kalach	½ slice	Калач (белый хлеб, несдобный)	½ ломтика
Cereals and grains	**Amount**	**Крупы и зерновые хлопья**	**Количество**
Kasha (buckwheat, cooked)	⅓ cup	Гречневая каша	⅓ чашки
Soups	**Amount**	**Супы**	**Количество**
Borshch	1 cup	Борщ	1 чашка
Combination dishes	**Amount**	**Блюда, содержащие несколько типов продуктов**	**Количество**
Pirozhki (small meat or potato pies)	1	Пирожки печеные (с мясом или картофелем)	1

Somali			
Breads	**Amount**	**Rooti/Roodhi**	**Qadar**
Enjera	One 7-inch piece	Canjeero	Hal xabo oo ah 7-inji
Sabaayad (Somali Chapati)	1	Sabaayad	1
Mufo (Somali pita bread)	1	Muufo	1

Spanish			
Breads	**Amount**	**Panes**	**Cantidad**
Pan dulce (sweet bread)	¼	Pan dulce	¼
Tortilla, flour or corn (6 inches)	1	Tortilla, de harina o maíz (6 pulgadas)	1
Cereals and Grains	**Amount**	**Cereales y granos**	**Cantidades**
Masa harina (corn flour)	2 ½ tablespoons	Masa harina	2 ½ cucharadas soperas
Vegetables	**Amount**	**Vegetales con harinas**	**Cantidad**
Corn or hominy	½ cup	Maíz	½ taza
Jicama	1 cup	Jícama	1 taza
Plantain, cooked	½ cup	Plátano macho, cocido	½ taza
Okra, cooked	1 cup	Quingombó, cocido	1 taza
Milk	**Amount**	**Leche**	**Cantidad**
Condensed milk	½ cup	Leche condensada	½ taza

Notes

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