



Planning Healthy Meals and Snacks for Persons with Diabetes

About this Kit

This kit focuses on the basic skills people with diabetes need to plan healthy meals and snacks. Remember that this kit and the Lifestyle Management and Cardiovascular Risk Reduction Program are meant to complement, but not substitute, your physician's advice. If you have any questions, ask your mentor. The information in this kit is from the following websites: www.diabetes.ca and www.diabete.qc.ca.

- Step 1.** The Diabetes Food Guide To Healthy Eating
- Step 2.** Mixed dishes
- Step 3.** Diabetes and alcohol
- Step 4.** Preparing food

Step 1

The Diabetes Food Guide To Healthy Eating

For the past several years, people living with diabetes have not needed to follow a specific diet. In fact, most people with diabetes can follow the same food guidelines as everyone else. If you have diabetes, you do not need to buy specific foods. Indeed, if the rest of your family eats the same foods as you, their health will improve considerably. You will need to develop a personalized eating plan since each person with diabetes is different and does not have the same energy needs. Only a dietitian can help you prepare an appropriate plan, taking into account your physical activity level, whether you have a day or night job, whether you have a regular or flexible schedule, your weight, sex, age, food allergies and intolerances, blood pressure and cholesterol levels. If you have not seen a dietitian, ask your doctor to refer you to one.

In the meantime, follow the basic advice below:

1. Eat three regular meals a day. Your main meals should not be more than six hours apart.
2. Eat breakfast every day.
3. A healthy snack can be valuable to you. Snacks prevent you from getting too hungry between meals or eating too much at mealtime. Snacks should be eaten at least two hours before or after a meal.
4. Limit sources of sugar and sweets such as regular soft drinks, fruit drinks, desserts, candies, jam, syrup and honey.
5. Eat more foods that are high in dietary fibre (whole wheat bread, whole grains, lentils, legumes, brown rice, vegetables and fruit).
6. If you're thirsty, drink water or sugar-free drinks. Regular soft drinks, sweetened drinks and fruit juices will raise your blood glucose levels. If you have been previously instructed to limit your fluid intake, follow the recommendations you were given.
7. Eat portions that will help you reach your healthy weight and maintain it.

The Diabetes Food Guide To Healthy Eating (developed by Ottawa's Centretown Community Health Centre) can add to your basic knowledge. The Guide recommends a number of food choices from each of the six food groups: vegetables, grains and starches, fruits, milk and alternatives, meat and alternatives, and fats and oils. It follows the recommendations from the Canadian Diabetes Association and is designed so that approximately 50% to 60% of calories come from carbohydrates, mainly starches. Use this

Guide in making your food choices so that you get the appropriate amount of carbohydrate. The foods to choose more often and those to eat in moderation are also included.

VEGETABLES

The Diabetes Food Guide To Healthy Eating recommends eating five choices or more of vegetables a day. Vegetables are high in nutrients and fibre and have few calories. Choose dark green and brightly coloured vegetables.

Examples of one choice in the vegetable group

| 1 cup (250ml) raw leafy greens | 1 cup (250mL) raw or 1/2 cup (125mL) cooked vegetables | |
|---|---|---|
| Spinach Romaine lettuce Kale Endives | Asparagus Beets Broccoli Green or yellow String beans Carrots Cabbage Cauliflower Celery Cucumber Eggplant | Leeks Mushrooms Frozen mixed vegetables Onions Green and red peppers Spinach Tomatoes Squash |

Note: Potatoes, sweet potatoes and kernel corn are in the grains and starches category because they are higher in carbohydrate content.

GRAINS AND STARCHES

Following your dietitian's recommendations, you must eat between six and eight choices a day in the grains and starches group.

Examples of one choice in the grains and starches group

| | | |
|---|--|-------------------------------------|
| 1 slice whole grain bread | 1/2 medium potato | 1/2 (6 inch) pita bread |
| 3/4 cup (175mL) hot cereal | 1/2 cup (125mL) mashed potatoes | 1/4 large bagel |
| 1/2 cup (125mL) cold cereal | 1/3 cup (80mL) brown rice, white rice, millet | 1 (4 inch) pancake or waffle |
| 1/2 cup (125mL) barley, bulgar, buckwheat, corn or wild rice | 1/3 cup (80mL) sweet potato | 1 (2 inch) small muffin |
| 1/2 cup (125mL) pasta or couscous | 1 (6 inch) whole wheat chapatti, roti, tortilla | 3 cups (750mL) popcorn |

Starches are good sources of fibre and important vitamins and minerals. They're filling, enjoyable to eat and give you a feeling of satisfaction. Unless you add fat, starches are generally low in fat. Don't avoid eating starches because they are some of the healthiest foods around. Eating pasta, barley and whole grains usually helps improve glycemic control. Choose whole grains (e.g. whole wheat pasta, brown rice) to increase your fibre intake.

FRUITS

The Guide, recommends three fruit choices a day, or as instructed by your dietitian. Fruits are an excellent source of vitamins and minerals essential to a healthy body and are a good source of fibre. You should eat a variety of fruit every day. You should also choose whole fruit instead of fruit juice. Fruits contain more fibre and less sugar and calories than their juice. They also make you feel more satisfied than juice. Several fruits, including small ones, also have antioxidant properties that protect the cardiovascular system.

Examples of one choice in the fruit group

| | | |
|--|---|--|
| 1 medium apple, orange, pear | 1 large peach, nectarine | 15 grapes, cherries |
| 2 medium kiwis, prunes, clementines | 2 cups (500mL) strawberries, blackberries, raspberries | 1/2 cup (125mL) unsweetened applesauce, canned fruit in juice |
| 1/2 medium mango | 1 cup (250mL) blueberries | 1/2 cup (125mL) unsweetened juice |
| 1 small banana, grapefruit | 1 cup (250mL) melon | 1/4 cup (60mL) dried fruit |

MILK AND ALTERNATIVES

In the milk and alternatives group, two to three choices are recommended per day. They provide an excellent source of calcium, vitamin D, protein and carbohydrate. Make lower fat choices (skim, 1% or 2%).

Examples of one choice in the milk and alternatives group

| | | |
|---|---|---|
| 1 cup (250mL) milk | 1/2 cup (125mL) flavoured soy beverage | 1/2 cup (125mL) evaporated milk |
| 1 cup (250mL) plain soy beverage | 4 tbsp (60mL) powdered milk | 3/4 cup (175mL) low-fat plain yogurt |

MEAT AND ALTERNATIVES

The Diabetes Food Guide To Healthy Eating recommends four to eight meat and alternatives choices a day. Foods in this group are an excellent source of protein and should account for 15% to 20% of your daily caloric intake. Choose lean meats, skinless chicken, low-fat cheeses and fish in order to lower your intake of total fat and saturated fat. It is recommended that animal-based protein (meat, poultry, fish, eggs, cheese) be substituted occasionally with plant-based protein (legumes, tofu, peanut butter). It is recommended that you eat at least one vegetarian meal a week.

Protein and fat are two nutrients that provide energy and have little or no effect on your glycemia (blood glucose levels). A meal high in protein or fat can therefore delay the increased glycemia from carbohydrates in other foods.

Examples of one choice in the meat and alternatives group

| | | |
|---|---|------------------------------------|
| 1 oz (30 g) lean meat, poultry or fish | 1/4 cup (65mL) cottage cheese (1% or 2% MF) | 1/2 block tofu |
| 1 large egg | 1 oz (30 g) cheese (<18% MF) | 2 tbsp (30mL) peanut butter |
| 1/4 cup (60mL) canned fish | 1/2 cup (125mL) legumes (beans, peas lentils)* | 1/3 cup (80mL) hummus |

* Legumes contain carbohydrate that has little effect on blood glucose.

FATS AND OILS

The Diabetes Food Guide To Healthy Eating recommends a moderate intake of fats and oils. Choose unsaturated fats (better for the heart) such as non-hydrogenated margarine, canola oil, olive oil and peanut oil. Avoid tropical oils such as coconut oil and palm oil as they are high in saturated fat (bad for the heart).

By avoiding saturated fat, it will be easier to prevent heart disease, the main cause of death in people with diabetes.

Examples of one choice in the fats and oils group

| | | |
|--|---|---------------------------------------|
| 1 tsp (5mL) non-hydrogenated margarine | 1 tbsp (15mL) nuts or seeds | 2 tbsp (30mL) light mayonnaise |
| 1 tsp (5mL) canola oil, olive oil, peanut oil | 1 tbsp (15mL) regular salad dressing | 1 slice bacon |

Step 2

Mixed Dishes

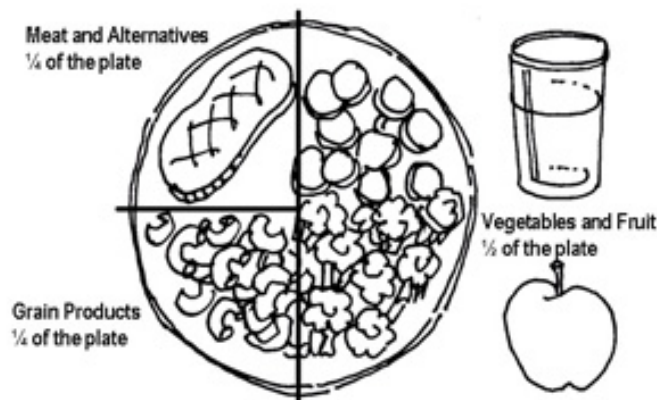
It is easy to know where most foods are located in *The Diabetes Food Guide To Healthy Eating*. However, some foods contain ingredients from a number of the food groups. These foods are called mixed dishes. To determine their nutritional value, consider only the main ingredients, those that make up at least half a choice. Do not count the ingredients that account for lesser amounts, except for fats. Refer to the food label for fat content.

Another recommendation is to monitor to the size of portions. The proportion of carbohydrates and calories from oversized portions can make the difference in your success of controlling your blood glucose levels and managing your weight. It is important to weigh and measure food, especially new food, when you start counting carbohydrates. Weighing and measuring food and drink portions at home allows you to better assess the size of portions when you eat at a restaurant. A list of visual cues can be found at the end of this module to help you assess food portions. For example, a medium fruit is approximately the size of a tennis ball.

A 3 oz. (84 g) portion of cooked meat with no bone (a typical meal portion) is approximately the size of a deck of cards. However, note that in *The Diabetes Food Guide To Healthy Eating*, this 3 oz. (84 g) portion is equal to three choices as one choice is equal to 1 oz. (28 g) of meat or alternatives.

When planning your meal divide a medium plate into three sections. Half of the plate should be filled with vegetables, one-quarter with starches and the last quarter with protein. You can complete your meal with a glass of milk and one portion of fruit.

Portions of food on a healthy plate



Choose the right portion size for your body size and activity level.

Step 3

Diabetes and Alcohol

As a general rule, it is not necessary to eliminate alcohol when you have diabetes; the important thing is to drink in moderation. Regardless, you should not drink alcohol under the following circumstances:

- if you are pregnant, trying to get pregnant or if you are breastfeeding
- if you have a personal or family history of drinking problems
- if you are planning to drive or engage in other activities that require attention or skill
- if you are taking certain medications

If your diabetes is not under control, or if you have certain health problems such as disease of the pancreas, eye disease, high blood pressure, high triglycerides, liver problems, nerve damage or stroke you should avoid alcohol. You should also abstain from drinking if you do not know how to deal with a hypoglycemic episode. Otherwise, you can drink alcohol in moderation, that is, not more than two drinks a day for men and one drink for women. This recommendation also applies to people without diabetes. One drink equals 12 oz. (355mL) of beer, 5 oz. (148mL) of wine or 1 1/2 (45mL) oz. of hard liquor such as gin or whisky.

Alcohol poses some health risks. Although you may have heard that alcohol has certain benefits, any regular or excessive drinking can be harmful. Alcohol can lead to lower blood glucose levels in individuals under insulin therapy or taking certain oral antidiabetics. If you are drinking while taking your insulin or oral antidiabetics, your blood glucose could become very low. Alcohol's effect on glycemia can appear a short while after drinking and last from 8 to 14 hours. If you are taking antidiabetics, talk to your diabetes care provider or a dietitian about drinking alcohol.

The symptoms of excessive drinking and low glucose levels are similar. Tell your family and friends so that they do not confuse the symptoms of hypoglycemia with intoxication so that they can assist you with the appropriate treatment.

Drinking can also lead to increased glucose levels because of the calories in certain alcoholic beverages such as beer, wine and soft drinks. If you have a glass of alcohol at a meal and your antidiabetic is still not working at peak action, the alcoholic beverage could cause your blood glucose levels to go too high. If your diabetes is under control, you can drink a moderate amount of alcohol. If you do not currently drink alcohol, there is no reason to start.

Keep these points in mind:

- Before drinking alcohol, make sure you are eating regular meals and snacks.
- Keep food close at hand to deal with hypoglycemia, and ensure that someone knows the signs and symptoms of hypoglycemia and how to deal with them.
- Eat while drinking and alternate with non-alcoholic drinks containing minimal sugar.
- Check your blood glucose levels before going to bed and eat a carbohydrate snack.
- Check your blood glucose levels during the night and get up at the regular time to take your medication and eat your breakfast.

Step 4

Preparing Food

Here are a few tips that will help you while shopping, preparing and serving food.

At the grocery store

- Choose smaller portions, such as a small potato rather than a big one, three ounces (86 g) of chicken rather than six to eight. Buy individual packages for yogurt and snacks.
- Buy breads and cereals that have whole grains as the first ingredient on the label. Choose oatmeal or a high-fibre cereal.
- Choose foods that contain natural sugars like fruits (fructose) or milk (lactose). These foods are rich in vitamins, minerals and fibre compared to fruit-flavoured drinks and soft drinks that contain high-fructose corn syrup.
- Substitute regular soft drinks with sugar-free drinks.
- Choose fresh or frozen fruits, or if they are canned, choose those packed in their own juice or in water.

While preparing meals:

- Avoid adding fat to starches and vegetables.
- Minimize the cooking of vegetables so that they maintain their flavour and nutrients.
- Cook your vegetables in the oven, on a grill, boil or steam them, barbecue them or braise them using a cooking spray.
- Limit the addition of rich sauces and choose low-fat condiments instead.
- When possible, use sugar substitutes such as aspartame, saccharin and sucralose rather than sugar, honey or molasses.

While serving:

- Weigh and measure your portions. You could be eating a large fruit that counts for two portions. Be honest about the size of your portions.
- Plan to have half of your plate filled with vegetables, one-quarter with starches and the other quarter with meat or a meat alternative.
- Eat your fruits and vegetables raw as much as possible. When possible eat the skin of fruits and vegetables, as it is rich in fibre and nutrients.
- Always use the same size of serving plate and visualize the portion each food must take up.
- Prepare plates in the kitchen and avoid putting serving dishes directly on the table so that you are not tempted to take more.

Planning Healthy Meals and Snacks for those with Diabetes

Before Your Next Visit

In the time between visits with your mentor, you should read and complete your educational kits. Use this sheet to record your work. Think of this as “homework.”

- Complete the sentences in the Check Yourself section to ensure that you have a good understanding of the key concepts in this kit.

Check Yourself

Fill in the blanks:

1. Meals should be no longer than _____ hours apart.
2. One choice of vegetables represents ___ cup(s) or ___ mL of raw vegetables or 1/2 cup or ___ mL of cooked vegetables.
3. Potatoes, sweet potatoes and kernel corn are in the _____ group according to *The Diabetes Food Guide To Healthy Eating*.
4. ___ cup(s) or ___ mL of pasta represents one choice in the grains and starches group.
5. Fruits contain more _____ and less sugar and calories than their juice.
6. Cheese is in the _____ group in *The Diabetes Food Guide To Healthy Eating*.
7. _____ and _____ provide energy but have little effect on blood glucose levels.
8. _____ fat contributes to heart disease.
9. To plan a meal, you should divide your plate into three sections. Half of the plate should be filled with _____, one-quarter with starches and the other quarter with _____.
10. Moderate drinking for a man means no more than _____ drinks a day.

Answers: 1) 6; 2) 1, 250; 3) grains and starches; 4) 1/2, 125; 5) fibre; 6) meat and alternatives; 7) protein and fat; 8) saturated; 9) vegetables, protein; 10) 2.