

# Eat Healthy

## Chapter 1

# Nutrition Basics

### **You Will Learn About:**

1. The 4 food groups
2. What foods have carbohydrates, proteins and fats
3. What the right amount of carbohydrates is to eat
  - a. The plate model
4. How to time your meals
5. Healthy snacks

The aim of healthy eating is to manage your blood sugar. You can help to prevent problems caused by diabetes with healthy eating.

Healthy eating lowers your blood sugar. Lower blood sugar lowers your A1c. Recall, your A1c tells you how well you managed your blood sugar over the past 3 months. Healthy eating can lower your A1c level by 1.0% to 2.0%.

To help manage your diabetes, eat foods from the 4 food groups each time you eat a main meal.

### 1. What Are the 4 Food Groups?

1. Vegetables and Fruits
2. Grain products
3. Milk and Alternatives
4. Meat and Alternatives

Eating a range of foods from the 4 food groups will help you to manage your blood sugar. You will also feel better and be more likely to do things in your daily routine (like exercise). Health Canada's 'Eating Well with Canada's Food Guide', gives you details about how to eat foods in the 4 food groups.

For more information on Eating Well with Canada's Food Guide, go to:

[http://www.hc-sc.gc.ca/fn-an/alt\\_formats/hpfb-dgpsa/pdf/food-guide-aliment/print\\_eatwell\\_bienmang-eng.pdf](http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/food-guide-aliment/print_eatwell_bienmang-eng.pdf)

### 2. What Foods Contain Carbohydrates, Protein and Fat?

- All food is made up of carbohydrates, protein or fat or a mix of these nutrients
- You need each of these nutrients (carbohydrates, protein and fat) to help

your body function. Eat a range of foods with these nutrients to have a healthy diet

### What are carbohydrates?

Carbohydrates are your body's main source of fuel or energy. Carbohydrates act like the gasoline in a car. Carbohydrates turn into sugar (glucose) in your body. Your working muscles and brain need this sugar to work well. You cannot live without them.

Since carbohydrates turn into sugar (glucose) in your body, they will raise your blood sugar level. Learn which foods have carbohydrates. You need to eat the right amount of carbohydrates to be healthy and still manage your blood sugar.

### What foods have carbohydrates?

Most foods from the 4 food groups contain carbohydrates.

#### Fruits and Vegetables

All fruit (except avocado) and starchy vegetables contain carbohydrates. Some examples of starchy vegetables include:

Potatoes, Yams, Sweet Potato	Parsnip	Green peas	Turnip (e.g. rutabaga)
Squash (e.g. pumpkin, butternut, buttercup, acorn)	Frozen mixed vegetables	Tomato sauce	Snow peas
Cassava or Yuca	Taro	Eddoes	Plantain
Jicama	Chayote	Dasheen	Breadfruit
Corn			

Some vegetables are not called carbohydrates. This is because they do not raise your blood sugar very much. Some examples are:

Asparagus	Bean sprouts	Broccoli	Beets
Carrots	Bok choi	Cucumber	Eggplant
Leeks	Lettuce	Kale	Onions
Cabbage	Mushrooms	Bell pepper	Okra
Celery	Endive	Radish	Yellow or green beans

### Grains

Bread, buns, rolls (all types)	Bagel	Cold cereal	Noodles
Pita	Roti, chapatti	Corn, cornmeal	Rice (all types)
Quinoa	Matzah	Barley	Muffin
Oats	Pasta	Crackers	Flour (all types)

### Milk and Alternatives (not cheese):

All types of cow milk	Soy beverage	Almond beverage	Yogurt (plain or flavoured)
Evaporated milk	kefir	Ice cream	

#### Meat Alternatives:

Legumes such as:

Lentils or Dhal	Chickpeas	Kidney (red or white) beans	Black-eye peas
Fava beans	Split pea	Romano	Pigeon peas

Sugar and sweets are not part of the 4 food groups, but also contain carbohydrates. These foods include:

- Sugar (all types like brown sugar, raw sugar, cane sugar)
- Agave
- Honey
- Candy
- Regular pop
- Iced tea
- Fruit drinks
- Syrups (like maple syrup)
- Cakes and muffins
- Cookies
- Pies

These foods do not provide the same value as other foods. Sweets often contain a large amount of carbohydrates in a very small serving. Limit your portion size and limit the amount of sweets you eat. Eat healthy foods such as vegetables, fruits, legumes and whole grains at your meals.

#### What is protein?

Protein helps to build tissue and repair your body after damage or stress. Protein does not raise blood sugar.

#### What foods have protein?

The foods that have higher amounts of protein include:

- Fish (canned, frozen and fresh) – also contains fat
- Meat (beef, pork, lamb, goat, etc.) –also contains fat
- Poultry (chicken, turkey) – also contains fat
- Legumes (dried beans, lentils, chickpeas) – also contains carbohydrate
- Soy (such as tofu), tempeh (fermented soy)
- Edamame – also contains fat
- Eggs and egg whites
- Nuts and seeds – also contains fat
- Nut and seed butters (like peanut butter, almond butter, tahini) – also contain fat
- Cheeses – also contain fat
- Kefir, milk (all types), yogurt – also contain carbohydrate and fat

#### What is fat?

Fats do not raise blood sugar and are needed for good health. There are three main types of fats: unsaturated, saturated and trans.

Fats that come from plants and fish are known as unsaturated fat. Unsaturated fat can lower your LDL (bad) cholesterol. Recall that too much LDL (bad) cholesterol can lead to plaque buildup in your blood vessels. Read

Chapter 4 of this section on 'Cholesterol, Triglycerides and the Mediterranean Diet Pattern' to learn more.

#### What foods have fat?

Some examples of foods that contain unsaturated fats include:

- Vegetable oils (all types like olive oil, canola oil, sesame oil, sunflower oil)
- Avocado
- Nut or seed butters (like peanut butter, almond butter, tahini)
- Nuts and seeds (all types)
- Non-hydrogenated margarines
- Fish, especially fatty fish (like trout, sardines, mackerel, herring, salmon, tuna)

Fats found mostly in animals are known as saturated fat. Saturated fat may increase your LDL (bad) cholesterol. Some examples include:

- Bacon and turkey bacon
- Skin on poultry
- Lard
- Butter
- Cream (table, half and half, whipping)
- Palm oil, palm kernel oil, cocoa butter, coconut oil

Trans fats are artificial fats or industrially produced (factory-made) fats. These fats are not healthy. Trans fats can increase your LDL (bad) cholesterol and lower your HDL (good) cholesterol. Trans fats have been shown to increase the risk of heart disease in people living with diabetes.

Foods with trans fats include:

- Shortening
- Hard stick margarine
- Baked goods and snacks that contain partially hydrogenated oils

To learn more read 'Getting the Facts on Fats' in the Toolbox section of this guide.

### 3. What Is the Right Amount of Carbohydrates To Eat?

To get enough carbohydrates, almost half of your daily energy or calorie intake needs to include carbohydrates. You can eat more carbohydrates (up to 60 percent % of your daily calories) if most of your food choices are high in fibre and low glycemic index. Foods that are high in fibre and low glycemic index will not raise your blood sugar as much (refer to Chapter 3 for more information on fibre and glycemic index).

#### What is the Plate Model?

The Plate Model is a guide to help you know how much carbohydrate you can eat at each meal. Use the steps of the Plate Model as a guide only.

**Step 1:** Start with vegetables. Aim to fill  $\frac{1}{2}$  your plate with a mix of different coloured vegetables. Eating vegetables of different colours will give you different nutrients. Vegetables can be raw, cooked, frozen or canned

**Step 2:** Think about your portion of high fibre foods (Read Chapter 3 of this section on 'Fibre and Glycemic Index' to learn more) grains or starches (sweet potato, corn, brown rice and other whole grains). Fill  $\frac{1}{4}$  of your plate with these types of foods. Start with this amount because these are the foods that will raise your blood sugar. You may wish to include a glass of milk and a piece of fruit. These foods also contain carbohydrate and can raise your blood sugar



**Step 3:** Complete your meal by filling  $\frac{1}{4}$  of your plate with protein (lean meat, fish, poultry, tofu, egg whites and legumes)

Tips:

- Try to keep the amount of carbohydrate the same every time you eat your main meal. This will help you to keep your blood sugar within a healthy range
- Eat different kinds of foods to make sure you get the proper nutrients
- Reduce of the amount of sweets, regular pop, vitamin water, sports drinks, bubble tea and flavoured coffees you have. These foods and drinks contain a lot of sugar and do not provide a good balance of nutrients

#### 4. How Do I Time My Meals?

Eat at least three meals a day and no more than six hours apart. Eat your meals at the same time every day. Eating three meals a day can help prevent low blood sugar and prevent you from getting too hungry. You may find that you crave food that is less healthy when you are too hungry.

Before you exercise, check the time. If it has been 4-6 hours since you ate, have a healthy snack such as fruit or lower fat, unsweetened yogurt. Refer to the Snack List below for more ideas. Healthy snacks can prevent low blood sugar during exercise.

A Registered Dietitian can answer your questions and help you to set goals to meet your needs.

#### 5. Healthy Snack List

- Small handful of unsalted nuts
- 1 small banana with 1 tablespoon of peanut or almond butter
- A piece of fruit with nuts or peanut butter or almond butter
- Smoothie made with ½ cup of 1% milk plus ½ cup yogurt and any fruit of your choice. You can add ground flaxseed (1 tablespoon)
- ¼ cup hummus with either 4-6 high fibre crackers or ½ whole grain pita or ½ cup chopped carrots
- ¾ cup oven-roasted chickpeas sprinkled with paprika or chili powder. Add a little bit of oil when you roast them
- 1 small bowl of high fibre cereal with ½ cup skim/1% milk/soy beverage.
- ½ cup ricotta or cottage cheese mixed with fruit
- 1 slice of whole grain bread with 1 oz reduced fat cheese e.g. 15% M.F. (milk fat) or less
- 1 slice of whole grain bread with 1 mini can of tuna or 1 tablespoon almond butter or natural peanut butter
- 1 boiled egg with 1 slice whole grain bread or high fibre crackers
- ¼-½ avocado spread over high fibre crackers, (option: sprinkle hemp hearts)

#### Summary:

- Choose low glycemic index carbohydrates most of the time. Read Chapter 3 of this section on 'Fibre and Glycemic Index' to learn more
- Keep the amount of carbohydrates you eat the same at each meal
- Eat every 3-4 hours and eat at the same time every day
- Include foods from at least 3 of the 4 food groups at each meal
- Use the Plate Method to help plan your meals