

Diabetes: Healthy Meal Planning

Eating the right balance of foods at the right times can help with managing your blood sugars. This is important for keeping healthy and reducing your risk of other health problems.

Tips in this handout can help you decide how much, and what types, of foods to eat throughout the day. The food lists on pages 3–7 can help you choose foods with balanced amounts of carbohydrate, protein, and fats.

Carbohydrate

Carbohydrates is a nutrient found in grains, starchy vegetables, beans, lentils, fruit, milk, plant-based beverages, yogurt, and sugar (molasses, honey, table sugar, juice, pop, syrup).

Foods containing carbohydrates have a bigger effect on blood sugar than other foods. Since these foods raise your blood sugar, it's important to spread them over the day.

Choose a variety of foods with carbohydrate every day to help you get the vitamins, minerals, and energy you need.

Protein and fat

Protein is nutrient found in foods like meat, fish, poultry, dairy products, beans, split peas, lentils, and soy products like tofu.

Protein does not directly raise your blood sugar, but some protein foods have carbohydrates in them.

Fat is a nutrient found mainly in higher fat meat and dairy products, oils, nuts and seeds, butter, margarines, fried foods, chocolate, snack foods like chips, and store-bought baked products.

Fat doesn't raise your blood sugar, but fat can be found in some foods with carbohydrates that do raise your blood sugars. Too much fat in your diet may affect how well your insulin works to manage your blood sugar.

Choose unsaturated fats like olive, canola, peanut, sunflower oil, or soft margarine more often. Limit saturated fats such as butter, lard, or high fat processed meats.

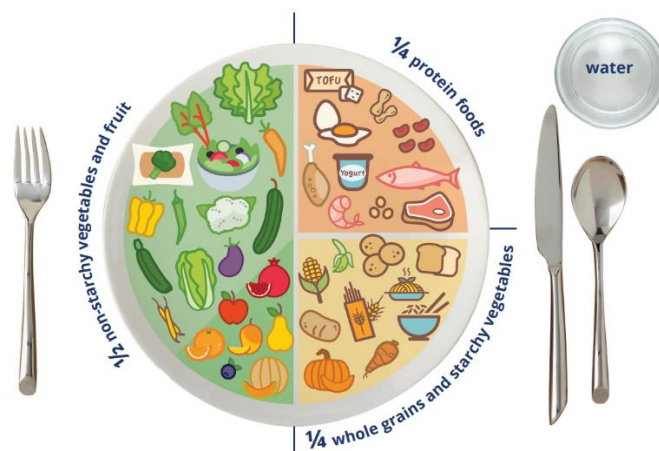
Tips for healthy meals

The tips below can help keep your blood sugars from rising too high after eating. They may also help you feel full longer after eating, which can help you manage your portion sizes.

- Eat 3 meals each day.
- Include snacks if they help you eat smaller portions at your next meal.
- Choose higher fibre foods like whole grains, vegetables, fruit, beans, split peas, and lentils.
- Choose lean protein foods and unsaturated fats.

Use the “Balanced Plate” plate model below to help you spread carbohydrate over the day.

- Cover $\frac{1}{2}$ of your plate with non-starchy vegetables. Some non-starchy vegetables are bell peppers, broccoli, carrots, cucumbers, and dark leafy greens like spinach. Fruit may also be included on this part of the plate.
- Put whole grains and starchy vegetables on $\frac{1}{4}$ of your plate. Some starchy vegetables are potatoes, yams, corn, squash, and parsnips.
- Put protein foods on $\frac{1}{4}$ of your plate. Some protein foods are meats, fish, eggs, Greek yogurt, and tofu.



Use the information on the next pages to help you learn more about carbohydrate foods.

Available carbohydrate (AC)

Sugar, starch, and fibre are types of carbohydrate. Fibre does not raise your blood sugar. Sugar and starch are **available carbohydrates** because they raise your blood sugar.

Knowing how many available carbohydrates are in your foods can help you manage your blood sugar.

Steps to find the available carbohydrate in foods:

1. Measure or weigh the food you eat using measuring cups or a food scale.
2. Look at the Nutrition Facts table on packaged food.

Nutrition Facts	
Per $\frac{3}{4}$ cup (30 g)	
Calories 110	% Daily Value*
Fat 1 g	2 %
Saturated 0.2 g	1 %
+Trans 0 g	
Carbohydrate 22 g	
Fibre 5 g	20 %
Sugars 4 g	15 %
Protein 3 g	
Cholesterol 0 mg	
Sodium 261 mg	11 %
Potassium 300 mg	6 %
Calcium 22 mg	2 %
Iron 4 mg	30 %

*5% or less is a little, 15% or more is a lot

If there's no Nutrition Facts table, use the food lists in this handout, in cookbooks, or in digital apps.

3. Find the available carbohydrate (AC) in your food.

**Grams of carbohydrate – Grams of fibre
= Grams available carbohydrate (AC)**

In the Nutrition Facts table above:

22 grams carbohydrate – 5 grams fibre
= 17 grams of available carbohydrate

If the table lists sugar alcohols, subtract (-) the sugar alcohols and fibre from the total carbohydrate.

Carbohydrate choices

A **carbohydrate choice** is the amount of a food that has about 15 grams of AC.

Carbohydrate choices, or counting the grams of carbohydrate, helps you know how much total carbohydrate you are eating at your meals and snacks. This will help you manage your blood sugar.

How much carbohydrate do I need in a day?

Everyone needs a different amount of carbohydrate. A dietitian can help you find the amount that's right for you. Two examples are below.


	Grams of carbohydrate	Number of carbohydrate choices
Smaller carbohydrate goals		
At each meal	30–60 grams	2–4 choices
At each snack	0–15 grams	0–1 choice
Larger carbohydrate goals		
At each meal	60–90 grams	4–6 choices
At each snack	0–30 grams	0–2 choices

My carbohydrate goals

At each meal: _____ grams or _____ choices

At each snack: _____ grams or _____ choices

Carbohydrate choices

Note: Foods with a salt shaker  are higher in salt (sodium). Choose lower sodium options.

The food lists below tell you how much food is 1 carbohydrate choice.

Each carbohydrate choice has about 15 grams of available carbohydrate.

My carbohydrate goals: _____ choices at each meal, and _____ choices at each snack.

Grains and Starchy Vegetables

Choose whole grain and higher fibre foods more often.

Choose more often


Grains:


bannock, whole grain, 1½ x 2½ inches (4 x 6 cm) baked
 barley or bulgur, ½ cup (125 mL) cooked
 bread, whole grain, 1 slice (30 grams weight)
 bun, hamburger or hotdog, whole grain, ½
 cereal, cold: bran cereals, ½ cup (125 mL)
 cereal, cold: oat O's, ⅔ cup (150 mL)
 cereal, cold: granola, ¼ cup (60 mL)
 cereal, hot, ¾ cup (175 mL)
 chapati, roti, whole grain, 1 (44 grams weight)
 English muffin, whole grain, ½
 injera (teff or buckwheat), ½ large (12 inch)
 millet, ⅓ cup (75 mL) cooked
 pancake or waffle, whole grain, 1 (4 inch or 10 cm)
 pasta, couscous, whole grain, ½ cup (125 mL) cooked
 pita bread, whole grain, ½ (6 inch or 15 cm)
 popcorn, air popped, 3 cups (750 mL)
 quinoa, ½ cup (125 mL) cooked
 rice, brown, ⅓ cup (75 mL) cooked
 rye crisps, 2–3 crackers (30 grams weight)
 tortilla, whole grain, 1 (6 inches or 15 cm) or ½ (10 inches or 25 cm)

Starchy Vegetables:

beans, lentils, split peas, ½ cup (125 mL) dried and cooked, or canned (See the Protein list, page 4.)
 cassava, raw, ¼ cup (60 mL)
 corn, ½ cup (125 mL)
 mushrooms, shitake, 1 cup (250 mL) cooked
 parsnips, ¾ cup (175 mL)
 green peas, 1 cup (250 mL)
 hummus, ⅔ cup (150 mL)
 plantain, mashed, ⅓ cup (75 mL)
 potatoes, ½ medium (84 grams weight) boiled or baked
 potatoes, ½ cup (125 mL) mashed
 squash: acorn, butternut, hubbard, ¾ cup (175 mL)
 sweet potato or yam, ⅓ cup (75 mL) mashed
 sweet potato or yam, ½ cup (125 mL) baked and cubed

Choose less often

bagel, ¼ large or ½ small
 bread, white, 1 slice (30 grams weight)
 bun, hamburger, or hotdog, white, ½
 cereal, not whole grain, ½ cup (125 mL)
 chapati, roti, white, 1 (44 grams weight)
 French fries, 10 
 granola bar, oatmeal, 1 bar (28 grams weight)
 muffin, plain, 1 small, 1½ inches (4 cm) high and 2½ inches (6 cm) diameter

naan, white, ⅓ (10 inches or 25 cm), 30 grams weight
 pancake or waffle, 1 (4 inch or 10 cm)
 pasta, couscous, white, ½ cup (125 mL) cooked
 pita bread, white, ½ (6 inch or 15 cm)
 pizza crust, 1/12 (12 inch or 30 cm)
 rice, white, ⅓ cup (75 mL) cooked
 soda crackers, 7
 taco shells, 2 (5 inch or 13 cm) 

Carbohydrate choices

The lists below tell you how much food is 1 carbohydrate choice.

Each carbohydrate choice has about 15 grams of available carbohydrate.

My carbohydrate goals: _____ choices at each meal, and _____ choices at each snack.


Fruit

Choose fresh, frozen, or canned fruit with no added sugar.

Choose more often

apple, 1 medium	mango, ½ medium or ½ cup (125 mL)
applesauce, unsweetened, ½ cup (125 mL)	melon, 1 cup (250 mL)
banana, ½ large	nectarine, 1 large
blackberries, 2 cups (500 mL)	orange, 1 medium
blueberries, 1 cup (250 mL)	peach, 1 large
cherries, 15	pear, 1 small
fruit canned in juice, ½ cup (125 mL)	pineapple, fresh, ¾ cup (175 mL)
fruit canned in water, ¾ cup (175 mL)	plum, 2 medium
grapefruit, 1 small	pomegranate, ½ medium
grapes, 15	raspberries, 2 cups (500 mL)
kiwi, 2 medium	strawberries, 2 cups (500 mL)
mandarin orange (tangerine), 2 medium	

Choose less often

dried fruit:	fruit leather, 1 small (14 grams weight)
apricots, 8 halves	juice, unsweetened, ½ cup (125 mL)
cranberries, sweetened, 3 Tbsp (45 mL)	tomato juice, vegetable cocktail, 1½ cups (375 mL) 
date, medjool 1	
figs, 3	
raisins, 2 Tbsp (30 mL)	

Milk, yogurt, fortified soy beverage

Make lower fat choices from this group more often.

Choose more often

milk, skim, 1% or 2%, 1 cup (250 mL)	fortified soy beverage, unsweetened, 1 cup (250 mL)
evaporated milk, skim 1% or 2%, canned, ½ cup (125 mL)	yogurt, less than 4% M.F., plain or no added sugar, ¾ cup (175 mL)

Choose less often

milk, 3.25% (homogenized), 1 cup (250 mL)	milk pudding, no added sugar, ½ cup (125 mL)
chocolate milk, 1%, ½ cup (125 mL)	yogurt or soy yogurt, flavoured, with added sugar, ⅓ cup (75 mL)
fortified soy beverage, flavoured, ½ cup (125 mL)	

M.F. = Milk Fat

Carbohydrate choices

The list below tells you how much food is 1 carbohydrate choice.

Each carbohydrate choice has about 15 grams of available carbohydrate.

My carbohydrate goals: _____ choices at each meal, and _____ choices at each snack.

Other choices

Limit how many Other Choices you eat. These foods are higher in sugar and calories, and may be higher in fat and salt.

Choose less often

brownie or cake, no icing, 2 inch (5 cm) square
candies, hard, 5 small
candies, jellybeans, 5 large
candies, licorice, 2 pieces
cookies, arrowroot, digestive, and gingersnap, 3
cookies, chocolate chip, 2
cookies, cream type filling, 2
cranberry sauce, with added sugar, 2 Tbsp (30 mL)
frozen yogurt, 1/3 cup (75 mL)
honey, 1 Tbsp (15 mL)

ice cream, 1/2 cup (125 mL)
jam, jelly, marmalade, 1 Tbsp (15 mL)
jam, syrup, no sugar added, 3 Tbsp (45 mL)
ketchup, 4 Tbsp (60 mL) 🍷
popcorn, buttered and salted, 3 cups (750 mL)
potato chips, baked, 10 chips 🍷
pretzels, low fat, 7 large or 30 sticks 🍷
sherbet, 1/3 cup (75 mL)
soft drink, regular (varies with flavor), 1/2 cup (125 mL)
sugar, syrup, or molasses, 1 Tbsp (15 mL)

Foods with little or no carbohydrate

The foods listed on this page and the next page have little effect on blood sugars. Include non-starchy vegetables, protein foods, and fats in your meals and snacks every day to manage your diabetes and support your health.

Non-starchy vegetables

Eat vegetables throughout the day. Cover ½ your plate with vegetables at most meals.

Choose more often

artichoke	celery	onions
asparagus	chard	peppers
bean sprouts	cucumber	radish
beans (yellow or green)	eggplant	rhubarb
beets	kale	spinach
Bok choy	kohlrabi	squash (pumpkin, spaghetti)
broccoli, rapini	leeks	tomato, canned/stewed 🥫
Brussels sprouts	lettuce	tomato sauce 🥫
cabbage, Chinese cabbage	mixed vegetables	tomatoes, fresh
carrots	mushrooms	turnips
cauliflower	okra	zucchini

Protein foods

Protein is found in meat, fish, poultry, dairy products, eggs, and dried cooked beans, split peas, lentils, and soy products like tofu. These foods have little or no carbohydrate.

Protein foods that are leaner and have healthy fats are in the “Choose more often” group. Put protein foods on ¼ of your plate.

For hard cheeses, use your thumb as a guide to 1 serving.



Choose more often

beans, lentils, split peas, dried and cooked, or canned, hummus (See the “Starchy vegetables” list, page 3 for carbohydrate content)	meat or poultry, lean
cheese, reduced fat 🥫	meatless soy protein products (such as vegetarian ground round) 🥫
cottage cheese 🥫	tofu, firm or soft
eggs or egg white	yogurt, Greek or Icelandic (Skyr), plain, less than 4 % M.F. (See the “Milk, yogurt, fortified soy beverage” list, page 5 for carbohydrate content)
fish, fresh, frozen, or canned	

Choose less often

cheese, processed or spreads 🥫	poultry strips, breaded or seasoned 🥫
meat, deli or processed 🥫	wieners and sausages 🥫
meat, ground, medium or regular fat	

M.F. = Milk Fat

Foods with little or no carbohydrate

Fats

Choose small amounts of the fats from the “Choose more often” group.

All fats are high in calories. These foods have little or no carbohydrate.

For added fats like oils and margarine, use your thumb tip as a guide to 1 serving.



Choose more often

avocado
margarine, soft
mayonnaise
nuts and seeds

oil: canola, olive, peanut, avocado, sunflower
olives, black or green
peanut butter and other nut butters

salad dressing, made with oil
sour cream, light
tahini

Choose less often

bacon
gravy
butter
cheese, spreadable, regular or light

salad dressing, regular
sour cream, regular

tropical oils such as palm or coconut oil
whipped topping, regular

Extras

Extras are foods that are lower in calories and carbohydrates.

The foods below are very low in carbohydrate, so they don't need to be measured.

broth , bouillon , consommé
club soda, mineral water
coffee, tea
herbs and spices, flavouring extracts
horseradish, 1 Tbsp (15 mL)
mustard
pickle, dill

sauces: chili sauce , fish sauce , soy sauce ,
Worcestershire sauce
sugar-free gelatin, gum, soft drinks, or crystal drinks
sugar substitutes
vinegar

The foods below are extras if you eat the small servings listed.

barbecue sauce, 1 Tbsp (15 mL)
fruit spread, no sugar added, 2 tsp (10 mL)
ketchup, 1 Tbsp (15 mL)
oyster sauce, 1 Tbsp (15 mL)
relish, sweet, 1 Tbsp (15 mL)
salsa, ¼ cup (60 mL)

sour cream, fat free, 1 Tbsp (15 mL)
steak sauce, 2 Tbsp (30 mL)
syrup, no sugar added, 1 Tbsp (15 mL)
tomato paste, 1 Tbsp (15 mL)
vinaigrette salad dressing, 2 Tbsp (30 mL)
whipped topping, low fat, 2 Tbsp (30 mL)

Counting carbohydrate choices

Counting available carbohydrate in meals and snacks, and using carbohydrate choices, can help you manage your blood sugars. Use the sample meal below to practice counting grams of available carbohydrate (AC) or carbohydrate choices.

Food	Portion size	Grams of carbohydrate	Carbohydrate choices
Salmon	4 ounces (120 grams)	0	0
Brown rice	1 cup (250 mL)	45	3
Green beans	1 cup (250 mL)	0	0
Sliced tomatoes	½ cup (125 mL)	0	0
Pear	1 small	15	1
Milk, 1%	1 cup (250 mL)	15	1
Total		75 grams	5 choices

In the spaces below you can write what you ate and drank for 1 meal. Then, count the grams of carbohydrate or carbohydrate choices in your meal.

Total		_____ grams	_____ choices

Next steps

This handout includes healthy eating choices that can help you manage your diabetes. Change can be hard, especially if we try to make too many changes at once. To learn more, visit ahs.ca/nutritionhandouts and search “setting goals”.



For more information



- Talk to your healthcare team.
- Call Health Link at 811 and ask to talk to a dietitian or complete a [self-referral form](#) on ahs.ca/811.
- Visit ahs.ca/nutrition.
- Call, text, or chat with 211 Alberta (<https://ab.211.ca/>). It is a provincial directory of financial benefits, programs, and services.