

# Healthy Eating for People with Diabetes and Kidney Disease

High blood sugar from diabetes can put extra stress on your kidneys. Healthy eating that meets your needs can help you manage your blood sugar.

Every person with kidney disease has different needs. These needs depend on their age, medical condition, and stage of kidney disease.

The guidelines in this handout can help you choose foods to help manage your diabetes and kidney disease. Your dietitian can help you find the amounts and types of food that work best for you.

## Healthy eating guidelines

- Eat at least 3 meals every day. Spreading your food over the day helps to manage blood sugar. Include snacks if they help you eat smaller portions at your next meal.
- Choose lean proteins and healthier fats.
- Cook and eat food without adding salt. Try using herbs and spices to replace salt. Don't use salt substitutes because many have potassium in them (for example, No Salt<sup>®</sup> or Half Salt<sup>®</sup>).
- Limit higher sodium foods: processed, packaged, and prepared foods such as deli meat, bacon, sausage, canned soup and vegetables, snack foods, pickles, condiments, and sauces.
- Read the ingredient list on food packages every time you shop to limit foods with phosphorus and potassium additives.
- Limit food and drinks with added sugars like juice, pop, candy, desserts, and sweet sauces.

## For your kidney disease:

Talk to your dietitian about how much of these foods are right for you:

- **Meat and protein foods:** fish, poultry, eggs, pork, beef, peanut butter, beans/lentils, and milk products
- **Vegetables and fruits** lower in potassium
- **Foods higher in phosphorus**

## Meal planning

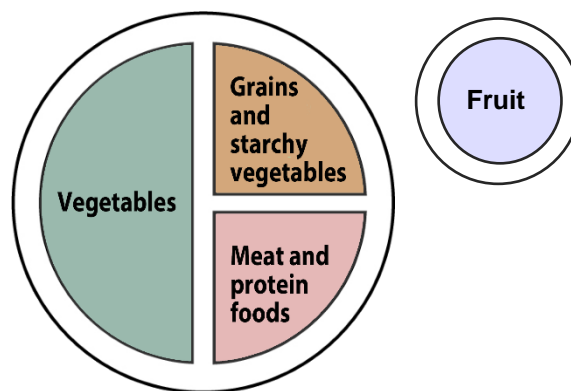
Our bodies use carbohydrate foods for energy. Foods with carbohydrates affect your blood sugar more than other foods. Spread these foods over the day into several meals and snacks.

Carbohydrates are found in grains and starches, fruits, milk and alternatives, and sweets.

## A healthy plate

A meal that looks like the one below can help you to spread carbohydrate over your day.

- Fill ½ your plate with vegetables
- Put grains and starchy vegetables on ¼ of your plate. Some starchy vegetables are potatoes and corn.
- Put meat and protein foods on ¼ of your plate.



**Available carbohydrate** is the amount of carbohydrate in a food that will raise blood sugar.

$$\begin{aligned} &\text{Grams of carbohydrate} - \text{Grams of fibre} \\ &= \text{Grams of available carbohydrate} \end{aligned}$$

Common foods that contain carbohydrates are listed in the following pages.

# Carbohydrate choices

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

**Each carbohydrate choice has about 15 grams of available carbohydrate.** Carbohydrate choices are listed on pages 2, 3 and 4.

Have 2–4 carbohydrate choices at each meal and 1–2 carbohydrate choices for each snack, or as suggested by your dietitian.

**At each meal:** \_\_\_\_ grams or \_\_\_\_ choices

**At each snack:** \_\_\_\_ grams or \_\_\_\_ choices

## Grain foods and starchy vegetables

People with kidney disease may need to limit some grain foods and starchy vegetables to manage the amount of phosphorus and potassium they have every day.

### Choose more often

#### Grain foods:

- bannock 1½ x 2½ inches (4 x 6 cm) baked
- barley or bulgur ½ cup (125 mL) cooked
- bread, white, light rye or 60% whole wheat 1 slice (30 grams weight)
- buns:
  - small (dinner roll), 1
  - large (Kaiser, hamburger, hotdog), ½
- cereal:
  - cooked (cream of wheat or rolled oats), ¾ cup (175 mL)
  - dry (unsweetened): Corn bran, Corn flakes, toasted rice cereal, Special K®, ½ cup (125 mL)
- chapati or roti, white, 1 6-inch (44 grams weight)
- crackers:
  - soda, unsalted, 7
  - Melba toast, 4 rectangles or 7 rounds
  - wheat thin crackers, 3 large or 12 small
  - stoned wheat crackers, unsalted, 3

- English muffin, 1/2
- pancakes or waffles, homemade, 1 (4-inch or 10 cm)
- pasta (white) or couscous, ½ cup (125 mL) cooked
- pita bread (white), ½ (6 inch or 15 cm)
- rice or millet, ⅓ cup (75 mL) cooked
- soup, homemade with noodles or rice, 1 cup (250 mL)
- tortilla shell, white, 1 (6 inches or 15 cm) or ½ (10 inches or 25 cm)

#### Starchy vegetables:

- beans, lentils, peas: ½ cup (125 mL) dried and cooked, or canned (limit to ½ cup (125 mL) serving per day).
- corn, ½ cup (125 mL)
- potatoes, peeled, cubed or shredded, then boiled in unsalted water, ½ cup (125 mL)

### Choose less often

**Speak to your dietitian about whether you need to limit whole grain foods.**

- bread, (100% whole wheat, multigrain, dark rye), 1 slice (30 grams weight)
- granola bar, oatmeal, 1 bar (28 g)
- muffins: oatmeal, bran or oat bran, 1 small (45 g)
- pretzels, plain, unsalted, 30 small sticks or 7 large
- rice, brown 1/3 cup

### Avoid

#### Grains:

- pancake, muffin, or waffle mixes
- macaroni and cheese mixes

#### Starchy vegetables (higher potassium):

- parsnips
- potatoes:
  - chips/fries, hash browns, scalloped
  - whole boiled, baked, or microwaved
- squash: acorn, butternut, Hubbard
- sweet potato and yam

# Carbohydrate choices

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

**Each carbohydrate choice has about 15 grams of available carbohydrate.**

## Fruit

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

Serving sizes are ½ cup (125 mL) or 1 medium piece unless other amounts are listed. These serving sizes provide less than 215 mg potassium per serving. To meet the potassium target the serving size may have less than 15 grams of available carbohydrate per serving.

### Choose more often (low potassium)

- apple
- applesauce, unsweetened
- apricots, 2 raw
- berries, 1 cup (250 mL):
  - blueberry
- berries, ½ cup (125 mL):
  - blackberry
  - raspberry
  - strawberry
- canned fruit, in juice or water, unsweetened, ½ cup (125 mL):
  - fruit cocktail
  - peaches
  - pears
  - pineapple
- casaba melon
- cherries, 10
- figs, 1 raw or 3 dried
- grapes, 20
- honeydew melon
- lychee, 10
- mandarin orange or tangerine
- mango, ½ medium or ½ cup (125 mL)
- passion fruit, 3 fruits
- peach
- pear
- pineapple, ¾ cup (175 mL)
- plum
- watermelon, 1 cup (250 mL)

### Choose less often

- juice (apple, cranberry, pear, pineapple), unsweetened, ½ cup (125 mL)

### Avoid (high potassium)

- avocado
- banana
- cantaloupe
- guava
- kiwi fruit
- nectarine
- orange, navel
- persimmon
- plantain
- fruit, dried: apricots, currants, dates, raisins

## Caution

- Do not eat or drink **starfruit** and **starfruit juice**. These are dangerous if you have kidney disease.
- **Grapefruit** and **grapefruit juice** are low in potassium but they affect the way many medicines work. Ask your doctor or pharmacist if grapefruit is safe for you to have.

# Carbohydrate choices

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

**Each carbohydrate choice has about 15 grams of available carbohydrate.**

<b>Milk and alternatives</b>	
<p>People with kidney disease may need to limit their milk products to control their phosphorus and potassium intake. Limit to no more than 2 servings a day (½ cup/ 125 mL each), or as suggested by your dietitian.</p>	
<b>Choose more often</b>	
<ul style="list-style-type: none"> <li>• milk: skim, 1%, 2%, 1 cup (250 mL)</li> <li>• rice beverage, non-fortified, ½ cup (125 mL)</li> <li>• soy beverage, plain, 1 cup (250 mL)</li> </ul>	<ul style="list-style-type: none"> <li>• soy beverage, flavoured, ½–1 cup (125–250 mL)</li> <li>• yogurt               <ul style="list-style-type: none"> <li>◦ plain or no added sugar, ¾ cup (175 mL)</li> <li>◦ flavoured, with added sugar, ½ cup (125 mL)</li> </ul> </li> </ul>
<b>Avoid</b>	
<ul style="list-style-type: none"> <li>• milk: chocolate, buttermilk, condensed or evaporated</li> <li>• coconut milk</li> <li>• eggnog</li> <li>• instant breakfast mixes</li> </ul>	<ul style="list-style-type: none"> <li>• instant pudding</li> <li>• milkshakes</li> <li>• malted drinks: Ovaltine<sup>®</sup>, Bournvita<sup>®</sup>, Horlicks<sup>®</sup></li> </ul>

# Foods with little or no carbohydrate

<b>Vegetables</b>		
<p>Most vegetables are <b>low in carbohydrate</b> but they still have potassium in them. They must be counted towards your total potassium intake. Speak to your dietitian about how many servings are right for you.</p>		
<b>Choose more often (low potassium)</b>		
<p>All servings are ½ cup (125 mL) or 1 medium piece unless other amounts are listed.</p>		
<ul style="list-style-type: none"> <li>• alfalfa sprouts, 1 cup (250 mL)</li> <li>• asparagus</li> <li>• beans: yellow and green</li> <li>• bean sprouts</li> <li>• broccoli</li> <li>• cabbage: green/red or suey choy</li> <li>• carrot</li> <li>• cauliflower</li> <li>• celery</li> <li>• cucumber</li> <li>• eggplant</li> </ul>	<ul style="list-style-type: none"> <li>• endive</li> <li>• kale</li> <li>• leeks</li> <li>• lettuce, 1 cup (250 mL) of all varieties, raw</li> <li>• mushrooms, raw or canned</li> <li>• okra</li> <li>• peas, green and snow</li> <li>• peppers, bell</li> <li>• radish</li> </ul>	<ul style="list-style-type: none"> <li>• spinach, 1 cup (250 mL) raw</li> <li>• squash, summer: chayote, crookneck, mo qua</li> <li>• squash, winter: pul qua, spaghetti</li> <li>• tomato: ½ medium, raw, ¼ cup (60 mL) sauce</li> <li>• turnip</li> <li>• water chestnuts, canned</li> <li>• watercress, 1 cup (250 mL) raw</li> <li>• zucchini</li> </ul>
<b>Avoid (high potassium)</b>		
<ul style="list-style-type: none"> <li>• artichokes</li> <li>• beets</li> <li>• bok choy</li> </ul>	<ul style="list-style-type: none"> <li>• Brussels sprouts</li> <li>• chard, Swiss boiled</li> <li>• gai lan (Chinese broccoli)</li> </ul>	<ul style="list-style-type: none"> <li>• gai choy (Chinese mustard greens)</li> <li>• mushrooms, cooked</li> <li>• spinach, boiled</li> <li>• vegetable and tomato juice</li> </ul>

# Foods with little or no carbohydrate

## Meat and protein choices

If you are **on dialysis**, choose 5–8 choices a day, or as suggested by your dietitian.

If you are **not on dialysis**, choose 4–6 choices a day, or as suggested by your dietitian.

**At each meal:** \_\_\_\_ grams or \_\_\_\_ choices

1 choice = about 7 grams protein.

**At each snack:** \_\_\_\_ grams or \_\_\_\_ choices

Choose leaner meats and lower fat cooking methods. People with kidney disease may need to limit certain protein choices to limit the phosphorus and potassium they have every day.

### Choose more often

- cottage cheese, no added salt, ¼ cup (60 mL)
- egg, 1 (large)
- fish:
  - halibut, cod, salmon, tuna, 1 ounce (30 g)
  - canned tuna, salmon (rinsed) ¼ cup (60 mL)
- meat and poultry:
  - beef, lamb, pork, veal, chicken, 1 ounce (30 g)
- seafood:
  - lobster, 1 ounce (30 g)
  - shrimp, 6 medium or 5 large
  - blue crab, ¼ cup (30 g)

### Choose less often (limit to 1 serving of each choice a day)

- beans or lentils, dried and cooked, or canned ½ cup (125 mL) (These also contain 1 carbohydrate choice. See the *Starchy vegetables* list, page 2.)
- tofu, ½ cup (125 mL)
- cheese, hard, 1 oz (30 grams)
- peanut butter, nut butters, unsalted 2 Tbsp (30 mL)

### Avoid

- organ meats such as liver, heart, and kidney
- processed meats: bacon, sausage, ham, hot dogs, salami, bologna, corned beef and pepperoni
- restructured meat (chicken fingers, chicken nuggets)
- fresh meats that have had phosphorus or potassium additives or sodium added (enhanced meats)
- canned fish with bones
- oysters, clams, sardines

## 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

- margarine, soft
- oil: canola, olive
- sour cream, light
- mayonnaise, light
- salad dressing, low fat

### Choose less often




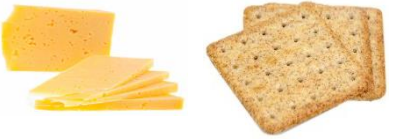








- butter, unsalted
- regular mayonnaise
- tropical oils such as palm or coconut oil
- gravy, unsalted
- regular salad dressing
- regular cream cheese
- regular sour cream

### Avoid

- cream sauces made with milk
- cheese spreads
- gravy mixes
- Read the ingredient lists on packaged foods for shortening, lard, or hard margarines

# Healthy snack ideas

Eating snacks helps you spread carbohydrate over the day. This may help you manage your blood sugar.

Smaller snacks (about 15 grams carbohydrate)		
 <p>1 cup (250 mL) vegetables, ¼ cup (60 mL) hummus</p>	 <p>7 unsalted soda crackers, ¼ cup (60 mL) tuna</p>	 <p>1 small or medium fruit</p>
 <p>1 ounce (30 g) cheese, 3 large wheat thin crackers</p>	 <p>2 Tbsp (30 mL) nuts, 20 grapes</p>	 <p>½ cup (125 mL) berries, ¼ cup (60 mL) no salt added cottage cheese</p>
Larger snacks (about 30 grams carbohydrate)		
 <p>¼ cup (60 mL) hummus, vegetables, ½ pita</p>	 <p>1 slice toast, 2 Tbsp (30 mL) peanut butter, ½ cup (125 mL) unsweetened applesauce</p>	 <p>½ cup (125 mL) cornflakes, ½ cup (125 mL) milk</p>
 <p>½ salmon or egg salad sandwich, ½ cup (125 mL) milk</p>	 <p>½ cup (125 mL) mango, 1 Tbsp (15 mL) nuts, ¾ cup (175 mL) plain or no added sugar yogurt</p>	 <p>1 6-inch (15 cm) tortilla shell, 1 scrambled egg, vegetables</p>

## Notes