
Diabetes: Balancing Meals with Carbohydrate Counting - Adapted for African and Caribbean Communities

What are carbohydrates?

Carbohydrates are the sugars, starches and fibres found in foods. They give your body energy in the form of blood glucose (sugar). Carbohydrates will cause your blood glucose to go up.

What foods contain carbohydrates?

Carbohydrate foods include:

- starchy vegetables like yams, cocoyam, cassava (manioc), eddoes, dasheen, sweet potato, potatoes and corn (maize)
- starchy fruits like plantain, green banana and breadfruit
- legumes like dried peas, beans and lentils
- grains and grain products like bread, rice and pasta
- fruits and their juices
- milk and yogurt
- sugars – white, brown and icing sugars, molasses, honey, coconut or palm sugar and foods with these added ingredients.

Do I need to remove carbohydrates from my diet?

No. A healthy diet for diabetes includes carbohydrates. The goal is to get the right amount.

How much carbohydrate is right for me?

Too much carbohydrate in a meal can cause your blood glucose to go too high. Not enough carbohydrate in a meal can result in a lack of energy and possibly low blood glucose levels. Talk to a dietitian or ask your doctor and consider visiting your local diabetes education centre for an individual appointment or class.

In the meantime, most people find the following amounts a safe place to start:

Men: 60-75 g carbohydrate per meal and 15-30 g carbohydrates per snack.

Women: 45-60 g carbohydrate per meal and 15-30 g carbohydrates per snack.



Steps you can take

- Use Table 1 to help you pick healthy foods, based on the carbohydrate amounts suggested above.
- Consider that each serving listed in Table 1 is 15 g of carbohydrates. For example, if you are aiming for 60 g of carbohydrate at a meal, choose 4 servings from a variety of food groups from the table.
- Pick foods from different food groups to meet your carbohydrate goals rather than all your servings from one food group. This will help you meet your other nutrient needs.
- Choose whole grain and higher fibre choices more often. Fibre slows the release of glucose in your body and can help you reach your blood glucose targets.
- You may also find that eating a food with protein at meals and snacks helps to control your blood glucose. Good sources of protein are meat, poultry, fish, eggs, cheese, tofu, legumes (also a carbohydrate), milk (also a carbohydrate), and nuts.

Table 1: Foods with Carbohydrate

Food Groups	One Serving (15 grams of carbohydrate)
-------------	--

<p>Grains and Starches * Legumes (dried beans, peas and lentils) belong to the Meat and Alternatives food group. They are listed here to show that they also contain carbohydrate.</p>	<p>75 mL (1/3 cup) cooked brown rice, millet, sorghum 125 mL (1/2 cup) cooked barley, bulgur, quinoa, couscous 125 mL (1/2 cup) cooked chow mein noodles, macaroni 125 mL (1/2 cup) cooked pelau, jollof rice or rice and peas 125 mL (1/2 cup) cooked cornmeal (coucou, porridge) 175 mL (3/4 cup) whole grain hot cereal (hominy, oats, cream of wheat) 125 mL (1/2 cup) to 175 mL (3/4 cup) high-fibre, cold cereal 125 mL (1/2 cup) legumes* (cowpeas, chickpeas/channa) 1 small dumpling or bake 1-6 inch (15 cm) roti or chapatti 1 small piece of banku, kenkey 1/4 bammy or cassava cake 4 water or cream crackers or biscuits 1/2 whole wheat pita bread (6 inch/15 cm) 1/2 tortilla (10 inch/25 cm) 1 slice (30 g) whole grain bread 1/2 small whole wheat bagel 1/2 small homemade bran muffin 750 mL (3 cups) low-fat, air popped popcorn</p>
<p>Starchy Vegetables and Fruit</p>	<p>250 mL (1 cup) parsnips 1/2 medium potato (aloo) 125 mL (1/2 cup) corn (maize) 250 mL (1 cup) winter squash (acorn, butternut, pumpkin) 250 mL (1 cup) peas 250 mL (1 cup) canned tomatoes 75 mL (1/3 cup) sweet potato 125 mL (1/2 cup) yam 60 mL (1/4 cup or 1/10th) cassava</p>

	<p>root (yucca or manioc) 75 mL (1/3 cup) taro (dasheen, cocoyam or eddoe) 1 piece fufu 1/8 small breadfruit 1/2 medium green banana 75 mL (1/3 cup) or 1/3rd small plantain</p>
Fruit	<p>500 mL (2 cups) acerola (cherry) 1 small banana or grapefruit 500 mL (2 cups) blackberries, strawberries, raspberries 250 mL (1 cup) blueberries, melon, papaya (pawpaw) 125 mL (1/2 cup) canned fruit (in juice, not syrup) 15 cherries or grapes 1/4 custard apple 60 mL (1/4 cup) mixed dried fruit 3 medium guava or starfruit 15 guinep (chennette or quenapa) 125 mL (1/2 cup) jackfruit, soursop 125 mL (1/2 cup) juice 2 medium kiwifruit or plums 1/2 medium mango or pomegranate 1 large peach 1 medium pear or apple 175 mL (3/4 cup) pineapple 1 medium sapodilla (naseberry), star apple or june plum 15 tamarind or 60 mL (1/4 cup) tamarind pulp 1 medium tangerine, mandarin or orange</p>
Milk and Alternatives	<p>250 mL (1 cup) low-fat milk (skim, 1%) 125 mL (1/2 cup) low-fat chocolate milk or malted milk beverage 125 mL (1/2 cup) low-fat evaporated</p>

	canned milk 60 mL (4 Tbsp) skim milk powder 175 mL (¾ cup) low-fat (0%,1%,2%) plain yogurt 250 mL (1 cup) artificially sweetened yogurt 250 mL (1 cup) plain low-fat fortified soy beverage 125 mL (½ cup) flavoured fortified soy beverage 75 mL (⅓ cup) flavoured low-fat soy yogurt
--	---

Special Considerations

Many healthy foods have little or no carbohydrate and will have only a small effect on your blood glucose. Add these foods to your meals and snacks, in the recommended serving sizes, to help fill up your plate and keep you feeling full.

Use Table 2 below to help you add these foods to the choices made above.

Table 2: Foods with Little or No Carbohydrate

Food Group		
Vegetables Fill half your plate with vegetables at each main meal.	Amaranth leaves Asparagus Beans, yellow or green Bean sprouts Beets Bitter Melon Bok choy/pakchoy Broccoli Brussels sprouts Cabbage Calaloo Carrots Cauliflower Celery Chard	Cucumber Eggplant/Garden Egg/ Melongene Kale Lettuce Mushrooms Okra Onion Peppers Rapini Spinach Taro leaves Tomatoes Zucchini

	Cho-cho (cristophene)	
<p>Meat and Alternatives</p> <p>Aim for the following amounts to start:</p> <ul style="list-style-type: none"> • 1-2 choices at smaller meals and snacks • 3-4 choices at your main meal 	<p>The amounts listed below are each equal to one choice:</p> <p>30 g (1 oz) lower fat cheese, less than 20% milk fat 60 mL (¼ cup) low-fat cottage cheese 1 large egg 60 mL (¼ cup) canned fish 30 g (1 oz) cooked fish 60 mL (¼ cup) shellfish 30 g (1 oz) cooked lean meat or skinless poultry 125 mL (½ cup) cooked legumes (pigeon peas, black eyed peas, kidney beans, dahl) 125 mL (½ cup) groundnut 30 mL (2 Tbsp) peanut or other nut butter (100% natural) 85g (⅓ cup) tofu, firm/regular 30 g (1 oz) soy-based vegetarian meat alternatives.</p> <p>Meats, fish, poultry, eggs, cheese, and soy-based vegetarian meat alternatives don't contain carbohydrate, so eating these foods is not likely to affect your blood glucose.</p> <p>Meat alternatives such as legumes (dried beans, peas and lentils) contain carbohydrates so eating these foods can affect your blood glucose. See Table 1.</p>	
<p>Fats</p> <p>Limit to 3-6 choices per day</p> <p>*use less often</p>	<p>The amounts below are equal to one choice:</p> <p>5 mL (1 tsp) non-hydrogenated margarine 5 mL (1 tsp) vegetable oil (olive, canola, coconut*) 30 mL (2 Tbsp) salad dressing, low-fat 5 mL (1 tsp) salad dressing, regular 1/6 avocado 125 mL (½ cup) ackee 15 mL (1 Tbsp) unsalted nuts or seeds 5 mL (1 tsp) mayonnaise, regular 15 mL (1 Tbsp) mayonnaise, light</p>	



Notes

Distributed by: