

Medical Nutrition Therapy for Diabetes



Carbohydrates

Along with proteins and fats, carbohydrates (carbs) are one of the three main nutrients found in foods and drinks. Foods that are high in carbohydrates include grains, fruits, starchy vegetables, dairy, sugar, and desserts. Foods with little to no carbohydrates are meat, meat substitutions, non-starchy vegetables, and fats.

Carbohydrates are important to monitor with diabetes because your body breaks down carbohydrates into glucose. Therefore, foods with carbohydrates make your blood glucose or blood sugar levels rise. Counting the amount of carbohydrates you consume at each meal helps you control your portion sizes of carbs, and ultimately helps you control your blood glucose levels.

Recommendations for Blood Glucose Control:

Eat three meals per day



Do not skip meals. Aim to eat meals/snacks around the same time each day.

Counting carbohydrates



Consume a consistent amount of carbohydrates at every meal.



One carb choice = 15 grams of carbohydrates



Females: 3-4 carb choices (or 45-60 grams) per meal



Males: 4-5 carb choices (or 60-75 grams) per meal

Limit added sugars and refined carbohydrates



Choose whole grains and other high fiber foods instead.



Whole grains and other high fiber foods get digested more slowly, so they don't spike blood glucose levels as high.



Limit adding sugar! Instead of using white sugar, honey, brown sugar, etc. try sugar substitutes like stevia.

























Each serving (picture) is equal to 1 carb choice (15 grams)



Males
4-5 carb choices per meal
(60-75 grams)



















Females
3-4 carb choices per meal
(45-60 grams)

 <p>1 SLICE OF BREAD</p>	 <p>1/3 CUP PASTA OR RICE</p>	 <p>1/2 CUP OATMEAL</p>	 <p>4-INCH PANCAKE</p>
 <p>6-INCH TORTILLA</p>	 <p>3/4 CUP UNSWEETENED CEREAL</p>	 <p>1/2 CUP FRUIT</p>	 <p>1 MEDIUM APPLE</p>
 <p>1/2 CUP 100% FRUIT JUICE</p>	 <p>15 GRAPES</p>	 <p>2 TBSP RAISINS</p>	 <p>1/2 BANANA</p>
 <p>1/2 CUP BEANS</p>	 <p>1/2 CUP MASHED POTATOES</p>	 <p>1/2 CUP CORN</p>	 <p>1/2 CUP PEAS</p>
 <p>3 OZ POTATO</p>	 <p>1/2 CUP SWEET POTATO</p>	 <p>3 CUPS POPCORN</p>	 <p>4-6 SMALL CRACKERS</p>
 <p>9-13 POTATO CHIPS OR PRETZELS</p>	 <p>1 CUP MILK</p>	 <p>1 CUP FAT-FREE YOGURT</p>	 <p>1 CUP SOY MILK</p>

Free Foods

(Foods with little to no carbs - no need to count)

 <p>TOMATOES</p>	 <p>MUSHROOMS</p>	 <p>BELL PEPPERS</p>	 <p>ZUCCHINI / YELLOW SQUASH</p>
 <p>BROCOLI / CAULIFLOWER</p>	 <p>CARROTS</p>	 <p>MIXED GREENS</p>	 <p>CUCUMBER</p>
 <p>CELERY</p>	 <p>ONIONS</p>	 <p>ASPARAGUS</p>	 <p>BRUSSELS SPROUTS</p>
 <p>3 OZ MEAT</p>	 <p>1 WHOLE EGG</p>	 <p>1 OZ CHEESE</p>	 <p>1 TSP FAT</p>

Tips for Eating Healthy













- Choose low-fat meats like skinless poultry, seafood, fish, and lean beef
- Choose low-fat dairy products like low-fat or fat-free cheese
- Choose plant oils instead of butter or lard



High Carb Foods



(Foods with added sugar)

 SODA POP 12 fl oz = 39g carbs	 SPORTS DRINKS 32 fl oz = 52g carbs	 ENERGY DRINKS 8.4 fl oz = 28g carbs	 BOTTLED GREEN TEA 20 fl oz = 33g carbs
 REGULAR PUDDING 1/4 cup = 25g carbs	 FRUIT CUP IN SYRUP 1/2 cup = 25g carbs	 1 DONUT 39g carbs	 1 SLICE OF CAKE 51g carbs
 3 COOKIES 22g carbs	 17 GUMMY BEARS 31g carbs	 1 CUP ICE CREAM 32g carbs	 1 CANDY BAR 25g carbs

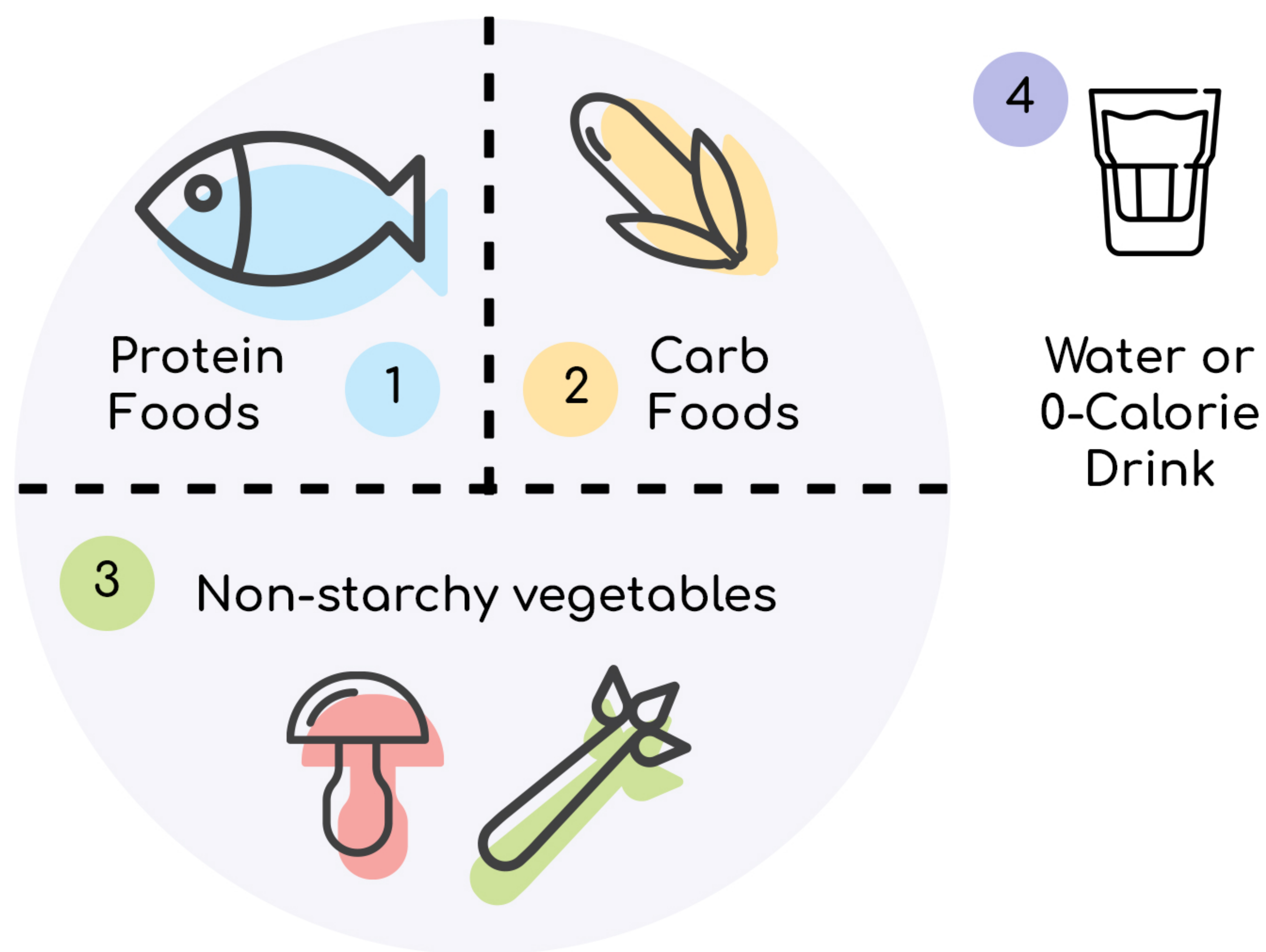
Hypoglycemia

A blood glucose level below 70 mg/dL

Causes	Symptoms	Treatment
<ul style="list-style-type: none"> • Errors in medication administration • Inadequate food intake • Skipping meals or snacks • Delayed meals or snacks • Improper timing of insulin in relation to food intake • Unplanned or increased physical activity. • Alcohol intake without food 	<p>HUNGER</p> <p>SWEATING</p> <p>SHAKINESS</p> <p>DIZZINESS</p> <p>LIGHT-HEADEDNESS</p> <p>SLEEPINESS</p> <p>CONFUSION</p> <p>DIFFICULTY SPEAKING</p> <p>ANXIETY</p> <p>WEAKNESS</p> <p>BLURRY VISION</p>	<p>1 Consume 15 grams of carbohydrates (preferably sugar because it is fast-acting)</p> <p>1/2 cup juice or soda</p> <p>1 tbsp of sugar or honey</p> <p>Hard Candy: 6 lifesavers, 3 peppermints</p> <p>1 Retest blood glucose in 10-15 minutes</p> <p>1 Repeat if blood glucose is still below 70 mg/dL</p>

The Diabetes Plate Method

Using this plate method is a simple way to plan your meals and control the amount of carbohydrates you eat. Make your plate at mealtimes look like the picture below. Use the following chart to help you choose your foods.



Food Group	Examples of Foods/Beverages
<p>1 Section 1: Non-Starchy Vegetables Fill ½ of your plate with non-starchy vegetables</p>	<p>Asparagus, broccoli, cabbage, cauliflower, celery, cucumber, green beans, kale, mushrooms, onions, peppers, or zucchini.</p>
<p>2 Section 2: Protein Foods Fill ¼ of your plate with a lean protein</p>	<p>Lean meat, poultry, fish, seafood, cheese, eggs, tofu, beans, lentils, nuts or nut butters.</p>
<p>3 Section 3: Carbohydrate Foods Fill ¼ of your plate with carbohydrate foods</p>	<p>Whole grains, whole wheat bread, brown rice, whole grain pasta, polenta, corn tortillas, fruit, or starchy vegetables (potatoes, green peas, corn, beans, acorn squash, and butternut squash). One cup of milk also counts as a food that contains carbohydrate.</p>
<p>4 Section 4: Beverage Choose water or a low-calorie, zero-sugar drink for your beverage</p>	<p>Unsweetened tea, coffee, or flavored/sparkling water without added sugar.</p>

Snacking

Eating snacks between meals helps you spread out your intake of carbohydrates, which can help control your blood sugar. Choose snacks that contain protein and ~15 grams of carbohydrates (1 carb choice). Healthy snack options are shown below.



1 cup non-starchy vegetables
¼ cup hummus



4-6 unsalted crackers
¼ cup tuna



1 ounce cheese
3 large wheat thin crackers



2 tbsp nuts
15 grapes



½ cup berries
¼ cup no salt added cottage cheese



1 small apple
1 tbsp peanut butter
or 2 tbsp PB2

Disclaimer: Please note that the information provided herein is intended to serve as a general guideline and may not meet the unique nutritional needs of individual patients. The distribution of these materials is at the discretion of the physician. The creator is not responsible for their application or outcomes on individual health conditions. All patients are advised to consult with their physician for personalized advice tailored to their unique needs and circumstances.