

Name _____ Date _____

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Carbohydrate Counting for People with Cystic Fibrosis– Related Diabetes

Unlike people who have type 1 or type 2 diabetes, people with cystic fibrosis–related diabetes need to eat a high-calorie, high-fat, and high-salt eating plan. In addition to taking your cystic fibrosis vitamin and mineral supplements, following a healthy, well-balanced eating pattern will help you get all the nutrients you need.

Good blood glucose control is very important when you have cystic fibrosis–related diabetes. Using insulin-to-carbohydrate ratios will help control your blood glucose levels. This method of taking insulin to cover your carbohydrates allows you to eat as much as you need by matching the amount of rapid-acting insulin you take to the amount of carbohydrates you eat, according to your diabetes and cystic fibrosis health care team’s recommendations.

Your doctor or registered dietitian nutritionist (RDN) will help you understand how to use insulin-to-carbohydrate ratios. For example, your doctor or RDN may tell you that you need 1 unit of rapid-acting insulin (Humalog, Novolog, Apidra) for 15 grams of carbohydrate. That means if you eat 60 grams of carbohydrate, you would then take 4 units of rapid-acting insulin for that meal or snack.

This handout tells you about reading labels, counting carbohydrates, and matching insulin to your carbohydrates. It has food lists to help you with carbohydrate counting.

Label Reading Tips

The Nutrition Facts panel on a label lists the grams of total carbohydrate in 1 standard serving. The label’s standard serving may be larger or smaller than 1 carbohydrate serving. To figure out how many carbohydrate servings are in the food:

- First, look at the label’s standard serving size.
- Check the grams of total carbohydrate. This is the amount of carbohydrate in 1 standard serving.
- Divide the grams of total carbohydrate by 15. This number equals the number of carbohydrate servings in 1 standard serving. **Remember:** 1 carbohydrate serving is 15 grams of carbohydrate.

Note: You may ignore the grams of sugars on the Nutrition Facts panel because they are included in the grams of total carbohydrate.

Meal Planning Tips

- A daily meal plan for cystic fibrosis–related diabetes includes healthy carbohydrates from fruits and vegetables; whole grains; and milk and milk products.
- Meat, poultry, fish, seafood, eggs, and cheese do not contain carbohydrate. Choose high-fat protein sources, such as regular ground beef, pork, and other high-fat meats such as bacon and sausage; chicken with skin; fried fish; eggs; and cheese.
- Fats do not contain carbohydrate. Eat a variety of fats, such as olive oil, canola oil, nuts and seeds, butter or margarine, cream, dips, and gravy.
- Continue to use salt liberally for your usual diet for cystic fibrosis.
- Check your blood glucose levels as often as your doctor recommends, usually 4 times per day, before each meal and at bedtime.

Carbohydrate Servings

In diabetes meal planning, 1 serving of a food with carbohydrate has about 15 grams of carbohydrate:

- Check serving sizes with measuring cups and spoons or a food scale.
- Read the Nutrition Facts on food labels (see Label Reading Tips) to find out how many grams of carbohydrate are in foods you eat.
- The food lists in this handout show portions that have about 15 grams of carbohydrate.

Food Lists for Carbohydrate Counting

1 serving = about 15 grams of carbohydrate

Starches

- 1 slice bread (1 ounce)
- 1 tortilla (6-inch size)
- ¼ large bagel (1 ounce)
- 2 hard taco shells (5-inch size)
- ½ hamburger or hot dog bun (1 ounce)
- ¾ cup ready-to-eat cereal
- ½ cup cooked cereal
- 1 cup cream or broth-based soup
- 4 to 6 small crackers
- ⅓ cup pasta or rice (cooked)
- ½ cup beans, peas, corn, sweet potatoes, winter squash, or mashed or boiled potatoes (cooked)
- ¼ large baked potato (3 ounces)
- ¾ ounce pretzels, potato chips, or tortilla chips
- 3 cups popcorn (popped)

Fruit

- 1 small fresh fruit (4 ounces)
- ½ cup canned fruit
- ¼ cup dried fruit (2 tablespoons)
- 17 small grapes (3 ounces)
- 1 cup melon, berries
- 2 tablespoons raisins
- ½ cup fruit juice

Milk and Milk Products

- 1 cup reduced-fat (2%) or whole milk
- 1 cup soy milk
- ⅔ cup (6 ounces) full-fat yogurt
- Sweets and Desserts
- 2-inch square cake (unfrosted)
- 2 small cookies (2/3 ounce)
- ½ cup ice cream or frozen yogurt
- ¼ cup sherbet or sorbet
- 1 tablespoon syrup, jam, jelly, table sugar, or honey
- 1 tablespoons regular syrup

Other Foods

- Count 1 cup raw vegetables or ½ cup cooked nonstarchy vegetables as zero (0) carbohydrate servings or “free” foods. If you eat 3 or more servings at one meal, count them as 1 carbohydrate serving.
- Foods that have less than 20 calories in each serving also may be counted as zero carbohydrate servings or “free” foods.
- Count 1 cup of casserole or other mixed foods as 2 carbohydrate servings.

Cystic Fibrosis–Related Diabetes Sample 1-Day Menu

Meal	Menu
Breakfast	2 eggs and 2 slices bacon 2 slices whole wheat toast (2 carbohydrate servings) with 3 teaspoons butter or margarine and 2 tablespoons jam or jelly (2 carbohydrate servings) 1 orange (1 carbohydrate serving) 1 cup whole milk (1 carbohydrate serving)
Morning Snack	12 whole wheat crackers (2 carbohydrate servings) with 2 tablespoons peanut butter
Lunch	Sandwich with 3 ounces deli ham and 2 slices whole wheat bread (2 carbohydrate servings) with 2 teaspoons mayonnaise 1 cup cream soup (1 carbohydrate serving) Lettuce and tomato salad with 2 tablespoons regular salad dressing 1 cup whole milk (1 carbohydrate serving) 1 large banana (2 carbohydrate servings)
Afternoon Snack	2 ounces potato chips (2 carbohydrate servings) with 2 tablespoons dip
Evening Meal	4 ounces baked chicken with skin 1 medium baked potato (6 ounces) (2 carbohydrate servings) with 2 tablespoons sour cream 1 cup mixed vegetables with 2 teaspoons butter or margarine 2 small whole wheat rolls (2 carbohydrate servings) with 2 teaspoon butter or margarine 1 cup whole milk (1 carbohydrate serving) 1 small apple (1 carbohydrate serving)
Evening Snack	1 cup ice cream

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