

Memorandum

TO: Diabetes Care and Education Dietetic Practice Group (DCE DPG) members

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TOPIC: Reproduction of the education handout *Carbohydrate Counting: Focus on Consistency For People Who Use Diabetes Pills and Basic Insulin Regimens*

The educational handout *Carbohydrate Counting: Focus on Consistency For People Who Use Diabetes Pills and Basic Insulin Regimens* was originally developed in 2004 by the DCE DPG, authored by Belinda O'Connell MS, RD, CDE and Patti Urbanski, MEd, RD, LD, CDE. The handout has since been updated by Jamie Futterman, RD, LD, and may be reproduced for educational purposes only through 2012 with credit granted to DCE. Reproduction for sales purposes is not authorized. Please check the DCE website at www.dce.org or contact the DCE Publications Chair for the status of this educational handout after the expiration date.



Carbohydrate Counting: Focus on Consistency

For People Who Use Diabetes Pills and Basic Insulin Regimens

If you take diabetes pills that help your body make more insulin, or if you take set doses of insulin every day, eating consistently can help you achieve better blood glucose management. Consistency means eating about the same amounts of food, at regular times, each day. Eating consistent amounts of carbohydrate at meals and snacks from one day to the next may help keep your blood glucose in a healthy range. It also helps you and your health care team identify whether your current diabetes plan is working for you.

Follow the four steps below to learn how to eat consistent amounts of carbohydrate each day to improve your blood glucose.

Step 1: Know which foods have carbohydrates

- The amount of carbohydrate (sugar and starch) you eat at meals and snacks will affect how high your blood glucose rises. Learning to identify which foods and beverages have carbohydrate, and managing your portions of these foods, will help you meet your blood glucose goals. It's also important to spread your carbohydrates throughout the day. With this in mind, carbohydrate counting, or “carb” counting, can help you decide what, how much, and when to eat.
 - When you have a Nutrition Facts label available, look at the “Total Carbohydrate” line. Remember that the nutrition information on the label is for the serving size listed at the top. If your portion is larger or smaller than that, you need to adjust the carbohydrate amount.
- Foods that contain carbohydrates are listed below.**

Each portion listed contains 15 grams of carbohydrate or 1 carb “choice”

Grains, Breads, Cereals, Pasta, and Starchy Vegetables:

1 slice or 1 oz bread; ¾ oz dry cereal*; 1/2 cup cooked cereal; 1/3 cup cooked pasta or rice; 1/2 cup potato, peas, dried beans (e.g. kidney, pinto, navy) or corn

Milk and Yogurt: 1 cup milk, ¾ to 1 cup (6 to 8 oz) plain yogurt or yogurt made with low-calorie sweetener

Fruits: 1 small piece of fresh fruit, 1/2 cup canned fruit, 1 cup melon, 2 Tbsp dried fruit, 1/2 cup fruit juice

Vegetables: 3 cups raw vegetables, 1 1/2 cups cooked vegetables (Smaller portions do not need to be counted.)

Sweets and Snack Foods: ¾ oz snack food (pretzels, chips, 4 to 6 crackers), 1 oz sweet snack (2 small cookies), 1/2 cup ice cream, 1 Tbsp sugar or honey

*Serving sizes vary — Check the product's Nutrition Facts label

Step 2: Know your carbohydrate and blood glucose goals

- Your carbohydrate goals depend on the diabetes medications and/or insulin you use, your body weight, and how active you are. Work with a registered dietitian to develop a personalized meal plan.

A general rule of thumb:

Men: 4 to 5 carb choices (60 to 75 grams) at each meal

Women: 3 to 4 carb choices (45 to 60 grams) at each meal

If you eat snacks, choose foods that are 1 to 2 carbohydrate choices (15 to 30 grams).

Please note: If you take insulin or diabetes medications that may cause hypoglycemia (low blood glucose), do not skip meals.

- Ask your provider for help setting your blood glucose goals. Some general guidelines are listed below:

Blood Glucose Goals	American Diabetes Association	American Association of Clinical Endocrinologists
Fasting or before meals	70 to 130 mg/dl	less than 110 mg/dl
Two hours after the start of a meal	less than 180 mg/dl	less than 140 mg/dl

Step 3: Record your food and blood glucose levels

- Keep a food record that lists the times you ate, your food choices, and amounts of each food. Try to measure and/or weigh foods so you learn how the portions you eat compare to actual serving sizes.
- Check your blood glucose before and 2 hours after meals. Record your results in a blood glucose diary.
- The more days and meals you can record, the more information you will have about how different amounts of carbohydrate affect your blood glucose, allowing you to make adjustments as needed.

Step 4: Review your records

- Circle any blood glucose levels that are above or below your targets.
- **If you are above** your glucose target 2 hours after meals: Check the carbohydrates in your last meal or snack to see which foods or amounts may have caused your blood glucose to get too high. Eat the same meal another day, but cut back the portions of carbohydrate to try to reach your target glucose level or make adjustments as needed.
- **If you are below** your glucose target 2 hours after meals: You may not have eaten enough carbohydrate. (*Remember:* Any blood glucose less than 70 mg/dl must be treated immediately. If you are not sure how to treat a low blood glucose, talk to your doctor or registered dietitian.)

Sample food and blood glucose diary before and after a consistent carb meal plan

	Breakfast — 7:30 a.m.	Lunch — noon	Dinner — 5 p.m.
Sample day <i>before eating consistently</i>	Fasting BG: 82 mg/dl 4 four-inch pancakes 2 Tbsp regular syrup 3 sausage links 1 hard-boiled egg white 8 oz orange juice TOTAL: 8 carb choices (120 grams) 2 hour BG: 226 mg/dl	Before Meal BG: 162 mg/dl 4 oz chicken 1 cup green beans 6 oz light yogurt TOTAL: 1 carb choice (15 grams) 2 hour BG: 66 mg/dl (3 glucose tablets to treat low)	Before Meal BG: 100 mg/dl 1 cup rice 1 cup red beans 2 small dinner rolls 4 oz pork loin ½ cup broccoli TOTAL: 7 carb choices (105 grams) 2 hour BG: 300 mg/dl
Sample day <i>after eating consistently</i>	Fasting BG: 82 mg/dl 2 four-inch pancakes ¼ cup sugar-free syrup 1 sausage link 1 hard-boiled egg white 1 small orange TOTAL: 4 carb choices (60 grams) 2 hour BG: 125 mg/dl	Before Meal BG: 95 mg/dl 4 oz chicken 1 cup green beans ½ large baked potato 1 small apple 6 oz sugar-free yogurt TOTAL: 4 carb choices (60 grams) 2 hour BG: 140 mg/dl	Before dinner BG: 100 mg/dl 2/3 cup rice 1/2 cup red beans 1 dinner roll 4 oz pork loin ½ cup broccoli TOTAL: 4 carb choices (60 grams) 2 hour BG: 130 mg/dl

Follow up with your registered dietitian for assistance evaluating your blood glucose record and the amount of carbohydrates you eat at meals and snacks. Review your blood glucose record with your doctor, so that appropriate medication adjustments can be made, if needed.



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