CARBOHYDRATE COUNTING ASSESSMENT

Before you begin multiple daily injections (MDI) or insulin pump therapy, you need to become familiar with advanced carbohydrate counting. For MDI and pump therapy, you will be calculating an insulin dosage based on an insulin-to-carbohydrate ratio; therefore, you must have an accurate estimate of the "available carbohydrates" in the meal you will be eating.

Please email the completed assessment to dcnurse@cw.bc.ca

To complete this assessment you can use different tools:
- ✓ Apps and or websites, e.g. Calorie King®, myfitnesspal™, or Carbs & Cals
- ✓ BCCH Diabetes Clinic Food & Nutrition handouts
- ✓ Handouts
- ✓ Food Labels
- ✓ *Beyond the Basics* poster
- ✓ Calculator

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(1) Basal insulin is (choose all that apply):

A. Given with meals
B. Background insulin
C. Given to correct high glucose levels
D. Starts working within 10-15 minutes

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(2) Bolus insulin is (choose all that apply):

A. Given with meals
B. Background insulin
C. Given to correct high glucose levels
D. Starts working within 10-15 minutes

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(3) Which of the follow is an appropriate way to treat a low blood sugar (using a 15-g treatment option)? (Choose all that apply.)

A. 3–4 Dex4® glucose tablets
B. A fun-sized bag of Skittles® (15 pieces)
C. ½ of a regular-sized chocolate bar
D. ½ cup (4 ounces, 120 mL) of orange or apple juice
E. 1 scoop of vanilla ice cream (½ cup, 135 mL)
F. 1 tablespoon or 15 mL of honey

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(4) Which of the following vegetables would be less than 15 grams of carbohydrates if you eat 1 cup or less? (Choose all that apply.)

A. Carrots
B. Celery
C. Peas
D. Broccoli
E. Tomatoes

(5) Which of the following foods, if consumed without any other foods, will raise the blood sugar the SLOWEST?

A. White rice
B. Regular pop
C. White spaghetti, al dente
D. White bread
E. Whole wheat spaghetti, al dente

(6) Which of the following foods, if consumed without any other food, will raise the blood sugar the FASTEST?

A. White rice
B. Regular pop
C. White spaghetti, al dente
D. White bread
E. Whole wheat spaghetti, al dente

(7) Calculate the carbohydrate amount/count for the following foods (please show your work).

A. 2 cups of strawberries:

_____

B. 1 bottle (16 ounces, 480 mL) Snapple® Lemon Ice Tea:

_____

C. 3 Oreo® cookies:

_____

D. 1½ cups (375 mL) glass of 2% milk:

_____

E. 4 medium pieces of California Roll sushi:

_____

(8) Approximately how many grams of carbohydrates are in the following meal?

2 scrambled eggs, 2 sausages, 2 slices of whole-wheat toast, 1 cup of 2% milk, 2 tablespoons of blueberry jam

    A. 15 g
    B. 30 g
    C. 45 g
    D. 60 g
    E. 75 g

(9) Looking at the following label, how many grams of carbohydrates are in 6 crackers?

    A. 12 g
    B. 15 g
    C. 18 g
    D. 20 g
    E. 23 g

Nutrition Facts
Per 4 crackers (14 g)

Amount	% Daily Value
Calories 56	
Fat 1.0 g	2 %
Saturated 0 g + Trans 0 g	0 %
Cholesterol 0 mg	
Sodium 150 mg	4 %
Carbohydrate 10 g	4 %
Fibre 0 g	0 %
Sugars 1 g	
Protein 1 g	
Vitamin A 1 %	Vitamin C 0 %
Calcium 0 %	Iron 0 %

(10) Using the following label, how many grams of carbohydrates are in 1½ cups of cereal only? (Choose the closest answer)

    A. 35 g
    B. 41 g
    C. 47 g
    D. 53 g
    E. 62 g

Nutrition Facts
Per 1 cup (50 g)

Amount	Cereal only	With ½ cup skim milk
Calories	180	230
	% Daily Value	
Fat 1.0 g	2 %	2 %
Saturated 0.2 g + Trans 0 g	1 %	2 %
Cholesterol 0 mg	0 %	1 %
Sodium 310 mg	14 %	15 %
Carbohydrate 41 g	14 %	16 %
Fibre 6 g	24 %	24 %
Sugars 8 g		
Protein 5 g		
Vitamin A	0 %	8 %
Vitamin C	0 %	0 %
Calcium	2 %	15 %
Iron	50 %	50 %

(11) Part 1: Approximately how many grams of carbohydrates are in 1½ cups of cooked, long-grain white rice? (Choose the closest answer)

    A. 45-50 g
    B. 40-44 g
    C. 30-35 g
    D. 60-65 g
    E. 65-70 g

Part 2: The insulin-to-carbohydrate ratio is 9. How many units of rapid-acting insulin for the rice?

    A. 4.5 units
    B. 5 units
    C. 7.5 units
    D. 6 units
    E. 6.5 units

(12) A lemon loaf recipe (which makes 12 servings or slices) calls for 1 cup of white sugar and 1½ cups of white flour (as well as eggs, oil and other non-carb-containing ingredients).

Part 1: Calculate the grams of carbohydrate in 1 slice of lemon loaf.

    A. 12 g
    B. 18 g
    C. 29 g
    D. 37 g
    E. 45 g

Part 2: The insulin-to-carbohydrate ratio is 10. How many units of rapid-acting insulin for 1 slice?

    A. 2.5 units
    B. 3 units
    C. 3.5 units
    D. 4 units
    E. 4.5 units