

## Making Carbs Count:

### Advanced Carbohydrate Counting for Intensive Diabetes Management Case Study #1

Guy is a pleasant 30 year old male who has had type 1 diabetes for 20 years. Last year he came to see you to learn about basic carbohydrate counting. He has been carbohydrate counting and trying to follow a consistent carbohydrate meal plan since that time. Guy is coming to learn advanced carbohydrate counting skills because he wants to improve his glycemic control and have a more flexible lifestyle.

Ht: 6' (183 cm)

Wt: 183 lbs. (83 kg)

BMI = 24.8

Guy's insulin: 12 u intermediate-acting insulin bid  
8 u rapid-acting insulin with meals

Total daily dose (TDD) = 48 u/day

Guy's target blood glucose levels: ac meals 4-7 mmol/L

2 hr pc meals 5-10 mmol/L

Guy's latest HbA1C = 7.9

Guy brings detailed food records to his appointment.



### Questions/Problems

- 1) Examine Guy's initial food records of August 19, 20 and 21. What are the first steps that should be taken in teaching Guy advanced carbohydrate counting?

(5 min)

### **Calculating insulin:carb ratios**

- 2) Calculate Guy's insulin:carb ratio using all 3 methods.

(6 min)

- a) **Method 1:** Pattern Management for any meals that are applicable (i.e. when # units of insulin taken seem to give appropriate control for grams of carbohydrate eaten)

- b) **Method 2:**  $500 \div \text{TDD}$

- c) **Method 3:**  $\text{TDD} - \text{basal insulin requirement} = \text{bolus requirement}$   
 $\text{Average CHO eaten/day} \div \text{bolus requirement} = \text{insulin:carb}$

**Case Study #2: Determining insulin to carb ratio using Pattern Management and carb choices**

Samantha is Guy’s supervisor at work (weight 260 lbs/118 kg; “math reluctant”). She has type 2 diabetes, is on an insulin pump and prefers to work in carbohydrate choices. (1 carb choice = 15 g carbohydrate)

- 3) Examine Samantha’s food record. Calculate her insulin:carb choice ratio at all meals. (2 min)

**Calculating Insulin Sensitivity Factors (ISF)**

100 ÷ TDD for R/A (rapid-acting) insulin                    **OR**  
 85 ÷ TDD for R(Regular) insulin or insulin-resistant individuals

- 4) Calculate Guy’s ISF from his food records. (1 min)

**Using ISF to calculate a supplemental dose**

(Current BG – goal BG) ÷ ISF = supplemental dose

- 5) Guy’s BG before lunch is 10.2 mmol/L but his pre-meal target is 6 mmol/L. If his ISF is 2, what is his supplemental dose at lunch? (1 min)

**Applying the Principles**

- 6) Using the following information and the food lists provided, calculate Guy’s lunch time insulin dose. (5 min)  
 Pre-meal target BG = 6 mmol/L            insulin:carb ratio = 10                    ISF = 2

Meal	Food Eaten	# grams of carbs	Insulin Taken
Lunch Time: 12:30 Blood Glucose: 11.2	Ham & cheese sandwich 200 mL juice box (orange) 125 mL strawberry yogurt medium apple 50 g bag chips	_____	Meal Bolus: _____ Correction: _____ Total Taken: _____

- 7) Examine Guy’s follow-up food record. Assess it for how well Guy has applied the information he has been taught. What changes can you find? (2 min)

## Advanced Carbohydrate Counting Daily Worksheet: Grams of Carb

DATE Thursday August 19, 2004For: Guy (Initial)

Meal	Food Eaten (include portion)	# grams of carbs	Insulin Taken
Basal Insulin:			<b>12 NPH</b>
<b>Breakfast</b> Time: <b>7:00 am</b> Blood Glucose: <b>6.3</b>	<b>2 toast<sup>a</sup> + 1 tsp margarine</b> <b>2 slices cheddar cheese</b> <b>coffee with 1 tsp sugar</b> <b>1 cup 1% milk</b> <b>1 medium orange<sup>a</sup></b>	<b>32</b> <b>10</b> <b>5</b> <b>12</b> <b>15</b> <b>72</b>	Meal Bolus: <u>  8  </u> Correction: <u>  0  </u> Total Taken: <b>8 rapid</b>
Two hour BG: <b>7.8</b>			
Activity: *	<b>At work (sitting)</b>		
<b>Snack</b> Time: <b>10:00 am</b> Blood Glucose:	<b>Coffee with 1 packet sweetener</b> <b>and 1 milker</b>	<b>0</b> _____	Meal Bolus: <u>  0  </u> Correction: <u>  0  </u> Total Taken: <b>0</b>
<b>Lunch</b> Time: <b>12:45 pm</b> Blood Glucose: <b>6.9</b>	<b>Tuna sandwich on ww bread<sup>a</sup></b> <b>Tossed salad with oil &amp; vinegar</b> <b>50 g bag chips<sup>a</sup></b> <b>1 medium apple<sup>a</sup></b> <b>diet pop</b>	<b>32</b> <b>0</b> <b>31</b> <b>20</b> <b>0</b> <b>83</b>	Meal Bolus: <u>  8  </u> Correction: <u>  0  </u> Total Taken: <b>8 rapid</b>
Two Hour BG: <b>7.2</b>			
Activity:	<b>At work (sitting)</b>		
<b>Snack</b> Time: <b>2:45 pm</b> Blood Glucose: <b>7.2</b>	<b>Diet pop</b>	<b>0</b> _____	Meal Bolus: <u>  0  </u> Correction: _____ Total Taken: <b>0</b>
<b>Supper</b> Time: <b>6:30 pm</b> Blood Glucose: <b>6.9</b>	<b>Hamburger on bun with mustard</b> <b>Tossed salad w. Italian dressing</b> <b>+1/2 c. croutons<sup>a</sup></b> <b>Small cob of corn<sup>a</sup></b> <b>1/2 c fruit salad<sup>a</sup> + whipped cream</b>	<b>30</b> <b>11</b> <b>30</b> <b>10</b> <b>81</b>	Meal Bolus: <u>  8  </u> Correction: <u>  0  </u> Total Taken: <b>8 rapid</b>
Two hour BG: <b>3.8</b>	<b>ate chocolate bar to treat low</b>		
Activity:	<b>Bowling for 1 hour (7 -8 pm)</b>		
<b>Snack</b> Time: <b>10:30 pm</b> Blood Glucose: <b>9.8</b>	<b>1 cup milk</b> <b>1 toast<sup>a</sup> with peanut butter</b>	<b>12</b> <b>16</b> <b>28</b>	Meal Bolus: <u>  0  </u> Correction: <u>  0  </u> Total Taken: <b>0</b>
Basal Insulin:			<b>12 NPH</b>
Bedtime Glucose: <b>9.8</b> Time: <b>10:30 pm</b>			
Comments:			

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

<sup>a</sup> Nutritional information from resource

My Insulin Sensitivity is: 1 unit drops blood glucose \_\_\_\_\_ mmol/l.

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (breakfast)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (lunch)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (supper)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (bedtime snack)

Advanced Carbohydrate Counting Daily Worksheet: Grams of Carb

DATE Friday August 20, 2004

For: Guy (Initial)

Meal	Food Eaten (include portion)	# grams of carbs	Insulin Taken
Basal Insulin:			<b>12 NPH</b>
<b>Breakfast</b> Time: <i>7:00 am</i> Blood Glucose: <i>9.3</i>	<i>2 toast<sup>a</sup></i> <i>1 tbsp peanut butter</i> <i>coffee with 1 tsp sugar</i> <i>1 cup 1% milk</i> <i>1/2 medium grapefruit<sup>a</sup></i>	<i>32</i> <i>0</i> <i>5</i> <i>12</i> <u><i>20</i></u> <i>67</i>	Meal Bolus: <u><i>8</i></u> Correction: <u><i>0</i></u> Total Taken: <i>8</i> <i>rapid</i>
Two hour BG: <i>6.4</i>			
Activity: *	<i>3 (moved boxes and furniture in office)</i>		
<b>Snack</b> Time: <i>10:00 am</i> Blood Glucose: <i>4.2</i>	<i>Coffee with 1 packet sweetener and 1 milker</i>	<i>0</i> _____	Meal Bolus: <u><i>0</i></u> Correction: <u><i>0</i></u> Total Taken: <i>0</i>
<b>Lunch</b> Time: <i>12:45 pm</i> Blood Glucose: <i>3.5</i>	<i>Ham and cheese sandwich on ww bread<sup>a</sup></i> <i>3 c.c. cookies<sup>a</sup></i> <i>1 medium apple<sup>a</sup></i> <i>diet pop</i>	<i>32</i>  <i>30</i> <i>20</i> <u><i>0</i></u> <i>82</i>	Meal Bolus: <u><i>8</i></u> Correction: <u><i>0</i></u> Total Taken: <i>8</i> <i>rapid</i>
Two Hour BG: <i>5.1</i>			
Activity:	<i>At work (sitting)</i>		
<b>Snack</b> Time: <i>2:45 pm</i> Blood Glucose: <i>5.1</i>	<i>Diet pop</i>	<i>0</i> _____	Meal Bolus: <u><i>0</i></u> Correction: _____ Total Taken: <i>0</i>
<b>Supper</b> Time: <i>6:30 pm</i> Blood Glucose: <i>3.2</i>	<i>Steak</i> <i>1 cups rice pilaf (long-grain brown) <sup>a</sup></i> <i>Caesar salad (no croutons)</i> <i>1 cup orange and mango juice<sup>a</sup></i> <i>3 cc cookies (ate extra for low BG)</i>	<i>0</i> <i>45</i> <i>0</i> <i>30</i> <u><i>30</i></u> <i>105</i>	Meal Bolus: <u><i>8</i></u> Correction: <u><i>0</i></u> Total Taken: <i>8</i> <i>rapid</i>
Two hour BG: <i>12.1</i>			
Activity:			
<b>Snack</b> Time: <i>10:30 pm</i> Blood Glucose: <i>10.5</i>	<i>1 cup milk</i> <i>1 toast<sup>a</sup> with peanut butter</i>	<i>12</i> <u><i>16</i></u> <i>28</i>	Meal Bolus: <u><i>0</i></u> Correction: <u><i>0</i></u> Total Taken: <i>0</i>
Basal Insulin:			<b>12 NPH</b>
Bedtime Glucose: <i>10.0</i> Time: <i>midnight</i>			
Comments:			

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

<sup>a</sup> Nutritional information from resource

My Insulin Sensitivity is: 1 unit drops blood glucose \_\_\_\_\_ mmol/l.

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (breakfast)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (lunch)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (supper)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (bedtime snack)

## Advanced Carbohydrate Counting Daily Worksheet: Grams of Carb

DATE Saturday August 21, 2004For: Guy (Initial)

Meal	Food Eaten (include portion)	# grams carbs	Insulin Taken
Basal Insulin:			<b>12 NPH</b>
<b>Breakfast</b> Time: <b>8:00 am</b> Blood Glucose: <b>6.3</b>	<i>1 english muffin</i> <i>1 tbsp peanut butter</i> <i>2 tsp diet jam</i> <i>coffee with 1 tsp sugar</i> <i>1 cup 1% milk</i> <i>1/2 medium grapefruit<sup>a</sup></i>	<b>30</b> <b>0</b> <b>4</b> <b>5</b> <b>12</b> <u><b>20</b></u> <b>71</b>	Meal Bolus: <u><b>8</b></u> Correction: <u><b>0</b></u> Total Taken: <b>8</b> <b>rapid</b>
Two hour BG: <b>6.4</b>			
Activity:	<i>Grocery shopping for 1 hour</i>		
<b>Snack</b> Time: <b>10:00 am</b> Blood Glucose: <b>6.4</b>	<i>200 ml juice box (orange)<sup>a</sup></i>	<b>20</b> _____	Meal Bolus: <u><b>0</b></u> Correction: <u><b>0</b></u> Total Taken: <b>0</b>
<b>Lunch</b> Time: <b>12:45 pm</b> Blood Glucose: <b>4.6</b>	<i>Hamburger with mustard</i> <i>Small French fries<sup>a</sup></i> <i>50 g chocolate bar<sup>a</sup></i> <i>diet pop</i>	<b>30</b> <b>30</b> <b>26</b> <u><b>0</b></u> <b>86</b>	Meal Bolus: <u><b>8</b></u> Correction: <u><b>0</b></u> Total Taken: <b>8</b> <b>rapid</b>
Two Hour BG:			
Activity:	<i>Watching TV (Olympics)</i>		
Snack Time: Blood Glucose:	<i>Diet pop while watching TV.</i> <i>Forgot to test 2 hours after</i> <i>lunch. Nibbled on a few snack</i> <i>items.</i>	<b>0</b> _____	Meal Bolus: <u><b>0</b></u> Correction: _____ Total Taken: <b>0</b>
<b>Supper</b> Time: <b>6:30 pm</b> Blood Glucose: <b>10.8</b>	<i>BBQ chicken breast</i> <i>Medium baked potato<sup>a</sup></i> <i>½ c green beans</i> <i>1 large cob of corn<sup>a</sup></i> <i>1 c raspberries<sup>a</sup></i>	<b>0</b> <b>30</b> <b>0</b> <b>30</b> <u><b>10</b></u> <b>70</b>	Meal Bolus: <u><b>8</b></u> Correction: <u><b>0</b></u> Total Taken: <b>8</b> <b>rapid</b>
Two hour BG: <b>9.5</b>			
Activity:			
<b>Snack</b> Time: <b>10:30 pm</b> Blood Glucose: <b>8.5</b>	<i>1 cup milk</i> <i>1 toast<sup>a</sup> with peanut butter</i>	<b>12</b> <u><b>16</b></u> <b>28</b>	Meal Bolus: <u><b>0</b></u> Correction: <u><b>0</b></u> Total Taken: <b>0</b>
Basal Insulin: <b>10:30</b>			<b>12 NPH</b>
Bedtime Glucose: <b>9.9</b> Time: <b>midnight</b>			
Comments:			

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

<sup>a</sup> Nutritional information from resource

My Insulin Sensitivity is: 1 unit drops blood glucose \_\_\_\_\_ mmol/l.

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (breakfast)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (lunch)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (supper)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carbohydrates (bedtime snack)

Advanced Carbohydrate Counting Daily Worksheet: Carb Choices

DATE Friday August 20

For: *Samantha*

Meal	Food Eaten (include portion)	# carb choices	Insulin Taken
Basal Insulin:			
<b>Breakfast</b> Time: <i>7:30</i> Blood Glucose: <i>5.9</i>	<i>1 English muffin with peanut butter</i> <i>1 medium orange</i> <i>tea with s/a skim milk</i> <i>125 g fruit yogurt</i>	<i>2</i> <i>1</i> <i>0</i> <u><i>1</i></u> <i>4</i>	Meal Bolus: <u><i>16.4</i></u> Correction: <u><i>0</i></u> Total Taken: <i>16.4</i>
Two hour BG: <i>7.4</i>			
Activity: *	<i>Walked to work (1/2 hour)</i>		
<b>Snack</b> Time: <i>10:30</i> Blood Glucose:	<i>Tea with 1 milker</i>	<i>0</i> <u>          </u> <i>0</i>	Meal Bolus: <u><i>0</i></u> Correction: <u>          </u> Total Taken: <i>0</i>
<b>Lunch</b> Time: <i>12:15</i> Blood Glucose: <i>6.1</i>	<i>Hamburger</i> <i>Chicken noodle soup (1 cup)</i> <i>Celery sticks and cucumber slices</i> <i>1 small apple</i> <i>1 c. skim milk</i>	<i>2</i> <i>1</i> <i>0</i> <i>1</i> <u><i>1</i></u> <i>5</i>	Meal Bolus: <u><i>15.5</i></u> Correction: <u><i>0</i></u> Total Taken: <i>15.5</i>
Two Hour BG: <i>7.1</i>			
Activity:			
<b>Snack</b> Time: <i>3:30</i> Blood Glucose: <i>6.1</i>	<i>2 sugar-free cookies</i> <i>plain tea</i>	<i>0</i> <u>          </u> <i>0</i>	Meal Bolus: <u><i>0</i></u> Correction: <u>          </u> Total Taken: <i>0</i>
<b>Supper</b> Time: <i>6:30 pm</i> Blood Glucose: <i>10.6</i>	<i>1 pork chop w. 1/2 c applesauce</i> <i>1 medium baked potato w. yogurt</i> <i>tossed salad w. light dressing</i> <i>diet soda</i> <i>1/2 c frozen yogurt</i>	<i>1</i> <i>2</i> <i>0</i> <i>0</i> <u><i>1</i></u> <i>4</i>	Meal Bolus: <u><i>14.4</i></u> Correction: <u><i>4.4</i></u> Total Taken: <i>18.8</i>
Two hour BG: <i>8.1</i>			
Activity:	<i>Walked home from work (1/2 hour)</i>		
<b>Snack</b> Time: <i>10:15</i> Blood Glucose: <i>6.5</i>	<i>1 cup skim milk</i> <i>1 slice ww toast with peanut butter</i>	<i>1</i> <u><i>1</i></u> <i>2</i>	Meal Bolus: <u><i>2</i></u> Correction: <u>          </u> Total Taken:
Basal Insulin:			
Bedtime Glucose: <i>7.3</i> Time: <i>midnight</i>			
Comments:			<i>51 units/d basal</i>

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

My Insulin Sensitivity is: 1 unit drops blood glucose \_\_\_\_\_ mmol/l.

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carbohydrate choice (breakfast)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carbohydrate choice (lunch)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carbohydrate choice (supper)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carbohydrate choice (bedtime snack)

## Advanced Carbohydrate Counting Daily Worksheet: Grams of Carb

DATE Saturday August 28, 2004

For: Guy (Follow up)

Meal	Food Eaten (include portion)	# grams of carbs	Insulin Taken
Basal Insulin:			<b>12 NPH</b>
<b>Breakfast</b> Time: <i>8:30 am</i> Blood Glucose: <i>6.9</i>	<i>2 waffles (frozen) <sup>a</sup></i> <i>1 tsp margarine</i> <i>2 tsp maple syrup<sup>a</sup></i> <i>coffee with 1 tsp sugar</i> <i>1 cup 1% milk</i> <i>1 cup orange and mango juice<sup>a</sup></i>	<i>30</i> <i>0</i> <i>9</i> <i>5</i> <i>12</i> <hr/> <i>30</i> <i>86</i>	Meal Bolus: <u>  11  </u> Correction: <u>  0  </u> Total Taken: <i>11 rapid</i>
Two hour BG: <i>7.7</i>			
Activity: *	<i>Shopping (10:15)</i>		
<b>Snack</b> Time: <i>10:30 am</i> Blood Glucose: <i>7.7</i>	<i>200 ml juice box (orange) <sup>a</sup></i>	<i>20</i> <hr/> <i>20</i>	Meal Bolus: <u>  0  </u> Correction: <u>  0  </u> Total Taken: <i>0</i>
<b>Lunch</b> Time: <i>1:30 pm</i> Blood Glucose: <i>5.9</i>	<i>club sandwich on ww<sup>a</sup> bread</i> <i>1 cup bean salad<sup>a</sup></i> <i>1 cup fruit salad<sup>a</sup></i> <i>diet pop</i>	<i>48</i> <i>30</i> <i>20</i> <hr/> <i>0</i> <i>98</i>	Meal Bolus: <u>  10  </u> Correction: <u>  0  </u> Total Taken: <i>10 rapid</i>
Two Hour BG: <i>7.5</i>			
Activity:	<i>Watching football on TV</i>		
Snack Time: Blood Glucose:	<i>Diet pop</i>	<i>0</i> <hr/>	Meal Bolus: <u>      </u> Correction: <u>      </u> Total Taken:
<b>Supper</b> Time: <i>7:00 pm</i> Blood Glucose: <i>9.8</i>	<i>2 cups spaghetti<sup>a</sup> + <math>\frac{3}{4}</math> cup meat sauce<sup>a</sup></i> <i>1 slice garlic bread</i> <i>Tossed salad w. Italian dressing</i> <i>1 glass red wine</i> <i><math>\frac{1}{2}</math> c fruit salad<sup>a</sup> + whipped cream</i>	<i>80 + 15</i> <i>15</i> <i>0</i> <i>0</i> <hr/> <i>10</i> <i>120</i>	Meal Bolus: <u>  10  </u> Correction: <u>  2  </u> Total Taken: <i>12 rapid</i>
Two hour BG: <i>8.1</i>			
Activity:	<i>Went to the movies</i>		
<b>Snack</b> Time: <i>9:00 pm</i> Blood Glucose: <i>8.1</i>	<i>Diet pop</i> <i>9 cups popcorn<sup>a</sup> (estimated medium size)</i>	<hr/> <i>51</i> <i>51</i>	Meal Bolus: <u>  2  </u> Correction: <u>  0  </u> Total Taken: <i>2 rapid</i>
Basal Insulin:			<b>12 NPH</b>
Bedtime Glucose: <i>7.5</i> Time: <i>11:30 pm</i>			
Comments:	(note: usual bedtime snack = 28 g carbs with no RA insulin if BG <7.0)		

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

<sup>a</sup> Nutritional information from resource

My Insulin Sensitivity is: 1 unit drops blood glucose   2   mmol/l.

My Insulin:Carbohydrate ratio is:   1   unit for   8   grams of carbohydrates (breakfast)

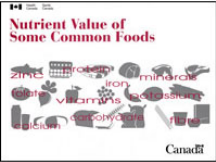

My Insulin:Carbohydrate ratio is:   1   unit for  10  grams of carbohydrates (lunch)

My Insulin:Carbohydrate ratio is:   1   unit for  11  grams of carbohydrates (supper)

My Insulin:Carbohydrate ratio is:   1   unit for  15  grams of carbohydrates (bedtime snack)

**Carbohydrate Resource Sheet: Making Carbs Count Workshop**

Guy used different resources in addition to food labels and the basic information that he learned using the **Good Health Eating Guide Resource** to look up carbohydrate values for the items he consumed over the week.

Resource	Item	Portion Listed	Grams Carb
 <p><b>Nutrient Value of Some Common Foods</b>  <a href="http://www.publications.gc.ca">www.publications.gc.ca</a></p>	Apple	7 in diameter	21g – 2.6 g fibre = 18.4 g
	Orange	1 medium	15 – 2.4 g fibre = 12.6 g
	Grapefruit	½ medium	9.2 – 1.2 g fibre = 8 g
	Raspberries, raw	125 mL	8 – 3.2 g fibre = 4.8 g
	Corn	20 cm cob	30 – 4.5 g fibre = 25.5 g
	Croutons	125 mL	12 – 0.8 g fibre = 11.2 g
	Popcorn	250 ml	7 – 1.3 g fibre = 5.7 g
	Potato, baked, flesh only	12 cm long	34 – 3.4 g fibre = 31.6 g
	Rice, long grain brown, cooked	250 mL	48 – 3.1 g fibre = 44.9 g
	Spaghetti, cooked	250 mL	42 – 2.4 g fibre = 39.6 g
	Syrup, maple	10 mL	9 g
 <p><b>Carbs, Carbs and More</b></p>	Chocolate bar (from package)	50 g bar	26 g
	Chips, potato (from package)	50 g bag	31 g
	Cookies, Chocolate chip (from package)	2	19.8 g
	French Fries (favourite fast food restaurant)	Small	30 g
	Fruit salad, fresh	1 cup	20 g
	Juice, orange	200 ml	20 g
	Salad, bean	1/2 cup	19 g – 4 g fibre = 15 g
	Sauce, tomato with meat	½ cup	9.8 g
	Waffles, frozen (from package)	2	32 – 1.7 g fibre = 30.3 g
	yogurt, strawberry, low-fat	125 g	19.7 g

**Carbohydrate Resource Sheet: Making Carbs Count Workshop**

<b>Granny's Whole Wheat Bread</b>			
<b>Nutrition Facts</b>			
<b>Valeur nutritive</b>			
Per 66 g = 2 slices / par 66 g 2 tranches			
<b>Amount</b>	<b>% Daily Value</b>		
<b>Teneur</b>	<b>% valeur quotidienne</b>		
<b>Energy/Énergie</b>	192 Cal/800 kJ		
<b>Fat/Lipides</b>	4 g		
	Saturated/saturés 3 g		
	+ Trans/trans 1 g		20%
<b>Cholesterol / Cholesterol</b>	0 mg		
<b>Sodium/Sodium</b>	384 mg		15%
<b>Carbohydrate/Glucides</b>	36 g		9%
	Fibre/Fibres 4.1 g		16%
	Sugars/Sucres 1.3 g		
<b>Protein/Protéines</b>	6.8 g		
Vit A	0%	Vit C	0%
Calcium	0.5 %	Iron/Fer	18%

<b>Paradise Orange and Mango Juice</b>			
<b>Nutrition Facts</b>			
<b>Valeur nutritive</b>			
Per 175 mL serving / par portion de 175 mL			
<b>Amount</b>	<b>% Daily Value</b>		
<b>Teneur</b>	<b>% valeur quotidienne</b>		
<b>Energy/Énergie</b>	87 Cal / 360 kJ		
<b>Protein/Protéines</b>	0.7 g		
<b>Fat/Lipides</b>	0 g		
<b>Carbohydrate/Glucides</b>	21 g		5%
	Sugars/Sucres 21 g		
<b>Vit C</b>	30%		

### Advanced Carbohydrate Counting Daily Worksheet: Grams of Carb

DATE: \_\_\_\_\_

FOR: \_\_\_\_\_

Meal	Food Eaten (include portion)	# grams carb	Insulin Taken
Basal Insulin:			
<b>Breakfast</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Two hour BG:			
Activity:			
<b><u>Snack</u></b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
<b>Lunch</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Two Hour BG:			
Activity:			
<b><u>Snack</u></b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
<b>Supper</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Two hour BG:			
Activity:			
<b><u>Snack</u></b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Basal Insulin:			
Bedtime Glucose: Time:			
Comments:			

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

My Insulin Sensitivity is: 1 unit drops blood glucose \_\_\_\_\_ mmol/l.

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carb (breakfast)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carb (lunch)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carb (supper)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for \_\_\_\_\_ grams of carb (bedtime snack)

### Advanced Carbohydrate Counting Daily Worksheet: Carb Choices

DATE: \_\_\_\_\_

FOR: \_\_\_\_\_

Meal	Food Eaten (include portion)	# carb choices	Insulin Taken
Basal Insulin:			
<b>Breakfast</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Two hour BG:			
Activity:			
<b>Snack</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
<b>Lunch</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Two Hour BG:			
Activity:			
Snack Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
<b>Dinner</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Two hour BG:			
Activity:			
<b>Snack</b> Time: Blood Glucose:			Meal Bolus: ____ Correction: ____ Total Taken: ____
Basal Insulin:			
Bedtime Glucose: Time:			
Comments:			

\* Write in activity or use 1: less than normal activity, 2: normal activity, 3: more than normal activity.

My Insulin Sensitivity is: 1 unit drops blood glucose \_\_\_\_\_ mmol/l.

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carb choice (breakfast)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carb choice (lunch)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carb choice (supper)

My Insulin:Carbohydrate ratio is: \_\_\_\_\_ unit for 1 carb choice (bedtime snack)