



## Diabetes in Pregnancy

### What is Diabetes?

- Diabetes means that your body has a problem with a hormone called insulin. Insulin helps the body use sugar from our blood for energy. When you have diabetes your body either does not make enough insulin or it does not use insulin as well as it should. This causes sugar (also called glucose) to build up in the blood.

### Types of Diabetes

#### Type 1 Diabetes:

- The body does not make insulin
- Treatment is always diet, exercise, and insulin

#### Type 2 Diabetes:

- The body makes some insulin but not enough
- Diet and exercise can help you control your blood sugar levels. Sometimes oral medicines and/or insulin may be needed.

#### Gestational Diabetes:

- The body has a problem with insulin while pregnant.
- This means you have too much sugar in your blood. This can harm your baby and you.
- Diet and exercise can help you control your blood sugar levels. Sometimes oral medicines and/or insulin may be needed.
- Blood sugars often return to normal after delivery.



## How does poorly controlled blood sugar affect your baby's health?

- **There is a higher risk for:**
  - Large size baby
  - Hypoglycemia at birth (low blood sugar)
  - Breathing problems
  - Birth defects or fetal death, if your blood sugar is too high during the 1<sup>st</sup> trimester (first 3 months of pregnancy)
  - Being born too early
  - Obesity, early onset of Type 2 Diabetes, and other problems later in life
- **Diabetes in pregnancy does not cause babies to be born with diabetes**

## How does poorly controlled blood sugar affect your health?

- **There is a higher risk for:**
  - High blood pressure (preeclampsia) during pregnancy
  - Developing diabetes in the next 5 years.
    - Regular exercise and weight management can help to reduce your risk, and it is important to have regular check-ups with your doctor to monitor your blood sugar levels

## How is Diabetes in Pregnancy Treated?

- **Food Plan:** A registered dietitian (RD) or other healthcare provider will help you create a food plan. This food plan will provide all of the nutrients that you and your baby need.
- **Being Active:** Physical activity and exercise (at least 30 minutes daily) help lower blood sugar levels.
- **Medication:** In addition to following a meal plan, you might need to take medicine (including insulin) to keep your blood sugar levels normal for the safety of your baby.
- **Checking your blood sugar:** You will need to check your blood sugar levels 4 times daily or as directed by your doctor.
  - Fasting blood sugar (first thing in the morning before any food or drink).
    - **Goal: Less than 95 mg/dL**
  - 1 hour after each meal. This is one hour after your first bite of food.
    - **Goal: less than 140mg/dL**

## Carbohydrates, Proteins, and Fats

- You should eat **at least one protein food** with every meal and snack
- **Carbohydrates affect your blood sugar** and can make your levels go up. These need to be consumed in moderation, steadily through the day.
- Fats and proteins **do not** affect your blood sugar levels

| Energy Nutrients   |   |  |
|--|---|--|
| Carbohydrate   | Protein   | Fat  |
| Breads/Tortillas<br>Crackers/ Chips<br>Pasta<br>Rice<br>Quinoa<br>Beans<br>Corn<br>Peas<br>Potatoes<br>Milk<br>Soy Milk<br>Yogurt<br>Fruits<br><br><i>Eat less often/avoid:</i><br>Breaded meat and fish<br>Fruit Juices<br>Cakes<br>Pan Dulce<br>Concha Bread<br>Cookies<br>Ice Cream<br>Jam/Jelly<br>Honey<br>Sweet Tea<br>Soda<br>Energy Drinks | Fish<br>Chicken<br>Turkey<br>Eggs<br>Low fat Cheese<br>Beef<br>Cottage Cheese<br>Lamb<br>Pork<br>Veggie Burger<br>Tofu<br>Tempeh<br>Peanut Butter<br>Edamame<br>Nuts<br><br><i>Eat less often/avoid:</i><br>Ham<br>Bacon<br>Turkey Bacon<br>Sausage<br>Hot Dogs | Olive Oil<br>Canola Oil<br>Vegetable Oil<br>Peanut Oil<br>Olives<br>Mayonnaise<br>Salad Dressing<br>Avocado<br><br><i>Eat less often/avoid:</i><br>Cream Cheese<br>Butter<br>Cream<br>Lard<br>Coconut Oil<br>Palm Oil<br>Chitterlings<br>Fatback<br>Chicken Skin<br>Pork Rinds |



### How much carbohydrate can you eat?

- The balance between carbohydrate intake and insulin determines your blood sugar levels after eating.
- Carbohydrate counting is important to help control your blood sugar. Your food plan can help keep your blood sugar levels normal.
- Your blood sugar levels will rise above normal if you eat too many carbohydrates.

### What kind of carbohydrate foods should you eat?

- The healthiest carbohydrate foods give you fiber, vitamins, minerals and other nutrients, as well as calories.
- Some carbohydrate foods are made with a lot of sugar but not a lot of nutrients.

| <b>Choose These Foods <u>MORE</u> Often:</b> | <b>Eat <u>LESS</u> of these Foods:</b>   |
|--|--|
| Whole Wheat Bread                            | White bread                              |
| Whole grain cereal                           | Sugar Cereals                            |
| Brown rice                                   | White rice                               |
| Whole grain pasta                            | White pasta                              |
| Whole grain crackers (ex: Triscuits)         | Cookies                                  |
| Fruit  | Pies, Cakes, Pastries                    |
| Low Fat or Fat free milk and yogurt          | Whole milk, whole milk yogurt, Ice Cream |

## Counting Carbohydrates

- Carbohydrates are counted in units called carbohydrate servings. **One serving** of a food with carbohydrates has about **15 grams of carbohydrates**
- It is very important to check serving sizes with measuring cups and spoons.
- **How do you determine how many carbohydrates are in a food item?**
  1. Read the Nutrition Facts Label on foods
  2. Use the food list (provided in this handout) to identify the portion of common foods that contain 15 grams of carbohydrates if you do not have a Nutrition Facts label to go by
- **Food Plan Tips:**
  - Eat 3 meals and 3 snacks at about the same time every day.
  - Your body is more sensitive to carbohydrates in the morning
    - Eating fruit or drinking milk at breakfast **might** make your blood sugar rise too high. If this happens to you, have your fruit and milk at your other meals and snacks.
    - Avoid juice and bagels at breakfast because these are very concentrated sources of carbohydrates
  - Eat a variety of foods from each food group daily to get nutrients that you and your baby need
  - Avoid “empty-calorie” carbohydrates (chips, candy, soda, sweet tea, lemonade, sweets, etc.)



## Label Reading for Carbohydrate Counting

Sample label for macaroni & cheese

The image shows a nutrition label for macaroni & cheese. The label is titled "Nutrition Facts" and includes the following information:

- Serving Size 1 cup (228g)
- Servings Per Container 2
- Amount Per Serving: Calories 250, Calories from Fat 110
- % Daily Value\*
  - Total Fat 12g (18%)
  - Saturated Fat 3g (15%)
  - Trans Fat 3g
  - Cholesterol 30mg (10%)
  - Sodium 470mg (20%)
  - Total Carbohydrate 31g (10%)
  - Dietary Fiber 0g (0%)
  - Sugars 5g
  - Protein 5g
- Vitamin A 4%
- Vitamin C 2%
- Calcium 20%
- Iron 4%

\* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

Calories: 2,000 2,500

|                    |           |         |         |
|--------------------|-----------|---------|---------|
| Total Fat          | Less than | 65g     | 80g     |
| Sat Fat            | Less than | 20g     | 25g     |
| Cholesterol        | Less than | 300mg   | 300mg   |
| Sodium             | Less than | 2,400mg | 2,400mg |
| Total Carbohydrate |           | 300g    | 375g    |
| Dietary Fiber      |           | 25g     | 30g     |

Callouts from the image:

- The serving size for the food is 1 cup
- There are 2 servings or 2 cups in this container
- The total carbohydrate tells how many grams of carbohydrate are in 1 serving (1 cup) of this food
- Sugar is already included in the total carbohydrate amount.

### Remember 1 serving of Carbohydrates = 15 grams

- In this example, 1 serving of the food is equal to 1 cup.
- There are 31 grams of total carbohydrates in one serving of this food.  
 $31 \text{ grams} \div 15 \text{ grams} = 2$
- Therefore 1 serving (1 cup) of this foods provides about 2 serving of carbohydrate

## Counting Carbohydrates Using Foods Labels

| Carbohydrate Choices or Servings | Carbohydrate Range per Serving |
|----------------------------------|--------------------------------|
| 0 (or 0 grams)                   | 0-5 grams                      |
| $\frac{1}{2}$                    | 6-10 grams                     |
| 1 (or 15 grams)                  | 11-20 grams                    |
| $1\frac{1}{2}$                   | 21-25 grams                    |
| 2 (or 30 grams)                  | 26-35 grams                    |
| $2\frac{1}{2}$                   | 36-40 grams                    |
| 3 (or 45 grams)                  | 41-50 grams                    |

EXAMPLE: 6 Triscuit crackers contain 20 grams of carbohydrate. If you eat 6 crackers, you will count that as 1 carbohydrate serving.



## Non-Starchy Vegetables

|                 |                |               |
|-----------------|----------------|---------------|
| Artichoke       | Collard Greens | Okra          |
| Asparagus       | Cucumbers      | Onion         |
| Beets           | Eggplant       | Peppers       |
| Broccoli        | Garlic         | Radishes      |
| Brussel Sprouts | Green Beans    | Rutabaga      |
| Cabbage         | Kale           | Spinach       |
| Carrots         | Kohlrabi       | Summer squash |
| Cauliflower     | Mushrooms      | Tomato        |
| Celery          | Mustard Greens | Turnips       |
| Chayote         | Nopales        | Zucchini      |

- Non-starchy vegetables are filled with vitamins, minerals, and fiber and are a great addition to meals and snacks.
- If you eat **more** than  $1\frac{1}{2}$  cups of cooked non-starchy vegetables at **one meal**, you must count them as 1 carbohydrate serving (15 grams carbohydrate).
- Salad greens (lettuce, spinach, and arugula) are very low in carbohydrates and are considered “free foods”



**Carbohydrate servings** (1 serving = 15 grams of carbohydrates)

**STARCH**

|  |                                    |
|--|------------------------------------|
| 1 slice of whole wheat bread   | ½ cup of mashed potatoes           |
| 2 slices <b>reduced-calorie</b> wheat bread                          | ¼ large baked potato (3 oz)        |
| ½ medium bagel   | ¾ oz pretzels or baked chips       |
| ½ English muffin   | 3-4 Lance crackers                 |
| ½ hamburger or hotdog bun  | 3 cups popcorn (popped)            |
| 1 tortilla (6 inches)  | 6 saltine or butter round crackers |
| 1 waffle (4 inches)  | 1 ½ graham cracker sheets          |
| 1 pancake (4 inches)   | 2 rice cakes (4 inches each)       |
| 1 cup soup   | 5-6 Triscuits                      |
| 1/3 cup whole wheat pasta  | 5 vanilla wafers                   |
| ½ cup corn or green peas   | ¾ cup cereal, ready to eat         |
| 1/3 cup of baked beans   | 12 French fries                    |
| ½ cups grits, oatmeal (not instant) or cream of wheat                |                                    |
| ½ cup of beans (black, pinto, navy or kidney), lentils or split peas |                                    |
| 1/3 cup cooked rice, barley, couscous, millet, quinoa, or polenta    |                                    |

**FRUIT**

|  |                                   |
|--|-----------------------------------|
| 1 cup melon or berries   | ½ large banana                    |
| 2 Tablespoons of dried fruit                                   | 3 medium prunes                   |
| 17 small grapes  | ½ cup of fruit juice, unsweetened |
| 1 small apple, pear, orange, mango, papaya or peach            |                                   |
| ½ cup fresh, frozen or canned fruit (packed in juice or water) |                                   |

**MILK**

|  |
|--|
| 1 cup of milk (Nonfat, 1%, 2% or whole)              |
| 1 cup of soy*, rice milk*, or sweetened almond milk* |
| 2/3 cup of yogurt*                                   |

*\*Carbohydrate content can vary. Check the food label to be sure.*

**SWEETS**

|                             |                               |
|-----------------------------|-------------------------------|
| ½ cup of ice cream, regular | 2-inch square cake, unfrosted |
| 2 small cookies             | ½ cup sugar free pudding      |
| 2-inch square brownie       | 1 Tablespoon maple syrup      |

**COMBINATION FOODS:**

(Example: lasagna, casseroles) ~1 cup is equal to 2 servings of carbohydrates



## High Protein Foods List

| <u>Food</u>                   | <u>Serving Size</u> | <u>Protein Amount</u> |
|-------------------------------|---------------------|-----------------------|
| Ground Sirloin                | 3oz                 | 24 grams              |
| Tofu, firm                    | ½ cup               | 20 grams              |
| Tuna Fish, in water           | 3 oz                | 20 grams              |
| Pork Tenderloin               | 3 oz                | 18 grams              |
| Chicken Breast                | 3 oz                | 18 grams              |
| Cottage cheese, low fat       | ½ cup               | 13 grams              |
| Soy Beans                     | ½ cup               | 11 grams              |
| Veggie or Soy Burger          | ½ cup               | 11 grams              |
| Pumpkin Seeds                 | 1 oz                | 8.5 grams             |
| Peanut Butter                 | 2 Tablespoons       | 8 grams               |
| Egg Substitute                | 1 egg, ¼ cup        | 7.5 grams             |
| Cheese                        | 1 slice (1 oz)      | 7 grams               |
| Fish                          | 1 oz                | 6.5 grams             |
| Whole Egg                     | 1 each              | 6 grams               |
| Nuts (almonds, peanuts, etc.) | 1 oz                | 6 grams               |
| Sunflower Seeds               | 1 oz                | 5.5 grams             |
| * Soy Milk                    | 8 oz (1 cup)        | 11 grams              |
| *Milk (2% or skim)            | 8 oz (1 cup)        | 8 grams               |
| *Greek Yogurt                 | 6 oz                | 11 grams              |
| *Beans                        | ½ cup               | 7 grams               |

\* These foods also contain carbohydrates

(Adapted from High Proteins Food List @ Academy of Nutrition & Dietetics)



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Updated on 7/2/2018

## Meal Plan

|  | <b>Breakfast</b>     | <b>Snack 1</b> | <b>Lunch</b>         | <b>Snack 2</b> | <b>Dinner</b>        | <b>Snack 3</b> |
|--|----------------------|----------------|----------------------|----------------|----------------------|----------------|
| <b>Carbohydrates</b><br><b>Servings</b><br>(15 grams=1<br>Serving) | <b>2</b>             | <b>1</b>       | <b>3</b>             | <b>1 or 2</b>  | <b>3</b>             | <b>1 or 2</b>  |
| <b>Protein</b><br><b>Servings</b>                                  | <b>1<br/>or more</b> | <b>1</b>       | <b>1<br/>or more</b> | <b>1</b>       | <b>1<br/>or more</b> | <b>1</b>       |
| <b>Write your<br/>menu ideas<br/>here</b>                          |                      |                |                      |                |                      |                |

1 serving = 15 grams carbohydrate

2 servings = 30 grams carbohydrate

3 servings = 45 grams carbohydrate



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## Portion Estimator

Manage portions so you can manage your diabetes. Meal planning is a big part of living with diabetes. It does not have to be hard. Learning to estimate how much to eat and drink can help. Use things you see every day for comparison to make this easier.

- Plan how much you will eat, so you can follow your meal plan.
- Keep accurate food diaries of what you have eaten and drank.

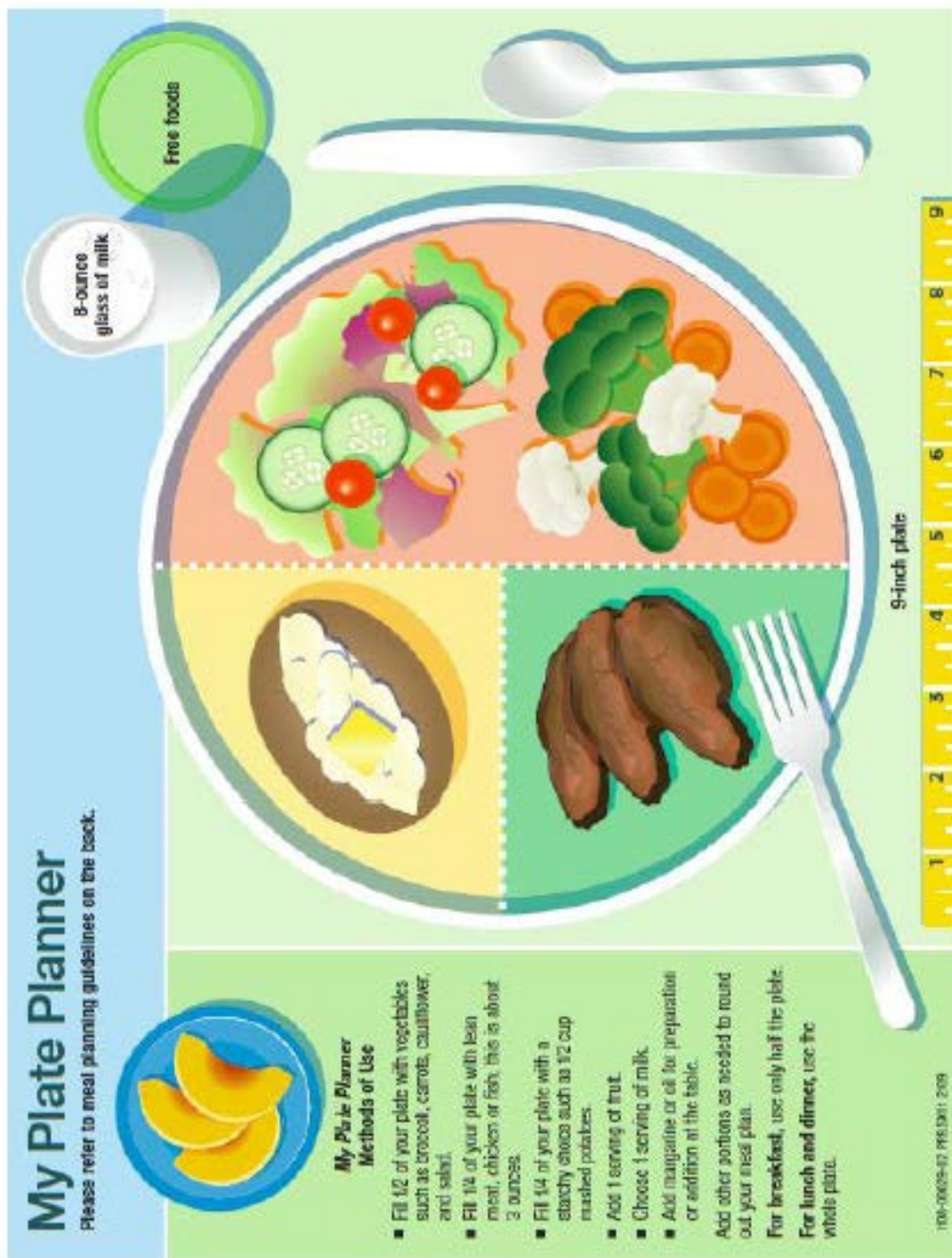
| Portion Equivalents: |   |
|----------------------|---|
| 1 cup                |  one-cup measure =  size of baseball =  2 scoops mashed potatoes              |
| 1/2 cup              |  half-cup measure =  size of lightbulb =  a scoop of ice cream                |
| 1/3 cup              |  third-cup measure =  size of egg =  small handful of crackers                |
| 2 Tablespoons        |  2 T measuring spoons =  size of golf ball =  small scoop of peanut butter |
| 1 Tablespoon         |  Tablespoon measure =  size of thumb =  dollop of Miracle Whip          |
| 1 teaspoon           |  teaspoon measure =  size of penny =  pat of butter                     |
| 3 ounces (oz)        |  size and thickness of a deck of cards =  small pork chop  |
| 1 ounce (oz)         |  size of 4 dice =  meat, fish fillet, chicken   |



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(Adapted from: RxSolution.com/Diabetes)

## **Being Active during Pregnancy with Diabetes**

For most people with diabetes in pregnancy, being active is safe and healthy. Be sure to talk to your doctor, midwife, or nurse practitioner before you start any kind of exercise regimen. Make sure that the activities you choose are safe for you and your baby during pregnancy.



### **How Much Time Should You Spend Being Active?**

Ask your doctor, midwife, or nurse practitioner about how much exercise you should get. For most pregnant women, 30 minutes of activity 5 days/week is a good goal. You may want to break your daily goal into shorter periods of time.

### **Exercise Tips:**

- Exercise one to two hours after a meal to help keep your blood sugar levels normal.
- Drink water before, during, and after you exercise. Your body loses water even if you do not sweat. You may need to take a break so you can drink the water you need.
- Do not exercise in very hot or humid weather.
- Do not exercise for more than 60 minutes at a time.

## **Exercising If You Take Insulin or Glyburide**



- Check your blood sugar level before and after you exercise.
- You may need to have a small snack with carbohydrates before you become active. This snack will help prevent hypoglycemia (dangerously low blood sugar).
- Do not exercise if your blood sugar is below 80 mg/dL or above 250 mg/dL.
- You may need to adjust the amount of insulin when you are exercising. Your doctor or diabetes educator will tell you how much to take.

## **Reasons to Stop Exercising Immediately**

If you have any of the following, stop exercising and call your doctor right away:

- Contractions, cramps, bleeding, or labor pains
- Any kind of pain in your chest or stomach, or below your waist
- Dizziness, shortness of breath, or trouble breathing
- Rapid heartbeats
- Trouble walking



## Meal Options for Fast Food

### Breakfast

|   | Calories | Carbohydrates<br>(grams) | Protein<br>(grams) |
|---|----------|--------------------------|--------------------|
| <b>McDonald's</b>                           |          |                          |                    |
| Egg McMuffin                                | 300      | <b>30</b>                | 18                 |
| Sausage Burrito                             | 290      | <b>26</b>                | 13                 |
|   |          |                          |                    |
| <b>Biscuitville</b>                         |          |                          |                    |
| Turkey sausage, egg & cheese English Muffin | 370      | <b>26</b>                | 36                 |
| Egg biscuit                                 | 180      | <b>29</b>                | 11                 |
|   |          |                          |                    |
| <b>Burger King</b>                          |          |                          |                    |
| Egg & cheese Croissan'wich                  | 300      | <b>30</b>                | 11                 |
|   |          |                          |                    |
| <b>Chick-Fil-A</b>                          |          |                          |                    |
| Egg white grill                             | 300      | <b>31</b>                | 25                 |
| Greek yogurt parfait                        | 230      | <b>28</b>                | 12                 |
| Breakfast burrito                           | 450      | <b>34</b>                | 30                 |





## Lunch or Dinner

|   | Calories | Carbohydrates<br>(grams) | Protein<br>(grams) |
|---|----------|--------------------------|--------------------|
| <b>Chick-Fil-A</b>  |          |                          |                    |
| Grilled chicken sandwich,<br><i>add side of fruit cup</i> | 355      | <b>48</b>                | 26                 |
|   |          |                          |                    |
| <b>McDonald's</b>   |          |                          |                    |
| Artisan grilled chicken<br>sandwich                       | 380      | <b>44</b>                | 37                 |
| Cheeseburger, <i>add side salad<br/>and apple slices</i>  | 330      | <b>41</b>                | 16                 |
|   |          |                          |                    |
| <b>Wendy's</b>  |          |                          |                    |
| Small Chili, <i>add kids' fries</i>                       | 400      | <b>46</b>                | 18                 |
| Grilled chicken sandwich,<br><i>add apple slices</i>      | 395      | <b>47</b>                | 35                 |
|   |          |                          |                    |
| <b>Subway</b>   |          |                          |                    |
| 6" oven roasted chicken<br>sandwich                       | 320      | <b>46</b>                | 23                 |
| 6" classic tuna sandwich                                  | 470      | <b>42</b>                | 20                 |
|   |          |                          |                    |

\*Nutrition information taken from Restaurant's Websites directly



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## Snack Ideas

(10-20 grams of carbohydrate + protein)

- ¼ cup dried fruit and nut mix
- 1 cup chicken noodle soup, tomato soup (made with water), or vegetable soup
- 1 small apple or orange + 2 Tablespoons of nut butter, low-fat string cheese or nuts
- 3 cups light popcorn + 1 low-fat string cheese
- 1/3 cup hummus + 1 cup raw fresh cut veggies (green peppers, carrots, broccoli, cucumber, celery, cauliflower or a combination of these)
- ½ cup cottage cheese + ½ cup canned or fresh fruit
- 1 cheese quesadilla (made with one 6-inch corn or whole wheat tortilla + 1 oz shredded cheese) + ¼ cup salsa
- 2 rice cakes (with a 4-inch diameter) + 2 Tablespoons nut butter
- 5 whole wheat crackers (or ¾ oz) + 1 low-fat string cheese
- ½ turkey sandwich (1 slice whole wheat bread + 2 oz heated turkey)
- ½ cup tuna or chicken salad + 4 saltines
- ½ English muffin + 2 Tablespoons of nut butter or low fat cheese slice
- ½ grilled cheese ( 1 slice whole wheat bread + low-fat cheese slice)
- 6 oz Greek yogurt (be sure to read label for grams of carbohydrate)
- ½ banana + 2 Tablespoons of nut butter

## Practice Time!

Take some time to practice. Look at the following meals and snacks and try to estimate the grams of carbohydrates contained in each. You can use the food list in this handout to assist you. Check your answers on the back of this page.

1. For breakfast you eat 2 Eggo waffles with 1 Tablespoon of maple syrup and some butter, 1 cup of strawberries and 1 cup of skim milk.  
Total Carbohydrate Servings: \_\_\_\_\_
2. For snack you have 1 small apple with 2 Tablespoons of peanut butter and 1 cup of whole milk.  
Total Carbohydrate Servings: \_\_\_\_\_
3. For lunch you have a 6" Subway tuna sandwich on whole wheat bread with cheese, lettuce, tomato and mayo. You also decide to have 1 bag of potato chips with a 16 oz Coca-Cola.  
Total Carbohydrate Servings: \_\_\_\_\_
4. For dinner you have 1 piece of meatloaf, mashed potatoes and green beans with 1 cup of skim milk.  
Total Carbohydrate Servings: \_\_\_\_\_
5. For a bedtime treat you decide to have 1 cup of chocolate ice cream.  
Total Carbohydrate Servings: \_\_\_\_\_

## Answer Sheet

1. Total of 5 Carbohydrate servings (71g)
  - Eggo Waffle: 13g of CHO/waffle= 26g of CHO
  - 1 Tablespoon syrup= 15g of CHO
  - 1 cup of strawberries= 15g of CHO
  - 1 cup of skim milk= 15g of CHO
  - Butter does not count toward carbohydrates
2. Total of 2 Carbohydrate servings (30g)
  - 1 small apple= 15g of CHO
  - 2 Tablespoons of peanut butter has no carbohydrate servings
  - 1 cup of whole milk= 15g of CHO
3. Total of 7 Carbohydrate servings (109g)
  - Coca-Cola (16oz)= 52g of CHO
  - 1 bag of potato chips= 15g of CHO
  - Bread on Tuna Sub= 42g of CHO (tuna, lettuce, tomato and mayo do not count toward carbohydrates)
4. Total of 2 Carbohydrate servings (30g)
  - Mashed potatoes= 15g of CHO (assuming you eat only 1 serving of ½ cup)
  - 1 cup of skim milk= 15g of CHO
  - Meatloaf does not count toward carbohydrates
5. Total of 2 Carbohydrate servings (30g)
  - 1 cup of ice cream is two servings= 30g of CHO

**\*CHO= carbohydrates**

