

# NUTRITION:

## Understanding Carbohydrates

### THIS CLASS WILL DISCUSS:

- Carbohydrate Review
- Reading a Nutrition Label
- Carbohydrate Counting
- Labeling Information

**“The only person you should try to be better than is the person you were yesterday.”**

-Unknown

### CARBOHYDRATE REVIEW

Carbohydrate foods you eat are digested into sugar, which cause your blood glucose (BG) level to increase. That said, it is still important to eat carbohydrates throughout the day because they provide energy and essential nutrients for your body.

#### Foods that contain carbohydrates:

- **Grains** (*bread, crackers, rice, hot and cold cereal, tortillas and noodles*)
- **Starchy vegetables** (*potatoes, peas, corn, winter squash, lentils and beans*)
- **Fruits and juices**
- **Milk and milk products**
- **Sweets and desserts** (*candy, baked goods, jellies, honey, etc.*)

This list may seem extensive, but there are many “free foods” that, when eaten in appropriate portions, will not affect blood glucose.

#### Foods with little to no carbohydrates:

- **Non-starchy vegetables** (*broccoli, tomatoes, spinach, cauliflower*)
- **Meats** (*All meats as long as they are not breaded*)
- **Eggs**
- **Cheese**



## NUTRITION LABEL READING

When counting carbohydrates during mealtime, the golden standard is to read the nutrition label for every food on your plate. The process would look something like this:

- 1. Determine foods on your plate which contain carbohydrates**
- 2. Approximate the serving size and compare this to the serving size listed on the food label**
- 3. Calculate “net carbs” by taking Total Carbs (grams) and subtracting Fiber (grams)**
- 4. Add total net carbs provided by all foods**

This is the ideal way to determine how many carbohydrates you are eating, but what do you do if the foods you eat do not come with a nutrition label? The carbohydrate exchange system (also referred to as carb choice, count, serving etc.) was created to fill this gap and we will discuss in detail.

Today, we can also take advantage of having the internet at our fingertips and the resources available online. Some ways to utilize the internet include:

- 1. Visit a chain restaurant’s website for nutrition information**
- 2. Refer to reliable websites which provide nutrition information** (ex: Calorie King, USDA Database, MyFoodAdvisor)
- 3. Download a nutrition app onto your cell phone** (ex: MyFitnessPal)
- 4. Visit your preferred search engine and enter “nutrition information for \_\_\_\_.”**

## CARBOHYDRATE COUNTING

An appropriate “carbohydrate choice” is a portion of food that has 15 grams of carbohydrate **(1 carb choice = 15 grams of carbohydrates).**

Common carbohydrate choices (see table) estimate what 15 grams of carbs looks like for a food item. When a nutrition label is not available, this may be the best way to guess how many carbohydrates you are consuming. Whenever possible, utilize the internet to find further nutrition information. Exactly how many grams of carbohydrates you should consume will be based on your weight, goals, caloric needs, etc. Your doctor or a registered dietitian will be able to better determine individualized goals for grams of carbohydrates per meal.

As a general rule, most Americans would benefit from a diet lower in carbohydrates and from knowing how to eat a “diabetic diet”. A good starting goal would be 3-4 CHO choices per meal (45-60 grams per meal).

<b>Grains</b>	<ul style="list-style-type: none"> <li>• 1 slice of bread</li> <li>• 1/4 large bagel</li> <li>• 6" tortilla</li> <li>• 1/3 cup cooked rice or pasta</li> <li>• 1/2 English Muffin</li> <li>• 4" pancake</li> <li>• 3/4 cup unsweetened cereal</li> </ul>
<b>Starchy Vegetables</b>	<ul style="list-style-type: none"> <li>• 1/2 corn on the cob or 1/2 cup</li> <li>• 1/2 cup peas</li> <li>• 1/4 large potato</li> <li>• 1/2 cup mashed potato</li> <li>• 1 cup winter squash</li> </ul>
<b>Fruit and Juice</b>	<ul style="list-style-type: none"> <li>• 1 small apple</li> <li>• 1/2 banana</li> <li>• 3/4 cup blueberries</li> <li>• 17 small grapes</li> <li>• 2 tbsp. raisins</li> <li>• 1<sup>1/4</sup> cup whole strawberries</li> <li>• 1/2 cup most fruit juice</li> </ul>
<b>Milk and Yogurt</b>	<ul style="list-style-type: none"> <li>• 1 cup milk</li> <li>• 1/2 cup chocolate milk</li> <li>• 2/3 cup yogurt</li> </ul>
<b>Sweets and Desserts</b>	<ul style="list-style-type: none"> <li>• 1 tbsp. honey</li> <li>• 1 tbsp. jelly</li> <li>• 1/2 cup ice cream</li> </ul>

## MORE LABELING INFORMATION

**1. Be aware of marketing strategies used to make food items appear “healthy.” Below are definitions for common terms found on packaging material.**

- **Sugar-Free:** Less than 0.5 g sugars per RACC and per labeled serving (or for meals and main dishes, less than 0.5 g per labeled serving).
- **No Added Sugar/ Without Added Sugar:** Allowed if no sugar or sugar containing ingredient is added during processing. The claim does not refer to sugar alcohols, which may be present. These foods usually still contain sugar.

**2. Other forms of simple sugar which may be listed as an ingredient and should be avoided include:**

- agave
- maple syrup
- cane sugar
- evaporated cane juice
- fructose
- brown sugar
- fruit juice concentrate
- honey
- molasses
- malt sugar
- coconut sugar
- palm sugar
- high fructose corn syrup

**3. Alternative sweeteners, or non-nutritive sweeteners, are added to food products to give your taste buds a sweet taste without the calories. Since these products do not have a nutritional component, they also do not have an effect on your blood glucose levels. Alternative Sweeteners include:**

- monk fruit sugar (*natural*)
- stevia (*natural*)
- sucralose (“Splenda”; *artificial*)
- saccharin (“Sweet-N-Low”; *artificial*)
- aspartame (“Equal”; *artificial*)
- sugar alcohols (*sorbitol, xylitol, maltitol, isomalt, lactitol, mannitol, erythritol; artificial*)

## WHAT ABOUT LOW-CARBOHYDRATE DIETS

There are many diets which promote low or no carbohydrate intake including the Atkin’s Diet, South Beach Diet and Ketogenic Diet. Results published on the effects of a low carbohydrate diet on type 2 diabetes is compelling, but it should be performed under strict supervision with access to a physician for medication management, biomarker feedback, nutrition and behavior change education, and a close support system which includes a health coach.



## CHECK YOUR UNDERSTANDING:

1. List the three common resources for counting carbohydrates and explain:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

2. List some labeling information to be mindful of:

---

---

---

## ACTION PLAN:

1. Practice food journaling to determine how many CHO you eat at each meal. Explore free applications available to log foods and track CHO and fiber intake (ex: myfitnesspal).

	Breakfast	CHO	Lunch	CHO	Dinner	CHO	Snacks	CHO
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								

**Directions:** In the first meal column list your food choices with portion sizes. In the column beside it calculate grams of carbohydrates in that meal.

## NOTES: