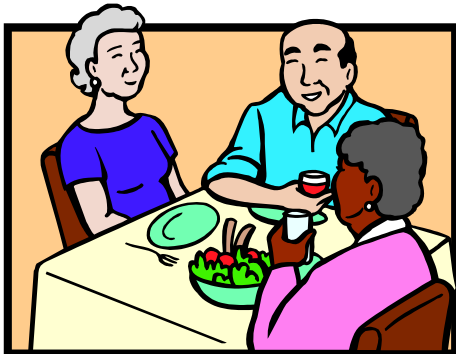


## Meeting 4



## Plan Meals for Glucose Balance

### Welcome!



We are so happy to see you again! Today's topic is Plan Meals for Glucose Balance.

Eating when you have diabetes is more about keeping things balanced – watching what you eat and paying attention to how your blood sugar responds after you eat certain foods.

To keep you on the path to glucose balance, we will learn about three main food plans recommended for glucose balance:

1. The Exchange Meal Plan
2. The Glycemic Index Plan
3. Counting Carbohydrates Food Plan

We will talk most about the Counting Carbohydrates Food Plan because it is one of the easier ways to plan meals, but we want you to know a little bit about the other two meal plans also.

But first let's spend a few minutes to review what we talked about in the first three meetings.

## Meeting 4



## Plan Meals for Glucose Balance

### Meeting 1: Glucose Balance Makes a Difference!



In meeting 1, **Glucose Balance Makes a Difference**, we said to get and keep your glucose in balance, it is important to:

- ✓ Know your glucose numbers,
- ✓ Know what makes them go up and down,
- ✓ Self-test often, with a goal of 70 - 130 before eating, and lower than 180 two hours after eating, and
- ✓ Get A1c lower than 7.

### Meeting 2: Medicine and Glucose Balance



In meeting 2, **Medicine and Glucose Balance**, we said:

- ✓ Diabetes medicine is an important part of a diabetes treatment plan, and
- ✓ Diabetes medicine works together with healthy eating and physical activity to lower blood sugar.

## Meeting 4



## Plan Meals for Glucose Balance

### Meeting 3: Food and Glucose Balance



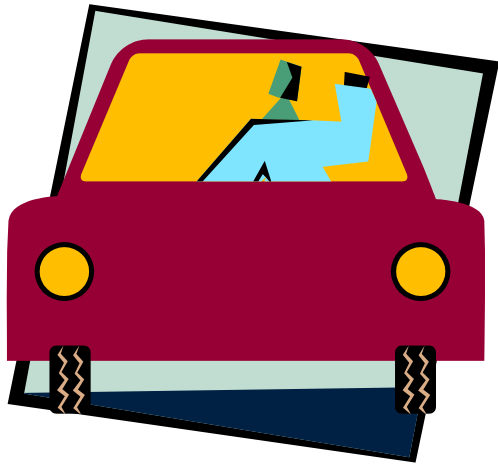
In meeting 3, **Food and Glucose Balance**, we said to:

- ✓ Develop a routine to eat your meals and snacks at about the same time each day.
- ✓ Eat a variety of foods high in fiber and low in fat, calories and sugar, such as whole wheat bread, brown rice, and vegetables.
- ✓ Do not skip meals or snacks.
- ✓ Avoid foods high in fat or oil, like fried foods, bacon, sausage, mayonnaise, and cheeses.
- ✓ Read food labels to find the best foods for glucose balance!

Before we get started on today's meeting, let's see what Kaipo and Uncle Tommy are doing today.

This morning, Uncle Tommy has an appointment at the clinic and Kaipo is going with him.

Kaipo ran out of the front door of his house to Uncle's car waiting for him. He jumped in and said, "Hi Uncle!" Uncle replied, "Good morning Kaipo. Thanks for going to my appointment with me. Afterward we will go to the bait and tackle shop and look at some fishing poles."



"Who are you going to see today?" asked Kaipo. "My doctor made an appointment for me to see a nutritionist to talk about my diet," said Uncle Tommy. "Oh," replied Kaipo. "What's wrong with your diet?"

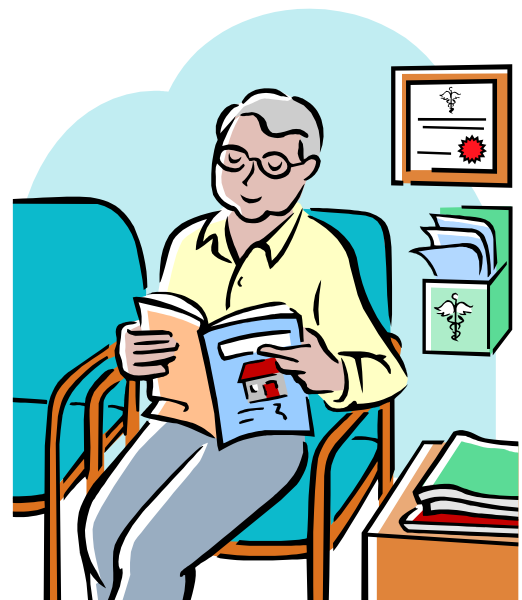
"I'm not sure, but I bet the nutritionist will help me figure it out," Uncle said laughing.

After they arrived at the clinic, Uncle checked in and waited for the nutritionist. About 15 minutes later, a nice looking lady came out to the waiting room and called his name.

Uncle Tommy and Kaipo stood up and followed the lady to an office.

"It's good to meet you, my name is Mele.

I am a registered dietitian and I help people plan meals that keep blood sugar in balance." Mele introduced her assistant, Donna, to them.



Kaipo sat there quietly in the chair next to Uncle Tommy. He was very interested to see how she was going to get Uncle to change his eating habits.

Mele asked Uncle, “Tell me what some of your favorite foods are.” Uncle listed about 10 foods he liked. He knew some of them weren’t that healthy, and he was a little embarrassed to tell her that they were his favorites, but he told her anyway.



Donna typed in everything Uncle said. Mele spent half an hour asking Uncle Tommy questions about the foods he ate, how they were cooked, when he ate his meals, and how often he ate out at restaurants and fast food places.

Kaipo said, “Wow, that’s a lot of questions.” “Yes it is,” replied Mele. I need to know all about what your Uncle eats so I can help him plan a diet that he can live with.”

Mele got up from her desk and picked up some plastic food models she had on a shelf. She showed Uncle Tommy and Kaipo some of the foods Uncle had mentioned and showed them how much of each food he should try to eat.



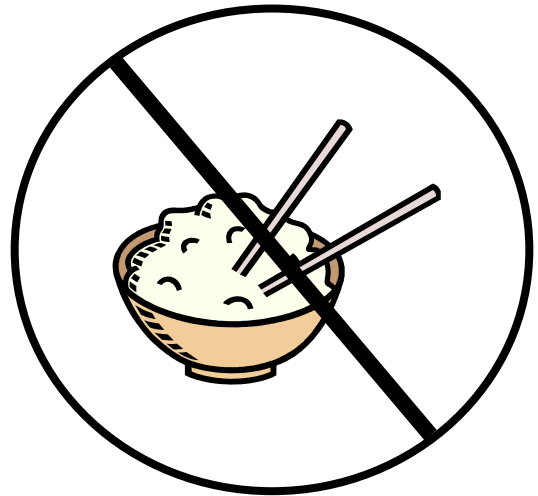
Mele told him about something in food called carbohydrates. Mele said, “Carbs are very important for our bodies, but we need to watch how many we eat and what foods they come from. It’s better to get carbs from whole grain foods, like whole wheat bread and brown rice, and from fruit and vegetables.

White foods, like white bread and white rice make your blood sugar go up more than whole grain foods and can cause weight gain.” Mele handed Uncle Tommy a picture of some foods that are good for glucose balance and some that are not so good.

Good for Glucose Balance



Not Good for Glucose Balance



Mele said to Uncle, “Let’s start with a small change that you can try over the next two weeks. What would you like to try changing?”

Uncle said, “I can try to eat brown rice instead of white rice.” Mele replied, “That would be great! I have some low salt seasoning you can sprinkle on it to give it flavor. You can also use low sodium soy sauce if you’d like. Please call me if you have any questions. I would like to see you again in two weeks and you can tell me what you thought about the brown rice.”



Kaipo and Uncle left Mele’s office and got in Uncle’s car. Kaipo said, “Thanks for taking me with you to your appointment. That was really cool, and I liked those plastic food models. I’m going to tell my mom that we should try brown rice too.” Uncle laughed and said, “We’ll pick some up from the store on the way home. Now let’s go to the bait and tackle shop!”

## Meeting 4



## Plan Meals Glucose Balance

### Three Major Diabetes Food Plans



### Why do you need a food plan?

### Carbs Affect Blood Sugar

As we said, there are three main food plans that people with diabetes use to manage their eating:

1. The Exchange Meal Plan
2. The Glycemic Index Plan
3. Counting Carbohydrates Food Plan

Using a food plan helps you keep track of your food intake, and eating close to the same amount of carbs, proteins and fats everyday helps you figure out how your body reacts to food. Knowing how foods affect your blood sugar gives you the tools to maintain balance.

It is important to test your blood sugar with your glucose monitor to see how different foods and drinks affect you.

Carbohydrates are the most important part of the food you eat. They directly affect your blood glucose almost immediately after you eat them. While carbs are an important part of everyone's diet, too many can keep glucose out of balance. All three plans we are going to talk about can help you choose the carbs that will get and keep glucose in balance.

We will talk about the Exchange Meal Plan first.



## Meeting 4



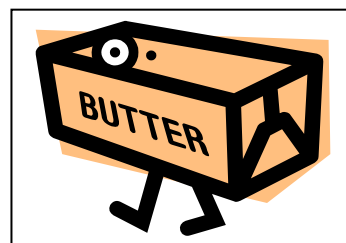
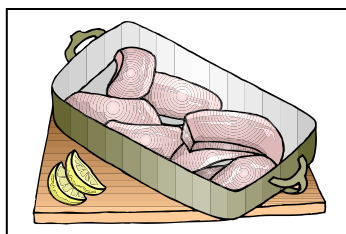
## Plan Meals for Glucose Balance

### The Exchange System

The word *exchange* refers to the fact that each item on a particular list may be interchanged, or switched, with any other food item on the same list. An exchange can be explained as a substitution, choice, or serving.

With the Exchange System, there are lists of foods found in books published by the American Diabetes Association and the American Dietetic Association. Each list is a group of measured or weighed foods that have about the same nutritional value.

The exchange system puts foods into three main groups: Carbohydrates, Meat and Meat Substitutes, and Fats.



1. The Carbohydrate Group contains the Starch, Fruit, Milk, Sweets and desserts (other carbohydrates), and Vegetable lists. Foods from the Starch, Fruit, Milk, and Sweets lists can be interchanged in the meal plan.
2. The Meat and Meat Substitute Group contains food sources of protein and fat. The group is divided into four lists: Very Lean Meats, Lean Meats, Medium-Fat Meats, and High-Fat Meats, allowing the user to see at a glance which meats are low-fat and which meats are high-fat.
3. The Fat Group contains three lists: Monounsaturated Fats, Polyunsaturated Fats, and Saturated Fats. The exchange lists also identify foods that contain a lot of sodium.

## Meeting 4



## Plan Meals for Glucose Balance

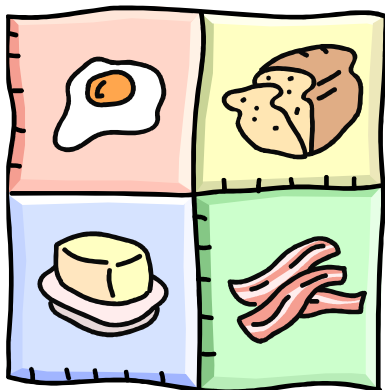


### Visit with a Registered Dietitian to learn how you can use the Exchange Plan

To use the exchange lists, you will need an individualized meal plan that shows the number of exchanges from each list for each meal and for snacks.

The American Diabetes Association recommends that, because nutrition can be complex, a registered dietitian who has experience with nutrition therapy be the team member who works with you to develop your meal plans.

### The Glycemic Index



The second meal plan is called the glycemic index. Some people who have diabetes use the glycemic index to choose foods, especially carbohydrates. The glycemic index rates carbs by how much they will raise blood sugar after you eat them.

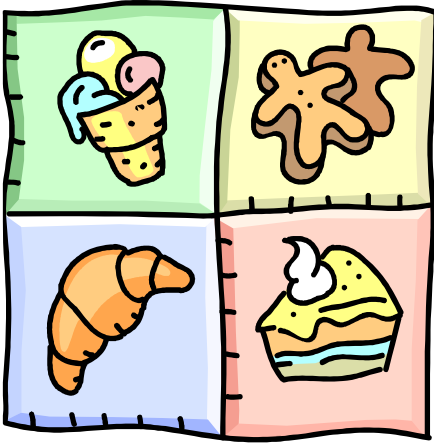
Foods and drinks are scored on a scale of 0 to 100. Lower numbers mean that the food or drink won't raise blood sugar as much as food or drinks with a higher number. Only foods that have carbs in them are ranked.

The goal of the glycemic index is to help you choose the "right" carbs to keep your blood glucose balanced. It is not a low-carb or a low fat diet, and it doesn't require you to count calories or eat smaller portion sizes.

## Meeting 4



## Plan Meals for Glucose Balance



Carbs, like candy, sugar, cake, and cookies have a high glycemic index. These foods can cause a spike in blood sugar. This is not helpful for glucose balance.

Whole grain foods will have a lower glycemic index because they will not raise your blood sugar as much as foods with a high glycemic index. Foods with a low glycemic index will be digested more slowly and raise blood sugar in a more regulated and gradual way. This is better for glucose balance.

For a glycemic index diet, it is suggested that you:



- ❖ Focus on breakfast cereals with oats, barley, and bran.
- ❖ Eat breads with whole grains, stone-ground flour, or sourdough.
- ❖ Eat fewer potatoes, rice pasta, and noodles.
- ❖ Eat plenty of fruits and vegetables.

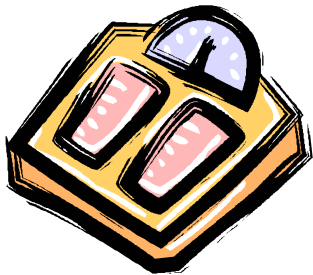
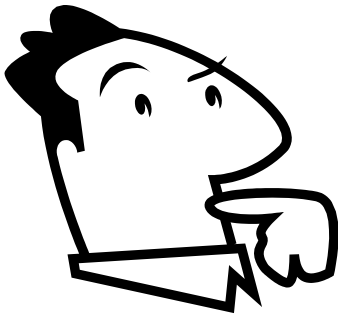
There are lists on the internet and in books that show the rankings of many foods, but some foods and drinks may not be listed.

## Meeting 4



## Plan Meals for Glucose Balance

### Concerns with the Glycemic Index Plan



It is important to know that the glycemic index does not rank foods according to how healthy they actually are. For example, both potato chips and ice cream have a lower glycemic index than baked potatoes, even though baked potatoes are considered healthier.

So while lower glycemic index foods may help with blood sugar balance, choosing them without thinking about fat and calories could lead to other health problems, like high cholesterol and weight gain.

There are some other things to think about if you choose the glycemic index plan.

1) Since this diet doesn't require you to eat smaller portion sizes, you could end up eating more calories whether the glycemic index is high or low. Eating more calories can lead to weight gain which will keep glucose out of balance.

2) Finally, it can be hard to follow a glycemic index diet on your own. For one thing, most foods aren't ranked by glycemic index. Packaged foods don't generally list their rank on the label, and it can be hard to estimate what it might be.

If you are interested in the Glycemic Index to plan your meals, you should first talk with a registered dietitian to see how it can help you with your goal of glucose balance.



## Meeting 4

# Plan Meals for Glucose Balance

### What is Carbohydrate Counting?

Now let's talk about the Counting Carbohydrates Food Plan.

As we said earlier, foods that contain carbohydrate raise blood glucose. By keeping track of how many carbohydrates you eat and setting a limit for the maximum amount to eat, you can keep blood glucose levels in your target range.

### What Foods Have Carbohydrate?



Foods that contain carbohydrate are:

- starchy foods like bread, cereal, rice, and crackers
- fruit and juice
- milk and yogurt
- dried beans like pinto beans and soy products like veggie burgers
- starchy vegetables like potatoes and corn
- sweets and snack foods like sodas, juice drinks, cake, cookies, candy, and chips
- beer, wine, and some hard liquors

Non-starchy vegetables, like broccoli, peppers, and zucchini have a little bit of carbohydrate but in general are very low.

## Meeting 4



## Plan Meals for Glucose Balance

### How many carbs should I eat?

On nutrition food labels you will see the number of carbohydrates listed in grams. Grams are a unit of weight like pounds or ounces. One carbohydrate servings equals 15 grams. For example, 6 crackers would equal one serving of carbs because the food label shows that there are 15 grams of carbs in 6 crackers

<b>Nutrition Facts</b>
<b>Serving Size:</b> 6 crackers
<b>Total Carbohydrate:</b> 15g



### Should I pay attention to serving sizes for carbs?

The recommended number of servings of carbs is based on your weight, activity level, diabetes medications, and goals for your blood glucose levels. A member of your health care team, such as a dietitian, can work with you to make a personalized plan.

For many people, 3 or 4 servings of carbohydrate foods at each meal, and 1 or 2 servings for snacks works well. This equals about 45 to 60 grams of carbohydrate at a meal, and 15 to 30 for snacks.

You should pay attention to the amount of carbs you eat because it can make a big difference in blood glucose balance. If you eat more carbs than usual, your blood sugar is likely to be higher than usual for several hours afterward.

Now let's count some carbs using food labels.

## Carbs on a Food Label

- Look for the serving size at the top of the label.
- Look for “Total Carbohydrate” in the middle of the label. Total Carbohydrate has a “g” for grams to the right of the number.

<b>Nutrition Facts</b>	
Serving Size ½ cup prepared	
Servings Per Container 8	
% Daily Value*	
AMOUNT PER SERVING	PREPARED
<b>Calories</b>	160
Calories from fat	70
<b>Total Fat</b> 1g	10%
Saturated Fat 0.5g	10%
Trans Fat 0.5g	
<b>Cholesterol</b> 0mg	1%
<b>Sodium</b> 370mg	18%
<b>Potassium</b> 310mg	11%
<b>Total Carbohydrate</b> 15g	7%
Dietary Fiber 1g	6%
Sugars 1g	
<b>Protein</b> 2g	
Vitamin A	6%
Calcium	6%
Iron	2%
Riboflavin	4%
Niacin	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.	

1. What is the serving size?

\_\_\_\_\_

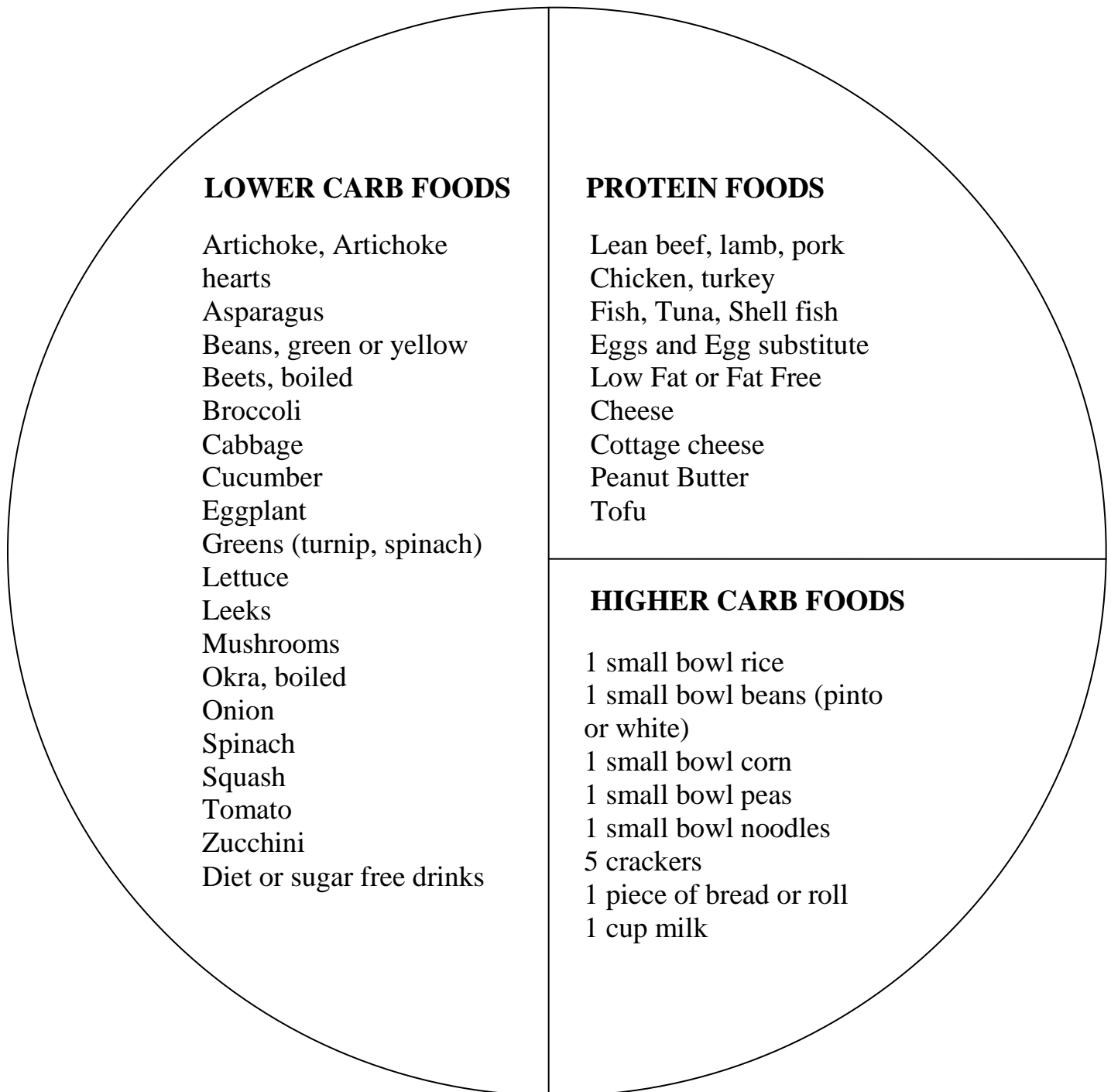
2. How many carbohydrate grams are in each serving? \_\_\_\_\_

3. If you eat 2 servings (1 cup) you will get \_\_\_\_\_ grams of carbs.

Answers:

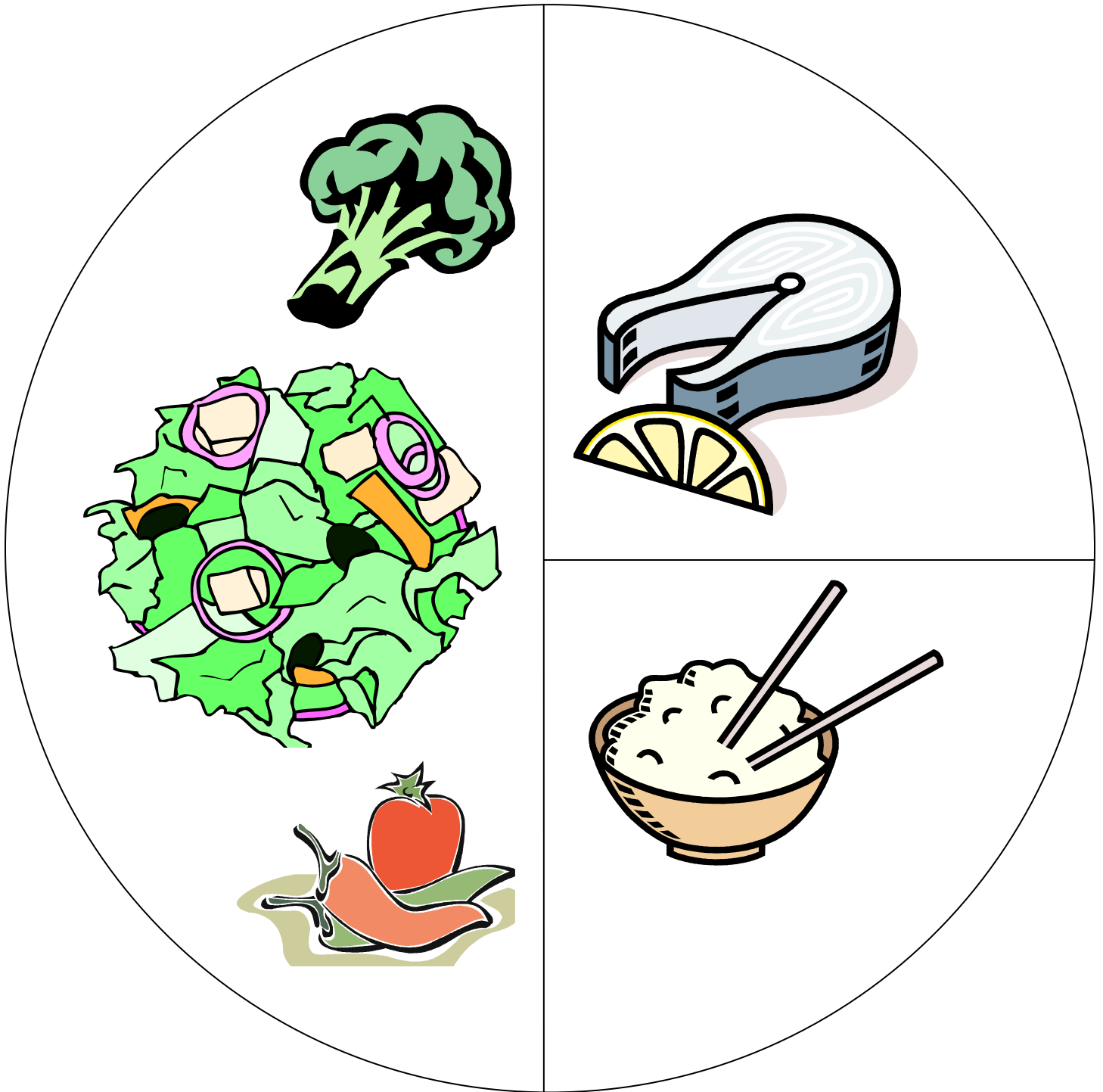
1. ½ cup
2. 15 grams
3. 30 grams

**You can also use your plate to control carbohydrates.  
For your lunch and dinner you can divide your plate into 3 parts.**





Here is an example of a balanced carb meal.



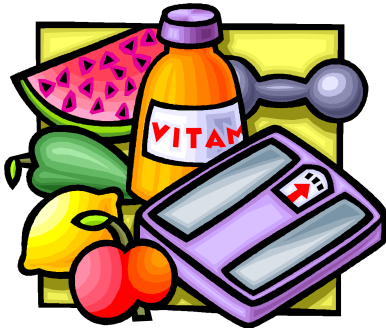
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## Plan Meals for Glucose Balance



Remember that finding the right amount of carbohydrate depends on many things including how active you are and what, if any, medicines you take.



Almost any diet that helps you lose weight can help with glucose balance because your body is better able to use the food you eat. The three plans we talked about today provide strategies to monitor your carbohydrates and balance blood sugar, and may help with weight loss too.



A Registered Dietitian can tailor a diet based on your health goals, tastes, and lifestyle. Ask your doctor for a referral to a registered dietitian. Or, to find a dietitian near you, call the American Dietetic Association's National Center for Nutrition and Dietetics toll free at 1-800-877-1600 or see [www.eatright.org](http://www.eatright.org) and click on "Find a Nutrition Professional."



# Meeting 4

# Plan Meals for Glucose Balance



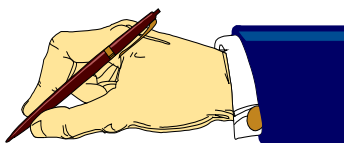
## Let's Review!

Here are some of the important things to remember from today's meeting:

- The three main food plans for glucose balance are:
  - 1) The Exchange Meal Plan
  - 2) The Glycemic Index Plan
  - 3) The Counting Carbohydrates Plan
- Any of the plans can help you choose carbs to keep glucose in balance.
- Counting Carbohydrates Plan may be the easiest to do because you can read food labels to monitor the number of carbs you eat.
- Talk with a registered dietitian about a plan that is best for you.
- It is important to monitor your blood sugar to see how different foods affect glucose balance.

We have covered a lot of information about meal plans for glucose balance. Knowing how choose your carbohydrates will help you reach your goal of glucose balance.

## Set a Goal!



Take a few minutes now to write down one goal that you plan to work on this week to plan meals for glucose balance. Remember all that we talked about today.

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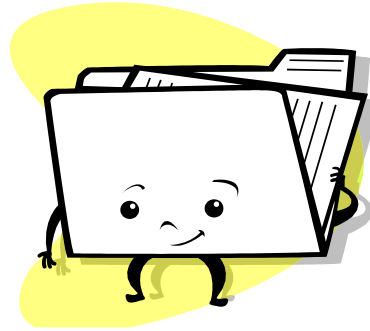
## Meeting 4



## Plan Meals for Glucose Balance

### More tools!

In the pocket for this meeting you will find some forms you can use to help keep you on the path to glucose balance.



### Thank You!

Thank you and we will see you next time when we will talk about Physical Activity and Glucose Balance. Be sure to bring your notebook with you.

