Challenges with Carbohydrate Counting & Food Labels

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The Confusion...
• Understanding how different foods and amounts of food affect blood sugar levels is the first step toward making healthy food choices

• Food is made up of carbohydrate, protein, and fat—and all of these have an effect on blood sugars
Foods with carbohydrates, or "carbs," have the most dramatic effect on raising blood sugar levels.

Since many healthy foods contain carbohydrates, they are important to include in a healthy diet.
Which Foods have Carbohydrates?

- Breads, crackers, and cereals
- Pasta, rice, and grains
- Vegetables, especially starchy vegetables such as potatoes, corn, and peas
- Beans and legumes
- Milk, soy milk, and yogurt
- Fruits and fruit juices
- Sweets such as cakes, cookies, ice cream, jam, and jelly

Meat, fish, chicken and fats including butter, cheese, and oils have none to few carbohydrates.
Carbohydrate counting is a useful tool in keeping a proper balance between diet, exercise, and diabetes medications.

Goal—develop a daily meal plan that is based on the number of carbohydrate grams to reach a healthy weight or keep blood sugar levels under control.

The amount (grams) and the type of carbohydrate in a food influence the blood glucose level.

What should we prioritize first?

- The total amount of carbohydrate in meals or snacks is more important than the source or type.
- The more carbohydrates consumed at one time will have a greater impact on post prandial blood sugars.

Franz MJ. Carbohydrate and diabetes: is the source or the amount of more importance? Curr Diab Rep, 2001;1(2):177-86
• Portions! The average Americans underestimate how much they eat by 30%.
• The amount of carbohydrates found in that food
• “Hidden” sources of carbohydrates
• Looking only at Sugars listed on the label
• Forgetting to look at the serving size first!
Easily forgotten sources of carbohydrates

- Milk substitutes
- Yogurt
- Baked beans (more carbs than regular beans)
- Tomato sauce
- Salad dressings
- BBQ sauce
- Orange chicken
- Split pea soup
- Sugar free foods
- Protein Bars
Other Challenges

• Eating out…portions of pasta and rice
• Prioritizing “Sugar free” products
• Some people respond differently to different foods
• Eating a “new” food and expecting it to act like other foods
• High fat and high protein foods don’t raise blood sugars
In diabetes meal planning, 1 serving of a food with carbohydrate has about 15 grams of carbohydrate.

Check serving sizes with measuring cups and spoons or a food scale.

Read the Nutrition Facts on food labels to find out how many grams of carbohydrate are in foods you eat.
• Original label introduced 20 years ago
• Manufactures will be required to use the new label by July 26, 2018
### NEW LABEL / WHAT'S DIFFERENT

- **Servings:** larger, bolder type
- **Serving sizes updated**
- **Calories:** larger type
- **Updated daily values**
- **Actual amounts declared**
- **New footnote**

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### Nutrition Facts

<table>
<thead>
<tr>
<th><strong>Amount per serving</strong></th>
<th><strong>Calories</strong> 230</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Fat</strong> 8g</td>
<td>10%</td>
</tr>
<tr>
<td>Saturated Fat 1g</td>
<td>5%</td>
</tr>
<tr>
<td>Trans Fat 0g</td>
<td></td>
</tr>
<tr>
<td><strong>Cholesterol</strong> 0mg</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Sodium</strong> 160mg</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total Carbohydrate</strong> 37g</td>
<td>13%</td>
</tr>
<tr>
<td>Dietary Fiber 4g</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total Sugars</strong> 12g</td>
<td></td>
</tr>
<tr>
<td>Includes 10g Added Sugars</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Protein</strong> 3g</td>
<td></td>
</tr>
</tbody>
</table>

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.*
Fiber is present in all plants that are eaten for food, including fruits, vegetables, grains, and legumes.

Fiber is divided into two types:
- **Soluble fiber**: keeps blood sugar (glucose) from entering the bloodstream too quickly
- **Insoluble fiber**: provides “bulk” helps move waste through the digestive tract
How many servings of carbohydrate foods are best for at each meal and snack?

The recommended number of servings is based on weight, activity level, diabetes medications, and goals for blood glucose levels.
For many people, about 45 to 60 grams of carbohydrates at meals is a good target.

For example:

Plan ahead and make other meal adjustments to compensate for a sweet or dessert, like cutting back on other foods with carbohydrates at the same meal.
Carbohydrates in Meat – Fish Poultry 3 to 4 oz serving. 0g

Carbohydrates in Vegetables = 1 c. Serving
Broccoli = 4g
Zucchini = 8g
Peas = 25g

Portion Size is Important

Carbohydrates in cooked starchy Food = 1 c. serving
Potatoes = 35g
Rice = 40g
Noodles = 32g
Pinto beans = 24g

Carbohydrates in Fruits = 1 c. serving
Apple = 19g
Blackberries = 18g
Grapes = 28g
Resources for Carbs – Calorie King
Helpful Hints for Visually Estimating Portion Sizes by VOLUME

When determining the calories of different foods, it is important to estimate portion sizes as accurately as possible. Some foods are better measured by volume, others by weight.

Actual Size

Compare your fist to a measuring cup. Is it more or less than one cup? Use this comparison to estimate how many cups of food are on your plate.

Actual Size of One Tablespoon

Compare your thumb to a tablespoon. Use this comparison to estimate portion size.

To become a Weights and Measures Expert, practice your estimating skills.

For example, put three measured cups of food on a dinner plate. Notice how much food is on the plate – take a "mental snapshot."

Now repeat this exercise with four measured cups of food on a dinner plate.

Use these measures for comparison when determining the number of cups of food you are eating.

It is helpful to repeat this exercise from time to time to brush up on your estimation skills – practice by using different amounts.
How many carb servings in lunch today?

- What are the carbohydrates in your lunch?
  - Spinach tortilla (12”) = 43 grams
  - Fruit salad (1 cup) = 19 grams

Total carbohydrate count = 62 grams
Portion Size Counts

1 Cup = Baseball
¾ Cup = Tennis Ball
½ Cup = Computer Mouse
¼ Cup = Egg
3 Oz. = Deck of Cards
2 Teaspoons = Ping-Pong Ball
Blood Sugar Levels

1 Hour 2 Hours

Carbohydrate Only Meal - (oatmeal & milk)

Mixed Meal – (pasta with meat sauce)
• Which Foods are “Free”
  (less than 20 calories per serving)
• Water and very low calorie beverages
  – Tea, coffee, diet soda
• Herbs and spices
• Condiments in moderation
• Sugar-free flavored gelatins
• Non-starchy vegetables, such as salads, cucumbers and carrots
General Nutrition Principles for Diabetes

- Eat 3 balanced meals each day. Aim for 1-2 snacks each day.
- Avoid skipping meals.
- Meals and snacks should not be longer than 5 hours apart. Eat every 2-4 hours.
- Meals/snacks should be eaten around the same time everyday.
- Eat about the same amount of food and carbohydrate at each meal/snack.
The amount of low nutrient, high calorie foods and beverages Americans consume has been a major contributor to the significant rise in obesity, diabetes, heart disease, high blood pressure and certain cancers.

In 2012, 29.1 million Americans (9.3%) were diagnosed with diabetes

In 2012, 86 million Americans had prediabetes

American Diabetes Association, revised 12/2015 Fast Facts
Diabetes Prevention Program

- 120 min/week moderate exercise (walking, 900-1000 kcal/week)
- Decreased total kcal intake by 450 kcal/d
- 5% weight loss or 8.8 pounds over 3yrs

Resources

- **American Diabetes Association (ADA) - "My food advisor"
  
  Free, online resource for recipes, tips, meal plans, newsletters for healthy living

- **ADA Complete Guide to Carb Counting (Paperback)**

- **The Complete Book of Food Counts**
  
  Corrine T. Netzer

- **The Ultimate Diabetes Meal Planner**
  
  Jaynie Higgins AC, CPT & David Groetzinger

- **The Healthy Carb Diabetes Cookbook**
  
  Chef Jennifer Bucko, MCFE, & Lara Rondinelli, RD, LDN, CDE

- **Diabetes Diet Cookbook**
  
  Ann Finzante, MS, RD
THANK YOU!