Diabetes, Obesity, & Nutrition: Promoting Positive Outcomes

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Objectives

• Basic overview of diabetes
• Coaching to address goals related to diabetes
• Promoting positive outcomes in diabetes
• Obesity’s role in diabetes prevention
• Nutrition overview to support positive outcomes
**The liver stores sugar in the form of glucagon to prevent low blood glucose levels in an individual without diabetes**
Diabetes - What Is It?

There are THREE types of diabetes

• **Type 1 Diabetes**
  • Autoimmune diseases
  • Body attacks the pancreas
  • “juvenile” diabetes

• **Type 2 Diabetes**
  • Most common type of diabetes
  • Adult onset
  • Prevention is key

• **Gestational Diabetes**
  • Occurs during pregnancy
  • Can lead to Type 2 diabetes later in life
Type 1 Diabetes
Autoimmune Attack On the Insulin Producing Beta Cells

Food enters the stomach and is turned into glucose

Glucose enters the bloodstream

Little to no insulin is sent into the blood stream

Muscles throughout the body are not able to use the glucose for energy
Type 1 Diabetes

DKA: Diabetic Ketoacidosis

- Occurs when blood glucose levels are dangerously high
- Severe dehydration occurs
- Life threatening
- Coma
Type 2 Diabetes

- The Pancreas may still produce insulin
- Insulin resistance - the insulin receptors malfunction blocking glucose from entering muscle cells
- The liver is unable to regulate the amount of glucagon entering the bloodstream
Insulin Resistance: A Vicious Cycle

- Feel Tired & Hungry
- Eat Food That is Turned Into Glucose
- Food Is Instead Stored As Fat
- Cell Cannot absorb food for energy
- The Body Makes Insulin
Diabetes Affects Every Organ and Body System
Target Goals In Diabetes:

Fasting Blood Glucose levels <130

Post Meal <180

HgA1C <7% *3 month average blood glucose level
## Comprehensive Care

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</table>
| **A** | Hemoglobin A1C | Checks overall control of diabetes by looking back at the blood glucose levels over the past 2-3 months | • Generally done 1-2x a year when diabetes is controlled  
• Every 3 months when diabetes is not well controlled |
| **B** | Blood Pressure | Control is vital to reduce stress on the heart and kidneys | • Goal less than 140/90  
• Check every visits, and as recommended by health care provider |
| **C** | Cholesterol | Controlling LDL levels is important to reduce risks for heart attack or strokes | • LDL goal less than 100  
• Checked at least annually |
| **S** | Smoking | Reduces risk for multiple conditions and life-threatening events | • New York State Smokers Quit Line  
• Assess smoking status, willingness to quit |
Additional Factors to Promote Positive Outcomes

- Annual Foot Exams
- Routine Dental Care Every Six Months
- Annual Flu Vaccine
- Dilated Eye Exam Annually
- Annual Kidney Test

Healthy Eating
Staying Active
Understanding Medication Regimen
Blood Glucose Monitoring
Important Questions To Ask..

- How often do you check your blood glucose levels?
- What is a normal blood glucose level?
- What medications do you take for your diabetes?
- When do you take your medications?
- How do you take your medications?
- Who helps you manage your diabetes?
- What are your blood glucose goals?
Prevention Is Key
Obesity Increases Can Individual’s Risk For Diabetes, Hypertension, Vascular Diseases
Nutrition: Where To Start

• Meet the patient where they are at by asking those open ended questions:

  • What concerns do you have regarding your diet?
  • Who prepares the food in your house?
  • What is a typical breakfast, lunch, dinner look like?
  • What do you know about carbohydrates?
  • What type of nutritional assistance or education have you received?
  • Where do you feel you struggle in maintaining a healthy diet?
Nutrition 101 - The Food Label

Learning to Read Food Labels

**Serving Size**: A serving size is usually less than most people eat. If you eat 2 servings, make sure you double the calories and all of the daily values. When comparing foods, make sure, the serving sizes are the same.

**Fat**: This lists the total amount of fat in one serving. Try to limit the amount of saturated fat and trans fat you eat.

**Cholesterol**: Try to eat less than 300 mg each day.

**Sodium**: Try to eat less than 2400 mg of sodium (salt) each day.

**Carbohydrates**: These help give you energy. They are found in bread, pasta, potatoes, fruits and vegetables. Good sources of fiber include fruits, vegetables, whole grains, and beans. Try to eat 20 to 35 g of fiber per day.

**Protein**: Protein helps build muscle. It is found in meat, nuts, eggs, fish, and dry beans. Try to eat lean cuts of meat.

**Chicken Noodle Soup**

**Nutrition Facts**

- Serving Size: 1/2 cup (120 ml) condensed soup
- Servings Per Container: about 2.5

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories: 80</th>
<th>Calories from Fat: 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat</td>
<td>1.5g</td>
<td>% Daily Value</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0.5g</td>
<td>2%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td>3%</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>15mg</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>890mg</td>
<td>37%</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>8g</td>
<td>3%</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>1g</td>
<td>4%</td>
</tr>
<tr>
<td>Sugars</td>
<td>1g</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>3g</td>
<td></td>
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**Calories**: A calorie is a measure of energy use. Also listed is the number of calories from fat. The general rule is that no more than 30% of your calories should come from fat.

**% Daily Value**: This shows how much of the recommended amounts of these nutrients are in one serving (based on a 2,000 calorie diet). These percentages make it easy to compare one brand with another. Just make sure the serving size is the same. The goal is to eat no more than 100% of each nutrient each day.

**Vitamins & Minerals**: This shows you how much of the recommended amount of certain vitamins and minerals are in the food. Your goal is to reach 100% for each vitamin and mineral every day.

**Recommended Amounts**: Here you can see the recommended daily amount for each nutrient for 2 calorie levels: a 2,000 calorie and a 2,500 calorie daily diet. Your recommended daily calories may be higher or lower depending on your age, gender, and how active you are. However, notice that the recommended amount of sodium and cholesterol are the same no matter how many calories you eat a day.
Quiz Them!

The best way to meet individuals where they at: Quiz them!

Use any food label and quiz your patient/client.
Carbohydrates are the primary source of energy in the body.

Carbohydrates comprise of starch, sugar, and fiber.

Carbohydrates are vital to organ function.

Simple vs. Complex Carbohydrates

What About Fiber?
-Fiber is plant-based
-Not digested in the body, but helps to regulate the GI system
-Can also promote healthy cholesterol levels
<table>
<thead>
<tr>
<th>Good Carbs</th>
<th>Bad Carbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex</td>
<td>Simple</td>
</tr>
<tr>
<td>Harder to Digest</td>
<td>Digest immediately</td>
</tr>
<tr>
<td>Burns calories being digested</td>
<td>Don’t burn many calories being digested</td>
</tr>
<tr>
<td>Keep you feeling fuller longer</td>
<td>Makes you hungry - sooner</td>
</tr>
<tr>
<td></td>
<td>Makes you crash</td>
</tr>
<tr>
<td></td>
<td>Caused sugar cravings (it’s addictive!)</td>
</tr>
<tr>
<td>Natural ‘Sugar’</td>
<td>Processed + Added sugars</td>
</tr>
<tr>
<td>Doesn’t spike blood sugar levels</td>
<td>Spikes blood sugar fast</td>
</tr>
<tr>
<td>Used for energy</td>
<td>Converts into fat easily</td>
</tr>
<tr>
<td></td>
<td>Can cause other ‘good’ nutrients to be stored as fat</td>
</tr>
<tr>
<td>Low Glycemic</td>
<td>High Glycemic</td>
</tr>
<tr>
<td>Help you lose fat</td>
<td>Helps you store fat</td>
</tr>
</tbody>
</table>

Yes | No
**General Guidelines for Meal Planning, however patients should always follow health care provider recommendations**

<table>
<thead>
<tr>
<th>General Carbs Per Meal</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Weight Loss</td>
<td>45-60 grams</td>
<td>30-45 grams</td>
</tr>
<tr>
<td>Maintenance</td>
<td>60-75 grams</td>
<td>45-60 grams</td>
</tr>
<tr>
<td>Snacks</td>
<td>15-30 grams</td>
<td>15-30 grams</td>
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</table>
Too much of a Good Thing….

- Is not a good thing, even when it comes to healthy foods
- Serving size matters
- Use measuring tools
- Estimate when necessary
WHAT'S THE DEAL WITH FATS?
Fats

- Fats are also essential to many body functions

- Just like carbohydrates, some fats are better than others

- Fats primarily comes from oils, nuts, and daily products
Proteins…

• Just like carbs and fats, they are essential components of daily nutrition
• Proteins are vital to the structure, function, and regulations of the body’s tissues and organs
• Healthy proteins can help reduce the risk of some chronic conditions

Protein is also helps to build and replenish muscles!
Foods High in Protein

- Meat and fish
- Cheese
- Eggs
- Beans
- Bread
- Hummus
- Nuts and seeds
The Balancing Act...
More Meaningful Visits

- Write down questions, concerns, visit goals
- Bring all your medications, or bring an up-to-date list
- Complete any tests or lab work prior to the visit
- Obtain a copy of test results, visit summary
- ASK, ASK, ASK