

# Managing Diabetes... Modifying Recipes



## **Lesson 4** **Modifying Recipes to Manage Diabetes**

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# Why Modify?

- **To prepare and eat foods that help you manage your diabetes**
- **Improve your overall health**
- **Prevent long-term complications**
- **Feel well every day**
- **Keep your favorite recipes**

**How do you  
modify a  
recipe?**



# **2 Ways to Modify a Recipe**

- 1. Change the ingredients.**
- 2. Change the preparation method.**



# 3 Rs to Change Ingredients

1. **R**emove
2. **R**educe
3. **R**eplace



# **Remove Fat and Oil**

- **Select foods that are naturally low in fat, and be careful with adding fats.**
  - ✓ **Fresh fruits and vegetables**
  - ✓ **Whole grains and whole-grain products**
  - ✓ **Legumes (dry beans and peas)**
  - ✓ **Lean cuts of meat and poultry (no skin)**
  - ✓ **Fish and seafood**
- **Learn low-fat cooking techniques.**
- **Reduce or omit obvious fats.**
- **Consider fat substitutions.**

# Functions of Fat

- ✓ **Flavor and richness**
- ✓ **Texture and tenderness**
- ✓ **Flakiness and lightness**

**1 tablespoon = 100-120 calories**

**1/2 cup = 800-960 calories**

**1 cup = 1,600-1,920 calories**

# Reducing Fat in Baked Products

- Reduce fat in recipe by  $\frac{1}{3}$  to  $\frac{1}{2}$ .
- Replace fat with a fat replacement product or a lower fat product.





# Replace with a better fat...

- Saturated
    - Butter or meat fats
  - Polyunsaturated
    - Sunflower
    - Other vegetable oils
  - Monounsaturated
    - Olive or canola oil
- Trans fats
    - Shortening or margarine



# **Replace** with Lower Fat Product? (Most of the time a good idea!)



*To further lower the cholesterol in a recipe, use egg substitutes or egg whites instead of whole eggs.*

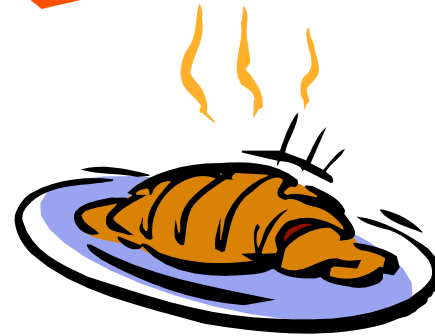
**Remember:** Fat-free does not  
mean Carbohydrate-free or  
Calorie-free when managing  
diabetes!

# Reducing Fat in Meat

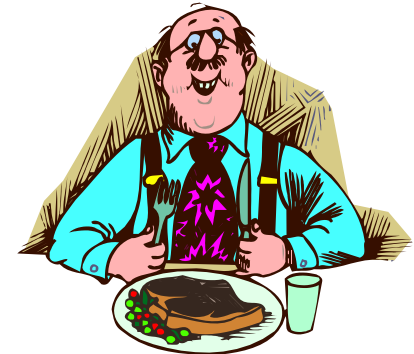
- Selection



- Preparation



- Portion control



# Looking for Lean?

- ✓ *Choose white-meat poultry and fish most often.*

## Leanest Beef Cuts

- ✓ Eye of round
- ✓ Top round
- ✓ Round tip
- ✓ Bottom round
- ✓ Flank
- ✓ Top loin (strip)
- ✓ Top sirloin
- ✓ Tenderloin

## Leanest Pork Cut

- ✓ Tenderloin



# **Change the preparation method:**

- **Remove skin from chicken and poultry.**
- **Bake, broil or grill.**
- **Marinate leaner, less tender cuts of meat.**
- **Try stir-frying small amounts with vegetables, rice or pasta.**
- **Pan fry in a small amount of oil instead of deep frying.**
- **Eliminate batter or coating.**
- **Broiling seafood is better than frying.**



# PORTIONS Matter!

- Measure
- Weigh
- Count
- Look at the label



# Functions of Sugar

- **Flavor and texture**
- **Tenderness and browning**
- **Preservative**
- **Food for yeast**

**1 cup = 770 calories**





**Fact:** Foods containing sugar count as part of the total amount of carbohydrates in a diabetes meal plan.

**Fact:** For blood glucose control, the amount of carbohydrates you eat is more important than the source of carbohydrates.

**Sugar Is Sweet...**

**But What About  
Non-nutritive Sweeteners?**

# Sweetener Alternatives

- Non-nutritive sweeteners
- Reduced-energy polyols  
or sugar alcohols



# **Non-nutritive or Low-calorie Sweeteners:**

- GRAS food ingredients or food additives
- Few or no accompanying calories (non-nutritive)
- Sweeten with little volume (high-intensity)
- Includes non-nutritive/high-intensity sweeteners and polyols
- Can replace nutritive sweeteners like sugar or corn syrup

# Overview of Individual Sweeteners

- Saccharin
- Aspartame
- Acesulfame Potassium
- Sucralose
- Neotame
- Stevia
- Sugar Alcohols



# Saccharin



- Saccharin = Sweet n Low®; Sugar Twin®, Sweet Twin®
- 300-500 times sweeter than sugar
- Contributes no calories to the diet
- Available in granular and liquid form
- Single serving and bulk packages
- Also available in brown sugar variety
- Heat stable

# Aspartame



- Aspartame = Equal®; NutraSweet®; NutraTaste®
- Aspartic acid + phenylalanine
- PKU alert
- 160-200 times sweeter than sugar
- Approved for heating applications
- May contribute up to 4 calories to the diet
- Available in granular form – single packs or bulk

# Acesulfame Potassium

- Acesulfame Potassium has been around since 1988 – Sweet One®; Sunett®
- 200 times sweeter than sugar
- Can be used in cooking with foods
- Not metabolized in the body so it provides no calories
- Available in granular form



# Sucralose

- Sucralose = Splenda®; Altern®
- Produced from sugar – small amount of chlorine added to change chemical structure
- 600 times sweeter than sugar, has a sugar-like texture and appearance
- Not metabolized by the body, so it's eliminated
- Safe for cooking and baking; it is heat stable
- Available in granular form – single packs, bulk or blended with sugar (white and brown)



# Stevia

- Herb derived from the leaves of a South American shrub
- 250-300 times sweeter than sugar
- Recently approved as a food ingredient
- Provides no calories
- Has its own unique flavor, which can affect the taste of foods and beverages
- Can be found in different forms
- Can be found in supermarket as “Truvia” or “Sweet Leaf”

# What are Sugar Alcohols?



- Also called “Polyols”
- Group of lower-calorie, carbohydrate-based sweeteners with half the calories of sugar
- Comparable alternative to taste and texture of sugar
- Vary in sweetness from about half as sweet as sugar to equally as sweet
- Frequently combined with other low-calorie sweeteners

# Sugar Alcohols?

- Add texture to many sugar-free foods
- Common Polyols found on food labels:
  - Sorbitol
  - Xylitol
  - Mannitol
  - Maltitol
  - Isomalt
- Slowly and incompletely absorbed by the body
  - Absorbed – converted into energy
  - Not absorbed – ferment in large intestine



# Modifying Sugar

## TIPS for COOKING with Sucralose (SPLENDA)

- *Bar cookies, muffins and quick breads*
  - Add ½ teaspoon baking soda for each cup of SPLENDA.
  - In muffins and quick breads, add 1-2 tablespoons molasses to add flavor and moistness.
  - Check for doneness 3-5 minutes earlier than what the recipe states.

# Modifying Sugar

## TIPS for COOKING with Sucralose (SPLENDA)

- *Cookies*
  - Substitute SPLENDA measure for measure in place of sugar.
  - Add 1 tablespoon molasses for every cup of SPLENDA for browning and flavor.
  - Use cinnamon, vanilla or almond extract to help provide flavor.
  - Reduce liquid by ½ tablespoon.
  - Flatten cookies on cookie sheet before baking.

# Modifying Sugar

## **TIPS for COOKING with Sucralose (SPLENDA)**

- *Cakes*
  - For every cup of SPLENDA, add ½ cup nonfat dry milk powder and ½ teaspoon baking soda to dry ingredients.
  - Check for doneness 7-10 minutes earlier than recipe calls for.

# Synergistic Effect of Sweeteners

- Increases the sweetness in taste
- Taste profile will be similar to sugar
- Adds versatility to products
- Blends commonly used:
  - Acesulfame Potassium + Sucralose
  - Aspartame + Acesulfame Potassium
  - Aspartame + Saccharin



# Substituting Non-nutritive Sweeteners for Sugar

Sugar	Saccharin Packets	Granulated Saccharin	Sweet and Low (Bulk)	Aspartame Packets	Nutrasweet Spoonfuls (granulated)	Equal Measure (bulk)	Sucralose	Sucralose Sugar Blend for Baking	Stevia (packets)
2 teaspoons	1	2 tsp.	_____	1	2 tsp.	¼ tsp.	2 tsp.	1 tsp.	¾ tsp. or 1 packet
¼ cup	3	¼ cup	1 tsp.	6	¼ cup	1 ¾ tsp.	¼ cup	2 Tbsp.	1 Tbsp + 2 tsp. or 6 packets
1/3 cup	4	1/3 cup	1 ¼ tsp.	8	1/3 cup	2 ½ tsp.	1/3 cup	8 tsp.	2 Tbsp + ½ tsp. or 8 packets
½ cup	6	½ cup	2 tsp.	12	½ cup	3 ½ tsp.	½ cup	¼ cup	3 Tbsp. + ¾ tsp. or 12 packets
¾ cup	9	¾ cup	3 tsp.	18	¾ cup	5 ½ tsp.	¾ cup	6 Tbsp.	4 Tbsp. + 2 ¾ tsp. or 18 packets
1 cup	12	1 cup	4 tsp.	24	1 cup	7 ¼ tsp.	1 cup	½ cup	1/3 cup + 1 Tbsp. or 24 packets

# Low-calorie Sweeteners In Practice

- Low-calorie Sweeteners and Healthful Eating
  - Weight Loss or Management
  - Diabetes Management

# Low-calorie Sweeteners and Diabetes Management

- Primary goal:
  - Maintain near-normal blood glucose levels through dietary modification, physical activity and, when needed, medication



# **Low-calorie Sweeteners in Diabetes Management**

- Are safe for people with diabetes
- Are appropriate for management of carbohydrate and sugar intake
- Are appropriate for management of total calories
- Provide people with diabetes an expanded set of food choices
- Approved for use in diabetes management by American Dietetic Association and American Diabetes Association

# Use of the Food Label in Practice

## Nutritive Sweeteners

- Labeling Categories
  - Sugar free
    - (<0.5 grams sugar)
  - Reduced sugar
    - Reduction of 25%
  - “No added sugar”
    - No sugars added at processing

Nutrition Facts	
Serving Size 1 cup (228g)	
Serving Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
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%

# Sugar-free vs. Calorie-free

- Tabletop sweeteners
  - 0 to 2 calories
- Foods with low-calorie sweeteners that contain minimal calories
  - A serving has less than 20 calories and 5 grams of carbohydrates = calorie free
- Foods that contribute calories and carbohydrates
  - Review facts label on product to determine number of calories and amount of carbohydrates in one serving

# **Add Fiber to Recipes**

- ✓ **Choose whole-grain breads and cereals.**
  - ✓ **Add oatmeal to meatloaf or meatballs.**
- ✓ **Add other high-fiber grains.**
- ✓ **Replace 1/2 all-purpose flour with whole-wheat flour.**
- ✓ **Add extra fruit and vegetables.**

# Crockpot Scalloped Corn

How can we modify it ?

**2/3 cup flour**

**1/4 cup butter, melted**

**2 eggs**

**3/4 cup evaporated milk**

**2 teaspoon sugar**

**1 teaspoon salt**

**1/8 teaspoon pepper**

**14-ounce can cream style corn**

**15-ounce can corn, drained**



# Banana Nut Bread

What are the changes ?

**1 1/3 cups flour**

**1/2 teaspoon baking  
soda**

**1 teaspoon baking  
powder**

**1/2 cup Splenda  
(granular)**

**Dash of salt**

**1 1/4 cups bananas**

**1 tablespoon canola oil**

**1/2 cup reduced-fat  
buttermilk**

**2 teaspoons vanilla**

**1/4 cup walnuts**

# Crawfish Fettuccini

How was it modified ?

**2 medium onions,  
chopped**

**1 bunch green onions**

**1 bell pepper, chopped**

**Parsley**

**8 tablespoons tub  
margarine**

**1 tablespoon flour**

**1/2 cup skim  
evaporated milk**

**4 cups cooked  
fettuccini**

**1 pound crawfish**

**8 ounces reduced-fat  
cheddar cheese**

# Modify Habits



- Evaluate your shopping strategies.
- Experiment with new meal combinations.
- Try different cooking techniques.
- Manage your attitude.



# MODIFY Tastefully

- **Change ingredients in the recipe.**
- **Change the PORTION SIZE that you eat.**
- **Change habit of HOW OFTEN you eat it.**
- **Add garden-fresh or dried herbs**



# Healthy

can still be delicious !



# Small changes can make a BIG difference !

## References:

- Basics About Beef, National Cattlemen's Beef Association
- Just for the Health of It...Modify Recipes, by Donna Montgomery (retired), LSU AgCenter
- The New Family Cook Book For People with Diabetes
- The American Dietetic Association
- American Diabetes Association
- National Diabetes Education Program
- Diabetes Life Lines – The University of Georgia Cooperative Extension
- U. S. Food and Drug Administration
- International Food Information Council
- Diabetes Prevention and Control Program
- Oklahoma Cooperative Extension

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