

Nutrition Strategies for Managing Diabetes in Healthcare



Overview

Part 1

1. Overview of diabetes: prevalence, cost, types, treatment
2. Medical Nutrition Therapy (MNT) for diabetes
3. Glucose pattern management

Part 2

1. Strategies for Healthful Cooking
2. Recipes
3. Resources

Impact of Diabetes

By the numbers

- Almost 30 million children and adults in the United States have diabetes; 9.3% of U.S. population
- 86 million Americans have pre-diabetes

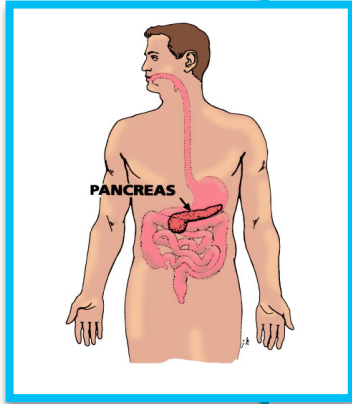
By the dollars

- Total cost of diagnosed diabetes is \$245 billion
- 13% of all U.S. healthcare dollars attributed to diabetes
- Health care costs 2.3 times greater if have diabetes

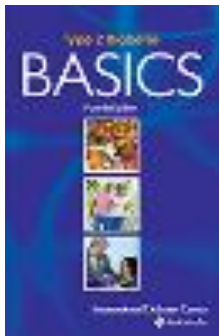
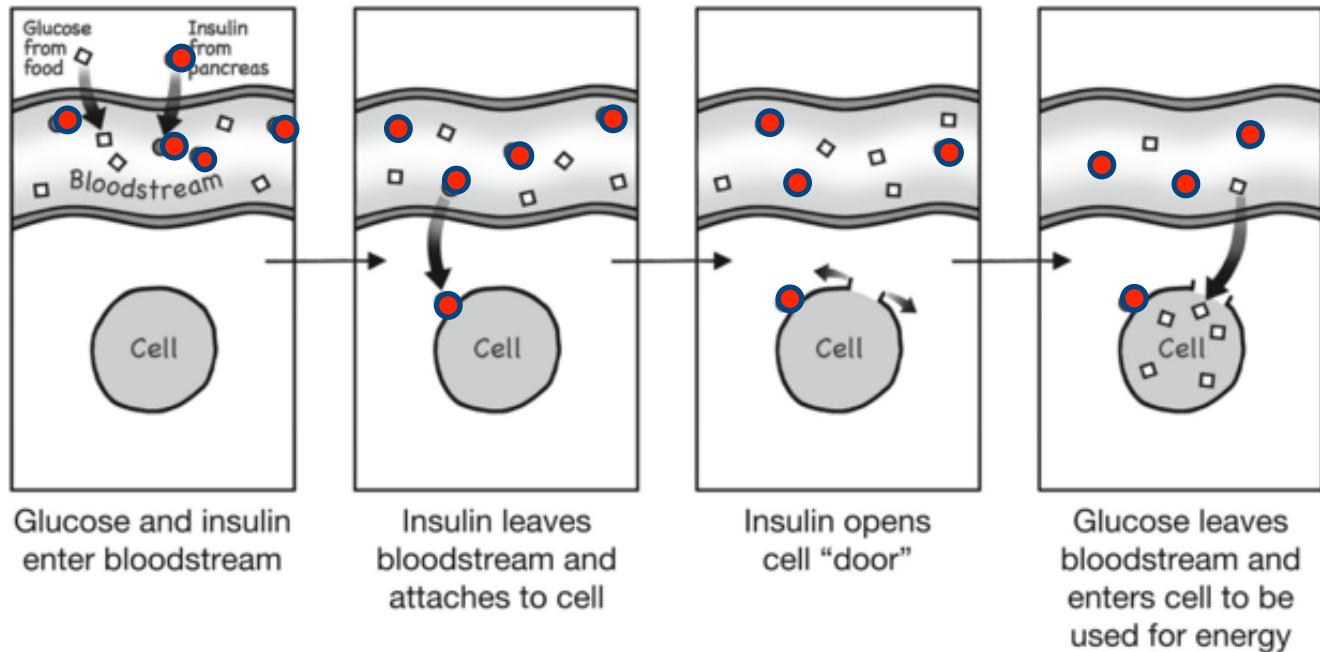
Those at risk: overweight, family history, race/ethnicity, physical inactivity; certain health conditions, pre-diabetes, history of GDM

Take assessment at: www.diabetes.org/risk

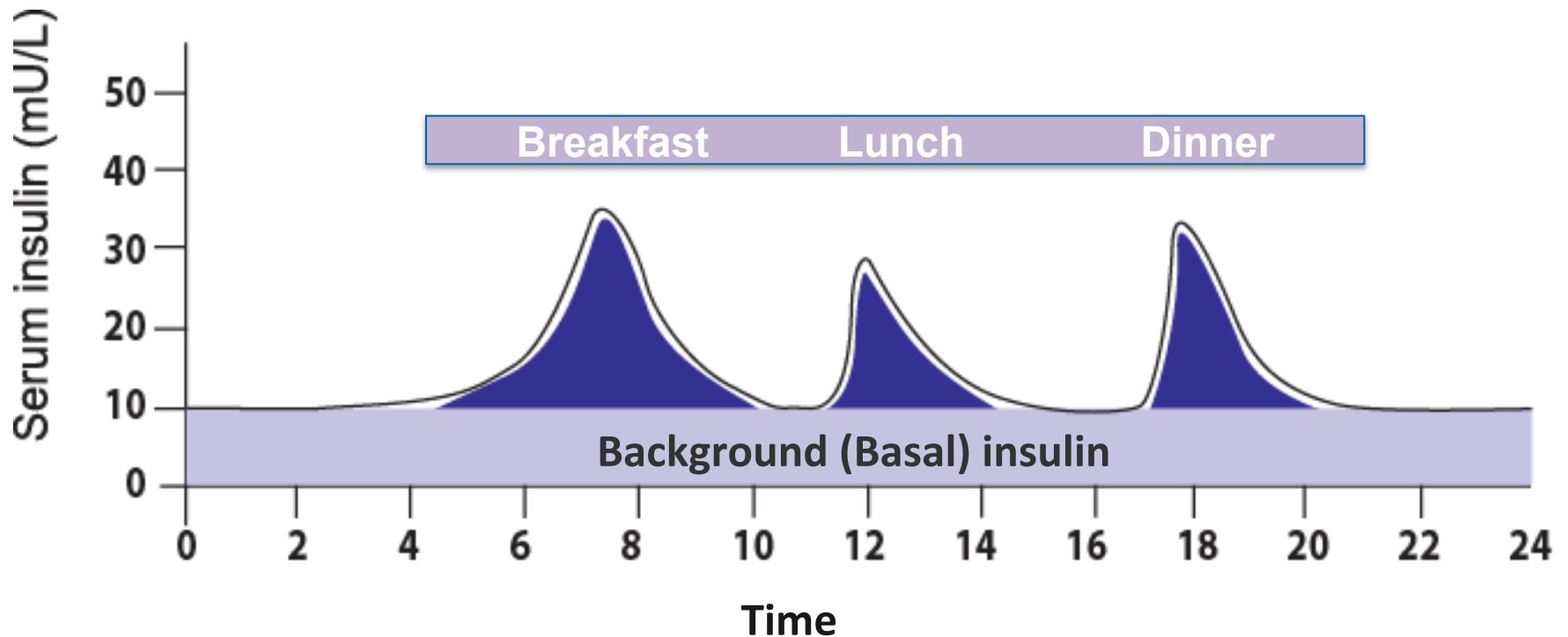
Glucose and Insulin



How Your Body Uses Glucose



Normal Insulin Secretion



Diabetes – Types, Treatment Focus

All - require a food plan

- **Pre-diabetes**..... Lifestyle prevents or delays development of type 2 diabetes
- **Gestational Diabetes**..... 24-28 weeks, may require medication
- **Type 1 Diabetes**..... Requires insulin
- **Type 2 Diabetes**..... Medications vary

Treatment of type 2 diabetes



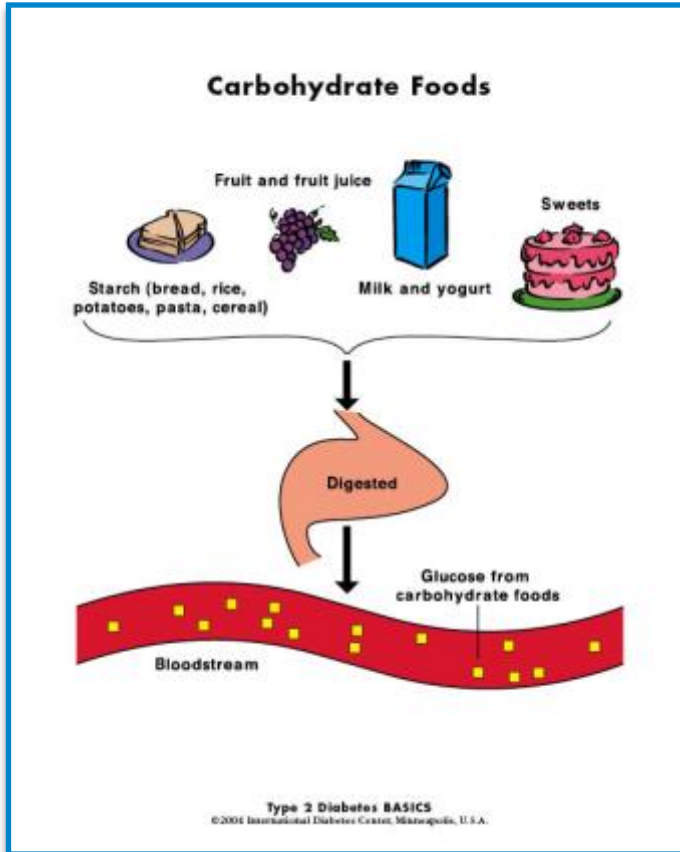
All – challenged with blood glucose control

Goals of Medical Nutrition Therapy (MNT) for Diabetes

- **Promote and support healthful eating patterns**, emphasizing a variety of nutrient dense foods in appropriate portion sizes to improve overall health
 - BP, lipids, glycemic control, weight; delay/prevent complications
 - Healthy food plan, all foods can fit, special foods usually not necessary
- **Address individual nutrition needs**
 - Personal/cultural preferences, health literacy, numeracy
- **Maintain the pleasure of eating** by providing positive messages about food choices while limiting food choices only when indicated by scientific evidence
- **Provide practical tools** for day-to-day meal planning

Addresses clinical, psychosocial, and behavioral needs of each individual
Requires on-going education and support

Carbohydrate Counting



Carbohydrate raises blood glucose

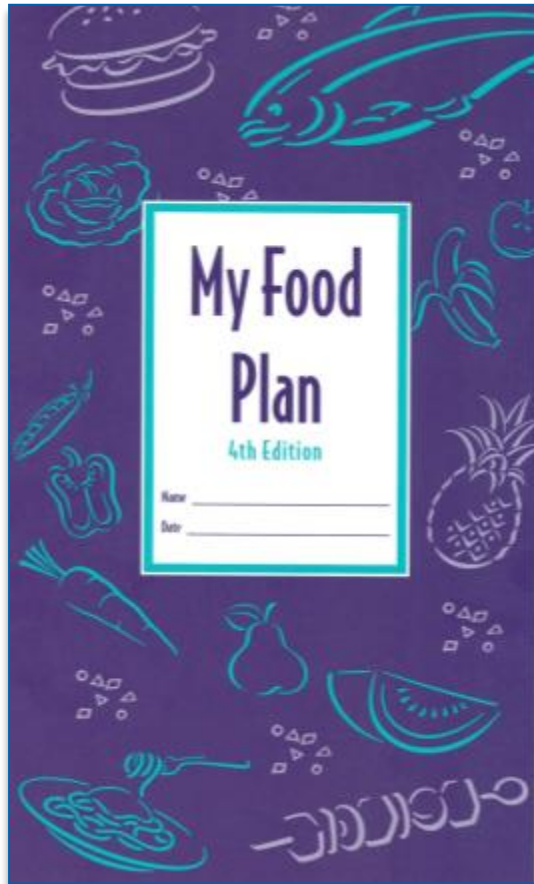
Other foods contribute little or no carbohydrate – meat/protein, fats and vegetables (*exchanges*)

Use for all types of diabetes

Teach:

1. What are carbohydrate foods?
2. How much is one choice?
3. How many choices to have at each meal and snack?

Carbohydrate Counting: Choices



What Is a Carbohydrate Choice?



= 1 choice (15 grams carbohydrate)



= 2 choices (30 grams carbohydrate)

3 choices = 45 grams carb

4 choices = 60 grams carb

5 choices = 75 grams carb

6 choices = 90 grams carb

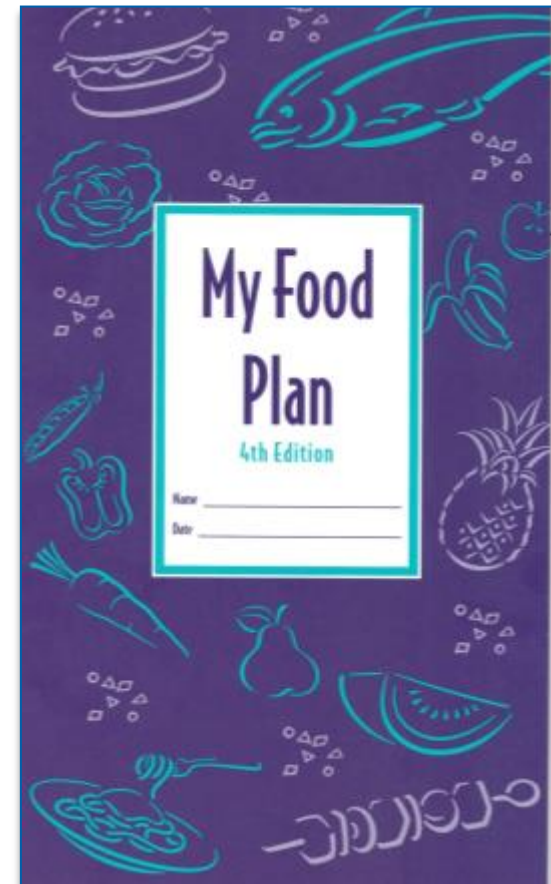
Type 2 Diabetes BASICS
© 2004 International Diabetes Center, Minneapolis, U.S.A.

Carbohydrate Choices or Grams

Carbohydrate Choices

A carbohydrate ("carb") choice is a serving of food or drink that has about 15 grams of carb. Carb foods have varying amounts of protein and fat.

Grains/Beans/Starchy Vegetables	Carb Choices	Carb Grams
Bagel, large (most bagel shops), 4-5"	2-4	48-67
Beans (black, garbanzo, pinto, red), cooked, ½ cup	1	13-18
Bread, whole-wheat or white, 1 slice or 1 small roll (1 oz)	1	14
Bun, hamburger or hot dog, 1 bun	1½	21
Cereal, cooked, unsweetened, ½ cup	1	13-19
Cereal, unsweetened (Cheerios®, Cornflakes®, Wheaties®), ¾ cup	1-1½	15-22
Corn or green peas, ½ cup	1	11-20
Couscous or quinoa, cooked, ½ cup	1-1½	18-23
French fries, regular cut, frozen, 10-12 fries	1	14-17
Lentils or dal, cooked, ½ cup	1	15-20
Muffin, small, 2¾" (1½-2 oz)	1½-2	23-30
Pancake or waffle, 4"	1	11-15
Pasta (macaroni, noodles, spaghetti), cooked, 1 cup	3	42
Plantain, cooked, ½ cup	1	16
Potato, sweet or white, cooked, ½ cup	1	15-20
Rice, brown or white, cooked, 1 cup	3	45
Roti or chapti, 6", or pita, half of 6"	1	11-20
Squash, acorn or butternut, cooked, 1 cup	1	18
Tortilla, 2 corn or 1 flour, 6"	1-1½	18-22



1 Carbohydrate Choice = 15 grams



1 small fruit/
1/2 cup juice



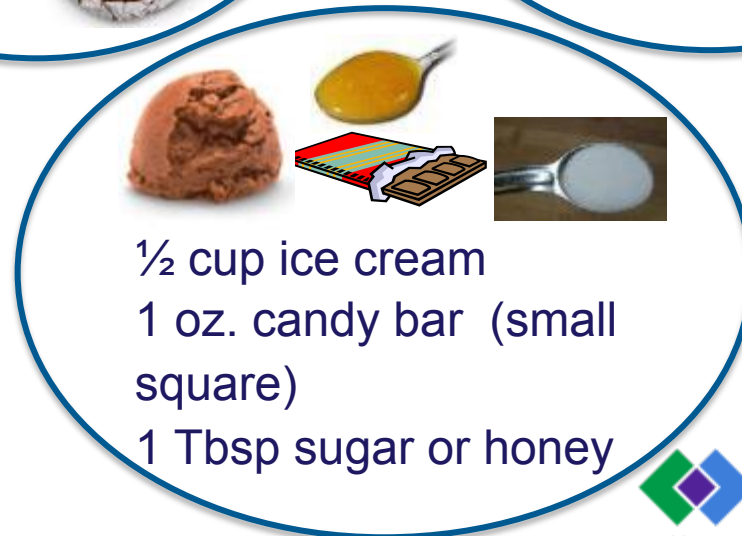
1/3 - 1/2 cup starchy food



1 slice bread
1- 6" tortilla/chapatti
1/3- 12" injera



1 cup milk



1/2 cup ice cream
1 oz. candy bar (small square)
1 Tbsp sugar or honey

Carb Counting - The Value of a Food Label

1. Find serving size

Nutrition Facts	
Serving Size 1 bar (36g)	
Servings Per Container 1	
Amount Per Serving	
Calories 140	Calories from Fat 25
%Daily Value*	
Total Fat 3g	5%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 5mg	2%
Sodium 110mg	5%
Total Carbohydrate 27g	9%
Dietary Fiber 1g	4%
Sugars 9g	
Sugar Alcohol 0g	
Protein 2g	16%
Vitamin A 15%	Vitamin C 2%
Calcium 30%	Iron 0%

*Percent Daily Values are based on a 2,000 calorie diet.

2. Find total carbohydrate

3. Use conversion guide

Conversion Guide	
Total Carbohydrate Grams	Carbohydrate Choices
0-5	0
6-10	½
11-20	1
21-25	1½
26-35	2
36-40	2½
41-50	3
51-55	3½
56-65	4
66-70	4½
71-80	5
81-85	5½
86-95	6
96-100	6½
101-110	7

Carbohydrate Choices Per Meal

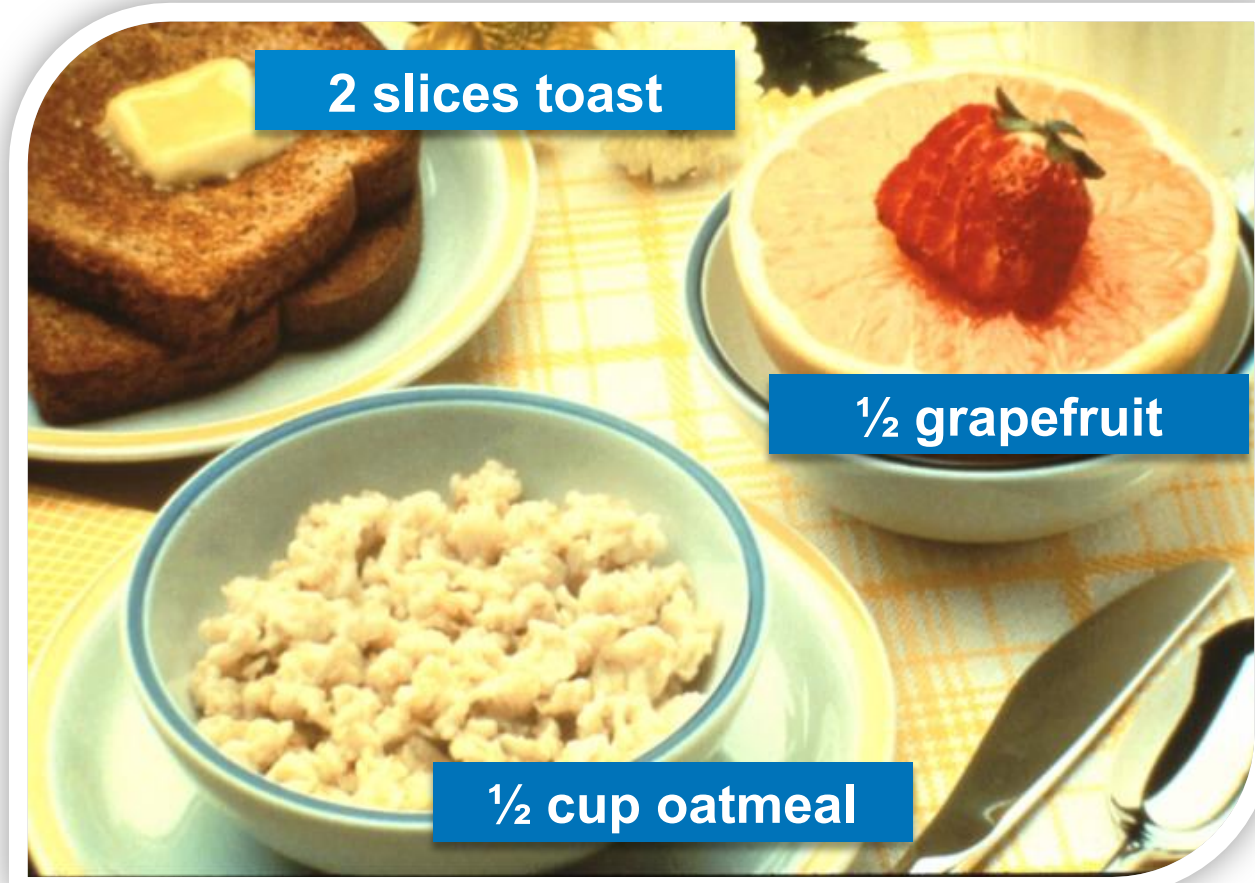
General guidelines / initial guidelines / individualize

	Lose Weight	Maintain Weight	Very Active
Women	2-3 choices (30-45 gm)	3-4 choices (45-60 gm)	4-5 choices (60-75 gm)
Men	3-4 choices (45-60 gm)	4-5 choices (60-75 gm)	4-6 choices (60-90 gm)

Snacks: 0-2 carb choices if desired (not usually needed)

(6 oz of protein and 1-2 fats/meal)
 8-12 choices = 1200 to 1500 calories
 12-15 choices = 1500 to 1800 calories

Counting Carbs - Sample Breakfast



Counting Carbs - Challenges

- Combination foods
- No food labels
- Unknown measurements
- Unfamiliar food
- Restaurant meals
- Less money for more food



Teaching Materials: Simplified

Eat 3 Meals a Day

- Eat at about the same time each day.
- Do not skip meals.
- If you eat snacks, keep them small.

Eating for Blood Sugar Control

Count your servings of the foods that affect blood sugar.

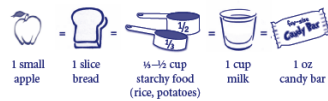
- Eating too many of these foods at one time can make blood sugar levels go too high.
- Not eating enough of these foods can make blood sugar levels go too low.

How Much is Right for Me?

At each meal or snack, choose this many servings from the box.

Breakfast: _____ Snack: _____
 Lunch: _____ Snack: _____
 Evening meal: _____ Snack: _____

One Serving Is:



Count Your Servings of These Foods

Grains, beans, and starchy vegetables	One serving
Bagel or English muffin	1/2 small
Bread	1 slice
Bun for hamburger or hot dog	1/2 bun
Casserole or hot dish	1/2 cup
Cereal or grits, cooked	1/2 cup
Cereal, dry, unsweetened	3/4 cup
Crackers	4-5 crackers
Pancake	1 medium
Pasta, rice, or macaroni and cheese	1/2 cup
Peas, corn, or cooked dried beans	1/2 cup
Pizza, thin-crust, medium	1/8 pizza
Potato (4 inches long)	1/2 potato
Soup	1 cup
Spaghetti sauce	1/2 cup
Squash	1 cup
Tortilla	1 small
Waffle	1 small

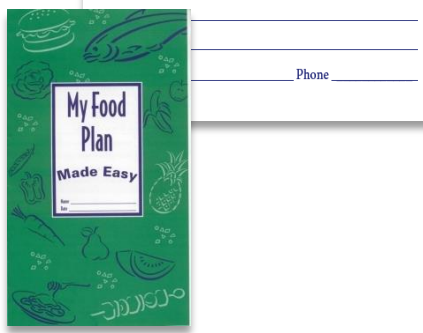
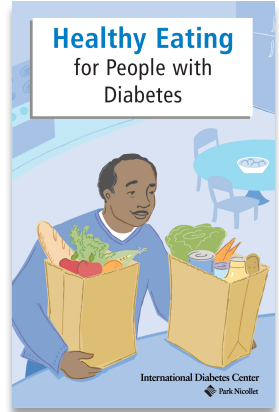
Fruit and fruit juices	One serving
Fruit juice or fruit canned in juice	1/2 cup
Fruit, whole	1 small
Melon, cubes	1 cup
Dried fruit (raisins, cranraisins)	2 tablespoons

Milk and yogurt	One serving
Milk, skim or 1%	1 cup
Yogurt, plain, light or sugar-free	1 cup

Snacks/sweets	One serving
Cookie	2 small or 1 medium
Frozen yogurt or low-fat ice cream	1/2 cup
Popcorn	3 cups
Pretzels or chips, snack-size	1 bag
Pudding, sugar-free	1/2 cup

Grains, Beans, and Starchy Vegetables

You need to eat these kinds of foods at every meal.



Glucose Pattern Management

Glucose Targets: Fasting / pre-meal: 70-130 mg/dL
 1-2 hours after meal: Less than 180 mg/dL

Date	Breakfast			Lunch			Supper			Bedtime	
	8 AM BG	Med	BG	12N BG	Med	BG	6 PM BG	Med	BG	10 PM BG	Med
	128						105		194		
	87						84		146		
	117						114		227		

Review with food records: Consistent carb intake; correct measurements; count all foods; variety of food choices; healthy eating pattern

Summary

- Diabetes is a serious medical condition that affects millions of Americans
- Treatment focuses on glucose control: food, activity and medication, if needed
- Carbohydrate counting is the primary food plan
 - Distribute carb throughout the day
 - Keep consistent from day to day
 - All foods fit, keeping within carbohydrate intake goals
- Glucose pattern management provides feedback on food plan

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Strategies for Healthful Cooking

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Control Portion Size

Bagel: 43g carb difference



3 inch diameter
37g carb



6 inch diameter
80g

French Fries: 47g carb difference



2.4 ounces
25g carb



6.9 ounces
72g carb



American Portion Sizes are too Large

Balance Food Groups Appropriately

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Focus Your Efforts On Training



Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Checks and Balances



Gather Your Raw
Ingredients



Measure Ingredients
with Proper Tools



Mix Ingredients
Following Recipe
Instructions



Portion Accurately
During Preparation



Heat/Prepare
According to Recipe
Instructions



Serve Correct Portion
Size

Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

How To Read a Recipe

Caramel Apple Cupcakes YIELD: 86 cupcakes

INGREDIENTS	WEIGHT	MEASURE	DIRECTIONS
Cupcake Batter			Cupcake Batter
Butter, unsalted	4 oz	1/2 cup	<ol style="list-style-type: none"> Melt butter in medium-size saute pan. Add apples, and cook until slightly tender. Set aside to cool. Follow package directions for cupcake batter, using apple juice in place of water and adding spices and caramel topping in step 1. Fold cooled apples into batter gently until well mixed. Deposit using #12 scoop of batter into paper-lined or greased muffin pans.
Apples, fresh, peeled, diced	2 lb	2 quarts	
Juice, apple	3 lb 8 oz	6 3/4 cups	
Gold Medal™ ZT White Cake Mix (11132)	5 lb	1 box	
Cinnamon, ground		2 Tbsp	Bake Convection Oven* 300°F 22-26 minutes Standard Oven 350°F 26-30 minutes ----- *Rotate pans baked in convection oven one-half turn (180°) after 12 minutes of baking.
Nutmeg, ground		1 Tbsp	
Cloves, ground		1 tsp	
Caramel sundae topping	1 lb 2 oz	1 1/2 cups	
Total Cupcake Batter Weight	11 lb 14 oz		
Icing			Icing
Cream cheese, softened	3 lb 8 oz	7 cups	<ol style="list-style-type: none"> Whip cream cheese in mixer bowl with paddle attachment on medium speed 3 minutes. Add vanilla icing. Stir icing mixture 2 minutes on medium speed.
Gold Medal™ ZT Ready-to-spread Vanilla Crème Icing (11216)	3 lb 8 oz	7 cups	
Total Icing Weight	7 lb		
Assembly			Assembly
Caramel sundae topping	12 oz	1 cup	<ol style="list-style-type: none"> Fill pastry bag fitted with star tip with the icing mixture. Pipe 1 1/4 oz icing on top of each cupcake.
Total Assembly Weight	12 oz		
NUTRITION: <i>Nutrition values calculated using weights of ingredients</i>			

- Use a scale
- Use a volume/ liquid measuring cup
- Follow Instruction in the right order
- Pay attention to oven directions
- Observe what unit of measure is used

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Mini Salted Caramel Cupcakes

Ingredients

Cupcakes

- Water, cool (approximately 72°F)
- Gold Medal™ ZT Yellow Cake Mix

Finishing

- Gold Medal™ ZT Ready-to-spread Vanilla Crème Icing
- Pretzel twist, mini's
- Caramel topping



Nutrition

- Serving Size: 1 serving Calories 150 (Calories from Fat 35), Total Fat 3 1/2g (Saturated Fat 2g Trans Fat 0g), Cholesterol 0mg; Sodium 190mg; Total Carbohydrate 28g (Dietary Fiber 0g Sugars 18g), Protein 1g
- % Daily Value*: Vitamin A 0%; Vitamin C 0%; Calcium 0%; Iron 2%;
- Exchanges: 1 Starch; 0 Fruit; 1 Other Carbohydrate; 0 Skim Milk; 0 Low-Fat Milk; 0 Milk; 0 Vegetable; 0 Very Lean Meat; 0 Lean Meat; 0 High-Fat Meat; 1/2 Fat;
- Carbohydrate Choices: 2

*Percent Daily Values are based on a 2,000 calorie diet.

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Focus on Carbohydrates

Carbohydrate Grams / Serving	=	Carbohydrate Servings
6-10 grams		½ CHO choice
11-20 grams		1
21-25 grams		1 ½
26-35 grams		2
36-40 grams		2 ½
41-50 grams		3
51-55 grams		3 ½
56-65 grams		4
66-70 grams		4 ½
71-80 grams		5

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Banana Breakfast Bar

Ingredients

- Bananas, peeled, pureed
- Peanut butter, creamy
- Eggs, large, whole
- Applesauce, unsweetened
- Yoplait® ParfaitPro® Greek Honey Vanilla
- Honey
- Vanilla extract, gluten-free
- Cinnamon, ground
- Baking powder, gluten-free
- Oats, old-fashioned, gluten-free



Nutrition

- Serving Size: 2 x 2-Inch Bar Calories 100 (Calories from Fat 15), Total Fat 1 1/2g (Saturated Fat 0g Trans Fat 0g), Cholesterol 10mg; Sodium 65mg; Total Carbohydrate 17g (Dietary Fiber 2g Sugars 6g), Protein 3g
- % Daily Value*: Vitamin A 0%; Vitamin C 0%; Calcium 8%; Iron 4%;
- Exchanges: 1/2 Starch; 0 Fruit; 1/2 Other Carbohydrate; 0 Skim Milk; 0 Low-Fat Milk; 0 Milk; 0 Vegetable; 1/2 Very Lean Meat; 0 Lean Meat; 0 High-Fat Meat; 0 Fat;
- Carbohydrate Choices: 1
- Gluten Free

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Ingredients Substitution/Recipe Modification

Not so Good

- Regular Dessert Recipe
- Potato Hashbrown
- Regular Jams
- Pasta
- Butter
- Heavy Cream
- Recipes containing whole eggs

Better

- Use 30-50% less Sugar in the Recipe
- Summer Squash Hashbrown
- Sugar Free Jam
- Whole Wheat Pasta
- Olive Oil
- Evaporated Skim Milk
- Remove Half the Egg Yolks



Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Why is Protein so Important?

- Stimulate the feeling of being full as well staying full longer
- It is recommended to choose leaner proteins
- Poaching, Grilling, Broiling and baking are recommended methods of cooking to avoid adding excessive fat to healthier protein choices

Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Mini Turkey Meatloaves

Ingredients

- Rice Chex™ Bulkpak Cereal
- Ketchup, tomato, gluten-free
- Eggs, liquid, pasteurized
- Worcestershire Sauce, gluten-free
- Parsley, fresh, chopped
- Pepper, black, ground
- Garlic, dried, granulated
- Salt, Kosher
- Turkey, ground, 93% Lean



Nutrition Information

- Serving Size: 4.5 oz Calories 280 (Calories from Fat 110), Total Fat 12g (Saturated Fat 3g Trans Fat 0g), Cholesterol 140mg; Sodium 580mg; Total Carbohydrate 14g (Dietary Fiber 0g Sugars 5g), Protein 28g
- % Daily Value*: Vitamin A 10%; Vitamin C 4%; Calcium 8%; Iron 30%;
- Exchanges: 0 Starch; 0 Fruit; 1 Other Carbohydrate; 0 Skim Milk; 0 Low-Fat Milk; 0 Milk; 0 Vegetable; 0 Very Lean Meat; 4 Lean Meat; 0 High-Fat Meat; 0 Fat;
- Carbohydrate Choices: 1
- Gluten Free

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Fat Considerations

- Fat is important for flavor & satiety
 - Just keep to $\leq 30\%$ of calories from fats
- Cook with small amounts
 - Use cooking sprays where possible
- Good fat sources
 - Foods: Nuts, avocado, salmon
 - Cooking: Olive, peanut oils
 - Baking: Canola, walnut, sunflower, sesame, grapeseed oils



Control Portion Size

Focus on
Carbohydrates

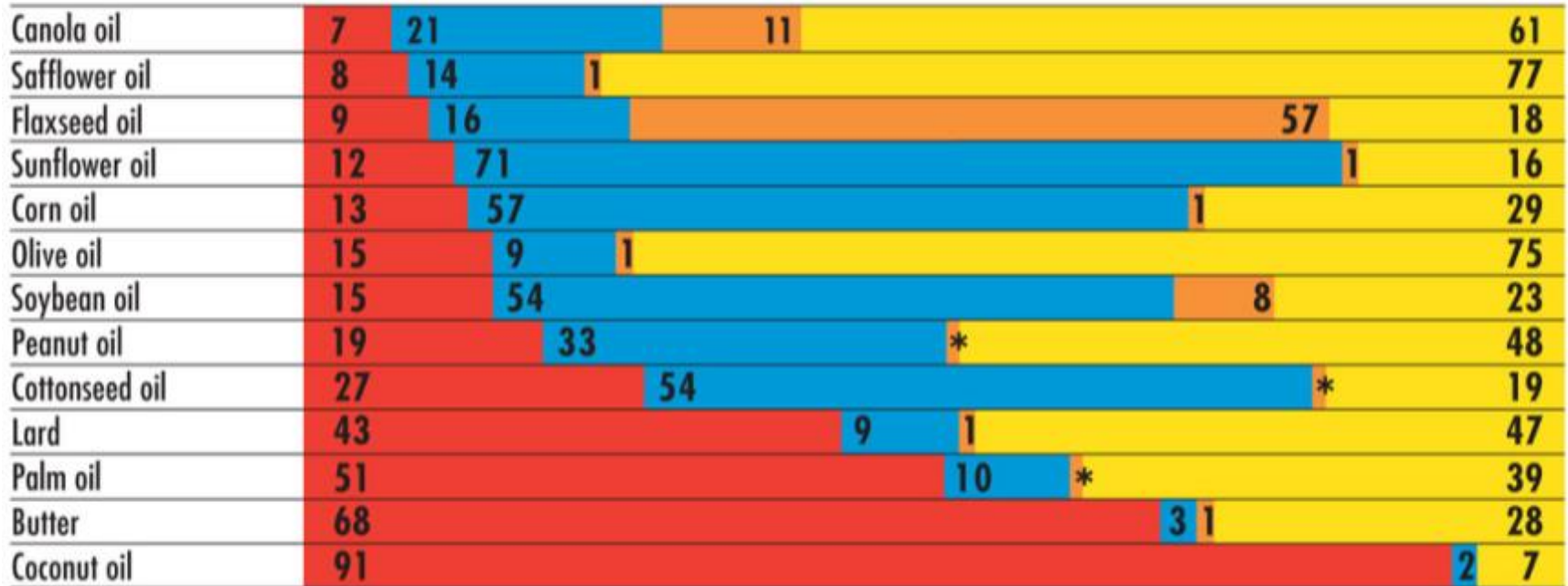
Include Protein

Choose Fats Wisely

Plan in Treats

Comparison of Dietary Fats

DIETARY FAT



SOURCE: POS PILOT PLANT CORPORATION

SATURATED FAT



POLYUNSATURATED FAT



linoleic acid
(an omega-6 fatty acid)



alpha-linolenic acid
(an omega-3 fatty acid)

MONOUNSATURATED FAT



oleic acid
(an omega-9 fatty acid)

*Trace

Fatty acid content normalized to 100%

Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Recipe Modification



Traditional Pot Pie

- Heavy Cream
- Whole Chicken
- Butter
- Eggs

38g Carbs (2.5 choices)
24g Grams Fat

Crispy Chicken Pot Pie

- Milk
- Chicken Breast
- Oil/Unsalted Butter
- Crumb Topping instead of Crust

37g Carb (2.5 choices)
19g Fat

Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Fried vs. Baked



Chicken Tenders

- Fried in Oil
- Heavy Breading
- Usually Served with Rich Sauces

16g Carb (1 choice)

15g Fat

Chex Buffalo Tenders

- Baked in Oven
- Lean Chicken Breast
- Light Crispy Gluten-Free Breading
- Served with Lighter Sauce

15g Carb (1 choice)

4g Fat

Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Fitting in Treats

- Avoiding sweet treats can backfire
- Offer some sweet options:
 - Limit the CHO to ≤ 15 grams per serving
 - Promote eating with meals not as a ‘stand alone’
 - Limit portion size:
 - Mini muffin / cupcake
 - Dessert ‘shots’



Control Portion Size

Focus on
Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Cinnamon Mocha Mousse

Ingredients

- Yoplait® Nonfat Plain Yogurt
- Whipped Topping, non-dairy
- Chocolate chips, semi-sweet
- Coffee granules, instant
- Cinnamon, ground
- Sauce, chocolate, gluten-free



Nutrition

- Serving Size: 1 serving Calories 150 (Calories from Fat 70), Total Fat 8g (Saturated Fat 6g Trans Fat 0g), Cholesterol 0mg; Sodium 30mg; Total Carbohydrate 17g (Dietary Fiber 1g Sugars 10g), Protein 2g
- % Daily Value*: Vitamin A 0%; Vitamin C 0%; Calcium 6%; Iron 0%;
- Exchanges: 0 Starch; 0 Fruit; 1/2 Other Carbohydrate; 1/2 Skim Milk; 0 Low-Fat Milk; 0 Milk; 0 Vegetable; 0 Very Lean Meat; 0 Lean Meat; 0 High-Fat Meat; 1 1/2 Fat;
- Carbohydrate Choices: 1
- **Gluten Free**

*Percent Daily Values are based on a 2,000 calorie

Control Portion Size

Focus on Carbohydrates

Include Protein

Choose Fats Wisely

Plan in Treats

Putting it all together

Thursday		Friday	
4 fl oz	CHOICE OF JUICE	4 fl oz	CHOICE OF JUICE
1 Svg	CHOICE OF CEREAL	1 Svg	CHOICE OF CEREAL
6 oz	YOGURT	1	HARD BOILED EGG
1 Sl	FRENCH TOAST	1 Sl	TOAST
1 Ea	RC SYRUP	1 Ea	RC JELLY
1 Ea	MARGARINE	1 Ea	MARGARINE
8 fl oz	SKIM MILK	8 fl oz	SKIM MILK
1/2 Svg	CHICKEN MARSALA	1/2 Ea	LEMON BAKED TILAPIA
1/2 C	BOILED POTATOES	4 Ea	TATER TOTS
1/2 C	CARROT COINS	1/2 C	BRUSSEL SPROUTS
1 Ea	GARLIC TOAST	1 SL	FOCCACCIA BREAD
1/2 C	PINEAPPLE TIDBITS	1/2 C	FRESH FRUIT CUP
4 fl oz	SKIM MILK	4 fl oz	SKIM MILK
1 Ea	TUNA MELT	3/4 C	CHICKEN RICE CASSEROLE
1/2 C	GREEN BEANS	1/2 C	SPINACH
1/2 C	COLESLAW	1 C	GRAPES
1/2 C	FRUITED RC GELATIN	5 EA	VANILLA WAFERS
4 fl oz	SKIM MILK	4 fl oz	SKIM MILK

Sample of 1,500 Calorie Hospital Non-Select Menu

Each meal provides about 50 grams (3 choices) of carbohydrates

RC = Reduced Calorie Recipe

Summary

How To Read a Recipe

Caramel Apple Cupcakes 1200 g (26.5 cups)		
INGREDIENTS	WEIGHT / MEASURE	DIRECTIONS
Cupcake Batter	4 ea 1/2 cup	1. Add butter in medium-size sauce pan, melt and stir until slightly brown. Add apples to pan.
Butter, unsalted	4 ea 1/2 cup	2. Follow package directions for cupcake batter, using apples in place of water and applesauce and caramel topping (2 cups).
Apples, fresh, peeled, sliced	2 lb 2 ea 2 1/4 cups	3. Bake in preheated oven for 10-15 minutes. Remove from oven and let cool.
Juice, apple	2 lb 2 ea 2 1/4 cups	4. Distributing 2 1/2 scoops of batter into each of 12 greased muffin pans.
Gold Medal™ 27 White Cake Mix (11.25)	5 lb 1 bag	
Cinnamon ground	2 TBSP	
Nutmeg ground	1 TBSP	
Cocoa ground	1 tsp	
Caramel sauce, topping	1 lb 2 ea 1 1/2 cups	
Total Cupcake Batter Weight	11 lb 14 oz	
TOPPING		
Cream cheese, softened	3 lb 2 ea 7 cups	
Gold Medal™ 27 Ready-Mix Vanilla Cream Icing (11.25)	3 lb 2 ea 7 cups	
Total Icing Weight	7 lb	
Assembly		
Caramel sauce, topping	12 ea 1 cup	
Total Assembly Weight	12 ea	
INSTRUCTIONS: Nutrition values calculated using weights of ingredients.		

- Use a scale
- Use a volume/liquid measuring cup
- Follow instruction in the right order
- Pay attention to oven directions
- Observe what unit of measure is used

Control Portion Size Focus on Carbohydrates Include Protein Choose Fats Wisely Plan in Treats



Portion Distortion

What you're served



3/2 lb (16.5 oz) burger, French fries, 3 1/2 cup
soft drink, tomato slice, onion, lettuce
1,345 calories
51 grams fat

What's one serving



1 1/4 lb (12.5 oz) burger, 1/2 cup French fries,
1 soft drink, tomato slice, onion, lettuce
685 calories
25 grams fat

Recipes and Training

Focus on the Right Foods

Portion Control

Resources

- International Diabetes Center at Park Nicollet
www.parknicollet.com/diabetes
- American Diabetes Association
www.diabetes.org
- MyPlate
www.myplate.gov