

# **Medical Nutrition Therapy**

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# Objectives

At the end of the presentation the participant will be able to:

- Describe the effectiveness of Medical Nutrition Therapy in controlling complications associated with diabetes.
- Define the portion sizes associated with 15 grams of carbohydrate.
- Describe the plate method.
- Define the various foods in the Haitian diet that are carbohydrates.



# Medical Nutrition Therapy (MNT)

An integral component of diabetes:

- Prevention
- Management
- Self management education
- Overall healthy lifestyle



# Effectiveness of MNT for Diabetes

- Glycemic control
- Lipids
- Hypertension

# Glycemic Control

- 0.25-2.9% decrease in HgA1C in type 2 diabetes
- 1% decrease in HgA1C in type 1 diabetes
- 50-100 mg/dl decrease in fasting plasma glucose

# Lipid Management

- 10-13% decrease in total cholesterol (24-32 mg/dl)
- 16% decrease in LDL cholesterol (15-25 mg/dl)
- 8% decrease in triglycerides (15-17 mg/dl)
- With exercise, HDL cholesterol decreases by 7% (3 mg/dl)
  - Without exercise, no decrease noted

# Hypertension

- Lowering sodium in diet to 2,400 mg
- Modest weight loss of 5-7% of starting weight
- 5-mmHg decrease in systolic blood pressure
- 2-mmHg decrease in diastolic blood pressure

# Macronutrients

- % of carbohydrates based on pre & post blood sugars
- Carbohydrates
- Protein
- Fat
- Fiber

# Carbohydrates (CHO)

- Come from:
  - Whole grains, fruits, vegetables, legumes and low fat milk
  - Restricting carbs to <130 mg/day not recommended
  - CHO and monosaturated fats together should provide 60-70% of energy intake
  - Total amount of carbohydrates ingested is the primary determinant of post prandial response
    - Type of carb does affect response

# Fiber Intake & Glycemia

- Daily Recommended Intake: 14 grams/1000 kcal
- Diets with 44-50 grams of fiber reported to improve glycemia

# Fiber Intake & Cholesterol

- 25-30 grams of total fiber per day with 7-13 grams of soluble fiber can decrease
  - Total cholesterol by 2-3%
  - LDL cholesterol up to 7%

# Nutritional Needs of Hospitalized Patient

- 25-35 kcal/kg body weight
- Protein needs for patients with nephropathy are  $< 1.0$  gm/kg body weight
- Protein (15-20% of energy intake)
  - Mildly stressed 1.0 gm/kg body weight
  - Moderately-severely stressed 1.5 gm/kg body weight

# Carbohydrate Consistent Diet

- Foods that contain carbohydrate, starch, fruit and milk
- 4 CHO (60 gms) choices served at each meal (180 gms/day)
- Minimum of 3 CHO with each meal (135 gms/day)
- If using NPH may need bedtime snack

# Plate Method

## Control Portion Sizes

1 serving of raw vegetables



1 serving of meat



1 serving of cooked vegetables



1 serving of cheese

1 serving of pasta

# Serving Size of CHO

- $\frac{1}{2}$  cup the size of a ladle or cooking spoon
- exception is rice  $\frac{1}{3}$  cup
- 1 piece the size of a tennis ball
- If purchasing something in a box read the label
- A snack should not be over 15-20 grams of carbohydrate

# Reading a Food Label

## Using a Food Label

### Nutrition Facts

Serving Size 1 Cup (239g)  
Servings Per Container About 2

Amount Per Serving

**Calories** 150    **Calories from Fat** 60

% Daily Value\*

**Total Fat** 6g                      **9%**

Saturated Fat 1.5g                **8%**

Trans Fat 0g

Polyunsaturated Fat 1.5g

Monounsaturated Fat 2.5g

**Cholesterol** Less than 5mg    **1%**

**Sodium** 250mg                    **10%**

**Total Carbohydrate** 19g        **6%**

Dietary Fiber Less than 1g    **3%**

Sugars 0g

**Protein** 3g

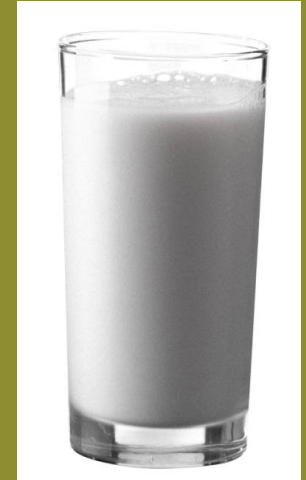
Vitamin A 0% • Vitamin C 0%

Calcium 2% • Iron 6%

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



# Balance Your Plate



$\frac{1}{2}$  non starchy  
vegetable:  
spinach, watercress,  
okra, cabbage

$\frac{1}{4}$  with a starch:  
sweet potatoe,  
pumpkin, rice

$\frac{1}{4}$  with lean meat,  
fish or poultry;  
chicken, lamb,  
fish, pork

# Haitian Meals

What are the carbohydrates here?



# Haitian Meals



Thank you

# Questions