



# NC Department of Health and Human Services NC Nurse Aide I Curriculum

## Module J Nutrition and Fluids

July 2019

# Objectives (1)

- **Describe nutrition and fluid requirements for the older adult**
- **Identify basic nutrients**
- **Explain the use of the U.S. Department of Agriculture's (USDA's) MyPlate**

## Objectives (2)

- **Identify special diets ordered for the older adult based on particular illnesses or conditions**
- **Discuss nurse aide responsibilities related to dysphagia and prevention of aspiration, hydration and prevention of dehydration**
- **Explain the nurse aide's role in enteral and parenteral nutrition**

# Important Terms

- **Nutrition** – when the body takes in and uses foods and fluids to maintain health
- **Nutrients** – substance found in food and fluids used for growth and maintenance of health
- **Malnutrition** – the lack of proper nutrition because of lack of food intake, improper diet, or impaired use of food

# Good Nutrition - Importance

- **Promotes physical and mental health**
- **↑ resistance to illness**
- **Produces energy and vitality**
- **Aids in healing**
- **Assists one to feel and sleep better**
- **Helps avoid or manage common diseases**

# Characteristics of Good Nutrition

- **Healthy body**
- **Alert expression**
- **Healthy, shiny hair**
- **Clear skin and bright eyes**
- **Healthy appetite**
- **Regular elimination**
- **Restful sleep**

# Characteristics of Poor Nutrition

- **Changes in weight**
- **Poor skin color and appearance**
- **Dull looking hair, eyes and skin**
- **Irregular elimination**
- **Poor sleep**
- **Abnormal conditions**
- **Tired**

# Nutrients

- **Water – the most essential nutrient for life**
- **Fats – help the body store energy**
- **Carbohydrates – supply the body with energy and extra protein**
- **Protein – essential for tissue growth and repair and supply the body with energy**
- **Vitamins – needed by the body to function**
- **Minerals – help build bones, make hormones, and help in blood formation**



# Water

- **Needed for every cell in body – only can survive a few days without water**
- **Main part of blood**
- **Importance to body**
  - **Helps move oxygen and nutrients into cells and removes waste products out of cells**
  - **Helps with digestion and absorption of food**
  - **Helps maintain temperature by perspiration**

# Fats

- **Good source of energy and gives flavor to food**
- **Certain fats may increase cholesterol levels and lead to heart disease**
- **Sources of fat – butter, oil, fatty meat, etc.**

# Carbohydrates

- **Supplies energy and helps body use fats**
- **Certain carbohydrates add fiber to the diet that help with elimination**
- **Sources of carbohydrates – breads, fruits, candy, sugary soft drinks, etc.**

# Protein

- **Needed by every cell to help grow new tissue and help with tissue repair**
- **Sources of proteins – meats, cheese, beans, etc.**

# Vitamins and Minerals

## Vitamins

- **Help the body function normally**
- **Body gets majority of vitamins from certain foods**
- **Examples are Vitamins A and C**

## Minerals

- **Help the body function normally**
- **One mineral, calcium, keeps bones and teeth strong**
- **One mineral, iron, helps blood carry oxygen to all parts of the body**

# Serving Size (1)

- **Two important pieces of information**
  - **Shows the number of servings in the package or container**
  - **Shows the amount for one serving or a food or beverage**
- **Serving sizes are given in familiar measurements, such as cups or pieces**

# Serving Size (2)

## Serving Size

- Information on the label is based on one serving of the food or beverage
- Be careful because if a label is one cup and you eat two cups, then you are doubling what is listed on the label

## Food Label Example

<b>Nutrition Facts</b>	
Serving Size 1 cup (228g)	
Servings Per Container about 2	
Amount Per Serving	
<b>Calories</b> 250	Calories from Fat 110
% Daily Value*	
<b>Total Fat</b> 12g	<b>18%</b>
Saturated Fat 3g	<b>15%</b>
Trans Fat 3g	
<b>Cholesterol</b> 30mg	<b>10%</b>
<b>Sodium</b> 470mg	<b>20%</b>
<b>Total Carbohydrate</b> 31g	<b>10%</b>
Dietary Fiber 0g	<b>0%</b>
Sugars 5g	
Proteins 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%
*Percent Daily Values are based on a diet of 2,000 calories a day. Your Daily Values may be higher or lower depending on your calorie needs.	
	Calories: 2,000    2,500
Total Fat	Less than 65g    80g
Saturated Fat	Less than 20g    25g
Cholesterol	Less than 300mg    300mg
Sodium	Less than 2,400mg    2,400mg
Total Carbohydrate	300g    375g
Dietary Fiber	25g    30g

For educational purposes only. This label does not meet the labeling requirements described in 21 CFR 101.9.

# Methods to Determine Serving Size (1)

**Weighing the Food**



**Using the hand as a frame of reference**





# Methods to Determine Serving Size (2)

## Postage Stamp



## Deck of Cards

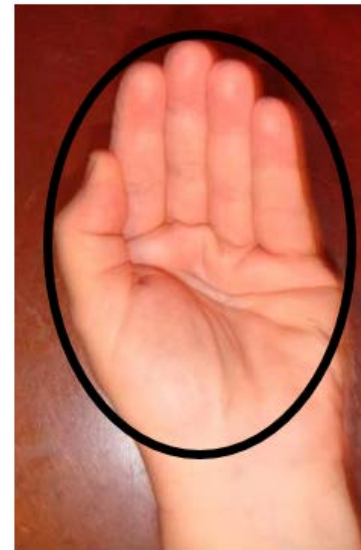


# Serving Sizes Using the Hand (1)

**3 Ounces**  
**(meat, poultry, fish)**



**1 Ounce**  
**(nuts, raisins, small candies)**



# Serving Sizes Using the Hand (2)

**1 Cup (rice, fruit,  
veggies, cereal,  
pasta, baked potato)**



**1 Ounce  
(chips, popcorn,  
pretzels)**



# Serving Sizes Using the Hand (3)

**1 Ounce or  
1 Tablespoon  
(peanut butter, hard  
cheese)**



**1 Teaspoon  
(cooking oil, mayo,  
butter, sugar)**



# Serving Size Using Common Objects (1)

## Deck of Cards

**(3 ounces of meat,  
poultry or fish)**



## Baseball

**(1 cup rice, fruit,  
veggies, cereal, or  
pasta)**



# Serving Size Using Common Objects (2)

**Tennis Ball**  
**(1 medium size fruit)**



**Postage Stamp**  
**(Butter)**



# Calories

- **Calorie is the energy value of a food or beverage**
- **Shows the number of calories in one serving**
- **Most people who are trying to lose weight are concerned with calorie intake**

# Teaching Tip:

**Review Answers to Activity #1J**



## **\*Activity #2J:**

# **Evaluation of Various Foods and Beverages Using a Nutrition Facts Label – Check ingredients to detect food allergies**

**\*Refer to the teaching guide at the beginning of this module.**

# USDA's My Plate (1)

## My Plate

- **Developed by U.S. Department of Agriculture**
- **It recommends balancing the intake of healthy food choices and physical activity**

## My Plate

- **Designed to help people easily build a health plate during meal times**
- **Shows the amounts of each food group that should be on a person's plate during meals**

## **\*USDA's My Plate (2)**

### **My Plate**

- **Emphasizes vegetables, fruits, grains, protein, and low-fat dairy**
- **Think about halves – make half your plate fruits and vegetables; and half your grains whole grains**

### **My Plate**

- **Advocates drinking water instead of sugary drinks**
- **Replaces the MyPyramid**
- **Helpful information at the following website: [www.choosemyplate.gov](http://www.choosemyplate.gov)**

## **\*USDA's My Plate (3)**

### **My Plate**

- **Vegetables: choose a variety of colored vegetables**
- **Fruits: choose whole fruits – fresh, frozen, dried, or canned in 100% juice**
- **Grains – make half your grains whole grains**

### **My Plate**

- **Dairy: choose low-fat or fat-free milk or yogurt**
- **Protein: mix up your protein foods to include seafood, beans, and peas, unsalted nuts and seeds, soy products, eggs, and lean meats and poultry**

# USDA's MyPlate Healthy Choices - Vegetables

- **Eat more red, orange, and dark-green, such as tomatoes (a fruit that is considered a vegetable by nutritionists), sweet potatoes, and broccoli**
- **Add beans or peas to salads, soups, or side dishes**
- **For canned vegetables, choose reduced sodium, or no salt added**

# USDA's MyPlate Healthy Choices - Fruits

- **Use fruits as snacks, and in salads and desserts**
- **At breakfast, add bananas or strawberries to oatmeal or cereal, or blueberries to pancakes**
- **Choose fresh, frozen, canned in water, or 100% juice, or dried**
- **Select fruit juices that are 100% fruit juice**

# USDA's MyPlate Healthy Choices - Grains

- **Choose whole grain instead of refined-grain food when selecting breads, bagels, rolls, cereals, crackers, rice, and pasta**
- **Whole grains include the “whole grain” and refined grains have valuable parts of the grain removed**
- **Examples of whole grain include brown rice, wild rice, oatmeal, whole wheat/oats/corn products**

# USDA's MyPlate Healthy Choices - Dairy

- **Choose skim (fat free) or 1% (low fat) milk**
- **Include low-fat yogurt on fruit salads, and baked potatoes**



# USDA's MyPlate Healthy Choices - Protein

- **Eat a variety of foods each week, including seafood, beans, peas, nuts, lean meats, poultry, and eggs**
- **Choose seafood twice a week**
- **Choose lean meats, and ground beef that is at least 90% lean**
- **Cut fat from meat and remove skin from poultry**

# USDA's My Plate Activity Plan

- **Pick activities you like and do each for at least 10 minutes at a time – because every little bit adds up as activity increases**
- **Adults - 2 ½ hours or more per week of activity of moderate effort, such as walking briskly**

# **\*Age Related Changes Affecting Nutrition (1)**

## **“Age Related Changes”**

- Need for fewer calories**
- Vitamin and mineral requirements change**
- Drugs may affect how nutrients are absorbed and used**

## **“Age Related Changes”**

- Teeth/dentures affect ability to chew**
- Saliva and gastric juices decrease**
- Appetite and thirst decrease**

# Age Related Changes Affecting Nutrition (2)

- **Constipation may occur**
- **Taste and smell diminish**
- **May require assistance with dining**

# The Diet Card

- **Prepared by dietary department based on doctor's order**
- **Each resident's meal has its own diet card**
- **At a minimum, lists the resident's room number, name, and type of diet**
- **The nurse aide who delivers the meal tray must verify that the right resident is receiving the right meal tray, with the right diet on it**

# The Regular Diet

- **Ordered by the doctor**
- **A basic, well-balanced diet**
- **Without limits or restrictions**

# Special Diets

- **Also called therapeutic or modified diet**
- **Ordered by the doctor and planned by dietician with input from resident**
- **May restrict or totally eliminate certain foods or fluids, based on illness (i.e. Celiac Disease), in preparation for procedures, or to meet nutritional needs**

# Cultural Food Preferences and Dietary Restrictions (1)

- **Culture influences dietary practices, food choices, and food preparation**
- **Many Buddhists are vegetarians, but some may include fish in their diet**
- **Some Christians, mostly Roman Catholics, do not eat meat on Fridays during Lent**
- **Mormons may not drink alcohol, coffee, or tea**



# Cultural Food Preferences and Dietary Restrictions (2)

- **Many Jewish people eat kosher foods, but do not eat pork, lobster, shrimp, or clams (shellfish). Kosher food is prepared according to Jewish dietary laws. Kosher and non-kosher foods cannot come into contact with the same plates. Jewish people who observe dietary laws may not eat meat at the same meal with dairy products**

# Cultural Food Preferences and Dietary Restrictions (3)

- **Muslims do not eat pork**
- **They may not eat certain fowl**
- **They may not drink alcohol**
- **Muslims observe regular periods of fasting as part of their religious practice**

# Advanced Diet

- **Food is gradually reintroduced to the resident**
- **Reasons – surgery or medical condition**
- **Resident may start out NPO (nothing by mouth) > ice chips > clear liquids > full liquids > mechanical soft > regular diet**

## **\*Other Forms of Nourishment (1)**

- **Residents may be unable to eat due to illness, surgery, or injury**
- **Enteral nutrition – feeds the resident through a feeding tube into the gastrointestinal tract, through the nose and directly into the stomach (naso-gastric tube), or into the stomach through the abdomen (gastrostomy)**

## Other Forms of Nourishment (2)

- **Nurse is responsible for care**
- **Nurse aide must keep the head of the bed elevated per facility policy**
- **Nurse aide must be careful to not pull on the tube and to keep tube secure**

## Other Forms of Nourishment (3)

- **Intravenous (IV) Fluids – feeds the resident through a vein**
  - **Nurse is responsible for care**
  - **Nurse aide observes for and reports redness, swelling, or pain at the IV site**
  - **Nurse aide reports low supply of fluid in bag**
  - **Nurse aide must be careful with tubing and connections when providing care**

# Alternative and Supplemental Feedings

- **Sometimes given when resident needs extra protein, calories, and fluids**
- **Examples?**
- **Nurse aide's responsibility?**

# OBRA Dietary Requirements for Residents in Nursing Homes (1)

- **Each person's**
  - **Dietary and nutritional needs are met**
  - **Diet is nourishing, well-balanced, and tastes good**



# OBRA Dietary Requirements for Residents in Nursing Homes (2)

- **The food is**
  - **Appetizing, smells good and looks good**
  - **Varied in color and texture**
  - **Served at the correct temperature**
  - **Served promptly**
  - **Prepared to meet individual needs**

# OBRA Dietary Requirements for Residents in Nursing Homes (3)

- **Other foods are offered if food served is refused**
- **Each person receives at least 3 meals a day, with the offer of a bedtime snack**
- **Assistive devices and utensils provided as needed**

# **\*Dysphagia**

- **Dysphagia is difficulty in swallowing**
- **With dysphagia, there is a danger in aspiration**
- **Causes of dysphagia**
- **Signs and symptoms**

# \*Aspiration

- **Aspiration (recall the definition) – the accidental breathing in of food, fluid, vomit, or other object into the lungs**
- **Nurse aide's role in the prevention of aspiration**

## **\*Fluid Balance - Water**

- **Needed to survive**
- **Death can occur if you get too little or too much**
- **Take in water by drinking fluids and eating foods**
- **Lose water via urine, feces, vomit, perspiration (sweat, and lungs (breathing out), plus drainage from wounds or liquids from stomach suctioning**

# Fluid Balance

- **Needed for good health**
- **Amount of fluid taken in (intake) equals the amount of fluid lost (output)**

# Dehydration

- **Resident does not take in enough fluid causing tissues to lack water**
- **When does it occur?**
- **Nurse aide's role?**
- **Warning signs of potential dehydration?**
- **Signs/symptoms of dehydration**

# Edema

- Resident does not excrete enough fluid causing tissues to swell with water
- Nurse aide's role
- Signs/symptoms of fluid overload

