

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 how to read and use information from a Nutrition Facts label
- Explain the use of the U.S. Department of Agriculture's (USDA's) MyPlate

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Objectives (2)

- Identify special diets ordered for the older adult based on particular illnesses or conditions
- Calculate dietary intake, fluid intake, and output
- 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

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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

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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**

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Characteristics of Good Nutrition

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

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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

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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

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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

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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.

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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.

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Protein

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

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Vitamins and Minerals

<p style="text-align: center;">Vitamins</p> <ul style="list-style-type: none"> • Help the body function normally • Body gets majority of vitamins from certain foods • Examples are Vitamins A and C 	<p style="text-align: center;">Minerals</p> <ul style="list-style-type: none"> • 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
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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

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Serving Size (2)

<p style="text-align: center;">Serving Size</p> <ul style="list-style-type: none"> • 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 	<p style="text-align: center;">Food Label Example</p> 
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Methods to Determine Serving Size (1)



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



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Methods to Determine Serving Size (2)

Postage Stamp **Deck of Cards**





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Serving Sizes Using the Hand (1)



3 Ounces
(meat, poultry, fish)

1 Ounce
(nuts, raisins, small candies)





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Serving Sizes Using the Hand (2)

1 Cup (rice, fruit, veggies, cereal, pasta, baked potato)	1 Ounce (chips, popcorn, pretzels)
	



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Serving Sizes Using the Hand (3)

1 Ounce or 1 Tablespoon (peanut butter, hard cheese)	1 Teaspoon (cooking oil, mayo, butter, sugar)
	



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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)
	

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Serving Size Using Common Objects (2)

Tennis Ball (1 medium size fruit)	Postage Stamp (Butter)
	

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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

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Teaching Tip #2J:

Review Answers to Activity #1J

- See answer sheet

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Activity #2J:

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

Follow instructor’s guide

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USDA’s My Plate (1)

<p style="text-align: center;">My Plate</p> <ul style="list-style-type: none"> • Developed by U.S. Department of Agriculture • It recommends balancing the intake of healthy food choices and physical activity 	<p style="text-align: center;">My Plate</p> <ul style="list-style-type: none"> • 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
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USDA’s My Plate (2)

<p style="text-align: center;">My Plate</p> <ul style="list-style-type: none"> • 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 	<p style="text-align: center;">My Plate</p> <ul style="list-style-type: none"> • Advocates drinking water instead of sugary drinks • Replaces the MyPyramid • Helpful information at the following website: www.choosemyplate.gov
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USDA's My Plate (3)

<p style="text-align: center;">My Plate</p> <ul style="list-style-type: none"> • Vegetables: choose a variety of colored vegetables • Fruits: choose whole fruits – fresh, frozen, dried, or canned in 100% juice 	<p style="text-align: center;">My Plate</p> <ul style="list-style-type: none"> • 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
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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**

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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**

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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

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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

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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

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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

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Age Related Changes Affecting Nutrition (1)

<p>“Age Related Changes”</p> <ul style="list-style-type: none"> • Need for fewer calories • Vitamin and mineral requirements change • Drugs may affect ability to chew 	<p>“Age Related Changes”</p> <ul style="list-style-type: none"> • Teeth/dentures affect ability to chew • Saliva and gastric juices decrease • Appetite and thirst decrease
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Age Related Changes Affecting Nutrition (2)

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

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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

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The Regular Diet

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

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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

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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

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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

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Cultural Food Preferences and Dietary Restrictions (3)

- Muslims do not eat pork and may not eat certain birds
- They may not eat certain birds
- They may not drink alcohol
- Muslims have regular periods of fasting

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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

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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 track, through the nose and directly into the stomach (naso-gastric tube), or into the stomach through the abdomen (gastrostomy)

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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

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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

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Alternative and Supplemental Feedings

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

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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

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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

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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

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Dysphagia

- Dysphagia is difficulty in swallowing
- With dysphagia, there is a danger in aspiration
- Causes of dysphagia
- Signs and symptoms
- Nurse aide's role in the prevention of aspiration

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Aspiration

- **Aspiration (recall the definition) – the accidental breathing in of food, fluid, vomit, or other object into the lungs**

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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**

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Fluid Balance

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

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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

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Edema

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



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