


Module 2

Nutrition, Hydration, and Therapeutic Diets

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- ## Objectives
- Describe the importance of adequate nutrition and hydration
 - Describe special or therapeutic diets
 - Identify texture modified diets and liquids
 - Explain the importance of fluid intake for older adults
 - Define the terms dysphagia and aspiration

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- ## Importance of Good Nutrition
- Older adults require extra foods and fluids due to:
- Chronic illness
 - Wound healing
 - Muscle weakness
 - Higher risk for acute illness
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Nutritional Needs

- Older individuals do not need as many calories
 - Still need vitamins, minerals, and protein
- If sick or have a healing wound, need more
- Good nutrition may have positive effects on the physical and mental health of the elderly

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Importance of Nutrition

- Maintain health, prevent injury and disease, manage chronic illness

What is necessary for good nutrition?

- Whole foods
- Variety
- Balance
- Consistency
- Adequate fluid / water intake
- Adequate vitamins & minerals



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Warning Signs of Malnutrition

- Poor appetite
- Low food intake
- Increased tiredness, weakness
- Swelling
- Difficulty chewing or swallowing
- Skin breakdown
- Weight loss
- Muscle/fat mass loss
- Edema



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Warning Signs of Malnutrition

- A person's size is not a good indicator
- Notify a nurse of any changes or concerns

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Risk Factors for Poor Nutrition

- Older age
- Physical inactivity
- Illness or injury
- Diarrhea / Fever
- Fatigue
- Poor appetite
- Impaired taste or smell
- Missing teeth / Loose dentures
- Impaired memory or cognition
- Loneliness or depression
- Pain / Discomfort
- Lack of assistance

Lack of physical activity	Poor appetite
Feeling of unwantedness (loneliness)	A sense of neglect

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Outcomes of Poor Nutrition

- Increases risk for infection
- Exacerbates chronic illness
- Loss of muscle mass and physical strength
- Slows wound healing
- Constipation or diarrhea
- Falls and fractures
- Poor quality of life

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Fluid Needs

- People need 6-8 cups of water/fluids every day
- People "eat" water in solid foods, too
- Thirst signals the need for fluids, but it is not foolproof
- Many older adults have a decreased sensation of thirst and do not drink adequate fluids
 - Fear of incontinence
 - Inability to request adequate fluids
 - Medication side effect

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Fluid Needs

It is important for all staff members to offer a variety of drinks throughout the day, as well as at meals.



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Dehydration

- Condition of a loss of body water
- May experience thirst, followed by fatigue, weakness, delirium, and ultimately death
- Be alert for signs of dehydration, particularly among those residents who are at risk

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Conditions That Increase Risk of Dehydration


- Fever
- High protein diet
- Infection
- Constipation
- Confusion
- Diarrhea
- Medications
- Decreased appetite
- Draining wounds
- Excessive sweating



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Warning Signs of Dehydration

- Dry or sticky mouth/tongue
- Increased confusion
- Increased tiredness, weakness
- Hollow or sunken look under eyes
- Fast pulse
- Low urine and/or strong smell of urine
- Dry or cracked lips
- Dry, flaky, cracked skin
- Fatigue
- Tongue thick and coated white
- Constipation



Notify a nurse of any changes or concerns

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Suggestions to Ensure Adequate Fluid Intake

- Give residents who may be confused special attention
 - Offer a variety of liquids.
 - Offer liquids that meet the resident's preferences.
- Check that adaptive devices to aid the drinking process are available
 - To be used only if recommended by the OT, SLP, or Nurse

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Interference with Nutrition

- Inability to feed oneself
- Poor oral health
- Dementia
- Medications
- Depression
- Medical condition
- Loss of senses (smell, taste, sight)

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Physical Risk Factors

- Physiological changes with advancing age
- Reduced hunger/thirst sensations
- Poor dentition
- Physical impairment
- Inability to feed self
- Difficulty holding utensils
- Difficulty chewing, swallowing

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Sensory Risk Factors

- Medications
- Reduced taste
- Impaired sight
- Reduced smell
- Impaired hearing

Diet orders may make food less appealing in taste, texture and/or appearance

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Cognitive Risk Factors

- Memory / perception of time
 - Forget that they have (or haven't) eaten
- May not remember how to use silverware
- May not recognize certain foods or what is edible v. inedible

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Environment Risk Factors

Surroundings

- Noisy dining room
- Different staff
- Improper positioning
- Lack of socialization

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Environment Risk Factors

- Lack of familiar food options
- Habit, culture, religion
- Dining routines that work well for staff but don't necessarily reflect resident preferences
- Limited options

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Psychosocial Risk Factors

- Loneliness
- Depression
- Frustration
- Discomfort

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What can you do as an Assistant?

- Take resident to the dining room for meals
- Sit with resident throughout the meal and talk to them
- Offer choices



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Weight Loss

- Increased need for assistance with eating
- Disability
- Ill-fitting dentures
- Teeth in need of repair
- Depression
- Changes in body composition
- Confusion or memory loss
- Increased nutritional needs
- Frequent use of medication or multiple medications
- Immobility
- Lack of socialization

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Pressure Ulcers

- Skin with a reddened area or an open sore that develops as a result of pressure
- Pressure ulcers usually develop over a bony area
- Poor nutrition is a risk factor
- Nutritional needs may be increased due to weight loss, pressure ulcers, or both

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Nutritional Approaches

- Enhanced foods
- Supplement drinks
- Between meal snacks and supplements
- Protein powder added to food and drinks

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Diet

- Amount and type of foods/beverages a person eats
- Orders are written in the medical chart for specific diets
 - Should also be on meal card or diet order list
- Dietitian assesses and determines diet
 - Therapy may be involved if swallowing issues are present
 - Staff must consider eating problems, health needs, nutrient needs, individual preferences

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Therapeutic Diets

- One or more ingredients are lowered or increased in the diet – OR food texture is changed
- Prescribed by the doctor based on
 - Presence of disease or potential disease
 - Presence of chewing or swallowing problem

It is very important that residents with doctor's orders for therapeutic diets be given those diets

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Therapeutic Diets

- High calorie, high protein diets
- Reduced sodium diets
- Low-fat and low-cholesterol diets
- Calorie- and carbohydrate-controlled diets
- Texture-modified diets

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High Calorie, High Protein Diets

- To provide extra energy/calories and extra protein
- To improve nutritional status, promote weight gain, aid in healing wounds, aid resident's response to a medical treatment
- Supplements or shakes may be provided to increase protein or calorie intake



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Reduced Sodium Diets

- Restricted in sodium, commonly found in table salt and naturally occurring in some foods
- To prevent a buildup of fluid, to promote a loss of excess body water, or both
- Orders may say “low sodium,” “4-gram sodium,” “2-gram sodium,” or “no added salt”
- No salt packet on the resident's tray



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No Added Salt (NAS) Diet

- For residents with hypertension or heart disease
- Regular diet - except no salt is added to foods during or after preparation
- No salt packet or saltshaker is allowed with the resident's meals or snacks

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Low-Fat and Low- Cholesterol Diets

- Restrict the type of fats or the amount of fat provided
- Diet order may state “low fat” or “low cholesterol,” or both



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Calorie- and Carbohydrate- Controlled Diets

- To better manage diabetes
- To induce weight loss
- Diet may have calorie restrictions or no concentrated sweets
- "Controlled Carbohydrate" diets omit the sugar packet but allow regular foods and desserts

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Diabetic Diet

- Also called Controlled Carbohydrate (CCHO) or No Added Sweets (NAS)
- For residents diagnosed with diabetes – designed to control blood glucose (blood sugar)
- Smaller portions of carbs and sweets
- Sugar substitutes



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Renal Diet

- For residents chronic kidney disease or dialysis
- Restricted nutrients: Potassium, Phosphorus, Sodium, Fluid
- Foods to avoid: tomatoes, potatoes, bananas, oranges, beans, processed meats, salt packets, and dairy products



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Fluid Restricted Diet

- For residents with End Stage Renal Disease, Congested Heart Failure, Liver Disease, or Hyponatremia (low blood level of sodium)
- The amount of fluid allowed varies based on the resident's condition

Check with nursing staff before offering additional fluids to a resident on a fluid restriction

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Snacks

- Snacks must be consistent with the type of diet order that the resident has
- Snacks can be foods or beverages
- Snacks often help residents meet their energy and nutrient needs

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Texture-Modified Diets

- Changing the texture of food and drinks, commonly called texture modification, may help with chewing or swallowing issues
- Food texture may be chopped or blended to different levels
- Diets are likely given different names at different facilities
- The resident's physician orders special diet considerations

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Common Diet Stages

- Stage 1. Pureed
- Stage 2. Pureed/Ground
- Stage 3. Ground
- Stage 4. Mechanical Soft
- Stage 5. Regular

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Common Liquid Stages

- Thin
- Nectar thick
- Honey thick
- Pudding thick

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Mechanical Soft

- Soft solid foods that require some chewing ability
- Easy-to-cut whole meats, fruits, and vegetables
- Avoids hard, crunchy fruits and vegetables; sticky foods; very dry foods
- Meats are chopped or ground
- May not be allowed foods with tough skin, dried fruits, hard rolls, bagels, breadsticks, popcorn, bacon, nuts, deep fried crispy foods, nuts, potato or snack chips

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Mechanically Altered or Chopped

- Semi-solid foods that require some chewing ability
- Fork-mashable fruits and vegetables
- Meats are ground or chopped, usually no larger than ¼-inch pieces
 - Meat is still moist
- Avoids crackers, most bread products, dry foods

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Pureed

- Smooth, pureed, very cohesive, pudding- like foods
- Processed in a blender or food processor
- Consistency of mashed potatoes, applesauce, pudding, oatmeal, refried beans



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Liquid Consistency


- May be thickened to aid with swallowing
- Consistency of a liquid is defined as the flow of the liquid
- Thickening powder or liquid may be added to drinks by nursing or dietary staff
 - Some beverage can be ordered pre-thickened
- Thin liquids:
 - Water, coffee, tea, soda, ices, lemonade, and juice that does not have pulp or fiber (clear juices)

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Types of Thickened Liquids

- Nectar-like
- Honey-like
- Pudding-like


Nectar



Honey




Pudding



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Nectar-Thick Liquids


- Can be sipped from a cup or through a straw
- Slowly fall off a spoon that is tipped
- Liquids that have been thickened to a consistency that coats and drips off a spoon, similar to unset Jello
- Examples include buttermilk, cold tomato juice, eggnog, and fruit nectars



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Honey-Thick Liquids

- Can be eaten with a spoon but do not hold their shape on a spoon
- Can be sipped, but not through a straw
- Liquid flows off a spoon in a ribbon just like actual honey



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Pudding-Thick Liquids

- Must be eaten with a spoon
- Hold their shape on a spoon
- Too thick to be sipped from a cup



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Remember ...

- All food/liquid must be of that consistency – including snacks
- List is not all-inclusive
- Review the diets that your facility uses as they may not be exactly the same as what is described here

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International Dysphagia Diet

- Continuum of 8 levels (0-7) – text and color coded
- Liquids are tested through a gravity flow test with a 10ml syringe
 - Cover the nozzle with a finger, fill with 10ml of the liquid, release nozzle, and time. Amount of liquid remaining after 10 seconds gives the classification
 - 0-1 ml for thin (Level 0)
 - 1-4 for slightly thick (Level 1)
 - 4-8 for mildly thick (Level 2)
 - 8-10 for moderately thick (Level 3)
 - 10 for extremely thick (Level 4)

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International Dysphagia Diet

- Solids are measured through the fork drip test
 - Level 3 (Liquidized or Moderately Thick liquids)
 - Should drip slowly or in dollops/strands through the tines/prongs of a fork
 - Level 4 (Puree food or Extremely Thick liquids)
 - A small amount may flow through and form a tail below the fork but it does not flow or drip continuously

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International Dysphagia Diet

- Levels 4 and 5 should not be sticky
 - Level 5 (Minced and Moist foods)
 - Particles should fit between the tines/prongs of a standard fork
 - Level 6 (Soft and Bite-sized)
 - Maximum food size of 1.5 cm x 1.5 cm

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International Dysphagia Diet



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Special Diets

- Verify the correct diet
- Check the card that comes with the food on the tray, the resident's name and the name band
- Check that the card and the food on the tray is the correct diet and consistency

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Swallowing

- Chewing and swallowing may be difficult residents
- Dysphagia is the term used for any change in the normal process of swallowing
- Dysphagia is difficulty swallowing
- Some residents may not be able to swallow at all, while others have problems with solids, liquids, saliva, or any combination of these items
- Safe swallowing is important for health

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Dysphagia

- Dysphagia is a swallowing disorder in which an individual demonstrates difficulty moving food from mouth to stomach, including food acceptance and recognition
- An impairment in any or all stages of swallowing
- Often requires therapist intervention



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Causes of Dysphagia

- Multiple Sclerosis
- Dementia
- Parkinson's disease
- Stroke/CVA
- Head injury
- An infection or irritation
- Cancer of the head, neck or esophagus
- Sometimes specific cancer treatment can cause dysphagia
- Injuries of the head, neck and chest
- Congenital abnormalities of the swallowing mechanism

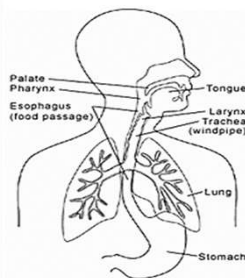
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Texture and Dysphagia

- Texture-modified diets to
 - Promote safe nutritional intake
 - Restore ability to swallow liquids and solids
 - Maintain and improve feeding and swallowing abilities and nutritional status

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Physical Structures for Swallowing



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Structures and Definitions

- Hard Palate
 - Roof of the mouth
- Soft Palate
 - Soft rear portion of the roof of the mouth
- Tongue
 - Used to form the bolus (ball of chewed food) move it to the back of the mouth
- Pharynx
 - Upper throat space
- Larynx
 - Voice box
- Adam's Apple
 - The prominent lump at the front of the neck
- Trachea
 - Pathway for air to the lungs or "windpipe"
- Esophagus
 - Pathway for food to the stomach

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Terms and Definitions

- Aspiration
 - When food or liquids go into the lungs instead of the stomach
- Aspiration Pneumonia
 - Inflammation and/or infection of the lungs caused by inhaling food, liquid or other substance
- Bite Reflex
 - Automatically biting or clenching the spoon with teeth
- Dry Swallows
 - Swallowing when food is not present in the mouth
- Dysphagia
 - Difficulty with swallowing
- NPO
 - Nothing by mouth

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Terms and Definitions

- Paralysis
 - Numbness in a limb, lips, tongue, palate, etc.
- PO
 - By mouth
- Pocketing
 - Keeping food in the cheeks when attempting to swallow
- Reflux
 - Return of food or liquid to the throat from the stomach
- Self-feeding
 - The ability to feed oneself, with or without adaptive equipment
- Silent Aspiration
 - Food or liquid entering the airway or lungs without any symptoms
- Tongue Thrust
 - Extending the tongue beyond the front teeth out of the mouth

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Stages of Swallowing

- Oral Preparatory Phase
 - Acceptance of food into the mouth, chewing
- Oral Phase
 - Tongue moves food back toward throat
- Pharyngeal Phase
 - Swallow reflex is triggered
- Esophageal Phase
 - Food moves through esophagus to stomach

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Symptoms of Swallowing Problems

- Decreased recognition of eating
- Decreased desire to eat in front of or with others
- Difficulty opening mouth for food acceptance
- Decreased physiological responses to food
- Recent diet changes
- Difficulty in chewing, excessive chewing
- Excessively long mealtime (45-60 minutes)
- Unusual posture during mealtime
- Difficulty managing saliva

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Symptoms of Swallowing Problems

- Excessive drooling
- Food or liquid leaking from mouth
- Nasal regurgitation
- Food remaining on tongue after swallowing
- Pocketing of food
- Spitting out food after chewing
- “Holding” food or medications in the mouth
- Refusing to swallow
- “Refusing” foods of different textures

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Symptoms of Swallowing Problems

- Difficulty starting a swallow
- Facial grimacing
- Gagging
- Complaining of pain or “something stuck”
- Coughing or choking
- Watery eyes and/or reddened face
- Attempts to clear throat during eating or drinking
- Difficulty or inability to breathe while eating
- Needing to swallow two or three times
- “Wet” voice after eating or drinking

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Symptoms of Swallowing Problems

- Excessive mouth movement
- Increased body temperature of unknown cause
- Pneumonia or chronic respiratory distress
- Unexplained weight loss
- Gastro esophageal reflux
- Unable to keep food in mouth
- Unable to drink
- Unable to move food or liquids backward to swallow
- Food is not chewed enough to swallow
- Unable to complete meals

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