

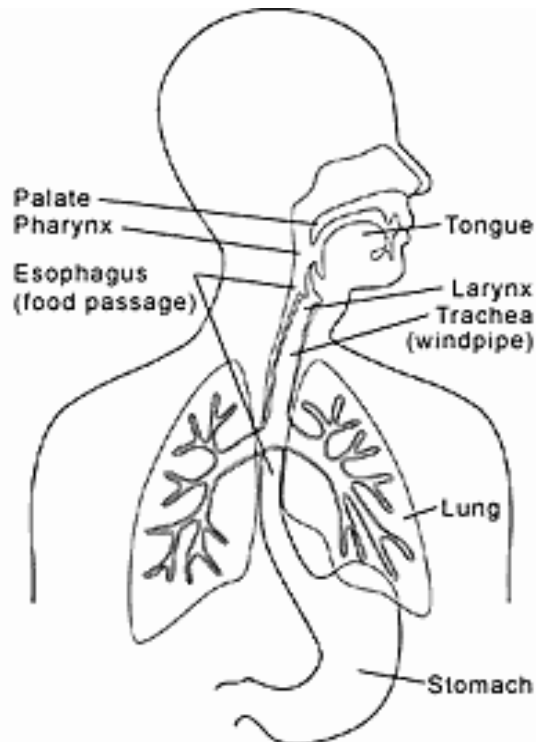
## Eating and Swallowing



## Eating and Swallowing

The ability for people to feed themselves is often the last self-care task they can perform. Many residents lose their self-feeding and/or swallowing abilities due to illness, progressive disease or aging and require special setup or assist. Safe swallowing is important for residents to stay healthy, maintain ideal body weight and prevent aspiration pneumonia, dehydration, development of pressure sores, loss of balance and falls. It is very important to preserve these skills.

### Important Physical Structures for Swallowing



Note: From National Institutes on Health. "How Do We Swallow?" Bethesda, MD: National Institute on Deafness and Other Communication Disorders. Copyright October, 1998 by National Institutes of Health

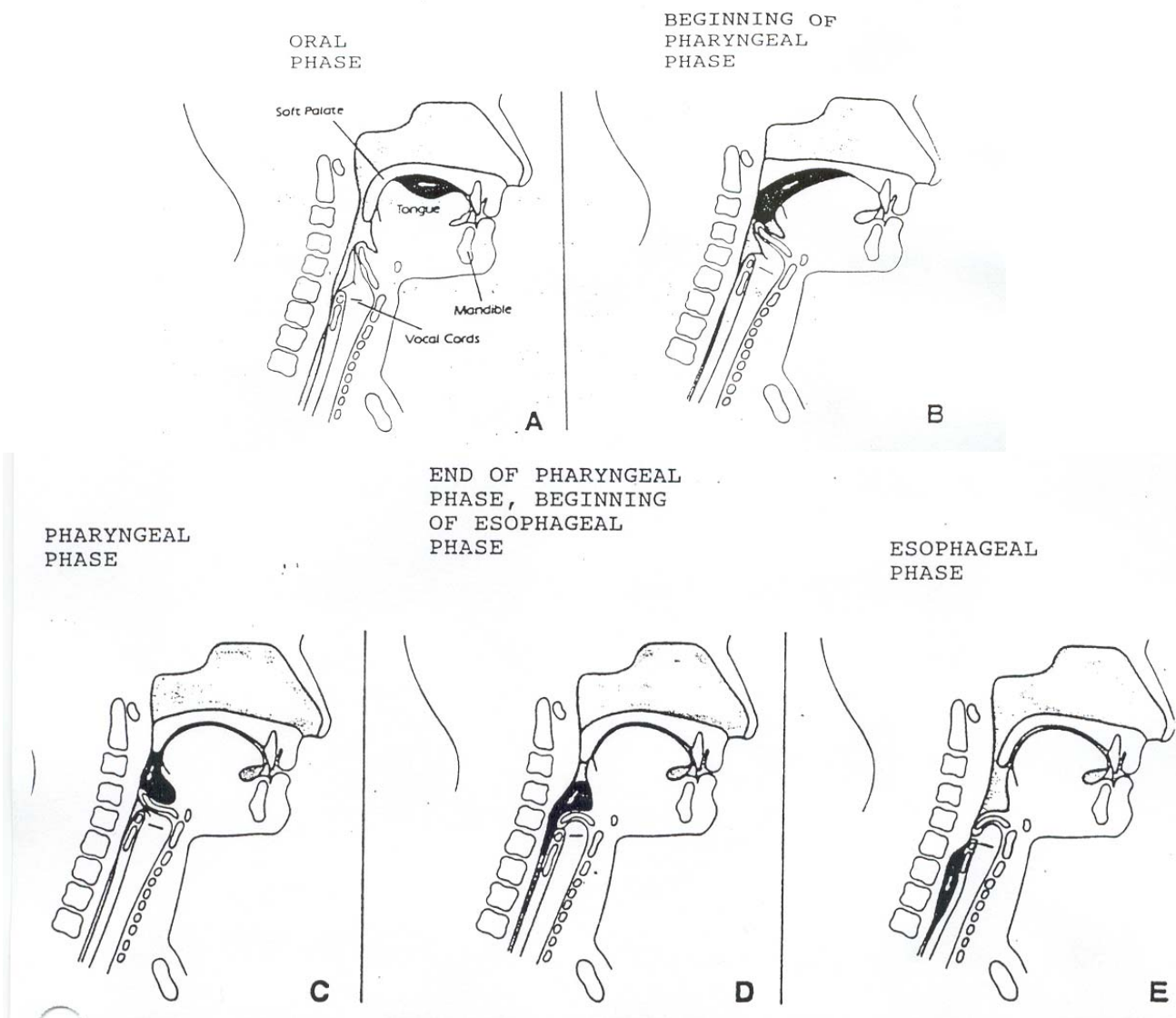
Structure	Description
<b>Hard Palate</b>	The roof of the mouth
<b>Soft Palate</b>	Soft rear portion of the roof of the mouth
<b>Tongue</b>	Used to form the bolus (ball of chewed food) and to propel the bolus to the back of the mouth
<b>Pharynx</b>	Upper throat space
<b>Larynx</b>	Voice box
<b>Adam's Apple</b>	The prominent lump at the front of the neck, which can be seen/felt approximately 2 inches below the chin. It should move upward each time the resident swallows. It is also called the "larynx" or "voice box". It can be felt by placing fingers on the neck/throat to confirm resident swallowed
<b>Trachea</b>	Pathway for air to the lungs or "windpipe"
<b>Esophagus</b>	Pathway for food to the stomach; when not in use, it is collapsed against itself

## Key Terms

Term	Definition
<b>Aspiration</b>	The breathing in of food or other substances into the lungs. This is VERY serious and frequently results in pneumonia.
<b>Aspiration Pneumonia</b>	Inflammation and/or infection of the lungs caused by inhaling food, liquid or other substance. A serious condition, it may occur before, during, or after the swallow, require hospitalization or result in death.
<b>Bite Reflex</b>	Automatically biting or clenching the spoon with one's teeth.
<b>Dry Swallows</b>	Swallowing when food is not present in the mouth.
<b>Dysphagia</b>	Difficulty with swallowing. Some residents may have difficulty with swallowing liquids, others may have trouble with textured food, and d some may have difficulty swallowing any type of food or liquid.
<b>G-tube (Gastrostomy Tube)</b>	Feeding tube inserted directly into the stomach through the stomach wall. Used to feed a person who is unable to safely consume food and/or liquids and/or medications by mouth.
<b>MBS (Modified Barium Swallow)</b>	Test used to assess the passage of substances during a swallow.
<b>NG tube (Nasogastric Tube)</b>	Feeding tube inserted into the nose and running down the throat, into the stomach. Used to feed a person who is unable to take food by mouth.
<b>NPO</b>	Nothing by mouth
<b>Paralysis</b>	Numbness in a limb, lips, tongue, palate, etc. which may prevent a resident from being able to self-feed or swallowing a regular diet.
<b>PO</b>	By mouth
<b>Pocketing</b>	Keeping food in the cheeks when attempting to swallow. The resident may not be able to sweep away food in the cheeks because of weakness in the tongue or cheeks.
<b>Reflux</b>	Return of food or liquid to the throat from the stomach.
<b>Self-feeding</b>	The ability to feed oneself, with or without adaptive equipment.
<b>Silent Aspiration</b>	Food or liquid entering the airway or lungs without producing any symptoms of disturbance such as coughing or struggling behavior.
<b>SLP</b>	Speech Language Pathologist
<b>Tongue Thrust</b>	Extending the tongue beyond the front teeth and out of the mouth each time a resident takes a bite of food.
<b>Upper Extremity</b>	The left or right arm.
<b>Visual Field</b>	The area that the resident is able to see when looking straight ahead.
<b>WNL</b>	Within Normal Limits

## Four Stages of Swallowing

- **Oral Preparatory Phase** Acceptance of food into the mouth and the chewing, tasting and manipulation of the food into a bolus (ball of chewed food) in the oral cavity
- **Oral Phase** Tongue moves bolus back to the pharynx
- **Pharyngeal Phase** Swallow reflex is triggered; bolus moves through pharynx to esophagus
- **Esophageal Phase** Bolus moves through esophagus to stomach



Logemann, J. A. (1983). Evaluation and treatment of swallowing disorders. *Journal of the National Student Speech Language Hearing Association*, 12, 38-50. Used with permission.

### What is Dysphagia?

- Dysphagia is a swallowing disorder in which an individual demonstrates difficulty moving food from mouth to stomach, including food acceptance and recognition.
- Some individuals may be completely unable to swallow, leading to the need for alternative feeding methods, while others may only have difficulties with lip closure and/or leakage of liquids, foods or saliva from the lips.
- An impairment in any or all stages of swallowing
- Results in reduced ability to obtain adequate nutrition by mouth
- Often requires therapist intervention

### What Causes Dysphagia?

- Any condition that weakens or damages the muscles and nerves used for swallowing, affects coordination and/or limits sensation may cause dysphagia, such as:
  - Multiple Sclerosis
  - Dementia
  - Parkinson's disease
  - Stroke/CVA
  - Head injury
- An infection or irritation can sometimes cause narrowing of the esophagus.
- Cancer of the head, neck or esophagus may cause swallowing problems.
- Sometimes specific cancer treatment can cause dysphagia.
- Injuries of the head, neck and chest
- Congenital abnormalities of the swallowing mechanism (e.g., cleft palate)

### Special Diets for Residents with Swallowing Problems

- 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

### Dysphagia diet

- Diets are given different names at different facilities
- The resident's physician orders special diet considerations
- Stages of diets:
  - Stage 1. Pureed
  - Stage 2. Pureed/Ground
  - Stage 3. Ground
  - Stage 4. Mechanical Soft
  - Stage 5. Regular
- Stages of liquids:
  - Thin (regular)
  - Nectar thick (like processed syrup)
  - Honey thick (like honey or buttermilk)
  - Pudding thick (like pudding in a pudding pack, sticks to spoon without running off)

**Symptoms of a swallowing disorder may include one or more of the following:**

- Decreased recognition of eating environment/situation/specific foods
- Decreased desire to eat in front of or with others
- Difficulty opening mouth for food acceptance
- Decreased physiological responses to food and/or liquids
- Recent diet changes
- Difficulty in chewing, excessive chewing
- Excessively long mealtime (45-60 minutes)
- Unusual posture during mealtime
- Difficulty managing saliva
- Excessive drooling, especially immediately after eating
- Food or liquid leaking from mouth
- Nasal regurgitation (food or liquid coming out the nose during swallow)
- Food remaining on tongue after swallowing
- Pocketing of food on one side or both sides of the mouth or tongue
- Spitting out food after chewing
- "Holding" food or medications in the mouth
- Refusing to swallow
- "Refusing" foods of different textures
- Difficulty starting a swallow
- Facial grimacing
- Gagging
- Complaining of pain or "something stuck" during or after swallow
- Coughing or choking before, during and/or after eating or drinking
- Watery eyes and/or reddened face while eating or drinking
- Attempts to clear throat during eating or drinking
- Difficulty or inability to breathe while consuming meals, snack or nutritional supplement
- Needing to swallow two or three times "to get all the food down"
- "Wet" voice after eating or drinking
- Excessive mouth movement during chewing and swallowing
- 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

Techniques for Improving Swallowing

- Tell the resident who you are and what you will be doing
- When feeding, if possible, sit down on a chair in front of the resident
- Resident should be positioned according to the instructions of the SLP and may need to be repositioned during the meal. Unless otherwise noted, residents are generally positioned upright with head in the neutral position.
- Describe the menu
- Tell the resident when the feeding utensil is near his/her mouth

- Present food at the mouth level so the resident does not need to lift his/her head while eating
- Do not use a straw unless instructed by therapy
- Tell the resident to take small bites and sips
- Place food on the strong side of the mouth
- Ask the resident to dry swallow to clear food lodged in the throat (as frequently as instructed by therapy)
- Alternate solids and liquids
- When feeding the resident, place the utensil gently on the mid-portion of the resident's tongue
- When the resident is swallowing, ensure that his/her lips are closed
- Give the resident regular, verbal cues
- To reduce confusion, place only one dish in front of the resident at a time
- After eating, have the resident remain sitting up for at least 30 minutes
- Check for pocketing. Food in mouth may need to be cleared prior to the next presentation.
- Do not use a syringe to feed
- Before and after each meal, the caregiver should provide complete oral care to ensure no food is in the mouth
- Resident may be safe to eat only foods and liquids of specific textures, be certain to check the diet order before feeding:
- Resident may not be safe to use a straw
- Ensure dentures fit well. The resident may eat better without the dentures or denture adhesive may be used to improve chewing.
- Allow adequate time for eating

Activities including repetition, physical or verbal cueing, and task segmentation provided by any staff member or volunteer under the supervision of a licensed nurse may qualify as training and skill practice in rehabilitation nursing.

Eating or swallowing: Activities used to improve or maintain the resident's self-performance in feeding one's self food and fluids, or activities used to improve or maintain the resident's ability to ingest nutrition and hydration by mouth.

### Techniques for Improving Self-Feeding

- Use a pleasant voice to greet residents by name and inform them it is mealtime
- Check to see that residents have their dentures, eyeglasses or any necessary adaptive equipment before transporting them to the dining room. If residents are able to walk or wheel to the dining room, allow them to do so and offer assistance as needed.
- Assist residents to achieve correct positioning (see photos below):
  - Transfer to regular chair if possible
  - Ensure hips and knees are positioned at 90 degree angles (or as close as possible)
  - Ensure feet are flat on the floor or on foot pedals
  - Position the resident as close to the eating surface as possible
  - Ensure the table is positioned at elbow height

- Encourage the resident to bring his head slightly forward
  - Position the resident so he is facing the table squarely
- Present food, describing what items are on the plate
- Set up food according to therapist recommendations, or resident preference
  - Remove plate from tray if possible (trays give a cafeteria appearance, and are often too big and cumbersome for the table)
  - Arrange the food in an appetizing or restaurant style format
- Allow the resident time to set up his/her own plate of food such as cutting food, pouring beverages, seasoning food or buttering bread. If he/she has difficulty, assist in set up of the tray.
- Use the "clock" method to set up food for those visually impaired to assist in locating food items (see diagram below). When setting up the clock program, ask the resident the preferred placement of food items. Stay consistent with food placement. For example:
  - Meat or entrée at 4:00
  - Vegetable at 1:00 – 2:00
  - Potato at 10:00
- Place a towel or napkin in the resident's lap to protect clothing. Avoid using bibs as this can be degrading for the elderly population.
- Ask the resident if there is anything else he/she needs
- Encourage the resident to independently self-feed without rushing and allowing rest breaks when needed
- If a resident has made an effort to self-feed, but now seems tired, assist with the remainder of the meal. Attempt to make the meal as pleasant as possible.
- Incorporate adaptive equipment and specific feeding techniques as outlined by the referring OT or SLP. Frequently used adaptive equipment includes:
  - Finger foods
  - Plate guard
  - Scoop dish
  - Dycem place mats
  - Utensils with built up handles
  - Weighted utensils
  - Swivel utensils
  - Rocker knife
  - Quad grip or universal cuff utensils holder
  - Nosey cup
  - Sip control cup
  - 2-handled cup
- For a neurologically impaired resident with perceptual deficits, other special arrangements may improve the self-feeding abilities. Food placement may be:
  - To the affected side (to increase visual scanning)
  - To the unaffected side (to increase self feeding independence and facilitate efficient oral clearance)
  - Within the resident's visual field
  - With pressure added from utensil (to increase sensation on the tongue)
- For a confused resident, presentation of one food item at a time or use of finger foods may be effective methods for the resident. If the resident seems distractible or has a short attention span, it may be best to position so he/she cannot observe other people. If easily distracted by noise, it may be necessary to work individually in a quiet room.



- Provide a pleasant eating environment. Mealtime is a social time. It is important to normalize the meal for residents. It is a proven fact that a pleasant environment directly affects the success of self-feeding. Have a newspaper on hand to incorporate discussion of current events.
- Residents should be seated with people they enjoy being around to encourage socialization. Try to group resident with similar difficulties together, such as those using adaptive equipment, those who eat only finger foods (sandwiches, fresh fruit, crackers, etc.), or those with impaired coordination who are messy eaters.
- A specific area should be designated for the Restorative Dining Program, and it should be:
  - Quiet with low stimulation
  - Well lit
  - Separate from other diners, if possible
  - Equipped with tables of the correct height to accommodate wheelchairs
  - Able to accommodate family/visitors
  - Decorated with contracting tablecloths and utensils to facilitate visual/perceptual skills for all residents

#### Resident Positioning for Swallowing and Self-Feeding

- Arrange for the resident to eat meals out of bed whenever possible
- Use pillows, wedges, or lap tables to assist the resident in maintaining the proper position
- Place the resident's arms on the table or tray-assure proper shoulder positioning
- Adjust the table height to reach between the resident's waist and mid-chest
- Place food within a 12 inch reach
- When the resident is ready to eat, have the resident place his/her head slightly forward
- Always check:
  - Positioning of resident
  - Positioning of the eating surface
- To protect the resident from choking, check with the speech/language pathologist or occupational therapist to see if these special positions are recommended:
  - Have the resident turn his/her head to the weak side
  - Have the resident tilt his/her head toward the strong s

## **Selecting and Using Adaptive Equipment During Self-Feeding**

- Use adaptive equipment to:
  - Assist in self-feeding
  - Increase independence
  - Help with safe swallowing
  - Decrease the chance of choking
- Choose adaptive equipment for residents with:
  - Limited range of motion
  - Upper extremity weakness
  - Poor coordination
  - Paralysis, especially one-sided
  - blindness
  - Swallowing problems

### **Residents with Decreased Strength:**

- If the resident's pinch or grasp is limited:
  - Select built-up or enlarged handles on utensils
  - Temporarily built-up handles with a wash cloth, foam rubber, or
  - Other material wrapped around the handle and secured
  - Use commercial utensils with plastic handles
  - Utensils should be lightweight to reduce resistance
- Types of adaptive equipment for these residents may include:
  - Universal Cuff
    - Use a universal cuff (utensil holder) when the resident cannot grasp or pinch.
    - The cuff fits around the palm and has a pocket where the utensil is inserted.
  - Lapboard/Elevated Table
    - Use a lapboard or high table to support the arm.
    - The height should be adjusted to just below the shoulder.
    - As arm strength increases, lower the lapboard or use a lower table.
  - Spork
    - This utensil combines the bowl of a spoon with the tines of a fork.
    - It eliminates the need to switch utensils.
    - It is used with a cuff or splint.
  - Sandwich Holder
    - This utensil holds the sandwich and has a handle.
    - Use when a resident cannot pick up a sandwich.
  - Cups or Mugs
    - When the resident has difficulty holding a cup, select a mug with a T-shaped handle or a handle long enough to accommodate all four fingers.

### **Residents with Poor Coordination:**

- Select a cup that has a sipping spout to prevent spills
- Prepare the resident's food before he/she attempts to self-feed

- Cut into small pieces
- Butter toast, rolls, etc.
- Mix the milk in cereal, etc.

### **Residents with Paralysis, Tremors or Range of Motion Deficits:**

- Rocker Knife
  - Use to stabilize and cut meat and other foods.
  - This utensil has a sharp curved blade that cuts when rocked over the meat.
- Dycem
  - Non-skid surface that prevents dishes from sliding
  - Useful for one-handed self-feeding
  - Wet towel or wet sponge-cloth will work, too
- Plate Guard
  - Use to prevent food from being pushed off the plate when scooped.
  - Attach the plate guard to the left of the plate for a right-handed resident, or to the right for a left-handed resident.
- Utensils
  - Use utensils weighted for stability.
  - Use enlarged handles to assist with the resident's grasp.
  - Plastic-coated utensils will protect the resident/s teeth.
- Nosey Cup
  - Use a nosey cup to compensate for decreased neck extension
  - Be sure that cut out faces away from the mouth

### **Residents Who are Blind:**

- Tray set-up
  - Tell the resident where each item is placed on his/her tray as he/she explores the placement of dishes, glasses, utensils with his/her hands.
  - Allow him/her to explore the location of the food by using the fork to taste the food.
  - Tell the resident to distinguish salt from pepper by taste.
  - Tell the resident to find the edge of the food with the fork.
  - Tell the resident to move the fork one bite size inward on the meat/food.
  - Tell the resident to cut the food, keeping the knife in contact with the fork.

## Eating and Swallowing

Pretest      Post Test (circle one)

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Social Security #: \_\_\_\_\_ Work #: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

- 
- Aspiration occurs when the resident breathes food or liquid into the lungs.  
A. True                      B. False
  - There are four stages of swallowing, (three traditional and one additional).  
A. True                      B. False
  - Coughing during or after a meal may be a sign of dysphagia.  
A. True                      B. False
  - Pocketing occurs when a resident puts food in their pockets to eat at a later time.  
A. True                      B. False
  - A universal cuff may help a resident with reduced strength hold eating utensils for self-feeding.  
A. True                      B. False
  - Blind residents should never be allowed to self-feed.  
A. True                      B. False
  - When feeding a resident, you should always tilt the resident's head back.  
A. True                      B. False
  - Dycem is non-slip material that prevents eating utensils from sliding.  
A. True                      B. False
  - It is okay to give un-thickened water to a resident on thickened liquids.

A. True                      B. False

10. It is very important to be sure a resident is wearing his dentures and/or glasses when eating

A. True                      B. False

11. It is appropriate for a resident to feed himself lying on his side if he is tired

A. True                      B. False

12. It is better to feed the resident rather than allow him to feed himself

A. True                      B. False

13. If you don't know how to use adaptive equipment, cover it with a napkin – pretend it's not there

A. True                      B. False

# Eating and Swallowing

## Key to Pre/Post Test

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Social Security #: \_\_\_\_\_ Work #: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

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