Dysphagia: What Your Speech Language Pathologist Wants You to Know

1.1 Contact Hours

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OBJECTIVES

Upon completion of this course, you will be able to do the following:

- Describe the anatomy and physiology of the normal swallow.
- Identify symptoms of dysphagia.
- Explain the role of the speech language pathologist and nurse in dysphagia management.
- Determine appropriate management of the dysphagia patient.

**dysphagia** |dis-fā́(ē)ə| noun -

difficulty or discomfort in swallowing
COURSE OUTLINE

I. Anatomy And Physiology Of The Normal Swallow
   1. Oral Phase
   2. Pharyngeal Phase
   3. Esophageal Phase

II. Symptoms Of Dysphagia
   1. Oral Phase
   2. Pharyngeal Phase
   3. Esophageal Phase

III. Role Of The SLP
   1. Evaluation
      a. Bedside Swallow Evaluation
      b. Modified Barium Swallow
   2. Treatment
      a. Diet Modification
   3. Compensatory Strategies
   4. Precautions

IV. Role Of The Nurse
   1. Initial Swallow Screen
   2. Knowing When To Refer To The SLP
   3. Strategies To Implement Prior To Bedside Swallow Eval
   4. Feeding The Patient
   5. Progressing The Patient
ANATOMY AND PHYSIOLOGY OF THE NORMAL SWALLOW

ORAL STAGE

While SLPs generally distinguish between the oral preparatory stage and the oral stage, both stages will be discussed as one for the purpose of this course.

During the oral phase, the food or liquid is taken into the mouth and formed into a bolus by chewing or movement of the tongue. This requires the teeth for chewing, soft palate movement for closure of the nasal cavity, tongue for bolus movement, buccal (cheek) muscles to maintain bolus placement toward the tongue, and lips to provide a seal for the oral cavity. The patient must also have enough respiratory capacity to maintain oxygenation during the swallow. When the bolus is formed on the tongue, it is then propelled back to the base of the tongue to trigger the swallow. The oral stage should take about one second after the food is chewed.

PHARYNGEAL STAGE

As the tongue propels the bolus posteriorly, the soft palate achieves closure to prevent nasal regurgitation, the larynx moves anteriorly allowing the epiglottis to move downward closing off the airway and allowing the bolus to travel to the esophagus. The vocal folds also close at this time to provide airway closure and protection. If there is no laryngeal elevation - there is no swallow! When at rest, the epiglottis forms a pocket called the vallecula. The pharyngeal stage should take about one second.

ESOPHAGEAL STAGE

The esophageal stage begins as the bolus enters the esophagus and continues until it passes into the stomach. This should take between 8-20 seconds. This timing cannot be determined at bedside.
SYMPTOMS OF DYSPHAGIA

ORAL PHASE

- Food or liquid may leak from the mouth
- Difficulty forming a bolus (the food or liquid scatters in the mouth)
- Pocketing (food falls into the lateral or anterior sulci. “Squirreling” it away in the cheeks)
- Reduced oral sensitivity. The patient cannot feel the food in the mouth and therefore, may be unable to control it.
- Difficulty chewing due to weakened oral musculature

PHARYNGEAL PHASE

- Pooling in the vallecula increasing the risk for aspiration after the swallow
- Food or liquid may enter the nasal cavity causing nasal regurgitation
- Airway protection (inadequate vocal fold closure may be compromise the airway resulting in aspiration
- Delayed initiation of swallow increasing risk of aspiration
- Globus (feeling of fullness in the throat as if something is caught)

ESOPHAGEAL PHASE

Food remains in the esophagus due to reduced movement of the bolus. This cannot be addressed by dysphagia therapy and will not be discussed in this course.
ROLE OF THE SPEECH-LANGUAGE PATHOLOGIST

Although dysphagia management involves a team approach, the speech language pathologist is the primary professional involved in the diagnosis and treatment of individuals with swallowing disorders.

EVALUATION

The SLP performs clinical (bedside) swallowing evaluations as well as instrumental evaluations (Modified Barium Swallow Study). Clinical and instrumental assessments allow the SLP to identify normal and abnormal patterns of swallowing. The SLP is then able to make decisions about the management of swallowing disorders including developing treatment plans and providing direct treatment. The SLP also provides education to the patient, family, nurses, and other professionals. The SLP works closely with the physician, nursing staff, dietician (for nutritional needs), occupational therapist (for positional and feeding issues), and respiratory therapist (for patients with additional respiratory issues.)

BEDSIDE SWALLOW EVALUATION

The SLP may perform the bedside swallowing evaluation using the patient’s meal tray or using specific foods based on the facility protocol.

The SLP will observe the patient’s ability to get the food/liquid into the mouth.

- Can the patient form the lips around the straw and suck from the straw?
- Can the patient clean the spoon with the lips?
- Does the patient eat at a safe pace with small sips and bites or is the patient impulsive, gobbling food, or taking big gulps of liquid?
- Does the patient have cognitive deficits which interfere with swallowing (does the patient forget to chew or swallow)?

Is the patient able to adequately chew the food?

- If not, is the problem a chronic issue such as poor dentition?
- Is decreased chewing caused by sensory deficits (the patient is unable to feel the food in the mouth) or motor deficits (weak muscles which decrease the ability to chew)?
- Does the patient pocket food in the cheeks?
- If so, can the patient clear the pocketed food or must the nurse provide oral care?

Laryngeal elevation may be assessed by placing the fingers on the neck to feel for laryngeal rise. The elevation should be strong and timely with a rise of approximately one finger’s width. If the laryngeal rise is absent, the swallow has not occurred even if the bolus is no longer in the oral cavity.
Case Study

Mrs. Brown was admitted to your unit with trans altered awareness. You give her a sip of water with her medication but notice that you do not see laryngeal elevation. You place your fingers on her neck to feel for laryngeal elevation but feel nothing. A swallow evaluation is recommended. This patient may be a silent aspirator. Consider placing the patient NPO until a swallow evaluation.

MODIFIED BARIUM SWALLOW

A Modified Barium Swallow Study is a moving x-ray of the swallow. It is the gold standard for swallowing evaluations. The MBSS can provide information that cannot be determined from a bedside swallowing evaluation. The MBSS is usually conducted in the radiology suite with the SLP and radiologist. While the patient sits in a specially designed chair, the SLP offers barium impregnated consistencies of increasingly larger measured amounts. The consistencies are usually, thin liquids, thick liquids, pudding, banana, and graham cracker. If a patient complains of special difficulty with medications, a barium table may also be used. The SLP and radiologist view the patient during all three phases of the swallow. The MBSS allows them to measure the timing of the swallow, visualize aspiration, and determine physiological reasons for swallowing difficulty. The MBSS also allows the SLP to assess the patient using varying compensatory strategies and determine which strategies are most effective. The SLP can recommend diet levels and compensatory strategies based on the MBSS.

TREATMENT

DIET MODIFICATION

The most common diet levels for foods in hospitals are:

1. Puree: All food are blended to a baby food texture.
2. Mech-Soft: Foods are soft and easily chewed. Meats may be ground for easier chewing.
3. Regular: No restrictions on texture of solid foods.

The most common diet levels for liquids in hospitals are:

1. Thin: No restrictions on viscosity of liquids.
2. Nectar thick: Commercial thickener needed to achieve correct viscosity.
3. Honey thick: Commercial thickener needed to achieve correct viscosity.

COMPENSATORY STRATEGIES

Varying compensatory strategies may be used by the patient to facilitate a safer swallow.

Strategies for patients with oral phase difficulty may require:

1. Finger sweep or swishing with liquid for pocketed food.
2. Posterior placement of food in mouth.
3. Placement of food on stronger side of mouth.
Strategies for patients with pharyngeal phase difficulty may require:

1. Alternate liquids and solids.
2. Posture changes such as tilting head toward stronger side or turning head toward weaker side.
3. Other strategies specifically recommended by the SLP.

**PRECAUTIONS**

- All patients should sit upright for meals and for medication.
- Patients should sit upright for 30-45 minutes after a meal to allow for clearance of vallecula if residue exists.
- All patients should have aggressive oral care to prevent growth of gram negative bacteria which causes aspiration pneumonia.
- Patients should use dentures and glasses if available.
- Decrease stimulation in environment such as turn down/off the TV or turn on lights.

**Case Study**

Mr. Jones was admitted to your unit with a diagnosis of stroke. He is alert but has slurred speech. His dentition is fair. He does not cough when you give him water with his pills but water leaks out of the left side of his mouth. He manages applesauce without difficulty but takes a long time to chew other textures like cookie and meat. After he swallows the solid foods, you notice that he has bits of food pocketed in the left side of his mouth.

Mr. Jones should have a swallowing evaluation by a speech language pathologist. He demonstrates oral dysphagia. The liquid leaked from his mouth, most likely due to decreased sensation and weakened labial (lip) musculature. The pocketed food is also likely due to decreased sensation and weakened tongue and check musculature.

The SLP will probably recommend that Mr. Jones’ diet be changed from Regular texture to Mechanical Soft with ground meat to reduce the stress of chewing. He should also be instructed to clear the pocketed food by doing a finger sweep and swishing with liquid. Aggressive oral care is recommended.
ROLE OF THE NURSE

INITIAL SWALLOW SCREEN

The nurse will most likely have the first contact with the patient. Upon the physician’s order for oral intake or administration of meds, the nurse should ensure upright positioning. The patient should be alert and aware of the requested task of swallowing. The nurse may wish to begin with a small sip of water via spoon or straw. If the patient has obvious difficulty with liquids, the nurse may want to try thickened liquids. The nurse may observe the patient swallow a puree texture such as applesauce or pudding. He or she may then progress to bites of solids.

Case Study

Mrs. Smith was admitted with pneumonia. She is edentulous. Each time she drinks a sip of liquid, she coughs. She only eats pureed food due to her lack of teeth. She swallows applesauce with no difficulty and no cough. Mrs. Smith demonstrated pharyngeal dysphagia with high aspiration risk. A swallowing evaluation should be ordered. Until the swallow evaluation, the nurse should consider trying thickened liquids. With her puree diet. Aggressive oral care is recommended.

KNOWING WHEN TO REFER TO THE SLP

Patients with the following symptoms of distress while swallowing or immediately after swallowing should be referred to the SLP for evaluation:

- Coughing
- Increased heart rate
- Decreased oxygen saturation
- Leakage of food from mouth or nose
- Food sitting in oral cavity
- No laryngeal swallow or evidence of swallow
- Gurgly or wet vocal quality

Case Study

Mr. White was admitted with a CVA. He drinks liquids and eats solids without difficulty, however, after drinking liquids he frequently has to clear his throat. This indicates possible aspiration as liquids sit on the vocal folds. A swallow evaluation is recommended.
STRATEGIES TO IMPLEMENT PRIOR TO BEDSIDE SWALLOW EVALUATION

1. Thickened liquids
2. Change diet texture
3. Ensure proper positioning (sitting upright)

FEEDING THE PATIENT

If at all possible, the patient should be allowed to self-feed. Provide a quiet and distraction-free environment if the patient is easily distracted. Eating is a social activity and if the patient is able to tolerate the dining room atmosphere, it is desirable to feed the patient in that atmosphere. Provide for a slow rate and offer small sips and bites (1/3 to 1/2 teaspoons). Allow the patient to provide input regarding which food he or she would like at each bite. If the patient has left neglect, he or she will need to be cued to locate food on the left side of the plate.

PROGRESSING THE PATIENT

Good communication with the SLP facilitates the progression of diet for patients with dysphagia. If the patient manages the current diet without difficulty, the team (nurse, dietician, and SLP) may wish to upgrade the diet (for example from puree to mechanical soft) or decrease the thickness of liquids, (from honey thick to nectar thick or thin liquids). The amount of supervision may be decreased from constant supervision during meals to intermittent supervision.
REFERENCES:


Directions: Circle the best answer.

1) Mrs. Smith coughs during each meal. She is exhibiting a symptom of dysphagia.
   1. True
   2. False

2) Mr. White does not cough when drinking, however, the nurse does not see or feel laryngeal elevation during the swallow. Mr. White may be demonstrating
   1. An Effective Swallow
   2. Pocketing
   3. Silent Aspiration
   4. Globus

3) Mr. Jones coughs during each meal, particularly on liquids. The nurse should
   1. Request a nasogastric tube
   2. Request a bedside swallow evaluation by the speech pathologist
   3. Request a peg tube
   4. Request that dietary provide solid foods only

4) The three stages of swallowing are: oral, pharyngeal, and ____________.
   1. Esophageal
   2. Gustatory
   3. Intestinal
   4. Abdominal

5) The airway is protected by closure of the
   1. Epiglottis
   2. Vocal folds
   3. Tongue base
   4. A and B
6) After meals, Mrs. Brown does not cough, however food particles remain in her mouth after meals. Mrs. Brown is unable to clear the pocketed food independently and must be assisted with oral care after each meal. The SLP may recommend
   1. Non-oral feeding
   2. Compensatory strategies
   3. Diet modification
   4. B and C

7) Mrs. Taylor is unable to feed herself due to fatigue. Her daughter has asked to feed her. The nurse should educate the daughter that Mrs. Taylor should be sitting as close to ______ degrees as possible for at least 30 to 45 minutes after meals.
   1. 90
   2. 60
   3. 45
   4. 35

8) The speech language pathologist has recommended that Mrs. Chokin have only nectar thick liquids. Should the nurse thicken the water given to the patient for swallowing pills?
   1. Yes
   2. No

9) The nurse notices that Patient A pockets food in her cheeks after each meal. The nurse could suggest that the patient
   1. Use his or her finger to sweep the oral cavity
   2. Swish with a small sip of liquids to dislodge the pocketed food
   3. Use the tongue to sweep the oral cavity
   4. All of the above

10) Patient B is a messy eater. During each meal, food leaks out of her mouth and down her chin. She makes no effort to wipe her chin and mouth with a napkin. The reason for Patient B’s messiness is probably
    1. She is just a messy person and doesn’t care
    2. She may have decreased sensation and be unable to feel the leaking food/liquid
    3. She may have decreased lip seal caused by weakened muscles
    4. B and C
Your opinion is important to us. Please answer the following questions by circling the response that best represents your experience.

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<tr>
<th>COURSE OBJECTIVES &amp; CONTENT</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>1. The activity was valuable in helping me achieve the stated learning objectives.</td>
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<td>2. The content was up to date.</td>
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<td>2. The number of credit hours was appropriate for the content.</td>
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<td>4. The teaching/learning methods, strategies, and slides were effective in helping me learn.</td>
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<td>5. The material was clearly explained.</td>
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<td>6. The answers to the post-test questions were appropriately covered in the activity.</td>
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<th>OVERALL ACTIVITY</th>
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<td>7. The online course/download supported the achievement of the stated learning objectives.</td>
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<td>8. The material was relevant to my professional development.</td>
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<td>9. Overall, I am pleased with this activity and would recommend it to others.</td>
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<td>10. The content was presented free of commercial bias. *</td>
<td>Yes</td>
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<td>11. Did the material presented increase your knowledge and/or understanding of this topic? *</td>
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<td>No</td>
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* If you responded “No” to question 10, please explain why:

________________________________________________________________________

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* If you answered “Yes” to question 11, what change do you intend to make?

________________________________________________________________________

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________________________________________________________________________

What barrier, if any, may prevent you from implementing what you learned?

________________________________________________________________________

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Cite one new piece of information you learned from this activity:

________________________________________________________________________

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Additional comments/suggestions:

________________________________________________________________________

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With my signature I confirm that I am the person who completed this independent educational activity by reading the material and completing this self evaluation.

Signature __________________________________ Date: __________________________
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(W) # _________________  (H) # ___________________   (F) #  __________________

Have you registered with us before?  ____ Yes     ______  No

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Paying By: _____ Check _____ Credit Card _____ Money Order _____ Cash

Credit Card Number: _______________________________ Exp. Date _____________

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