

DYSPHAGIA EDUCATION

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WHAT IS DYSPHAGIA?

- A difficulty with any stage of swallowing that causes risk for aspiration and/or inability to meet nutrition/hydration needs
- A Dysphagia Screening is done on ALL Code Stroke patients by Nurse.
- All Code Stroke patients are evaluated and treated by **Speech-language Pathologists (SLPs)**

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DYSPHAGIA SCREENING TOOL FOR NURSING

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DYSPHAGIA

- Dysphagia, or difficulty swallowing is a major stroke complication and a poor prognostic sign
- Patients usually have more difficulty swallowing liquids than solids
- About $1/3$ of patients with dysphagia develop aspiration pneumonia – **A major cause of morbidity and mortality**



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DYSPHAGIA – PROTECT THE AIRWAY

Fact

- Of Stroke patients that require mechanical ventilation, about 2/3 die in the hospital and most survivors are severely disabled

To Prevent Aspiration:

- Keep all Stroke patients NPO until a dysphagia screening has been performed
- Elevate the head of the bed 30°
- If patient vomits, place them immediately in the lateral decubitus position

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NON-STROKE PATIENTS

- The nurse will identify potential stroke patients at risk for aspiration using the Dysphagia Screening Tool
- A physician's order is not required to complete the dysphagia screening evaluation; however the physician may order the evaluation if one has not been completed.

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CODE STROKE PATIENTS

- **All Code Stroke patients will remain NPO until the Dysphagia Screening Tool is completed**
- If the patient FAILS the Dysphagia Screening Tool:
 - Keep the patient NPO
 - Notify the physician and obtain an order for a Speech Therapy Swallow Evaluation
 - Post a sign in the patient room denoting the patient is having difficulty swallowing



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PURPOSE

- This screening tool is used to identify patients at risk for clinically significant aspiration who need referral for more definitive swallow evaluation
- Speech Therapy will perform the Swallow Evaluation

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INCLUSION CRITERIA

- Patients presenting with:
 - Stroke, Transient Ischemic Attack, any rule out Stroke/TIA diagnosis, or history of stroke and concern for aspiration
 - Must be 18 years of age or older
 - Must be able to sit in an upright, 90 degree position

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EXCLUSION CRITERIA

DO NOT PERFORM DYSPHAGIA SCREEN ON:

- Patients unable to maintain their own airway or secretions
- Patients who are unable to follow commands
- Patients unable to sit upright at 90 degree position
- Patients under the age of 18
- Patients with history of dysphagia, aspiration, or a brain stem stroke
- Always document the dysphagia screen, if unable to do then document that as well!

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PROCEDURE

- To be completed prior to any oral intake
- Includes giving 3 ounces of water in three divided doses
- If there are any “Yes” responses during the evaluation, the process is STOPPED and the physician notified
- Keep the patient NPO

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STEP I

I. If one of the following applies, then STOP. Patient should remain NPO.

- **Present feeding status:** NG or PEG
- **Consciousness:** Unresponsive or Decreased LOC
- **Intubated:** Yes

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STEP 2

2. If none of the items in Step 1 apply, place patient in an upright, 90° sitting position prior to screen.
Assess the following:

- **History of aspiration, dysphagia or brain stem stroke:** Yes
- **Controls secretions:** Drools Coughs Requires suctioning
- **Voice quality:** Sounds wet or gurgly
- **Speech:** Severely slurred
- If any of the above are checked, STOP SCREEN. Patient MUST remain NPO, and notify physician. Otherwise, proceed to Step 3.

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STEP 3

3. Give the patient 5 ml of water from a medicine cup:

- **Throat clearing?:** Yes No
- **Choking / Coughing?:** Yes No
- **Drooling?:** Yes No
- **Wet voice?:** Yes No
- **Holding water in mouth or no apparent swallow?:** Yes No
- If any are Yes, STOP SCREEN. Keep NPO and notify physician. Otherwise, proceed to Step 4

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STEP 4

4. Allow patient to finish drinking water in multiple sips:

-
- **Throat clearing?:** Yes No
 - **Choking / Coughing?:** Yes No
 - **Drooling?:** Yes No
 - **Wet voice?:** Yes No
 - Holding water in mouth or no apparent swallow?: Yes No

 - If any Yes, STOP SCREEN. Keep NPO and notify physician.

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DOCUMENTATION

-
- Document the completion of the Dysphagia Screening evaluation indicating: **PASSED** or **FAILED**
 - Communicate the results of the evaluation to the physician
 - Remember, if the patient **FAILED**, post signage in room to prevent anyone from attempting to feed or give liquids to the patient!



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DYSPHAGIA: EDUCATION FROM SPEECH THERAPY

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DYSPHAGIA

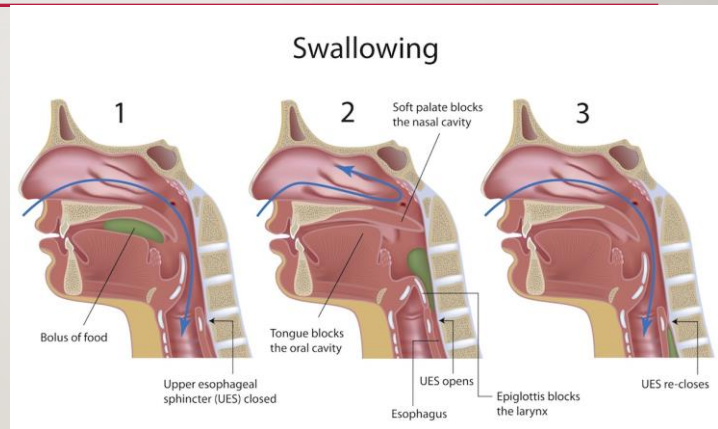
To increase patient swallow safety, SLPs recommend:

- A change in **diet textures**
- **Swallowing precautions**
- **Specific techniques** for eating, drinking and taking oral medications
- **Therapy** to improve swallow function

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THE NORMAL SWALLOW

- Oral Stage
- Pharyngeal Stage
- Esophageal Stage



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TERMINOLOGY

- **Silent Aspiration**
 - Patient does not cough when aspiration occurs
- **Pocketing**
 - Food sticks between the cheek and the teeth/gums after the swallow
- **Residue**
 - Some food or liquid remains in the mouth or the throat after the swallow

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SIGNS AND SYMPTOMS OF DYSPHAGIA

Oral

- Poor labial seal on utensils/straw/cup
- Anterior leakage
- Poor bolus formation
- Poor mastication
- Pocketing
- Slow transport
- Swallow delay
- Holding / Spitting
- Overstuffing

Pharyngeal

- Coughing
- Throat clearing
- Wet, gurgly, harsh voice
- Choking
- Watery eyes
- Runny nose
- Sneezing
- Face reddening

Pharyngeal

- Gagging
- Nasal regurgitation
- Changes in breathing status, heart rate, respiratory rate
- Change in lung sounds
- Audible breathing

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INDICATORS FOR ASPIRATION RISK

- TIA/CVA
- Dysarthria – Facial/lingual weakness & decreased speech intelligibility
- Decreased Alertness
- Recurrent bronchitis/PNA
- COPD/CHF
- Progressive degenerative diseases –PD, ALS, Dementia, MS
- Head/Neck Cancer
- TBI
- Laryngo-pharyngeal reflux (LPR)
- Postural complications
- Tracheostomies

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EVALUATION TECHNIQUES

- Bedside swallow study/evaluation (BSS)
- Modified barium swallow study (MBSS)
- Fiber-optic endoscopic evaluation of swallowing (FEES)
- Blue dye evaluation when tracheostomy present

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CLINICAL / BEDSIDE SWALLOW STUDY (BSS)

- Clinical/Subjective Study Completed by Speech-Language Pathologist (SLP) “at bedside”. Can do skilled meal assessments.
- Patient positioned in upright sitting position – 90 degrees is optimal
- Oral Mechanism Exam performed to establish appropriate anatomy/physiology of swallowing mechanism before po trials given

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CLINICAL / BEDSIDE SWALLOW STUDY (BSS)

- Different textures and consistencies of liquids and solids are given to the patient
- Observations are made about patient's ability to chew and swallow safely
- Strategies trialed to improve safety/efficiency during po intake
- If aspiration is suspected by clinical signs & symptoms, a MBSS/FEES may be recommended for objective evaluation
- Necessary and least restrictive diet interventions recommended to avoid aspiration risk and achieve best efficiency.

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MODIFIED BARIUM SWALLOW STUDY (MBSS)

- Patient's oral and pharyngeal phase of swallowing is tested using fluoroscopy (x-ray) and various consistencies of barium while patient is sitting upright 90' in a chair.
- The Radiologist and Speech-Language Pathologist (SLP) observe for aspiration and determine presence of oro-pharyngeal dysphagia while patient eats/drinks various consistencies. SLP trials strategies to decrease risk for aspiration and maximize intake efficiency.
- SLP determines necessary and least restrictive diet interventions, strategies needed, and makes recommendations for skilled SLP services when appropriate.

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MODIFIED BARIUM SWALLOW



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FIBER-OPTIC ENDOSCOPIC EVALUATION OF SWALLOW (FEES)

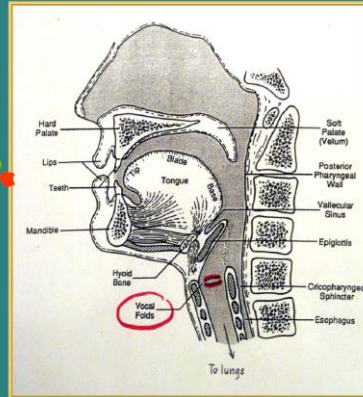
- PATIENT'S ORAL AND PHARYNGEAL PHASE OF SWALLOWING IS TESTED USING FIBER-OPTIC ENDOSCOPE TO VIEW LARYNX WHILE PATIENT EATS/DRINKS A VARIETY OF NORMAL FOOD CONSISTENCIES. PT IS SITTING UPRIGHT 90' OR IN MODIFIED POSITION NEEDED TO AVOID ASPIRATION. FOODS/LIQUIDS ARE COLORED WITH GREEN FOOD COLORING.
- THE SPEECH-LANGUAGE PATHOLOGIST (SLP) OBSERVE FOR ASPIRATION AND DETERMINE PRESENCE OF ORO-PHARYNGEAL DYSPHAGIA WHILE PATIENT EATS/DRINKS VARIOUS CONSISTENCIES. SLP TRIALS STRATEGIES TO DECREASE RISK FOR ASPIRATION AND MAXIMIZE INTAKE EFFICIENCY.
- SLP DETERMINES NECESSARY AND LEAST RESTRICTIVE DIET INTERVENTIONS, STRATEGIES NEEDED, AND MAKES RECOMMENDATIONS FOR SKILLED SLP SERVICES WHEN APPROPRIATE.

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ASPIRATION

What is Aspiration?

Aspiration occurs when food or liquid enters the airway below the level of the vocal folds (cords) and may enter the lungs.



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SIGNS AND SYMPTOMS OF ASPIRATION

- **Coughing or Throat Clearing** during meal or immediately after meal
- **Wet, gurgly, harsh voice**
- **Feeling of Choking** or that **food is stuck**
- **Watery eyes**
- Runny nose
- Sneezing
- **Face reddening**
- Gagging
- Nasal regurgitation
- **Difficulty Breathing** during meal or immediately after meal
- Change in lung sounds
- Audible breathing

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SILENT ASPIRATION

- Aspiration occurring while patient is asymptomatic with no audible/visible clinical signs/symptoms present
- Aspiration is directly viewed on MBSS/FEES but the patient shows no outward signs of difficulty ie No coughing, throat clearing
- 50% of all aspiration is silent (Logemann 1998)
- Signs/Symptoms can be delayed and subtle ie x1 gentle cough/throat clear seconds after po trials, wet vocal quality, increased work of breath/rate with no cough/throat clear.
- Necessary to use objective clinical data to determine risk for aspiration

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ASPIRATION PRECAUTIONS

- To decrease risk of aspiration and choking
- Use of compensatory strategies/modifications established by SLP
 - Modified Diet/Liquid Consistencies/Interventions
 - Alertness - Awake & actively participating with eating/drinking
 - Positioning – Sitting upright – 90 degrees is optimal
 - Modifications for feeding: Slow rate, Verbal/Tactile cueing
 - Assuring swallow occurs and mouth empty before adding more
 - Good oral care after po intake to ensure mouth empty

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DIET / LIQUID OPTIONS DYSPHAGIA INTERVENTIONS

Liquids

- **Honey-thick consistency**

(plastic spoon will stand upright but still runs like a liquid – Similar to maple syrup)

- **Nectar-thick consistency**

(plastic spoon will fall slowly to side of cup – Similar to buttermilk or tomato juice)

- **Thin / Regular Liquids**

Solids

- **Puree Diet**

- **Mechanical soft Diet includes either:**





- Chopped meats
- Ground –moist meats

- **Regular Diet**

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DIET / LIQUID FLUID CONSISTENCIES

Fluid consistencies

Thin	Nectar	Honey	Pudding
			
Runs quickly through the prongs of the fork with little or no coating e.g. water, tea	quickly sink through the prongs e.g. tomato juice	Coats fork and slowly sink through the prongs e.g. yogurt, honey	Remains on the fork and holds together well e.g. mayonnaise

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THIN WATER PROTOCOL

WHEN DYSPHAGIA DIAGNOSED AND THICKENED LIQUIDS ARE RECOMMENDED WITH MEALS & MEDS

- **Patient allowed Thin water, given alone, after good oral care**
 - Patient allowed thin water, **after ensuring mouth is clean** of debris/bacteria, **when only drinking** and **no solid food or medicines being given**
 - **Strategies - Must follow strategies provided by SLP for safety modifications: positioning, alertness, cup v/s straw v/s spoon, dysphagia techniques: chin tuck, extra swallow, throat clear/re-swallow, etc.**
 - **Not all patients are appropriate** and should only use thickened liquids recommended
- Safety/strategies are established by SLP during evaluation including individual patient history and acute/chronic respiratory status

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THIN WATER PROTOCOL CONTINUED

- Protocol developed at Frazier Rehabilitation Hospital in Kentucky in 1984.
- "...aspiration [of oropharyngeal organisms] is believed to be the most important [route] for both nosocomial and community-acquired pneumonia"(CDC, 1997) periodontal disease
- Some patients who aspirate do not get pneumonia. Those that do may also be aspirating secretions that contain bacteria.
 - A dirty mouth can be a major contributing factor to aspiration pneumonia.
 - If someone aspirates water, that may not be enough by itself to cause pneumonia. If someone aspirates oral bacteria along with the water then the situation can change. Shay K., Clinical Infectious Diseases, 34:1215–1223 (2002)

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STRATEGIES – POSITIONING FOR FEEDING / ASSISTING PATIENTS TO EAT

- Patient should be fully upright at or near **90 degrees**.
- If in bed, the head of the bed should be fully elevated **after the patient is properly positioned**.



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STRATEGIES – POSITIONING FOR FEEDING / ASSISTING PATIENTS TO EAT

- Check with SLP for specific instructions such as:
 - **NO STRAWS**
 - Straws make it easy to take a larger sip than is intended, which can reach the back of the throat faster than when a cup is used
 - **Liquids by Spoon Only**
 - **1:1 Feeding**

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STRATEGIES – POSITIONING SWALLOW TECHNIQUES

- **Double or Extra Swallow**

The patient swallows an extra time before taking the next bite/sip

This technique helps clear any food and liquid residue which may remain in the throat

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STRATEGIES – POSITIONING SWALLOW TECHNIQUES

- **Alternate Liquids and Solids**

- Cue the patient to take a bite
- When it has been completely swallowed, next have them take a sip and so on
- This technique clears food residues that may be left in the mouth or throat

“Wash it Down”

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STRATEGIES – POSITIONING SWALLOW TECHNIQUES

• **Effortful Swallow**

- The patient should “swallow hard” as if swallowing a pill or something dry
- This technique is helpful for people who have weakened swallow muscles

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STRATEGIES – POSITIONING SWALLOW TECHNIQUES

• **Chin Tuck**

- The patient tucks chin close to chest before the swallow and keeps chin down until finished swallowing
- This technique reduces chance of aspiration for some patients, however it does not help all patients

Should be used ONLY if recommended by the SLP

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STRATEGIES – POSITIONING **SWALLOW TECHNIQUES**

- **Swallow, Cough, Swallow**

- May help to prevent food or liquids from going “down the wrong pipe” (trachea)

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SPEECH THERAPY IN MEDITECH

- HOW/WHERE to find SLP RECOMMENDATIONS including:

Swallowing Strategies/Techniques/Positioning

EMR - CARE ACTIVITY – NAME – REHAB:

Fiberoptic Endoscopic FEES

Speech Modified Barium Swallow

Bedside Swallowing Evaluation

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SPEECH THERAPY IN MEDITECH

Assessments	Interventions	Outcomes	Plan of Care
Spreadsheet	Date	Name	Recorded by
Hand Off Communication		Orthostatic Vital Signs	
Hand Off Communication		Oxygen Order	
Height & Weight		Pain Assess/Reassess	
Height and Weight		Pain Assessment	
Hemocult		Pain Assessment/Reassessment	
Hypoglycemia Protocol		Past Medical History	
IV Intake Spreadsheet		Patient Rounding Assessment	
IV Line Assessment		Patient Safety Check	
IV/Invasive Line Assessment		Personal Hygiene	
Inpatient/OBS Wound Care Evaluation		Provide preop/postop teaching	
Insert/Assess Urinary Catheter		Pulse Oximetry Assessment	
Insert/Assess urinary catheter		RT Respiratory Assessment	
Intake & Output		Rehab: Bedside Swallowing Evaluation	
Intake and Output		Rehab: Fiberoptic Endoscopic FEES	
Isolation Precautions		Rehab: OT Daily Note	
Labs and Specimens Collected		Rehab: OT Evaluation	
Linen Change		Rehab: Physical Therapy Daily Note	
Medication Reconciliation		Rehab: Physical Therapy Evaluation	
Mouth/Denture Care		Rehab: Screening For Triggers	
NA Communication Tool		Rehab: Speech Modified Barium Swallow	
Nutrition and Functional Assessment		Report critical lab values	
Oral Nutritional Supplement Protocol		Resp BIPAP/CPAP Cont Assess	
Orientation/Safety/Isolation		Resp NEB TX (Adult)	

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SUMMARY

- If you have **ANY** concerns regarding the swallowing safety of any patient, always discuss those concerns with the **Nurse** caring for that patient
- If a full swallow evaluation is needed, an order will be obtained from the **Physician**
- An **SLP** will evaluate the patient and provide recommendations and treatment

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PLEASE ANSWER THE FOLLOWING QUESTIONS

1. Are SLP evaluations including recommendations / strategies / techniques available for review in the documentation system?
2. Should a plastic spoon stand upright, without falling, in Nectar-thick consistencies?
3. Should a patient be repositioned, in order to be upright 90 degrees before giving meds, meals, drinks?
4. Do signs/symptoms of aspiration include changes in vocal quality, breathing status, and throat clearing?
5. Are all signs/symptoms of aspiration audible at bedside?
6. Is the nurse required to have an order to perform a Dysphagia Screen Tool evaluation?
7. If there are any "Yes" responses during the dysphagia screening, does the nurse continue the evaluation without notifying the physician?
8. Does the patient with acute stroke symptoms have to remain NPO until the Dysphagia Screen is completed?

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THANK YOU FOR COMPLETING THIS MODULE

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