Yale Swallow Protocol: Is it a valuable tool?

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BACKGROUND

What is the **YALE** swallow screen?
The **Yale Swallow Protocol** (YSP) has a demonstrated high sensitivity for prediction of aspiration risk. In addition, the YSP provides sufficient negative predictive value to support care team members in recommending oral diets for patient who pass. However, this should be noted that the authors of the scale do recommend careful monitoring particularly in regards to swallowing medications. The YSP has a high sensitivity (true positive rate), acceptable specificity (true negative rate), high negative predictive value, and low false negative rate.

PURPOSE

A swallowing ***screening*** is a pass/fail tool used to identify those who require a comprehensive assessment of swallowing. Dysphagia increases the risk of aspirating oral secretions into the lungs and developing pneumonia. There is a **3x increased** risk for pneumonia in stroke patients with dysphagia and an **11x greater** risk in those presenting with aspiration. Using a systematic, formal dysphagia screen has proven to reduce pneumonia rates in hospitals.

REFERENCES

Leder, S.B. & Suiter, D.M. (2014) *The Yale Swallow Protocol: An Evidence-Based Approach to Decision Making.* Cham, Switzerland: Springer International Publishing.
Leder, SB, Suiter, DM (2011) *Silent aspiration risk is volume –dependent.* Dysphagia. *2011 Sep; 26(3):310*

YALE SWALLOW ADMINISTRATION

EXCLUSION CRITERIA: RISK IS TOO HIGH—DEFER ADMINISTRATION

- Unable to remain alert
- Baseline modified diet/thickened liquids
- Tube feeding in place
- Head of bed restrictions<30°
- Tracheostomy tube
- NPO by physician order.

BRIEF COGNITIVE SCREEN: Failure may be associated with an increased risk of aspiration and may warrant SLP consult, but does not prevent YSP screening.

1
- What is your name?
- Where are you?
- What year is it?

ORAL MECHANICAL EXAM: Weakness and/or asymmetry may warrant modified solid textures and indicates need for SLP consult.

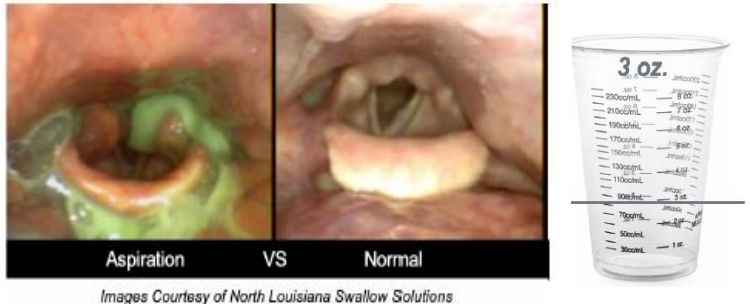
2
- Tongue Range of Motion: Stick out your tongue, move it side to side
- Facial Symmetry: Smile/Pucker
- Lip Closure: Puff up your cheeks with air and hold

3 OZ WATER SWALLOW CHALLENGE: Stopping while drinking, coughing, or throat clearing indicates a fail and an elevated aspiration risk

3
- Sit patient upright at 90 degrees or as high as tolerated >30°
- Ask the patient to drink 3 oz of water from a cup or straw with sequential swallows—slow and steady but without stopping.

PASS: Collaborate with MD/SLP for appropriate oral diet order, e.g., soft foods.

FAIL: Keep patient NPO including medications and order SLP clinical and/or instrumental swallow eval as soon as possible. YSP can be re-administered in 24 hrs. with clinical improvement.



Images Courtesy of North Louisiana Swallow Solutions

VALIDITY MEASURES

Sensitivity (probability patients who ***do aspirate*** have a ***positive*** screen (true positive)) = **96.5%**

Specificity (probability screen ***negative*** when a patient ***does not*** aspirate (true negative)) = **64%**

Negative Predictive Value (probability patients with ***negative*** screen ***do not*** aspirate)) = **97.9%**

Negative Likelihood Ratio (false negative) <**2%**

STUDIES SHOW…

Step 1 Cognition: Leder,Suiter and Warner found that when patients are not oriented x3, there is a **31%** greater aspiration risk. There is a correlation between aspiration and the ability to follow 1 step directions. Likelihood of aspiration of liquids increases to **57%**, pureed to **48%** and deemed unsafe for any oral consistency up to **69%**
Step 2 Oral Motor: If a patent has abnormal lingual range of motion, he is more likely to be an aspirator (**2.72** times higher than normal). Leder et al
Step 3 "3oz" water test: Aspiration risk prediction is *volume dependent*. Leder study (2011). Identification of aspiration risk status occurred for 58% of participants who exhibited silent aspiration on smaller volumes, i.e., an additional 48% of liquid silent aspirators and 65.6% of puree silent aspirators coughed when attempting the 3-oz. water swallow challenge.

Easy as 1-2-3

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