

Yale Swallow Protocol

Step 1: Exclusion Criteria

___ Yale Swallow Protocol Deferred due to NO concern for aspiration risk.

Any YES answer to the following risk factors will also defer administration to protocol:

Yes No

- ___ ___ Unable to remain alert for testing.
- ___ ___ Eating a modified diet (thickened liquids) due to pre-existing dysphagia.
- ___ ___ Existing enteral tube feeding via stomach or nose.
- ___ ___ Head-of-bed restrictions <30°.
- ___ ___ Tracheostomy tube present.
- ___ ___ Nil per os by physician order.

If the patient's clinical status changes resulting in a new risk for aspiration, the protocol must be readministered before oral alimentation or medications are ordered.

Step 2: Administration Instructions

If patient is deemed an aspiration risk and all exclusion criteria in Step 1 are checked "NO," proceed with protocol:

- Brief Cognitive Screen:

What is your name?

Where are you right now?

What year is it?

- Oral-Mechanism Examination

Labial closure

Lingual range of motion

Facial symmetry (smile/pucker)

- Perform 3-ounce water swallow challenge:

Sit patient upright at 80-90° (or as high as tolerated >30°).

Ask patient to drink the entire 3 ounces (90cc) of water from a cup or with a straw, in sequential swallows, and slow and steady but without stopping. (Note: Cup or straw can be held by clinician or patient.) Assess patient for interrupted drinking and coughing or choking during or immediately after completion of drinking.

Note: Information from the brief cognitive screen and oral mechanism examination provide information on odds of aspiration risk with the 3-ounce water swallow challenge and should not be used as exclusionary criteria for screening.

Step 3: Pass/Fail Criteria

Results and Recommendations

___ PASS: Complete and uninterrupted drinking of all 3 ounces of water without overt signs of aspiration, i.e., coughing or choking, either during or immediately after completion.

- If patient passes, collaborate with MD/PA/LIP to order appropriate oral diet. If dentate, order a soft solid consistency or regular consistency diet. If edentulous, order a liquid and puree diet.

___ FAIL: Inability to drink the entire 3 ounces in sequential swallows due to stopping/starting or patient exhibits overt signs of aspiration, i.e., coughing or choking, either during or immediately after completion.

- If patient fails, keep nil per os (including medications) and discuss with the MD/PA/LIP the need for an objective swallowing evaluation by speech-language pathologist.
- Readminister the protocol in 24 h if patient shows clinical improvement.

(Taken from: Suiter, D.M., Sloggy, J., & Leder, S.B. (2014). Validation of the Yale Swallow Protocol: A prospective double-blinded videofluoroscopic study. *Dysphagia*, 29, 199-203.)

Validation Information

1. Three-ounce water swallow test validation first reported on 44 stroke patients by DePippo et al. (1992). Failure required referral for objective (VFSS) dysphagia test.

2. A revised 3-ounce water swallow challenge administered to 3,000 hospitalized patients with 14 distinct diagnoses and referenced with FEES as the standard correctly predicted aspiration 96.5% of the time, with a negative predictive value of 97.9%, and a false negative rate of $\leq 2.0\%$. (Suiter, D.B. & Leder, S.B. [2008]. Clinical utility of the 3-ounce water swallow test. *Dysphagia*, 23, 244-250.)

3. Validation study of Yale Swallow Protocol was reported using 25 subjects with categorical diagnoses of esophageal surgery, head & neck cancer, neurosurgery, medical issues, or neurological (CAV, MS, TBI) and using VFSS as the standard reference. Seven participants passed and 18 failed the 3-ounce swallow challenge. Of the 18 who failed, 14 aspirated on VFSS (true positives) and 4 did not aspirate on VFSS (false positives). Sensitivity for the protocol = 100%, specificity = 64%, positive predictive value = 78%, and negative predictive value = 100%. All participants who passed the protocol, i.e., deemed to have no aspiration risk, also did not aspirate during VFSS. (Suiter, D.M., Sloggy, J., & Leder, S.B. [2014]. Validation of the Yale Swallow Protocol: A prospective double-blinded videofluoroscopic study. *Dysphagia*, 29, 199-203.)