



# Swallow Screening for the Stroke Patient Resource Guide

The ad hoc dysphagia group met for over a year discussing issues related dysphagia, swallow screening and the stroke patient. The following are results of their hard work:

1. Development of expert consensus (See sidebar)
2. Identification of swallow screens already published in the literature.
3. Comprehensive literature review.
4. Development of a swallow screen checklist and swallow screen process checklist enabling hospitals to compare their processes with best practices identified by the work group.
5. Recorded teleconferences with experts on swallow screening, dysphagia, The Joint Commission and the stroke patient. These can be reviewed, downloaded and listened to at:  
<http://www.uic.edu/depts/glstrknet/events.html>
6. An evaluation of this work group found:
  - Over 50% changed their training process
  - Almost 50% changed their swallow screen tool
  - 100% will still monitor dysphagia

Materials can be found at: <http://www.uic.edu/depts/glstrknet/dysphagia.html>

## Expert Consensus

- ✓ Maintain NPO until swallowing status is determined.
- ✓ Regular oral care. Oral care completed prior to dysphagia screen.
- ✓ Screen for swallowing status by team member that is licensed and trained in swallow screen protocol once patient is awake and alert.
- ✓ Swallowing assessment by speech language pathologist for all those who fail bedside screen.
- ✓ Where appropriate, feeding assistance or mealtime supervision by individuals trained in aspiration precautions.
- ✓ Education of patient and family regarding recommendations and feeding/swallowing plan of care.

## SWALLOW SCREEN ASSESSMENTS IN LITERATURE

The Consensus Stroke Performance Measures recommended by CDC, AHA, and The Joint Commission includes a swallow screen completed by a health care professional prior to oral intake of food, fluid or medications. A screening test need not be a formal evaluation of swallowing by a speech language pathologist (SLP) but should be standardized. Those with abnormal results should be referred for a complete examination by SLP. Below you will find a listing of swallow screens discussed in the literature specific to stroke between 1992 and 2009. The GLRSN does not endorse any particular screen.

### Bedside Swallow Assessment

**Description:** Pre-assessment questions, clinical exam, teaspoons of water three times, followed by water in a cup. **Source:** Smithard DG, O'Neill PA, Park C, England R, Renwick DS, Wyatt R, Morris J, Martin DF; North West Dysphagia Group. [Can bedside assessment reliably exclude aspiration following acute stroke?](#) *Age Ageing* 1998 Mar;27(2):99-106.

### Bedside Swallow Assessment EATS

**Description:** Uses 3 consistencies: semisolid, liquid and solid. Also contains pre-assessment criteria. **Source:** Courtney B, Flier L. RN dysphagia screening a stepwise approach. *Journal of Neuroscience Nursing* 2009 Feb; 41 (1): 28-38.

### Burke Dysphagia Screening Test (BDST)

**Description:** 3 oz. water swallow test and clinical checklist. Developed for use within stroke rehabilitation settings. **Source:** DePippo KL, Holas M, Reding M. Validation of the 3-oz water swallow test for aspiration following stroke. *Archives of Neurology* 1992 49:1259-1261.

### Gugging Swallow Screen

**Description:** Uses three consistencies: Semisolid, liquid and solid. Also contains pre-assessment criteria. **Source:** [Trapl M, Enderle P, Nowotny M, Teuschl Y, Matz K, Dachenhausen A, Brainin M.](#) Dysphagia bedside screening for acute-stroke patients: the Gugging Swallowing Screen. *Stroke* 2007 Nov;38(11):2948-52.

### Kidd Water Test

**Description:** Clinical examination includes pharyngeal sensation assessed by orange stick, tongue and facial movement, speech, sensory and perceptual function and muscle strength also assessed. Ability to swallow also assessed by patient swallowing 50 ml of water in 5 ml allotments. **Source:** Kidd D, Lawson J, Nesbitt R, MacMahon J. Aspiration in acute stroke: a clinical study with videofluoroscopy. *Quarterly Journal of Medicine* 1993 86:825-829.

### Massey Bedside

**Description:** Water test designed for nurses. Uses 1 teaspoon of water followed by glass of water. Also contains pre-assessment criteria. **Source:** [Massey R, Jedlicka D.](#) The Massey Bedside Swallowing Screen. *J Neurosci Nurs* 2002 Oct;34(5):252-3, 257-60.



Nishiwaki et al.

**Description:** Scores 6 items including lip closure, tongue movement, palatal elevation, gag reflex, voice quality and motor speech function. Also includes a saliva swallowing test. After patient swallows 1 teaspoon of water twice, asked to drink the rest of the water from a cup for a total of 30 ml.

**Source:** [Nishiwaki K, Tsuji T, Liu M, Hase K, Tanaka N, Fujiwara T.](#) Identification of a simple screening tool for dysphagia in patients with stroke using factor analysis of multiple dysphagia variables. *J Rehabil Med.* 2005 Jul;37(4):247-51.

Scottish Intercollegiate Guidelines Network (SIGN)

**Description:** Recommends the Clinical Bedside Assessment developed and tested by Longemann.

**Source:** Scottish Intercollegiate Guidelines Network. Management of Patients with Stroke: Identification and Management of dysphagia. September 2004. [www.sign.ac.uk](http://www.sign.ac.uk)

Standardized Swallowing Assessment (SSA)

**Description:** Pre-swallowing check list if passed is followed by teaspoon sips of water 3 times, followed by half glassful of water. (Grade A, strong evidence Westergren, 2006). **Source:** Perry, L. Screening swallowing function of patients with acute stroke. Part one: identification, implementation and initial evaluation of a screening tool for use by nurses. *Journal of Clinical Nursing* 2001; 10: 463±473.

Timed Test

**Description:** Pre-assessment criteria. Small amount of water given to patient with teaspoon. If tolerated, patient is given 100 – 150 ml of water and told to drink the water as quickly as possible. Residual water left over is measured. The number of swallows is counted by observing the movement of the thyroid cartilage. Stopwatch is started when the first drop of water touches the lip. Also includes a patient questionnaire. **Source:** [Hinds NP, Wiles CM.](#) Assessment of swallowing and referral to speech and language therapists in acute stroke. *QJM.* 1998 Dec;91(12):829-35.

TORBSST<sup>®</sup>

**Description:** Includes voice before, tongue movement, the Kidd Water test, and voice after. Tool not printed. Must participate in 4 hour training. **Source:** Martino, R, Silver, F, Teasell R, Bayley M, Nicholson G, Streiner D, Diamant N. The Toronto bedside swallowing screening test (TOR-BSST): Development and validation of a dysphagia screening tool for patients with stroke. *Stroke* 2009; 40: 555-561.



## GLRSN Swallow Screen Checklist\*

### PART ONE: Your swallow screen

	YES	NO
1. Is evidence based (were external sources referenced when developed)?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is validated (were swallow <b>screen</b> results compared to SLP swallow <b>eval</b> results)?	<input type="checkbox"/>	<input type="checkbox"/>
3. Published in the literature?	<input type="checkbox"/>	<input type="checkbox"/>
4. Begins with oral care?	<input type="checkbox"/>	<input type="checkbox"/>
5. Starts with behavioral observation? (cognition, postural control, speech/oral motor coordination and respiratory status)	<input type="checkbox"/>	<input type="checkbox"/>
6. Includes a progressive water swallow test?	<input type="checkbox"/>	<input type="checkbox"/>
a. Controlled small sips of water (tsps)	<input type="checkbox"/>	<input type="checkbox"/>
b. Single sips from a cup	<input type="checkbox"/>	<input type="checkbox"/>
c. Multiple sips from cup (Does <b>not</b> use straws)	<input type="checkbox"/>	<input type="checkbox"/>
7. Is conducted in the emergency department?	<input type="checkbox"/>	<input type="checkbox"/>
a. is a part of your care pathway in the ED?	<input type="checkbox"/>	<input type="checkbox"/>
b. If not done in ED, patients are kept NPO including meds until screened on the inpatient unit?	<input type="checkbox"/>	<input type="checkbox"/>
8. Criteria for completing screen clearly identified		
a. Upon arrival in ED	<input type="checkbox"/>	<input type="checkbox"/>
b. Change in neurostatus	<input type="checkbox"/>	<input type="checkbox"/>
c. After admission to floor	<input type="checkbox"/>	<input type="checkbox"/>
9. Is included in standing orders?	<input type="checkbox"/>	<input type="checkbox"/>
10. <i>Completion</i> clearly documented in the patient's chart?	<input type="checkbox"/>	<input type="checkbox"/>
11. <i>Results</i> are clearly documented in patient's chart.	<input type="checkbox"/>	<input type="checkbox"/>
a. If passed, diet is ordered.	<input type="checkbox"/>	<input type="checkbox"/>
b. If failed, kept NPO and SLP order solicited.	<input type="checkbox"/>	<input type="checkbox"/>
c. If unable to assess on admission the reason is documented and the task to screen continues before the patient can take po	<input type="checkbox"/>	<input type="checkbox"/>



## PART TWO: Your swallow screen training

	<b>YES</b>	<b>NO</b>
1. Is a collaboration between SLP and Nursing?	<input type="checkbox"/>	<input type="checkbox"/>
2. Includes a teach back opportunity? (formal training for the person conducting the screen with competency validated includes provider feedback)	<input type="checkbox"/>	<input type="checkbox"/>
3. Is covered in nursing orientation?	<input type="checkbox"/>	<input type="checkbox"/>
4. Has an annual competency requirement?	<input type="checkbox"/>	<input type="checkbox"/>
5. Is taught during unit orientation training?	<input type="checkbox"/>	<input type="checkbox"/>
6. Includes behavioral observations (cognition, postural control, speech/oral motor coordination and respiratory status)	<input type="checkbox"/>	<input type="checkbox"/>
7. Includes signs of dysphagia	<input type="checkbox"/>	<input type="checkbox"/>
8. Observation of eating and drinking	<input type="checkbox"/>	<input type="checkbox"/>

If you answered “yes” to all of these, congratulations! You are already using best practice strategies for swallow screening. Keep up the good work and share your successes!

If you answered “no” to any of these questions, you may need to consider revising your swallow screen tool, and/or training process to include these items that were identified as best practices. Follow up with your speech language pathology department and refer to the screens published in the literature as well as the literature review (which can be found at: <http://www.uic.edu/depts/glstrknet/dysphagia.html>).

* This swallow screen checklist was developed by through expert consensus of Great Lakes Regional Stroke
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