

# ADULT DYSPHAGIA

Clinical Reasoning and Decision-Making Guide

Yvette M. McCoy, MS, CCC-SLP, BCS-S

Ed M. Bice, MEd, CCC-SLP





9177 Aero Drive, Suite B  
San Diego, CA 92123

e-mail: [info@pluralpublishing.com](mailto:info@pluralpublishing.com)  
Website: <http://www.pluralpublishing.com>

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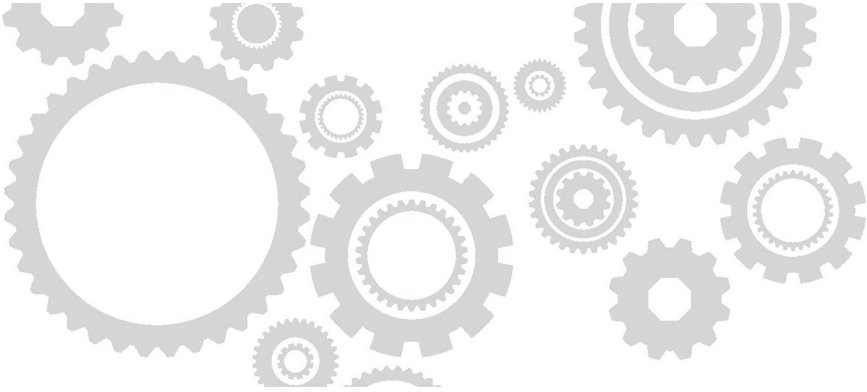
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# Preface

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**A**s clinicians, we understand that assessing and treating swallowing disorders is a momentous task. The idea for the guide was birthed in numerous conversations across several years. As we challenged one another to be better clinicians, we started formulating and sharing ideas. Through collaborating, we discovered clinicians lacked concise guidance for assessing and treating swallowing disorders. The guide you hold in your hand represents a systematic, clinical thought process supported by scientific literature to assist clinicians searching for direction and guidance. We hope the guide serves those who depend on us to regain their ability to have a pleasurable experience with food and drink.



# 1 Screening and Assessment: The Diagnostic Process

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**T**here is no commonly accepted definition of dysphagia, even though the terms dysphagia and swallowing difficulties are frequently used synonymously in the literature (Speyer et al., 2022). Dysfunction of one or more of the components of the swallowing mechanism (mouth, tongue, oral cavity, pharynx, airway, and upper and lower esophageal sphincters) is the most generally accepted description of dysphagia (Shaker, 2006; Speyer et al., 2022). Dysphagia is a symptom or group of symptoms resulting from complications within the complex neuro-motor swallowing sequence (Jean, 2001). In addition to being essential for nutrient absorption, effective swallowing is essential for managing secretions from the upper and lower aerodigestive tracts, such as saliva, nasal, and tracheal secretions. In a recent review by Bernardes et al. (2022), investigators found that dysphagia (OD) affect 7% to 13% of people aged 65 and older. In addition, researchers reported that OD is found in more than 30% of stroke patients, 52% to 82% of patients with neurological illnesses, 30% of patients with head and neck ailments, and 60% of elderly hospitalized patients (Bernardes et al., 2022). Given

the high prevalence of OD, its serious complications, and health care costs, systematic screening of at-risk populations using valid, standardized tools should be paramount when considering strategies to improve early intervention and clinical outcomes (Attrill et al., 2018; Rajati et al., 2022).

### The Purpose of Screening and Assessments: What Is the Difference, and Why Should Clinicians Care?

## Screenings

An effective screening attempts to predict the result of a diagnostic test (forming a hypothesis), predicts the probability of disorder, and provides early detection that could lead to intervention (Etges et al., 2014).

The following describes the nature of a screen:

- A screening cannot determine the disorder's nature or severity.
- The results of screening cannot be used to inform treatment decisions.



#### Clinician's Note

A screening is a pass/fail exam. If a patient passes, this suggests a disorder is NOT present. Conversely, if a patient fails, more testing is needed. Screening is a process of EXCLUSION; it does not specify the nature of the disorder.

### ***Determining if a Screen Is “Good”***

Several factors should be considered when determining the effectiveness of a screen. The disorder the screening tool detects must be well-defined,

the tool must be cost-effective, and the tool should be practical (Speyer et al., 2020). A screen should also be reliable, with an adequate fail cutoff. The presence of the sign must be clearly defined.

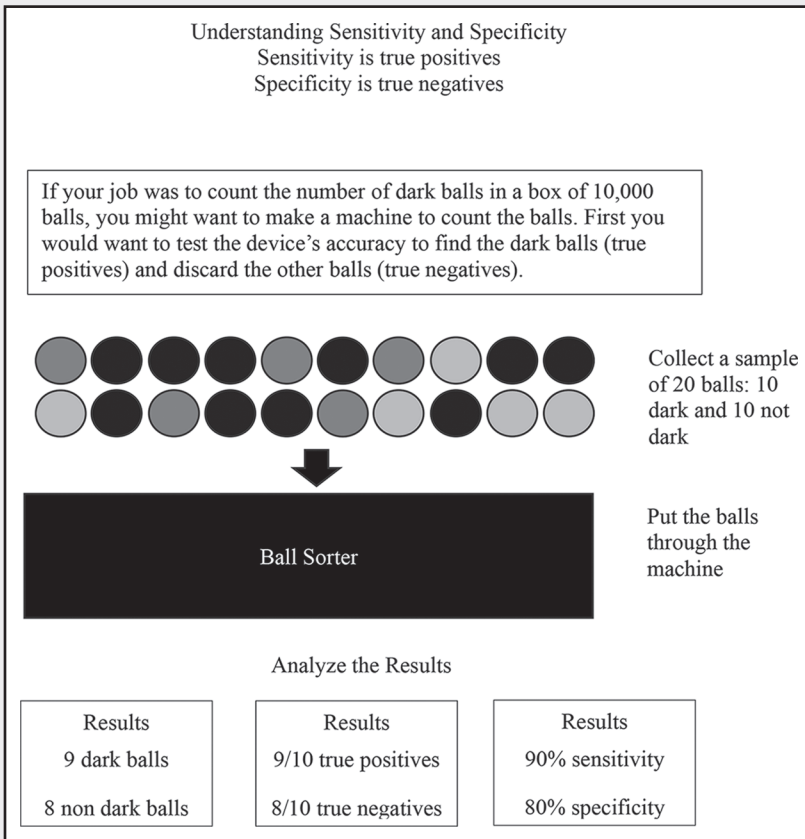
High sensitivity occurs when a clear “fail” captures patients with the condition. (Chu, 1999). A screen must possess a high predictive value. A predictive value is the ratio of patients diagnosed as positive (i.e., after an imaging examination) compared to all those who had positive when the screening tool was administered. In other words, how effectively will this screen function in the clinic? The percentage of times a pass predicts people who are not the target (i.e., do not have dysphagia) of the screen is expressed as a negative predictive value (Hayden & Brown, 1999). A successful screening has a high sensitivity, low specificity, and high negative predictive value. In such a case, more patients who pass will likely not have the illness (Chu, 1999; Hayden & Brown, 1999).





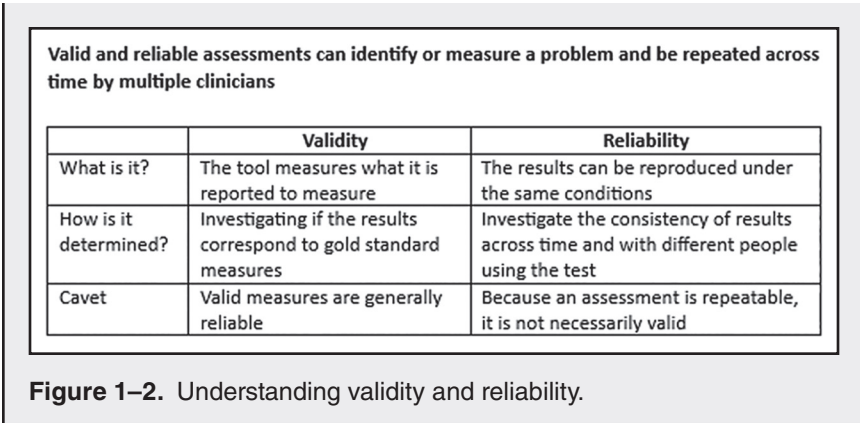
## Deeper Dive

To understand the value of a screening tool it is important to understand the concepts of sensitivity and specificity. Figure 1–1 provides an explanation of how to determine sensitivity and specificity.



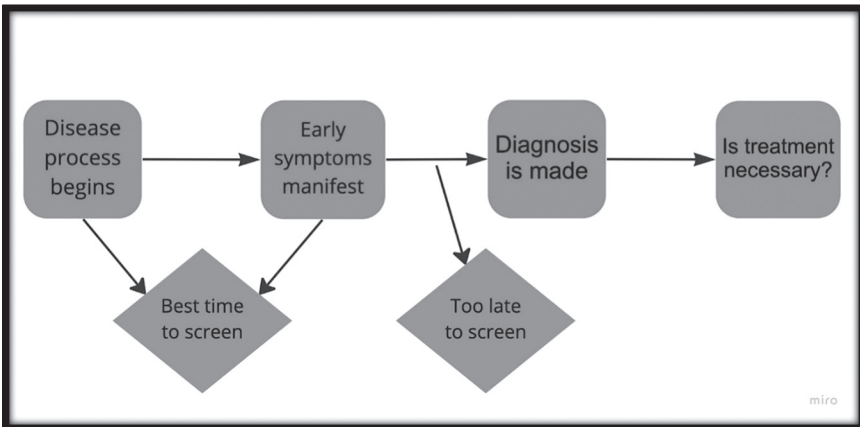
**Figure 1–1.** Understanding sensitivity and specificity.

Tools should have both validity and reliability. Figure 1–2 provides an explanation of the concepts.



### When to Use a Screening Tool?

A screening conducted too soon may fail to detect a disease or problem; however, a screening conducted too late may result in false negatives, as shown in Figure 1–3. The optimal period to perform a screen is between the onset of the illness and when the first symptoms occur. Figure 1–3 provides general guidance related to the timing of a screen.



**Figure 1–3.** Understanding when to initiate a screen.

## Decision Making Tools

A dysphagia screening is a helpful initial step in identifying swallowing difficulties. A clinical evaluation may be necessary to understand the impairment and address concerns identified during the screening process. Table 1–1 reviews common screening tools.

**What Is Next?** Once the results of the screen have been obtained, the clinician must make some decisions. Figure 1–4 provides a flowchart for decision making.

**Table 1–1.** Review of Common Screening Tools

<b>Screening Tool</b>	<b>Evidence in Literature</b>	<b>Predictive Values</b>
Yale Swallow Protocol	Suiter, D. M., Sloggy, J., & Leder, S. B. (2014). Validation of the Yale Swallow Protocol: A prospective double-blinded videofluoroscopic study. <i>Dysphagia</i> , 29, 199–203.	<i>Aspiration</i> <i>Acute Care</i> Sensitivity: 100% Specificity: 63.6%
	Ward, M., Skelley-Ashford, M., Brown, K., Ashford, J., & Suiter, D. (2020). Validation of the Yale Swallow Protocol in post-acute care: A prospective, double-blind, multirater study. <i>American Journal of Speech-Language Pathology</i> , 29(4), 1937–1943.	<i>Post-Acute Care</i> Sensitivity: 95.4% Specificity: 66.9%
3-oz water challenge	DePippo, K. L., Holas, M. A., & Reding, M. J. (1992). Validation of the 3-oz water swallow test for aspiration following stroke. <i>Archives of Neurology</i> , 49(12), 1259–1261.	<i>Aspiration</i> Sensitivity: 76% Specificity: 59% <i>Aspirating larger amount</i> Sensitivity: 94% Specificity: 26%