



Dysphagia in Older Adults: Clinical Review

Geriatric Fellow Trainee Presentation
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Disclosure

- I have no actual or potential conflict of interest in relation to this program/presentation
- I have no financial interests or relationships to disclose
- I will not be discussing "off-label" uses of medications



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Objectives

- Understand the **aging effects** on swallowing
- Describe **diagnostic modalities** in dysphagia management
- Compare **therapeutic strategies** for older adults



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Dysphagia^{1,5}

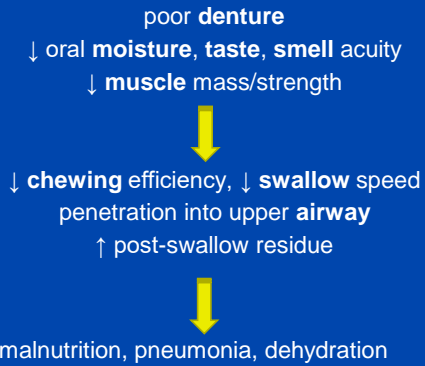
- **15%-37% older adults** vs 3% general population
 - hospital 30%, NH: 68%, indep: 13%-38%
- 6 million >65 years old at risk
- Associated with morbidity, mortality



1. Swenson-Konradi, CL. Mayo Clinic Proceedings. 2017
5. Sura, L. Clinical interventions. In spring. 2012

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Aging Effects on Swallowing⁴



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4. Hepler, GM. American Geriatrics Society, 2019

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Taking a History¹

- difficulty swallowing pills, solids, liquids
- trouble chewing
- duration, frequency, associated symptoms

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1. Janssen-Knodell, CL. Mayo Clinic Proceedings, 2017

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Physical Exam¹

- **HEENT**
 - denture fitting, tongue fasciculation
 - mucous membrane, facial muscles, lymph nodes
- **Abdomen**
 - timing of gurgling sound associated with swallow
- **Neuro**
 - cranial nerves, speech, gait, weakness
- **Other**
 - cachexia, weight loss
 - sclerodactyly, telangiectasia, shawl sign

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1. Janssen-Knodell, CL. Mayo Clinic Proceedings, 2017

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Oral Dysphagia

- **Mechanics:** voluntary, attention, coordination⁴
- **Process:** mastication, bolus mouth to pharynx^{1,4}
- **Symptoms¹:** trouble chewing, food in mouth, drool
- **Causes:** stroke, dementia^{2,4}, medications



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1. Janssen-Knodell, CL. Mayo Clinic Proceedings, 2017
2. Ruben, DB. Geriatrics at your Fingertips, 2016
4. Hepler, GM. American Geriatrics Society, 2019
Figure from Jastroff, I. Journal of Neural Engineering, 2015

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Pharyngeal Dysphagia

- **Process:**
 - swallow reflex, pharynx to esophagus⁴
- **Symptoms¹:**
 - difficult to initiate swallow, choking, dysphonia, nasal regurgitation
- **Causes^{1,2}:**
 - Neurogenic, myopathic, structural



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1. Jansson-Knodell, CL, Mayo Clinic Proceedings, 2017
2. Ruben, DB, Genetics of your fingertips, 2015
4. Harper, GM, American Genetics Society, 2019
Figure from Jansson, L, Journal of Neural Engineering, 2015

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Evaluation

- Trained nurse: warning signs
- Speech pathologist¹, occupational therapist
 - bedside evaluation⁴
 - observe oral swallow mechanism

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1. Jansson-Knodell, CL, Mayo Clinic Proceedings, 2017
4. Harper, GM, American Genetics Society, 2019

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Diagnostic Tests^{1,4}

- Videofluoroscopic swallow study ([play video](#))
 - Neuromuscular disease (ie: stroke, dementia)
 - Degree of dysfunction, severity of aspiration
 - Observe dietary modifications
- Fiberoptic Endoscopic Evaluation of Swallowing (FEES)
 - Nonsystemic disease (ie: structural lesion)
 - No radiation; office or clinic; quick, safe
 - Laryngeal/pharyngeal structures
 - "Whiteout" during swallow phase

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1. Jansson-Knodell, CL, Mayo Clinic Proceedings, 2017
4. Harper, GM, American Genetics Society, 2019

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Therapeutic Options^{1,2,4}

- **Behavioral**
 - Modify amount/rate/consistency of food
 - Eat slowly, mindful swallow
 - Caregiver training
- **Compensatory (low, variable evidence)**
 - Posture: upright posture, chin tuck; oral care
 - Swallowing maneuvers (ie: supraglottic swallow)
 - [Dietary modifications](#)

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1. Jansson-Knodell, CL, Mayo Clinic Proceedings, 2017
2. Ruben, DB, Genetics of your fingertips, 2015
4. Harper, GM, American Genetics Society, 2019

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Therapeutic Options

- **Dietary Modifications**
 - Liquids: thin, nectar, honey, pudding
 - Foods: pureed, mechanically altered, advanced, regular
 - ↓ acceptability → ↓ adherence/intake → ↓ nutrition^{8,9}
- **Swallow Rehabilitation**
 - Better swallow function, improved nutritional status, reduction of pneumonia
 - ie: expiratory muscle strength training (EMST)

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11. Robbins, J. Am Intern Med. 2008.

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Esophageal Dysphagia

- **Mechanics:** peristalsis
- **Process:** no cranial nerves; intrinsic innervation⁴
- **Symptoms**¹: mid-late meal, dysphagia to solids/liquids, heartburn, halitosis
- **Causes**¹: motility, inflammatory, infectious, structural



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1. Jensen-Kristell, CL. Mayo Clinic Proceedings. 2017.
4. Hepler, DM. American Geriatrics Society. 2010.
Figure from Jensen, L. Journal of Neural Engineering. 2015.

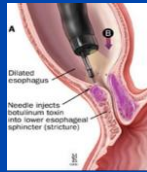
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Diagnostic Tests

- EGD, esophogram, manometry

Therapeutic Options

- **Treat underlying cause**¹
 - dilation, botulinum toxin injection, biopsy, etc

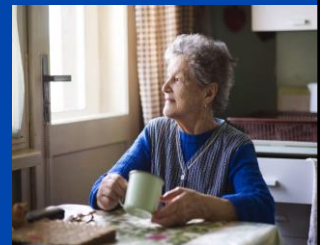


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1. Jensen-Kristell, CL. Mayo Clinic Proceedings. 2017.
11. Jensen-Kristell, CL. Mayo Clinic Proceedings. 2017.

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Conclusion

- Dysphagia = risk of malnutrition, pneumonia, dehydration
- pursue behavioral, compensatory, rehabilitation
- consider quality of life with therapeutic interventions



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