



Think Swallow: Theoretical and practical application of swallowing skill training

Presenters: Maggie-Lee Huckabee (MLH), Bonnie Martin-Harris (BMH)

9:00-9:45 Introduction & Historical Framing (MLH)

9:00-9:15 Historical context for current rehab approaches:

- Early view → swallowing as reflexive, rehabilitation focused on peripheral strengthening.
- Shift toward cortical and neural network models of swallowing motor control.
- Leads into the rationale for skill-based rehabilitation and intrinsic neural stimulation.

9:15-9:45 Principles of Motor Learning & Neural Plasticity (MLH)

- Advancing from biomechanics-only rehabilitation to skill-based, cognitively engaged, cross-system approaches.
- Experience-dependent neural plasticity as a basis for skill training.
- Embedding these principles into dysphagia treatment planning.

9:45-10:00 Morning Tea

10:00 -12:30 Respiratory–Swallowing Coordination (BMH).

10:00-11:15 The foundations

- Why is respiratory-swallowing coordination a significant clinical issue
- Instrumental measurement of respiratory swallowing discoordination
 - Cross-System Integration with Precise Movements of Swallowing
- Capacity for behavioral modulation of respiratory swallowing coordination.
- Training respiratory-swallow coordination: what are the essential methods, target and outcomes

11:15-12:15 Small Groups: Clinical translation: low tech methods and engagement.

12:15-12:30 Discussion

12:30-1:15 Lunch

1:15-2:30 sEMG Biofeedback: The foundations

- Surface electromyography as a proxy for hyolaryngeal movement
 - Measuring sEMG: practices and pitfalls
- Protocols : Strength and Skill
- Rehab selection : muscle or brain or both?
- Capacity for behavioural modulation of timing, organization and force generation.

2:30-3:30 Small Groups: Clinical translation: low tech methods and engagement.

3:30-3:45 Discussion

3:45-4:15 Reflections and Wrap up Q & A
