

Rehabilitative Strategies for Use with Specific Symptoms and Underlying Physiologic Abnormalities (adapted from Daniels & Huckabee, 2008)

The symptoms of:	Secondary to physiologic abnormality of:	Rehabilitation approach:	Other considerations:
Anterior leakage	Poor orolingual control	Tongue strengthening exercises: Tongue to palate pressure Tongue to tongue depressor pressure	Biofeedback device: IOPI or other oral pressure measurement device
Inadequate bolus preparation			
Inadequate bolus formation			
Oral residual			
Pharyngeal pooling to the level of ____	Delayed pharyngeal swallow	Thermal-tactile application**	
Inadequate epiglottic deflection	Decreased anterior hyoid movement	Head-lift exercise	
	Intrinsic structural changes in supportive tissue	No rehabilitation techniques at this time	
Vallecular residual	Decreased base of tongue to posterior pharyngeal wall approximation	Masako maneuver Effortful swallow** Oral motor exercises	Biofeedback device: sEMG of submental muscle group Precautions: attend to hyoid movement, may add head lift as prophylactic w/ effortful swallow
	Inadequate epiglottic deflection*	See rehabilitation approaches for physiologic abnormalities resulting in inadequate epiglottic deflection above.	
Inadequate opening of the UES	Decreased anterior hyoid movement Intrinsic structural/functional changes in cricopharyngeus	Head lift exercise Mendelsohn maneuver**	Biofeedback device: sEMG of submental muscle group Precautions: attend to hyoid movement, may add head lift as prophylactic w/ Mendelsohn
Pyramidal sinus residual	Inadequate opening of the UES*	See rehabilitation approaches for physiologic abnormalities resulting in inadequate opening of the UES above.	

*Occasionally a symptom will be caused by another symptom, which requires the clinician to problem solve through to the initial presenting physiologic abnormality.

**Treatments that have both compensatory and rehabilitative properties

sEMG = surface electromyography; UES = upper esophageal sphincter