Compensatory Strategies for Dysphagia

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This chart of compensatory strategies is based on our Dysphagia Exercise and Treatment Guide. See the full guide on our website for references, rationales, and more details. To use this chart, mark off the physiological impairments your patient has and move across the columns to find evidence-based strategies that can be used to compensate for each. Remember that compensatory strategies are meant to help patients *manage* their impaired physiology in real-time and are best trialed during an instrumental. See our corresponding chart of rehabilitative exercises for ideas for making lasting physiological changes in the areas of impairment.

	Postural Changes							*Sensory Changes*										
Impaired Physiology	HT	HR	HX	CT	RP	LW	TL	Mo	Tx	Tm	Ta	Vo	Ca	3S	RS	ES	SG	SS	Me
☐ Labial Closure	■		■		■		■	■										
☐ Tongue control during bolus hold	■						■											
☐ Bolus prep/mastication	■							■	■									
☐ Bolus transport / lingual movement			■		■	■			■					■		■		
☐ Oral residue	■			■		■		■	■	■	■	■	■		■			
☐ Initiation of pharyngeal swallow	■			■					■	■	■	■	■	■			■	
☐ Soft palate elevation									■			■						

***HT**: Head tilt*
***TL**: Thickened liquid*
***Ca**: Add carbonation*
***Me**: Mendelsohn*

***HR**: Head turn*
***Mo**: Alter modality*
***3S**: Three-second hold*

***HX**: Head extension*
***Tx**: Alter texture of solids*
***RS**: Repeat/dry swallows*

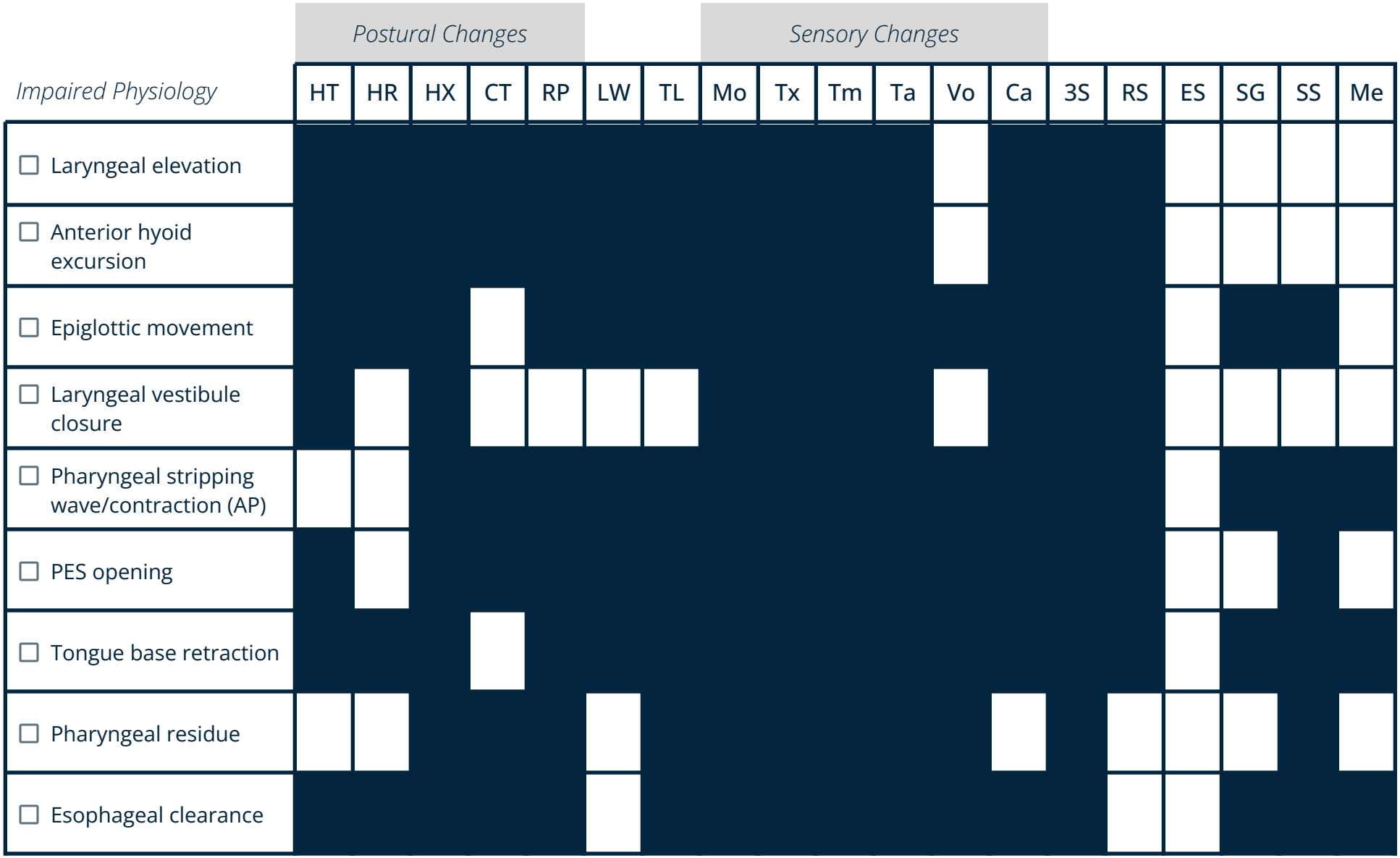
***CT**: Chin tuck*
***Tm**: Alter temperature*
***ES**: Effortful swallow*

***RP**: Reclined position*
***Ta**: Alter taste*
***SG**: Supraglottic swallow*

***LW:** Liquid wash*
***Vo**: Alter bolus volume*
***SS**: Super supraglottic*

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HT: *Head tilt* ***HR***: *Head turn* ***HX***: *Head extension* ***CT***: *Chin tuck* ***RP***: *Reclined position* ***TL***: *Thickened liquid* ***LW***: *Liquid wash*
Mo: *Alter modality* ***Tx***: *Alter texture of solids* ***Tm***: *Alter temperature* ***Ta***: *Alter taste* ***Vo***: *Alter bolus volume* ***Ca***: *Add carbonation* ***3S***: *3-sec hold*
RS: *Repeat/dry swallows* ***ES***: *Effortful swallow* ***SG***: *Supraglottic swallow* ***SS***: *Super supraglottic* ***Me***:*Mendelsohn*

Rehabilitative Strategies for Dysphagia

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This chart of rehabilitative strategies is based on our Dysphagia Exercise and Treatment Guide. See the full guide on our website for references, rationales, and more details. To use this chart, mark off the physiological impairments your patient has and move across the columns to find evidence-based strategies that can be used to rehabilitate for each impairment or, in the case of a degenerative process, maintain function for as long as possible. Remember to apply the principles of exercise, as discussed in our guide, when determining treatment intensity. See our corresponding chart of compensatory strategies and handout of descriptions for the exercises below.

Rehabilitative Strategies

Impaired Physiology	LC	OB	LR	LS	AS	ME	Sh	CP	CTAR	ES	SG	SS	Ma	Me	VF	EMST
☐ Labial closure																
☐ Tongue control during bolus hold																
☐ Bolus prep/mastication																
☐ Bolus transport / lingual movement																
☐ Oral residue																
☐ Initiation of pharyngeal swallow																

LC: *Labial closure exercises*
OB: *Oral bulb exercises* ***LR:*** *Lingual resistance exercises* ***LS:*** *Lingual stretching* ***AS:*** *Chewing advanced solids*
ME: *Mandibular opening exercises* ***Sh:*** *Shaker* ***CP****: Combined protocol of mandibular opening exercises + CTAR + Effortful swallows*
CTAR: *Chin tuck against resistance* ***ES:*** *Effortful swallow* ***SG:*** *Supraglottic swallow* ***SS:*** *Super supraglottic swallow* ***Ma:*** *Masako*
Me: *Mendelsohn* ***VF****: Laryngeal adduction* ***EMST:*** *Expiratory Muscle Strength Training*

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Rehabilitative Strategies

Impaired Physiology	LC	OB	LR	LS	AS	ME	Sh	CP	CTAR	ES	SG	SS	Ma	Me	VF	EMST
☐ Soft palate elevation	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■
☐ Laryngeal elevation	■	■	■	■	■			■			■		■	■	■	
☐ Anterior hyoid excursion	■	■	■	■	■	■		■	■				■	■	■	■
☐ Epiglottic movement	■	■	■	■	■	■		■			■	■	■	■	■	■
☐ Laryngeal vestibule closure	■	■		■	■	■		■	■		■	■	■			
☐ Pharyngeal stripping wave / contraction (A-P)	■	■	■	■	■	■	■	■	■		■	■		■	■	■
☐ Pharyngoesophageal segment opening	■	■	■	■	■	■		■			■	■	■		■	■
☐ Tongue base retraction	■	■	■	■	■	■	■	■	■		■	■			■	■
☐ Pharyngeal residue	■	■		■	■	■		■			■	■	■		■	■
☐ Esophageal clearance	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■

LC: *Labial closure exercises*
ME: *Mandibular opening exercises*
CTAR: *Chin tuck against resistance*
Me: *Mendelsohn*
OB: *Oral bulb exercises*
Sh: *Shaker*
ES: *Effortful swallow*
VF: *Laryngeal adduction*
LR: *Lingual resistance exercises*
CP: *Combined protocol of mandibular opening exercises + CTAR + Effortful swallows*
SG: *Supraglottic swallow*
EMST: *Expiratory Muscle Strength Training*
LS: *Lingual stretching*
SS: *Super supraglottic swallow*
AS: *Chewing advanced solids*
Ma: *Masako*

Descriptions of Rehabilitative Exercises for Dysphagia

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This handout describes how to perform common dysphagia rehab exercises for clinical reference and patient instruction. See the evidence table in the linked research review for references and rationales for which exercises can target which physiological deficits, plus additional compensatory strategies and principles of exercise. The exercises under each category are examples from the literature cited in our research review; they are not an exhaustive list. For exercises that involve an instrument such as an IOPI for lingual resistance or other oral bulb exercises, an EMST such as the EMST-150, or a Patakara Lip Trainer for labial closure, refer to the manufacturer's instructions for directions.

Labial Strengthening/Closure Exercises:

☐ **Pulling Exercises**

1. Place a safe item (e.g. oral screen, other rubber oral tool) in front of teeth, behind lips. Be sure there is a pulling loop or handle you can access from the outside of the mouth.
2. Instruct the patient to close mouth around the screen.
3. Gently pull the loop forward for 5-10 seconds, having the patient close their lips tightly to resist opening.

☐ **Lip Compression Exercises**

1. Instruct the patient to close lips normally, then squeeze together as hard as possible.
2. Relax the lips.
3. Repeat as many times as the patient can tolerate.
4. *Variation: Instruct the patient to puff out their cheeks and hold, then relax. This can be done bilaterally or alternating.*

☐ **Blade Holding Exercises**

1. Hold tongue depressor between lips with maximal effort.
2. Hold for as long as the patient can tolerate, or 6-10 seconds.

Lingual Stretching Exercises:

☐ **Static Lingual Stretching**

1. Instruct the patient to stick out their tongue.
2. Use gauze to hold the tongue, then pull gently until the patient feels a slight stretch.
3. Hold for 2-3 seconds, then guide gently back into the mouth.
4. Repeat as long as the patient can tolerate, or up to 20 times.

Lingual Resistance Exercises:

☐ **Blade Pushing Exercises**

1. Place tongue depressor in the lateral (or anterior) oral cavity.
2. Push the tongue against the depressor with maximal effort.
3. Hold for as long as the patient can tolerate, or 6-10 seconds.

☐ **Tongue Presses**

1. Instruct the patient to push the tongue up to the hard palate with maximal effort.
2. Hold for a few seconds, then release.
3. Repeat as many times as the patient can tolerate, or 10 repetitions.

Mandibular Opening Exercises:

☐ **Jaw Opening Against Resistance:**

1. Have the patient tuck their chin slightly toward the chest.
2. Instruct the patient to hold tightly, slowly open their mouth as wide as possible, and then close it.
3. As the patient can tolerate, have them open their mouth for increasing durations, or 30–60 seconds.

Descriptions of Rehabilitative Exercises for Dysphagia

☐ **3-Second Preparation/Trap and Hold:**

1. After the patient has formed a cohesive bolus, instruct them to pause and hold for ~3 seconds before triggering the swallow.
2. Instruct them to swallow mindfully.

☐ **Chin Tuck Against Resistance (CTAR):**

1. Complete with an exercise ball or rolled-up towel.
2. Place beneath the chin and base of the neck/chest.
3. Tuck your chin against the ball. Aim to hold for 10 seconds.
4. Release.
5. Complete as many times as your patient can tolerate, up to 10 repetitions.
6. Repeat the whole set 2-3 times daily.

☐ **Effortful Swallow:**

1. Instruct the patient to swallow as hard as they can, pushing the front of their tongue behind the teeth on the hard palate. using
2. Some patients benefit from the example, "Pretend you're trying to swallow a golf ball. Recruit as much strength as that would take, and swallow hard."
3. Complete as many times as your patient can tolerate.
4. Repeat the whole set 2-3 times daily.

☐ **Masako:**

1. Instruct the patient to stick their tongue out and hold it gently between the teeth.
2. Swallow while keeping tongue held between teeth, then release.
3. Repeat as many times as the patient can tolerate.

☐ **Mendelsohn:**

First, teach this exercise with the patient holding their larynx manually.

1. Instruct your patient to swallow.
2. When the larynx reaches its highest point, have them manually hold it in the elevated position for 3 seconds, then release.

Once they've effectively achieved the sensation of holding the larynx in the high position, have them complete without their hands.

1. Instruct the patient to swallow.
2. When the larynx reaches its highest point, have them hold the larynx in the elevated position using their suprahyoid muscles for 3 seconds, then release.

☐ **Shaker/Head Lift:**

1. Have your patient lie down, keeping the shoulders against the bed.
2. Instruct your patient to bend their head up/forward, assuring their chin is tucked. Aim for them to visualize their own feet.
3. Hold for as long as the patient can tolerate, up to 1 minute.
4. Repeat as many times as they can tolerate comfortably.
   See here for variations on the Shaker.

☐ **Supraglottic Swallow:**

1. Instruct the patient to take a deep breath and hold.
2. Take a sip/bite.
3. Swallow while still holding breath.
4. Use a cough for the exhale. Resume normal breathing.
5. Swallow again as needed.

☐ **Super Supraglottic Swallow:**

1. Instruct the patient to take a deep breath and hold tight while bearing down through abdominal muscles/pelvic floor muscles.
2. Take a sip/bite.
3. Swallow while still holding breath.
4. Use a cough for the exhale. Resume normal breathing.
5. Swallow again as needed.