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Effortful Swallow

Huckabee & Steele (2006)

- Increased pressure
 - When patient was told to increase tongue to palate contact
 - Resulted in increased oral and pharyngeal pressures
 - Directions matter!

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Effortful Swallow

- Lazarus et al., 2002
 - Comparison of:
 - effortful swallow, SSG, tongue hold, Mendelsohn
 - Aim
 - Which resulted in the greatest BOT-PPW pressure & most efficient pharyngeal bolus clearance
 - Measured
 - Peak pressures at BOT-PPW
 - Duration of BOT-PPW contact
 - % pharyngeal residue

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Effortful Swallow

- Greatest BOT-PPW pressure generated
 - Effortful Swallow
 - Second best - Tongue Hold
- Longest duration of BOT-PPW contact
 - Mendelsohn Maneuver
- Least pharyngeal residue:
 - Effortful Swallow
 - Mendelsohn Maneuver

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Clinical Outcomes of the Shaker Exercise in Dysphagic Patients

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Shaker Exercise

- **Isometric**
 - Static strength exercise
 - Involves resistance without movement
 - Tension develops in the muscle but the muscle does not shorten or lengthen
 - Limb: pushing against a wall
 - Valsalva maneuver
- **Isokinetic**
 - Dynamic strength exercise
 - Involves resistance at a constant speed
 - Muscle shortens against an accommodating resistance that matches the force produced by the muscle throughout the full range of motion
 - Slower speeds produce greatest gains

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Shaker Exercise

Shaker Exercise consists of:

- 3 repetitive one-minute sustained head raises in supine position, interrupted by a one-minute rest period.
- 30 consecutive repetitions of head raising in the supine position.
- Head is raised high and forward enough to see the toes without lifting the shoulders off the ground.

(Shaker et al. AJP 272 (Gastroenterol Liver Physiol 35):G1518-1522,1997)

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Shaker Exercise

Patients Enrolled:

- Twenty-seven tube-fed dysphagic patients
 - Post-deglutitive residue
 - Post deglutitive aspiration confirmed by videofluoroscopic swallow study
- Ages 62-89 yrs (mean: 73 yrs ± 1 yrs)

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Shaker Exercise

Inclusion Criteria:

- Patients with pyriform sinus residue
- Patients with post deglutitive aspiration
- Able to perform the Shaker Exercise independently
- Patients on g-tube or j-tube feedings

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Shaker Exercise

Exclusion Criteria:

- S/P Cervical Spine Surgery
- Patients unable to perform the Shaker exercise independently
- Patients with tracheostomy

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