

SHAKER'S TASK

I. Description

The Shaker's Tasks are composed of an isotonic exercise and an isometric exercise which together are designed to strengthen the suprahyoid muscles involved in upper esophageal sphincter (UES) opening. Some studies have shown that the cross-sectional area of the upper esophageal sphincter (UES) opening in the elderly can be increased significantly by an isotonic/ isometric head raising exercise. (Shaker et al AM J Physiol. 272 [Gastrointestinal Liver Physiology 35]: G1518-22, 1997)

II. Purpose

- A. To strengthen the hyothyroid muscle to maximize hyothyroid approximation as it relates to the process of hyolaryngeal excursion for opening of a relaxed upper esophageal sphincter (UES).
- B. To strengthen the suprahyoid muscles of the hyoglossal complex to facilitate improved anterior laryngeal movement during the swallow.
- C. To strengthen the extrinsic laryngeal strap muscles to facilitate improved superior laryngeal movement during the swallow.
- D. The composite laryngeal excursion vector resulting from the combination of improved forward and upward movement of the larynx results in the cricoid cartilage of the larynx tractioning the relaxed cricopharyngeal muscle which forms the anterior portion of the UES forward as the muscles of the UES relax to achieve UES opening for safe bolus passage. *

III. Indications

- A. Diminished or absent hyolaryngeal approximation in the presence of decreased UES opening.
- B. Diminished or absent anterior laryngeal movement in the presence of decreased UES opening.

- C. Diminished or absent superior laryngeal movement in the presence of decreased UES opening.

IV. Contraindications

- A. Tracheotomy
- B. Condition warranting restricted range of motion of the head and neck (e.g. cervical spine contracture).

V. Precautions

- A. Reflux precautions
- B. Avoid Shaker's Tasks for one hour after given a meal.

VI. Equipment

- A. Bed or therapy mat
- B. 30 degree wedge to keep upper body elevated as a reflux precaution
- C. Gloves

VII. Procedure

- A. Ensure patient privacy and safety.
- B. Don gloves and explain the procedure and purpose to the patient.
- C. Elevate the head of the bed 30 degrees or place a 30 degree wedge on therapy mat.
- D. Instruct the patient to lie supine with the upper body properly elevated to 30 degrees.

- E. Instruct the patient to perform cervical flexion by cueing him/her to "raise your head to look at your feet while you keep your shoulders on the bed/mat."
- F. Instruct patient to gently rest head back down to the bed or mat.
- G. From here, remember that Shaker's Tasks involve two parts:
 - 1. Consecutive repetitions of head and neck raising with maintenance of the head and neck at the highest comfortable point for 2 seconds. For example, 30 repetitions/sets of 2 second sustained cervical flexion for 3 sets per therapy session.
 - 2. Consecutive repetitions of head and neck raising with maintenance of the head and neck at the highest comfortable point for a goal of 30 seconds per repetition. For example, 3 repetitions per set of 30 second sustained cervical flexion for 3 sets per therapy session.
- H. Ensure that the patient's shoulders remain on the bed or mat throughout the tasks.
- I. Monitor patient for signs / symptoms of distress.
- J. Provide rest breaks as necessary.