

TRUE VOCAL FOLD ADDUCTION TASKS

I. Description

True vocal fold (TVF) adduction tasks are designed to improve glottic closure for airway protection during the swallow and to improve glottic closure for voicing. Decreased vocal fold closure may be caused by:

A. **Organic disorders** involving:

1. **Structural** disorders that are caused by some physical abnormality of the larynx (i.e. contact ulcers, cysts, granuloma, hemorrhage, hyperkeratosis, laryngitis, leukoplakia, nodules, papilloma, polyps, trauma, miscellaneous growths)
2. **Neurogenic** disorders that are caused by a dysfunction within the nervous system as it interacts with the larynx (i.e. paralysis/paresis, spasmodic dysphonia, tremor, etc.)

B. **Functional disorders** caused by poor muscle function (i.e. muscle tension, hyper-abduction, vocal fold bowing, etc.)

C. **Psychogenic disorders**

II. Purpose

- A. Improve closure of the True Vocal Folds.
- B. Improve closure of the False Vocal Folds (FVF).
- C. Improve anterior-posterior shortening of the thyroarytenoid muscles which traction the arytenoids forward to complete the glottic closure process as it pertains to the swallow.

III. Indications

True vocal fold adduction tasks may be used with patients who exhibit decreased glottic closure of the True Vocal Folds and/or False Vocal Folds which is resulting in:

1. Voice Disorder
2. Swallow Disorder

IV. Contraindications

- A. Patients with significant uncontrolled high blood pressure, since bearing-down tasks may cause an incidental increase in blood pressure.
- B. True vocal fold (TVF) adduction tasks should be preceded by examination per fiberoptic endoscopy or other laryngeal visualization by a trained professional to rule out evidence of structural disorder.
- C. Presence of lesions, masses, and / or significant discolorations involving the TVFs and/or FVFs. In this case, TVF adductions tasks may be administered only with ENT physician clearance.

V. Precautions

- A. Avoid push/pull approaches in the presence of unstable cardiac conditions.
- B. Clinicians review and monitor the respiratory status of all patients participating in TVF adduction tasks.

VI. Equipment

- A. Ensure appropriate seating and positioning for the individual patient.
- B. Select appropriate devices (e.g. weights, parallel bars, sound intensity meter, spectrographic software, stopwatch, pitch meter, keyboard, etc.).

VII. Procedure

- A. Explain procedure and purpose to the patient.
- B. Ensure patient privacy.
- C. Select appropriate patient - clinician positioning.
- D. Identify appropriate infection control procedures for implementation.
- E. Choose the vowel sound(s) to be elicited.
- F. Cue patient as appropriate to produce and sustain each vowel sound for a targeted number of seconds.
- G. Choose whether or not the patient will be required to push and/or pull with his/her arms and/or legs while producing sustained phonation (NOTE:

special considerations may need to be made for special populations -- e.g. quadriplegic patients).

- H. Pushing and/or pulling can be accomplished against the clinicians hands/arms, and immobile object (e.g. arms of chair, bed rails etc.), weights and parallel bars.
- I. May incorporate the use of diadochokinetic technique while pushing /pulling (e.g. /i/, /i/, /i/, /i/, etc.)
- J. May incorporate the use of glissando for pitch variance throughout the given patient's register (e.g. Require the patient to sing notes loudly while maintaining good vocal hygiene from the patient's habitual pitch to his/her highest pitch with both strong loudness and hygiene. Also, require the patient to sing notes loudly while maintaining good vocal hygiene from the patient's habitual pitch to his/her lowest pitch with both strong loudness and hygiene. With both of these elicit gliding [transitioning] between the low and high pitches).
- K. Incorporate the use of variable loudness while being mindful of vocal hygiene.
- L. Incorporate the use of breath support techniques (e.g. deep breath, breath impounding [holding breath], breath conservation [efficiency], resistive breathing w/ inhalation, etc.).
- M. After obtaining baseline data for number of seconds by vowel and specific parameters(e.g. Pitch, Frequency, SPL in dB, etc.), the clinician may increase the goals in the seconds of duration, number of repetitions, amount of weight, pitch target, loudness or intensity target, etc. during successive treatment sessions as clinically tolerated.