

## ENT 2019: The Effect of a Vocal Loading Task on Vocal Function Before and After 24 Hours of Thickened Liquid Use

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**Objective:** To decide the impact of a vocal stacking task on vocal capacity when 24 hours of thickened fluid use.

**Methods:** Seven solid grown-ups, ages 19 to 52 years old, were selected as members. Gauge information with respect to food/fluid admission and pee explicit gravity levels (USG) as a marker of hydration were acquired. Members at that point finished a vocal stacking task, which comprised of 3 × 10 redundancies of a supported vowel task at 65 dB to 75 dB SPL. Voice accounts and emotional evaluations of vocal exhaustion and muscle touchiness were acquired before and following the vocal stacking task for both the pre-thickened fluid and post-thickened fluid trial meeting. The voice tests were broke down for changes in crucial recurrence, clamor, and irritation measures.

**Results:** There was a noteworthy primary impact of vocal stacking on vocal clamor just as emotional appraisals of vocal weariness and muscle irritation; all boundaries were higher post-vocal stacking. There was additionally a noteworthy primary impact of thickened fluid use on jitter, as jitter levels were significantly lower post-thickened fluids.

**Conclusion:** The goal and abstract changes announced by the members' post-vocal stacking are predictable with earlier reports concerning ordinary versatile reactions to more prominent vocal requests and expanded strong exertion. A brief time of thickened fluids doesn't seem to influence vocal capacity.

**Introduction:** HLckened liquids are the most frequently used compensatory interventions for individuals with dysphagia to reduce or eliminate their risk of aspiration [1-3]. Because of the increase in viscosity, thickened liquids travel through the oropharynx at a slower rate, which is thought to contribute to greater control of the liquid bolus and provides

increased time to trigger the pharyngeal swallow. Improved control of the bolus provides additional time to complete the processes needed to close and protect the airway and reduces the possibility that liquid will enter the airway [1,4]. However, limited evidence is available to support the concept that the consumption of thickened liquids results in positive health outcomes with regards to pneumonia [5]. He available data suggest that thickened liquids may be beneficial for some individuals but not others. Logemann et al. [6] reported that while the use of thickened liquids reduced or eliminated aspiration in some patients with dementia, there were still a large percentage of patients for whom thickened liquids were ineffective. Rather, higher liquid viscosity was associated with an increased incidence of adverse outcomes, including a greater risk of aspiration pneumonia, longer hospital stays, and mortality [3]. Several reports have demonstrated that individuals who are placed on thickened liquid diets fail to meet minimum fluid intake requirements and thus are at risk for dehydration [7-9]. Patients often report that they don't like the thickened liquids; they refuse to drink them which mean that they reduce their overall fluid intake [10]. Other possible factors to the reduction in fluid intake include the beverage preferences of the patient and incorrect preparation of thickened liquids [1,7,11]. He increased risk of dehydration has numerous implications for rehabilitative function, including that of voice production. Specifically, hydration status has been associated with alterations in phonation threshold pressure (PTP), which refers to the minimum lung pressure needed to initiate and sustain vocal fold vibration and may be used as a physiological measure of phonatory effort [12,13]. A number of studies have suggested that systemic dehydration increases vocal fold viscosity, which contributes to an increase in PTP and

phonatory effort [13-15]. In contrast, hydration may lower PTP and improve phonatory function as shown in speakers following a vocally fatiguing task and in individuals with nodules and polyps [16,17]. Although systemic dehydration is known to affect vocal fold function, it is not known if the use of thickened liquids contributes to measurable and observable changes in the voice. Given the correlation between thickened liquids and dehydration, as well as the relationship between hydration status and vocal function, the aim of this study was to determine if vocal function would change in association with the use of thickened liquids.

**Methods :** Participants Endorsement from the Valdosta State University Institutional Review Board was acquired preceding enlistment of members in the investigation. Four female and three male speakers, 19 to 52 years old, chipped in to finish the investigation. Members were required to display an ordinary voice quality, have no history of voice issues, and be liberated from cold or then again sensitivity side effects upon the arrival of testing. Given that the convention for the examination included pre-test fasting meetings, physical exercise, what's more, a likely change in fluid/food admission [18], insurances were taken to guarantee that the volunteers were sufficiently sound to partake in the examination. Prudent steps included building up exclusionary standards, for example, history of blacking out, a background marked by high blood pressure, diabetes, hypoglycemia, cardiovascular illness, kidney or urinary tract issues, and additionally a background marked by seizure issue.

**Trial convention:** Benchmark information: Prior to the commencement of the time of thickened fluid use, benchmark information were gathered from every member. Members were coordinated to keep a log everything being equal/fluids devoured during the 24 hours preceding the utilization of thickened fluids and during the 24-hour time of thickened fluid admission. He admission logs were analyzed as a list of food/water devoured before and during the time of thickened fluid use. Every member was likewise

approached to give a pee test upon showing up for the investigation; this example was utilized to quantify pee specific gravity (USG) utilizing a clinical refractometer (Atago, USA, Inc., Bellevue, WA). Estimation of pee specific gravity is much of the time finished in research contemplates concerning the effects of hydration on athletic execution, and is viewed as a viable, noninvasive, furthermore, solid boundary of hydration [19]. As indicated by Casa et al. [20], the National Athletic Trainer's Association suggests a pee specific gravity level of 1.020 g/ml preceding starting activity. HLs level was utilized as a benchmark of satisfactory hydration in the current examination. Acoustic chronicles: Each member's voice was recorded preceding furthermore, quickly following the trial voice assignments. Before the introductory chronicles, the members finished a progression of warm-up practices that included five preliminaries every one of murmuring, glissando, and lip trills. Specific undertakings that were recorded for resulting examination included supported creation of the vowel/and perusing of the first two sentences of the rainbow section. Hree preliminaries of each errand were acquired at an agreeable pitch and uproar level. All accounts were finished in a sound rewarded corner and were digitized straightforwardly into a work station utilizing the Computerized Speech Lab (Model 4500, KayPENTAX). A steady mouth-to-amplifier separation of 6 cm was kept up utilizing an ATM AudioTechnica omnidirectional headset cardioid condenser receiver. He pre-voice and post-voice accounts of the supported vowels were investigated for major recurrence (F0), vowel relative clamor level (RLL-V), and commotion toharmonic proportion (NHR) utilizing the MultiDimensional Voice Program software. He pre-voice and post-voice accounts of the rainbow entry were investigated for talking central recurrence (SFF), talking relative clamor level (RLL-S), cepstral top unmistakable quality (CPP), and the proportion of low otherworldly vitality to high ghastly vitality (L/H proportion) utilizing the Analysis of Dysphonia and Speech in Voice.