



## Re-examining the Use of Thickened Liquids among Patients with Dysphagia

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### Editorial

The use of thickened liquids is a frequent recommendation by many speech-language pathologists to minimize or eliminate the possibility of oral aspiration of liquids. The basic premise supporting the use of thickened liquids is that increased viscosity results in a slower transit time and allows for greater control of the bolus, thus providing more time to trigger a pharyngeal swallow. In theory, then, the use of thickened liquids should reduce chances of aspiration. In practice, however, this assumption does not always hold true. For example, patients with dementia have been shown to continue to aspirate with thickened liquids of varying viscosity, from nectar to honey-thick liquids [1]. Furthermore, increased viscosity may not necessarily reduce adverse effects associated with aspiration, as evidenced by a higher rate of pneumonia among patients with dementia who were given honey thick liquids compared to those given nectar-thick liquids [2]. To date, there is a paucity of data to support the benefits of thickened liquids [3] but the emerging evidence suggests that the use of thickened liquids not “a one size fits all” approach and individual patient characteristics must be taken into account.

Given the questionable benefits of thickened liquids, it is disconcerting to realize the frequency with which they are recommended; nearly 85% of speech-language pathologists report that they are an effective strategy [4]. In addition, it is well established that patients dislike thickened liquids and often choose not to drink. This avoidance of fluid intake results in dehydration and can compromise a patient's recovery process. It has been shown that hospitalized patients do not meet the minimum daily fluid requirements when placed on thickened liquids [5]. Common knowledge dictates adequate fluid intake during illness or post-injury recovery, yet the majority of patients with dysphagia, such as that which would occur following a stroke or traumatic brain injury, do not receive adequate amounts of fluid.

Lack of fluid intake can obviously lead to dehydration, which can have significant consequences for the patient with dysphagia. Dehydration, even in mild levels, can negatively impact physical and cognitive abilities, as well as contributing to greater fatigue and reduced alertness. Deficits in cognitive function have been demonstrated in both young and elderly adults during periods of mild dehydration [6,7]. Given that many individuals with dysphagia have co-existing cognitive and/or physical deficits, the use of thickened

liquids may further diminish such functions and prolong their need for rehabilitative services. Indeed, we have recently collected data that demonstrates reduced cognitive abilities in healthy young adults following a brief period of thickened liquid intake.

Thickened liquids are often recommended for patients in the acute stages of an injury. Too frequently, however, this recommendation remains in place during the rehabilitative process and upon discharge. Patients often remain on thickened liquids for months or years post-injury. Given the documented reduction in overall fluid intake associated with thickened liquids, it is likely that at least mild levels of dehydration persist in these patients [8]. The extent to which this process affects the extent and duration of recovery is not known. Patients should be continually re-evaluated for potential discontinuation of thickened liquids. Supplemental water intake should also be provided if possible, e.g., according to the Frazier Water Protocol. Continued research is needed to clarify the circumstances and specific patient populations that will receive maximum benefit from thickened liquids while minimizing potentially negative consequences.

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