

# Biozoon Reference List

## Including Key Findings and Links

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To date, there have not been any randomized controlled trial studies which have examined either the direct benefits of using foam to treat people with dysphagia or adverse events, such as aspiration pneumonia.

There have been several studies, however, which have investigated the impact of taste on sensation, swallowing physiology and dry mouth. A number of positive findings have been reported and a reference list is available below.

In addition, research on the impact of dysphagia and quality of life, effect of not eating on muscle strength and benefits of therapeutic feeding can be applied to the use of foam with dysphagic clients.

Cola, P. C., Gatto, A. R., Silva, R. G. d., Spadotto, A. A., Schelp, A. O., & Henry, Maria Aparecida Coelho de Arruda. (2010). The influence of sour taste and cold temperature in pharyngeal transit duration in patients with stroke. *Arquivos De Gastroenterologia*, 47(1), 18-21.

Stroke patients given a sour and cold stimuli showed a significantly changed swallowing pattern with a shortened pharyngeal transit time; this could have positive implications for patients with oropharyngeal dysphagia.

LINK: <https://doi.org/10.1590/S0004-28032010000100004>

Dietsch, A. M., A. Pelletier, C., & Solomon, N. P. (2018). Saliva production and enjoyment of real-food flavors in people with and without dysphagia and/or xerostomia. *Dysphagia*, 33(6), 803-808.

Dissolvable taste strips provided low-risk taste stimulation in dysphagia and elicited an increase in saliva flow that may provide temporary relief from dry mouth symptoms.

LINK: <https://doi.org/10.1007/s00455-018-9905-8> (Abstract)

Lee, K. L., Kim, D. Y., Kim, W. H., Kim, E. J., Lee, W. S., Hahn, S. J., Kang, M. S., & Ahn, S. Y. (2012). The influence of sour taste on dysphagia in brain injury: Blind study. *Annals of Rehabilitation Medicine*, 36(3), 365-370.

Individuals with dysphagia related to a brain injury may benefit from sensorimotor feedback in the oropharynx using a sour bolus. This could shorten oropharyngeal transit times and lower the chances of penetration-aspiration.

LINK: DOI [10.5535/arm.2012.36.3.365](https://doi.org/10.5535/arm.2012.36.3.365)

Loret, C. (2015). Using sensory properties of food to trigger swallowing: A review. *Critical Reviews in Food Science and Nutrition*, 55(1), 140-145.

Food sensory properties play an important role in promoting swallowing.

LINK: <https://doi.org/10.1080/10408398.2011.649810>

Roa Pauloski, B., Logemann, J. A., Rademaker, A. W., Lundy, D., Sullivan, P. A., Newman, L. A., Lazarus, C., & Bacon, M. (2013). Effects of enhanced bolus flavors on oropharyngeal swallow in patients treated for head and neck cancer. *Head & Neck*, 35(8), 1124-1131.

Sour flavour influenced the swallow of patients treated for head and neck cancer, and may increase the speed of pharyngeal transit regardless of whether a patient has suffered peripheral or central sensory damage.

LINK: <https://doi.org/10.1002/hed.23086> (Abstract)

Pedersen, A., Bardow, A., Jensen, S. B., & Nauntofte, B. (2002). Saliva and gastrointestinal functions of taste, mastication, swallowing and digestion. *Oral Diseases*, 8(3), 117-129.

This article provides information on the complex relationships between taste and saliva including the reflex of increased salivary secretion in response to taste stimulation.

LINK: <https://doi.org/10.1034/j.1601-0825.2002.02851.x>