

## Factors Affecting 100cc Water Swallow Test

I read with great interest the original research article titled, “Comparative Analysis of Swallowing Efficacy in Young Adults and Geriatric Population by 100-cc Water Swallow Test” by Ismail *et al.*<sup>[1]</sup> published in *Journal of Indian Speech, Language and Hearing Association* in February 2019. I congratulate and appreciate the efforts taken by the authors to clinically validate the administration of 100-cc water swallow test to effectively understand and predict the swallowing dysfunctions. Following are the observations made that may warrant readers’ attention for a better interpretation and application of the results of the study in the context.

### INSTRUCTION

Participant instruction may greatly influence the outcomes as the comfortable way of drinking may vary person to person. Some may prefer to drink fast over drinking slow. A similar study<sup>[2]</sup> stated, in the reference of the study employed, relatively standard instruction to the participants to swallow as quickly and as comfortably possible. The term “comfortable” is a relative term. Further, the number of swallows that a person may require to swallow 100 mL of water may vary for a number of reasons.

### POSTURE

Some regularly observed drinking postures are neutral head posture with the cup touching the lips and head lift posture with the cup or bottle pouring the liquid into mouth. A complete swallow of 100cc water may compel the individual to change the head posture from a neutral position to a head lift position to empty the cup. This makes it challenging to maintain a stable head position. There is a marked difference between the two postures of swallowing. The timing of swallow is delayed in chin-up position with a delay in swallow trigger.<sup>[3]</sup> It is important to maintain a neutral head posture throughout the swallow.

### Time Measure

Time measures of voluntary phase of swallow (oral phase) are generally variable in nature while involuntary phase (pharyngeal phase) may give valid and reliable results. There is no consensus on oral transit time in the literature. The duration may vary from 0.35 to 1.54 s.<sup>[4]</sup>

Hence, the swallow capacity measure should be rate, volume, and posture standardized to arrive at representative data on swallowing dimensions for comparison. Addition of simultaneous measures (tongue pressure and exhalation for coordination of swallowing and breathing) would give better

insight. A study inculcating a controlled test and simultaneous test measure may equip us with better tools.

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### REFERENCES

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