

## Spontaneous dry swallowing rates in health and stroke

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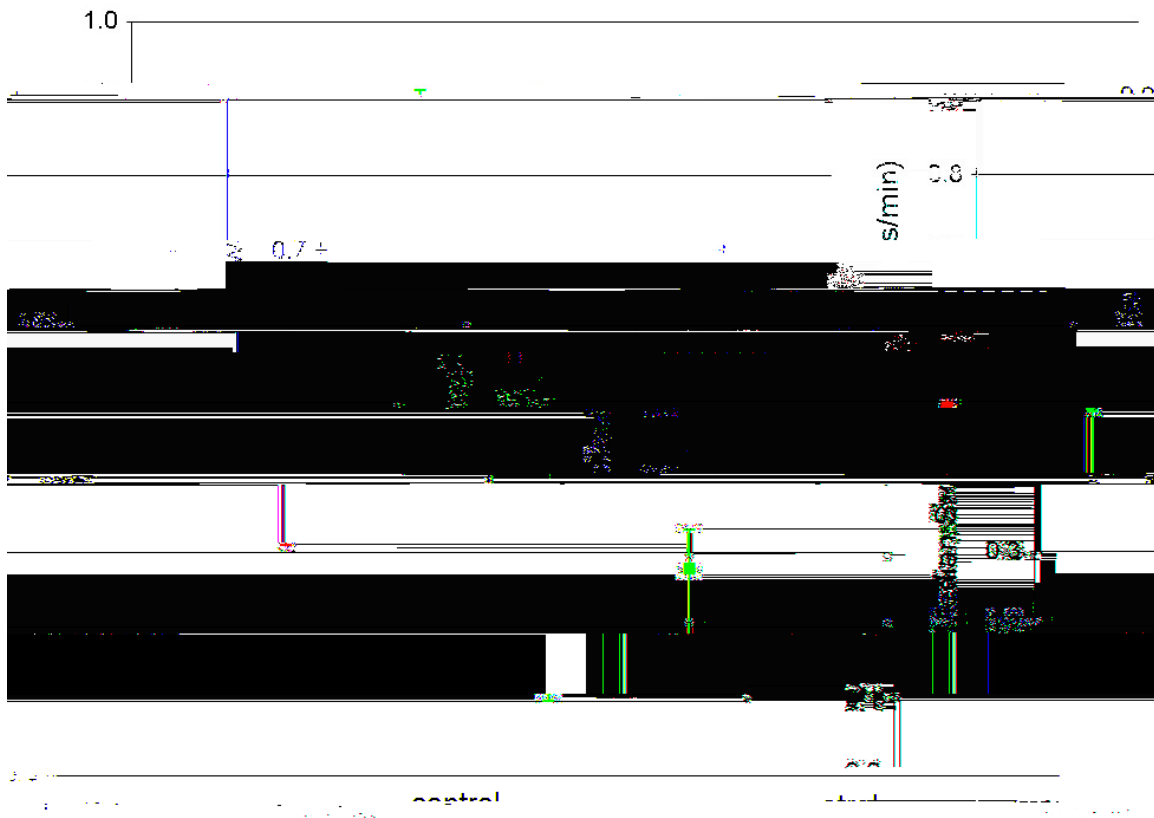
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**Purpose:** Few studies have documented spontaneous dry swallowing rates in patients with swallowing impairment. This study compared dry swallowing rates in dysphagic stroke patients and healthy older adults.

**Methods:** In 19 dysphagic stroke patients (11 males; mean age: 67.4 yrs) and 18 healthy older adults (10 males; mean age: 73.4 yrs), swallow-related laryngeal and respiratory signals were recorded from the output of pressure transducers positioned around the subject's neck and ribcage, respectively, during a 5-minute period. Dry swallowing rates were calculated as number of swallows per minute. Group data were analyzed using a Mann-Whitney U test.

**Results:** Spontaneous dry swallowing rates ranged from 0.0 to 1.14 sws/min in the dysphagic stroke patients, and 0.0 to 1.6 sws/min in the older controls. Group comparison revealed that the median spontaneous dry swallowing rate among the dysphagic stroke patients was significantly lower than the dry swallowing rate in healthy older adults ( $p=0.013$ ).

**Conclusion:** Spontaneous dry swallowing rates vary substantially among individuals in both health and disease. Dysphagic stroke patients tend to demonstrate significantly lower dry swallowing rates than healthy older controls. Future research is required to explore the potential relationships between spontaneous swallowing frequency, patterns of swallowing impairment, and responses to swallowing rehabilitation.



Median spontaneous dry swallowing rate for control group (i.e., healthy older adults) and dysphagic stroke patients. Error bars represent 95% confidence intervals.

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