# The Association Between Laryngopharyngeal Sensory Deficits, Pharyngeal Motor Function

**Objective:**

The study goal was to evaluate the association among laryngopharyngeal sensory deficits, pharyngeal motor function, and the prevalence of aspiration with thin liquids.

**Study Design and Setting:**

We conducted a prospective study of 204 consecutive patients undergoing flexible endoscopic evaluation of swallowing with sensory testing and an assessment of pharyngeal motor function (pharyngeal squeeze). Patients were divided into 6 groups depending on the results of sensory and motor testing in the laryngopharynx. Subjects were given 5 mL of thin liquid, and the prevalence of aspiration in each group was compared.

**Results:**

The mean age of the entire cohort was 65 years (58% female). The prevalence of aspiration in patients with intact laryngopharyngeal sensation was 2% (3 of 137) in persons with intact pharyngeal motor function and 29% (2 of 7) when pharyngeal motor function was impaired ($P < 0.05$). The prevalence of aspiration in patients with a moderate decrease in laryngopharyngeal sensation was 0% (0 of 9) in persons with intact pharyngeal motor function and 67% (2 of 3) when pharyngeal motor function was impaired ($P < 0.05$). The prevalence of aspiration in patients with severely diminished or absent laryngopharyngeal sensation was 15% (5 of 33) in persons with intact pharyngeal motor function and 100% (15 of 15) when pharyngeal motor function was impaired ($P < 0.05$).

**Conclusion:**

Patients with severely diminished laryngopharyngeal sensation and pharyngeal motor function are at an extremely high risk of aspirating thin liquids (100%). Moderate sensory deficits only appear to influence the prevalence of thin liquid aspiration in the presence of pharyngeal motor dysfunction. Severe laryngopharyngeal sensory deficits are associated with the aspiration of thin liquids regardless of the integrity of pharyngeal motor function. We assume that all persons with an insensate laryngopharynx aspirate thin liquids until proved otherwise. These results emphasize the relationship between laryngopharyngeal sensation and pharyngeal motor function in the evaluation of patients for suspected aspiration.

For more information please email us
info@michaelsetzen.com