

**Patient Information:** Male, Age 72

**Diagnosis:** Subdural Hematoma / Aspiration Pneumonia / Intubation via Tracheotomy

**History:** This gentleman was hospitalized for six weeks due to a subdural hematoma. During his hospital stay, he was intubated and subsequently received a cuffed trachea tube after experiencing multiple episodes of pneumonia. Following hospitalization, he was transferred to a rehabilitation facility for therapy services.

**Pre-Therapy Status:**

- Swallow Assessment: Video fluoroscopy revealed silent aspiration (food and liquid entering the lungs without coughing) before the swallow occurred. Delayed swallow noted with thick liquids and post-swallow residue noted with solid food.
- Saliva Management: Insufficient oral-pharyngeal muscle strength to manage oral secretions, resulting in aspiration of saliva.
- Diet: No oral intake (Functional Oral Intake Scale of 1); all nutrition provided via tube feeding.

**Therapy Information:**

- Modality/Equipment: OMNI<sup>s</sup>EMG™ Biofeedback, Omnistim® FX<sup>2</sup> Portable Patterned Electrical Neuromuscular Stimulation (PENS)
- Frequency: 5x per week.
- Protocol: OMNI<sup>s</sup>EMG™ biofeedback was used to improve timing of swallow. Line-graph exercise, kangaroo exercise, bar graph exercise were used to practice swallow on command (with variable rest times) and produce effortful swallows. Bolus viscosities/consistencies were progressed to promote muscle strengthening via increased swallow resistance.
- Duration: Six weeks.
- Other therapy services provided: Diet progression and patient/family education.

**Outcome:**

- Swallow Assessment: No silent aspiration visible with saliva or small amounts of thin liquids. Large volumes of thick liquids provoked visible aspiration and coughing to clear the airway.
- Saliva Management: Sufficient oral-pharyngeal muscle strength to manage saliva without aspiration.
- Diet: Total oral diet with multiple consistencies, but required special preparation or compensations (Functional Oral Intake Scale of 5); no longer dependent upon tube feeding for nutrition.

This gentleman and his family are happy he is able to enjoy food and family meals again. His improvement with swallowing has significantly impacted his quality of life, allowing for the removal of the feeding tube and the resumption of feeding independence.

