

**Patient Information:** Male, Age 81

**Diagnosis:** CVA / Pneumonia

**History:** This gentleman suffered a stroke, resulting in an inability to swallow safely. He was unable to eat anything by mouth and required tube feedings for nutrition. He was admitted to a skilled nursing facility to address his muscle weakness and swallowing limitations.

**Pre-Therapy Status:**

- Swallow Assessment (performed by observation at bedside): Unable to safely swallow secondary to overt signs and symptoms of aspiration (introduction of food into the wind pipe), with an average of 13 swallows per each presentation of every solid and fluid consistency.
- Diet: Unable to have any solid food or liquid by mouth.
- Surface Electromyography (sEMG): Muscle fatigue, as evidenced by decreased sEMG amplitude, was noted at 10 swallow repetitions with 5cc's of pureed solids.

**Therapy Information:**

- Modality: Omnistim<sup>®</sup> FX<sup>2</sup> Portable Patterned Electrical Neuromuscular Stimulation (PENS), OMNI<sup>s</sup>EMG<sup>™</sup> Unit (Surface Electromyography).
- Frequency: 5x per week.
- Protocol: PENS face and posterior neck protocol.
- Duration: Four weeks.
- Other Therapy Services Provided: Oral motor and swallowing exercises.

**Outcome:**

- Swallow Assessment (performed by video fluoroscopy): Minimal difficulty manipulating food and liquid within mouth, delayed swallow response with minimal residue of liquids, able to safely swallow on command with head turned to the right.
- Diet: Mechanical soft solids, nectar-thick liquids.
- sEMG: Surface Electromyography (sEMG): Muscle fatigue, as evidenced by decreased sEMG amplitude, was noted at 25 swallow repetitions with 10cc's of pureed solids.

This gentleman is so excited to be able to eat again after his stroke! His wife had been very concerned about the care required to maintain his feeding tube, so they are both excited that he has returned home without it.

The therapist is delighted to see such a significant change in his diet over the course of therapy. She believes the cues from the OMNI<sup>s</sup>EMG<sup>™</sup> allowed the gentleman to better understand his exercises and gave him specific visual goals to achieve at each therapy session. During therapy sessions with the OMNI<sup>s</sup>EMG<sup>™</sup>, she was able to use the objective information to show increases in swallowing strength as well as to know precisely when to increase the bolus size during swallowing exercises.

