

New Treatment Method for Improving Swallowing

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The ability to eat is often taken for granted. For most people, it is a task that requires little conscious thought. However, when an injury or illness decreases one's ability to eat safely, regaining that function becomes vitally important to that person's health and quality of life. When a person has difficulty swallowing (referred to as *dysphagia*) it can include complaints of food sticking in the throat area, frequent coughing or choking on food or liquids, frequent lung congestion, taking a long time to eat, and/or unintended weight loss. People can have difficulty swallowing for many reasons including a stroke, brain injury, progressive neurological diseases (dementia, ALS, MS, Parkinson disease, etc.), oral or laryngeal cancer, medicine side effects, or multiple medical problems.

Traditional therapy to improve swallow function includes diet modifications (changing the consistency of the food or liquid), swallowing exercises, and/or positional changes. In an attempt to enhance these therapy techniques, a Speech-Language Pathologist, Marcy Freed, developed VitalStim (*registered trademark*) Therapy which is a form of neuromuscular electrical stimulation (NMES). NMES is the use of electrical stimulation to activate a muscle response through the nerves that supply the swallowing muscles. The major goals of VitalStim Therapy are to strengthen and improve control of the swallowing muscles. Neuromuscular electrical stimulation is a well known treatment method that has been used by Physical and Occupational Therapists to improve muscle response primarily in the larger muscles of the legs and arms. However, the use of NMES (via VitalStim) for improving function of the smaller muscles that control swallowing is a relatively new, though controversial, treatment method used by some Speech Pathologists.

VitalStim Therapy which was approved by the FDA in 2001 uses a small hand held device that was specifically designed for the smaller muscles that control swallow function. This device is attached to four electrodes that are placed on appropriate areas on the front of the neck based on specific areas of weakness determined by the speech pathologist. In order to determine those main areas of weakness, it is recommended to perform a formal swallow study under radiological evaluation prior to the initiation of VitalStim Therapy. Some of the situations in which VitalStim Therapy is not appropriate would include people with severe dementia, reflux of tube feedings, dysphagia due to drug toxicity, areas of active tumor growth or infection, areas of peripheral vascular disease, dysphagia due to a structural problem, staples or metal in the throat/neck area, or individuals with severe oral motor dysfunction. In addition, there are certain precautions that should be taken with individuals with pacemakers or implanted cardioverter defibrillators, areas of scar tissue, a history of seizures, open wounds, and patients who are unable to give clear and reliable feedback.

Once candidacy is determined by the Speech Pathologist and physician, then therapy can be initiated by a Speech Pathologist certified in providing VitalStim Therapy. Therapy consists of initial placement of the electrodes and achieving a level of electrical stimulation that elicits a strong muscle contraction. The device is then left at this level for a one hour session or two thirty minute sessions a day. During this session, a Speech Pathologist is present and will provide additional treatment during a meal and/or with traditional swallowing exercises (with a goal of performing 70-80 swallowing exercises per session). Typical number of sessions is 10-14 over a 2-3 week period. At the end of treatment, a repeat evaluation of the swallow is recommended to assess progress. No adverse effects of VitalStim Therapy were reported by the initial study performed by Marcy Freed which involved over 800 patients.

Since this is a relatively new treatment method and research is somewhat limited, the level of acceptance of VitalStim Therapy is varied among medical providers. Further research is being performed nationwide and is expected to provide further objective information regarding outcomes. In the meantime, VitalStim Therapy may be an option for certain individuals who are suffering from dysphagia that should be discussed with your medical provider. For additional information on VitalStim Therapy, visit their website at vitalstimtherapy.com.