

NEW HOPE for Treating Swallowing Disorders in Stroke Survivors *By Yorick Wijting, PT*

What's it like when you can't swallow? The problem is more common than we think. Dysphagia, a term encompassing a variety of swallowing disorders, affects an estimated 15 million Americans, with one million new diagnoses every year. In fact, based on data from the Centers for Disease Control and Prevention, more people die annually from complications associated with swallowing dysfunctions than from all forms of liver and kidney disease and HIV/AIDS combined.

Some degree of dysphagia is experienced by about 75 percent of stroke survivors. Up to 90 percent of people with neurological illnesses like Parkinson's Disease experience dysphagia at some point; others at risk include patients with traumatic brain injury and many who undergo radiation as a result of head and neck cancers.

In dysphagia, eating becomes a challenge. When weak muscles in the throat cannot move all of the food to the stomach, it can fall or be pulled into the windpipe which can lead to a lung infection, possibly pneumonia. Many patients with dysphagia end up with a feeding tube placed directly into their stomach because they are not able to take in any kind of nutrition or fluids on their own. Other potentially serious consequences of dysphagia include complications such as choking, increased infection rate, chronic malnutrition, severe lifethreatening dehydration, significant weight loss, muscle wasting, physical debilitation, and death from choking.

In addition, dysphagia profoundly affects quality of life: dysphagic patients experience personal discomfort and a drastic reduction in the quality of their lifestyles due to the inconvenience and pain of feeding tubes, which for many has been the primary treatment option for this condition. The loss of swallowing can also lead to severe depression due to the interruption of patients' normal ways of life.

Traditional methods to treat dysphagia involve thermal stimulation, speech therapy and oral exercises, swallowing maneuvers, and diet modifications. These treatments may require a person to tilt his or her chin down while swallowing, eat only pureed foods, take medications to decrease secretions, or drink only thickened liquids.

An innovative new treatment that uses electrical impulses to retrain throat muscles is being studied for use in stroke victims. Called VitalStim® Therapy, this patented device allows a small current to pass through external electrodes on the neck in order to re-educate the muscles around the throat to restore swallowing. With repeated therapy, some patients are freed from the need for feeding tubes.

Created by Marcy Freed, a veteran Speech-Language Pathologist and researcher in swallowing disorders, VitalStim® Therapy is the only electrical stimulation device cleared by the FDA for the treatment of dysphagia. FDA clearance was based on the evaluation of 892 patients, both inpatients and outpatients, of which 446 were stroke survivors. The study included 99 stroke patients randomly assigned to treatment with thermal application, the previous leading traditional therapy, or electrical stimulation, and another 347 directly assigned to electrical stimulation. Based on these as yet unpublished data submitted to the FDA, VitalStim® Therapy was judged to be a safe and effective application of electrical stimulation for the treatment of dysphagia. Clinical trials to study the exact role in patients with stroke are ongoing, but with over 25,000 patients treated with this method in the four years since FDA clearance, it appears to be quite safe, and appears to be a promising alternative for treatment of dysphagia in stroke survivors.

After a referral by a physician, a medical practitioner certified in the therapy administers the treatment, which is usually done three to five times per week, for as much as an hour at a time. Treatments are not painful, with patients feeling a tingling or pulling sensation. While some patients reportedly see dramatic improvement after just four or five sessions, on average, patients need 12-14 sessions to see improvement.

Local speech pathologists around the country report that they seem to accomplish more with electrical stimulation than with traditional therapies – and in a much shorter time. Sue Creekmore, MSSLP/CCC, Director of Clinical Services at HealthSouth Rehab Hospital of North Alabama, in Huntsville, says that based on her clinical experience with the clinical use of VitalStim® Therapy, the time for survivors of severe strokes to achieve some normal eating has been reduced to 2-3 weeks – up to a 75-95% reduction in recovery time. Therapists who've pioneered the clinical application of VitalStim® Therapy with stroke survivors suggest that when it is begun within about 5-7 days post-stroke, most of their patients start consuming a normal diet by the end of 8-10 treatment sessions.

With over three-fourths of a million Americans suffering strokes each year, stroke is the leading cause of serious long-term adult disability in the country, as well as the third leading cause of death. Stroke-related medical costs now top \$50 billion annually. An independent study showed annual savings to the US healthcare system may potentially exceed \$10,000, for each patient with severe poststroke dysphagia who can avoid having a feeding tube inserted. With increasing attention to the despair of dysphagia, promising treatments such as electrical stimulation, could play a key role to decrease the devastation caused by stroke. Results of ongoing research studies to better define the clinical utility of treatments such as VitalStim® Therapy, for stroke survivors, will be eagerly anticipated.