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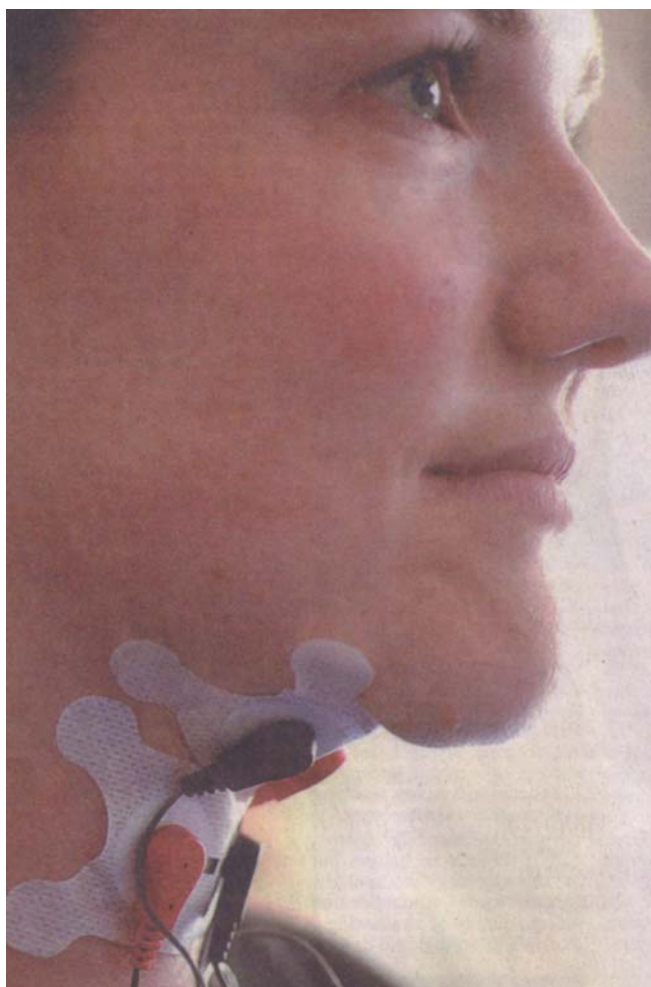
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A model wears electrodes on her throat in a demonstration of VitalStim therapy, which helps some patients regain the ability to safely swallow.

Photos by Steve Heaslip/Cape Cod Times

HARD TO SWALLOW

By BETH PATKOSKE
CONTRIBUTING WRITER

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VitalStim - a therapy approved by the FDA - may hold hope for people with dysphagia

It's something you do a thousand times a day without a second thought. It has physical effects and is also a key component in many social situations. And, like many behaviors, most people take it for granted until a problem arises.

It's the ability to swallow.

Over 15 million Americans suffer from dysphagia, or swallowing disorders - 6.2 million of them over age 60. One in 17 people will develop some form of dysphagia in their lifetime, including 50 to 75 percent of stroke patients and 60 to 70 percent of patients who undergo radiation therapy for head and neck cancer. Estimates of dysphagia's prevalence in such neurological diseases as Parkinson's Disease and amyotrophic lateral sclerosis (ALS or Lou Gehrig's Disease) run as high as 90 percent. And, according to the Agency for Health Care Policy and Research (AHCPR), over 60,000 Americans die each year from complications associated with swallowing dysfunctions, most commonly from aspiration pneumonia, caused by food or saliva going down the windpipe and into the lungs.

There are several new advances in medical technology designed to help those suffering from swallowing disorders, including the new VitalStim therapy which is now approved by the FDA and covered by Medicare.

Suzanne M. Miller, Ph.D., is the president and owner of Speech-Language Pathology Associates of Cape Cod, a private practice providing services to children and adults with communication and swallowing disorders. She explains a few specifics of the disorders,

"With airway protection problems, someone swallows and the food is diverted from the throat into the windpipe and then into the lungs; however, there is no exit for it from the lungs," she says. "If this aspiration process continues over a period of time, bacteria can build up in the lungs and cause aspiration pneumonia. When the aspiration occurs in a compromised system, such as in the case of someone elderly or ill, the probability of aspiration pneumonia is high. For others, the frequent choking while eating becomes a quality-of-life issue. In addition to aspiration, many swallowing disorders center around problems with triggering the swallow quickly enough."

The physical effects of dysphagia are evident, but there is also a considerable emotional impact. The experience of sharing a meal is basic to human social interaction. Robbed

of that experience, dysphagia patients of all ages can suffer deep psychological injury. From small children who can't eat cake at birthday parties to adults unable to take part in dinner parties or family barbecues, the social effects are evident every day. Hardest hit may be the elderly, especially those in care facilities, for whom mealtime is often the day's most meaningful social activity. And of all the age groups affected by dysphagia, the elderly are most often the victims, with an estimated half of all nursing home residents suffering from swallowing disorders.

Once a swallowing disorder is specifically identified, a medical team will determine the most effective plan for treatment, often a combination of therapies. The dysphagia diagnostic and treatment strategy team may include speech and language therapists, gastroenterologists, otolaryngologists, neurologists, surgeons, dietitians, nurses, and radiologists.

Many patients can be helped by changing their diets and learning new eating techniques, for example, positioning the head and neck in a certain way to help in swallowing. Additional swallowing exercises and compensatory behavior such as chin tucking are often accompanied by further diet modification such as pureed food and thickened liquids. A therapy called thermal tactile stimulation, which elicits a swallow response with ice, may also be used.

For those patients whose vocal cords do not close correctly, Dr. Douglas Mann of Upper Cape Ear, Nose & Throat now uses an innovative procedure to move the vocal cord over, allowing the airway to close. During an outpatient minor surgical procedure, Dr. Mann can inject fat, or Radiesse, a synthetic, injectable, collagen-like product, into the vocal cord and it will then close more easily.

Donn DeVita of East Dennis, 74, who was diagnosed with progressive supranuclear palsy or PSP, a brain disease, some four years ago, began having trouble swallowing several years ago. He underwent a modified barium swallow and several months of conventional therapies including swallowing exercises and diet modification. But he was meeting with limited success until his daughter Nora stumbled onto something new. Nora, a page designer at the Cape Cod Times, had been researching her father's PSP and later his swallowing disorder through a variety of Web sites. Eventually, she learned about VitalStim therapy.

The only technology approved by the FDA (in June,

2001) for safely re-educating the pharyngeal muscles with electrical stimulation, VitalStim therapy is a treatment for dysphagia based on the application of a specialized form of electrical stimulation to the muscles involved in swallowing. It facilitates re-education and strengthening of the muscles, recovery of motor control, and improved muscle performance.

Painless and non-invasive, VitalStim is becoming more widely available and may be used on patients of all ages. During the treatment session, a small, carefully calibrated electrical current is delivered to the motor nerves of the

patient's throat through specially designed electrodes causing the muscles responsible for swallowing to contract. At the same time, a dysphagia specialist guides the patient through active swallowing therapy to re-educate normal swallow function. With repeated therapy, muscles response is altered.

In many patients, improvement in the swallowing function begins almost immediately. Patients often see good results in six to 20 treatment sessions.

Initial sessions are usually delivered on a daily basis but later sessions are often given every other day. Sessions typically last 45 minutes to an hour and there appear to be no side effects other than the occasional occurrence of minor skin irritation as a result of the adhesive used to secure the electrodes to the neck.

The cost of VitalStim therapy is covered by Medicare or any insurer under Dysphagia Therapy Services as long as it is prescribed by a doctor and administered by a certified therapist.

Originally developed by Speech Pathologist Marcy Freed at the University Hospitals of Cleveland, VitalStim is now being used in rehabilitation hospitals, acute care facilities and freestanding clinics, including 15 locations in Massachusetts. Not currently available on the Cape or islands, the closest location is the LifeCare Center in Plymouth where Nora DeVita's Internet research led her and her father. Donn underwent 17 sessions in January, resulting in noticeable improvements.

Nora explains, "His doctors find it difficult to believe but the therapy really worked! His swallow score - a number that reflects quality of swallowing - returned to normal and despite further complications with his disease, it remains normal even now. His voice improved a bit too -

last year it was not consistently audible, but now it is smooth. Last year he was on thickened liquids and now he really has no restrictions, just a softer diet."

Speech pathologist Meredith Hilditch of Life Care Center has been treating patients with VitalStim therapy since the technology arrived there a year ago. Hilditch is very pleased with the progress she has seen, "We've had a lot of success with it. Although it hasn't worked for everyone, it has worked for the majority of patients who have tried it." She stresses the role of communication during the one-hour sessions, "As long as patients can communicate a

yes or no response in some way, we can work with them. However, patients with conditions that cause them to talk almost constantly are not good candidates as the sessions would increase the risk of aspiration," she says.

Overall, she sees VitalStim Therapy as an exciting breakthrough for patients with swallowing disorders, "It's nice to have something where we can see such progress with so little modification," she says. "Other therapies don't create such rapid change."

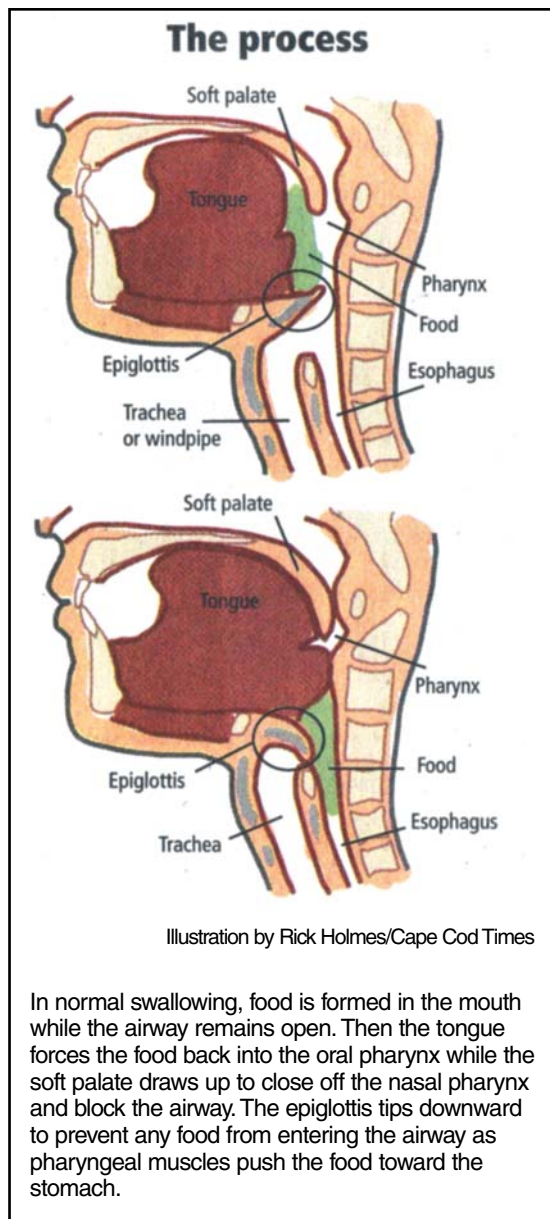
Fellow Life Care Center speech pathologist Erica Howland, who successfully treated Donn Devita, agrees. "Occasionally I have patients who are hesitant to try it, but I recommend they have just one treatment. After that first treatment, I have never had a patient who has chosen not to continue. They see that it's not painful and in most cases has an immediate effect on their swallowing," she said.

Today, there are over 4,000 certified therapists at 1,400 facilities in 40 U.S. states offering VitalStim Therapy. A thousand new therapists complete the intensive 2-day training program each year.

The therapy is not a cure-all, however.

Writing in the magazine *ADVANCE for Occupational Therapists*, Dr. Pat Klossman of

Coventry Speech in East Coventry, Penn., says "VitalStim Therapy is not 100-percent effective because every patient is different, but we have been extremely successful," Dr. Klossman reported that among her caseload of 12 patients with dysphagia, 10 use VitalStim therapy. She believes VitalStim is one of the few true breakthroughs in the area of swallowing disorders. While clinicians report successful outcomes, some speech-language pathologists, including



Dr. Miller, have expressed concern about the use of electrotherapy for swallowing disorders due to "the lack of quality research to date."

Dr. Mann agrees, "There is a lot of excitement around VitalStim, but treatments are brought to market all the time that are not necessarily researched at the highest level as may be desired," he said. Despite the FDA approval and initial research, neither Dr. Mann, who is affiliated with Cape Cod Healthcare, nor the Rehabilitation Hospital of the Cape & Islands has placed an order for VitalStim Therapy equipment yet.

Carol Stasiowski, spokesperson for RHCI, says: "We are constantly reviewing the field for improvements in treatments based on evidence-based practice. We will be looking with interest at the results of current research being done by the National Speech and Hearing Association and National Institute of Neurological Disorders and Stroke."

While Drs. Miller and Mann and the team at RHCI



Speech pathologist Erica Howland applies VitalStim electrodes to a model at the Life Care Center in Plymouth.

await more rigorous studies on the longterm effectiveness of the new treatment, they focus on traditional therapies and the new technologies they have recently acquired to identify and help improve swallowing disorders.

About dysphagia

- Dysphagia is defined as any difficulty in swallowing.
- Symptoms can include coughing while or after swallowing, choking on food or liquid, the sensation of food getting stuck in the throat, pain during swallowing, shortness of breath during feeding and onset of pneumonia.
- Disorders can occur at any stage of the swallowing process, from the mouth, through the pharynx, into the esophagus, and finally, into the stomach.
- Dysphagia is common in individuals with degenerative neurological disorders such as amyotrophic lateral sclerosis (ALS), postpolio syndrome, progressive supranuclear palsy (PSP), myasthenia gravis, multiple sclerosis, and Parkinson's disease, It may be the first

symptom of the disease.

■ Swallowing disorders may also occur after sudden neurological damage as in stroke, or head or spinal cord injury, or indicate other problems, such as the presence of cancer or heart problems. People with swallowing disorders may suffer from weight loss or dehydration and may be at risk for developing pneumonia.

■ Some individuals notice that the disorders get worse at times of stress or excitement.

Testing options

Modified Barium Swallow (MBS) is a painless X-ray procedure that obtains views of swallowing function that are then recorded on videotape. During the test, small amounts of different textured, flavored barium are swallowed. The patient is fully alert, and the process typically lasts for 10 minutes.

Fiberoptic Endoscopic Evaluation of Swallowing (FEES) is a standard test using a small flexible fiberoptic endoscope. Dr. Douglas Mann, of Upper Cape Ear, Nose & Throat, recently acquired the FEES technology for his office, "The endoscope is passed through the nose to a position slightly above the voice box," he explains. "Once the patient is comfortable, he or she is given foods or liquids tinted with food dye so we can follow their passage." A recording is made so the treatment team can view the results with the patient.

Stroboscopy is a new procedure Dr. Mann has added to his diagnostic repertoire. "A crucial part of swallowing is the proper movement of the vocal folds," Mann says, "However, they move so rapidly that the naked eye can't see the movement. Using the strobe, we can literally see the vocal folds moving."

FOR MORE INFORMATION

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Dr. Suzanne Miller, Speech-Language Pathology Associates of Cape Cod: 508-362-3314

Life Care Center, 94 Obery Street, Plymouth, 508-747-9800

Advance for Speech Language Pathologists & Audiologists: newsmagazine and Web site www.speech-language-pathology-audiology.advanceweb.com