

Electric pulses can improve swallowing

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For patients with dysphagia, the act of swallowing foods and liquids can be so difficult that sometimes the only recourse is to have a feeding tube directly linked to their stomach.

But a new technology that uses electric pulses to treat swallowing disorders may provide greatly improved outcomes for some patients.

VitalStim is the first device approved by the United States Food and Drug Administration to provide neuromuscular electrical stimulation therapy for swallowing disorders.

The results obtained from the therapy have been impressive, said Ann Goldberg, a speech language pathologist at Beebe Medical Center.

"I've been a speech pathologist for 20 years, and my first client that I used it on was a patient who hasn't had anything by mouth for seven months, post stroke," she said. "Within 14 sessions, he was back on regular foods and liquids."

The technology works on the same principles as the electrical stimulation therapy that has been used by physical therapists for years. Specially designed electrodes are attached to the throat, through which a mild electrical pulse is delivered to the weakened muscles that are inhibiting a proper swallow. This electrical "kick-start" essentially retrains the atrophied neck muscles.

A video fluoroscopy determines where the weakness lies, and the electrodes are aligned accordingly. The intensity of the pulse can be adjusted to focus on the weaker parts of the throat.

Many of the current treatment methods are palliative, rather than remedial, said Dale Gregore, a speech language pathologist at Christiana Care Health System.

Patients are taught various behavioral adjustments such as tucking their chin or turning their head while they swallow to favor the side of the throat with better muscle function.

A modified diet is also a common option. Liquids are thickened until an agreeable consistency is reached, and solid foods are cut into small pieces.

These treatments have varying degrees of success, said Melissa Morini, a speech language pathologist with Delaware Curative, an outpatient therapy center.

"A lot of the time, people with cerebrovascular accidents have cognitive impairment, and it's very tricky to deal with these techniques with cognitive [impaired] patients, because they're not going to remember to tuck their chin or whatever," she said.

Exercises to stimulate the muscles have shown effectiveness, said Gregore. But by combining electrical stimulation therapy with these exercises, patients may be able to wean themselves off modified diets more quickly.

"Yes, you may have to compensate while you're remediating the weakness," she said. "However, I'm going to really work on those muscles to restore the person's ability, so we're no longer going to relegate the person to eating modified foods or eating in a modified way."

Patients with severe dementia or who have recently received radiation therapy to the neck are not good candidates for the therapy.

Treatment typically consists of daily one-hour sessions of stimulation five days a week. About 14 to 15 sessions are usually needed to achieve improvement.

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