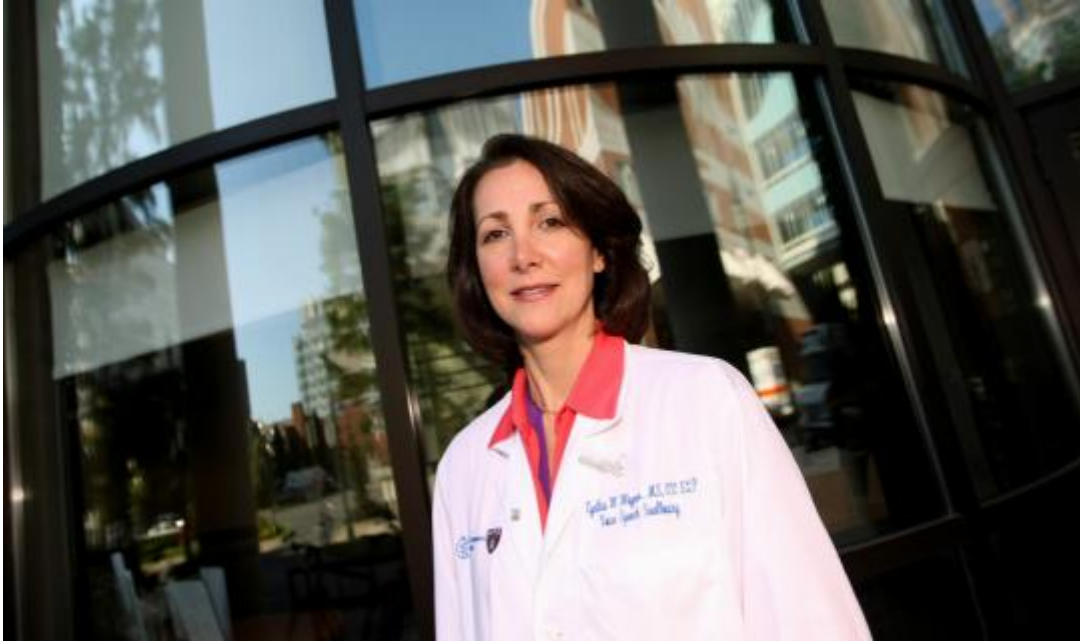


The Boston Globe

Quietly, a gamble is paying off



Speech pathologist Cynthia Wagner's trial program that uses electrical stimulation to treat swallowing disorders has offered new hope to her patients at Beth Israel Deaconess. (David Kamerman/Globe Staff)

By Billy Baker

Globe Correspondent / September 29, 2008

The research is incomplete, but Cynthia Wagner is not waiting.

For two decades, the speech pathologist has been treating patients with swallowing disorders. Very often, that meant simply putting the patient on a feeding tube. "We weren't doing much for therapy," she said recently from her office at Beth Israel Deaconess Medical Center.

So when something more promising came along, she decided to give it a try. Never mind the consequences.

Wagner had heard reports from colleagues, particularly in the Southeast, who were using neuromuscular electrical stimulation with the aim of helping patients strengthen the muscles in the throat. The treatment, where electrodes force a contraction in a muscle, has been in use in

physical therapy for decades. Its effectiveness on certain muscles was a given; its effectiveness on swallowing muscles was a big question mark, and the scientific studies were just getting underway.

"The way I think it works is like weightlifting. The higher you turn it up, the harder you have to swallow against the resistance. The more you do it, the stronger those muscles get," Wagner said with a here-goes-nothing expression. "So I decided to do it and take whatever criticism came."

According to Wagner, there are many ways people can develop swallowing problems - such as stroke, head and neck cancer, chemotherapy and radiation, Parkinson's disease, ALS - and with those problems comes a concern that food, liquid, and even saliva could go down wrong and end up in the lungs, causing pneumonia. With this fear, the pleasure of eating is often abandoned for the safety of the feeding tube.

Wagner was able to get the hospital to sign off on a 10-patient trial program, and probably would have flown under the radar were it not for the fact that the treatment worked extremely well on one particular patient: Bob Rines.

Rines, who is 86 and had developed swallowing problems as the result of a stroke, is a prominent patent attorney, inventor, and MIT lecturer best known for his nearly four-decade quest to prove the existence of the Loch Ness monster (which he believes he saw in 1972). Rines was Wagner's fifth patient; he arrived on a feeding tube and left eating on his own.

Rines's success happened to coincide with Wagner's program being cut by the hospital, so he stepped in to provide the funding to allow it to continue for the next three years.

That happy outcome does not erase some doubts about what Wagner decided to do.

The success of one patient does not validate the effectiveness of the treatment, argued Susan Langmore, the director of speech pathology at Boston University Medical Center who is heading up a government-funded multihospital study to test the treatment on patients who develop swallowing disorders as a result of head and neck cancer.

"The use of electrical stimulation is something that's very interesting and worthy of study. I'm anxious to see the results, and I hope it works," she said of the \$5 million study funded by the National Institutes of Health. "But you don't promote something and charge for it until you know it works. Anecdotal information from one or two patients is not enough to prove anything."

Wagner, a 44-year-old mother of three girls, does not exactly look the part of the medical maverick. She's soft-spoken and has a refined, stately charm (she's from Houston). And while she believes enough in the treatment to ruffle some feathers, she's clearly uncomfortable speaking about herself as a rule-breaker.

"I guess I'm a little bit of a pioneer in that I decided to do it in Boston, and Boston doesn't like to get ahead of the research," she said. "But as far as I'm concerned, that research could take 10 to 15 years to prove that it works."

Her story, she says, is a case of happy coincidence. She had the right patient for the right treatment at the right time.

"I don't think there's any chance traditional therapy would have worked for Dr. Rines," she said. "When I first met him, you could say 'swallow, swallow, swallow,' but he couldn't even swallow his saliva.

"When he finished," she said, "he was eating steak and lobster."

Fact sheet

Hometown: Houston; lives in Wellesley

Education: Studied at Boston University in a combined program for communication disorders, earning her bachelor's in 1986 and her master's in 1987.

Family: Husband, Edward Wagner, is a software marketing management consultant. They have three daughters: Michaela, 13; Sage, 11; and Kendra, 8.

Hobbies: "With three daughters, I have two full-time jobs. It's overwhelming. I used to love to travel and ski, but we don't do that much anymore."

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