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Hoping To Walk Again

1983 PHS grad
wiggling her toes,
moving her feet
at 11 years

By Michael Jacobson

"We're going to get you to walk again."

Since a fall in her Crosslake home in October 2006, ever walking again seemed like an impossibility for Kathy (Pederson) Allen, a 1983 PHS graduate. A sleepwalking Allen fell from the second-floor balcony more than a decade ago, nearly severing her spinal cord and resulting in her being paralyzed from the waist down.

"Nobody has said that to me in a long time," she said. But now, thanks to a new treatment, she is moving her toes and feet again.

"My toe and foot movements are amazing to see," said Allen at the Minnesota Spinal Cord and Traumatic Brain Injury Research Symposium on Wednesday, Jan. 31, in St. Paul. "I still pinch myself when I see them move."

"We're hoping that big toes lead to feet lead to legs," Allen added in a Press interview.

Last fall, in a 30-minute procedure at Hennepin County Medical Center, a small device was attached to the electrodes in Allen's damaged spinal cord. Called epidural spinal cord stimulation (eSCS), the first implant was done in 2011, but now Dr. David Darrow, a fifth-year resident in neurosurgery at the University of Minnesota, is trying to recreate the findings in 20-plus studies about epidural stimulus, using looser criteria for the subjects, trying to determine if this treatment will work for "everyone."

Allen is the first "everyone." She's the first female to do epidural spinal cord stimulation, the oldest person, and the longest since being injured. She also has a severe injury, less than 10 percent of her spinal cord remaining.

"Wow! If it works for some-



Submitted Photo

Kathy (Pederson) Allen, a 1983 PHS graduate, is the first woman to undergo epidural spinal cord stimulation (eSCS) and spoke about the results at a research symposium in January.

body 11 years out, this should work for many more people than we thought it would," said Allen.

She had the eSCS installed at the end of September in a 30-minute procedure. The device, said Allen, has been used for pain for years, so it is already FDA approved. Boston Scientific and Medtronic make similar devices, but hers is from St. Jude Medical. (Essentially, they are using these approved devices "off label," having the electrical stimulation fire the nerves instead of treating pain.)

"We turned it on in October, and my toes moved. Then we turned it on in November, and I could move my feet."

Dr. Darrow, who plans to study 100 patients eventually, also spoke at the research symposium in January. "The day after surgery, patients can move legs and feet," he said.

A surprise for him was that patients, so far, have been as excited for the autonomic system improvements as for the possibility of walking again.

Nothing below the belt – bladder, bowels, etc. – works quite the same after being

paralyzed, Allen described. Even your blood pressure is affected. Just the improved core stability from the treatments makes it easier to get dressed, to reach for things, and to push her wheelchair, said Allen.

She now does up to four hours of epidural stimulation per day. She uses a tablet to report the daily dosages and her daily exercise regime, wiggling her toes and moving her feet, to the medical staff. She also keeps a notebook with her observations of the treatment and its impact, including side effects (none so far).

"I'm pushing hard to use it more often," she said.

Allen had pursued different medical treatments and clinical studies before and is grateful that Dr. Darrow included her in this one. "Let's see if it works on somebody 10 years out (from their injury)," she said. "I've always told people, 'Prove to me it's not going to work on me.'"

Since her lower-body muscles have all atrophied from lack of use over the past 11 years, she faces the long process of rebuilding these muscles. "It's not like I'm going to

get up and start dancing," she said. "I'd like to be more independent. Yes, I'd like to walk again, but I know I have a lot of muscles to rebuild."

The State of Minnesota provided a grant to support the study by Dr. Darrow and other initiatives, which was the focus of the recent symposium, where a video of Allen was shown and where she spoke briefly about her condition, her treatment, and her gratitude to her medical providers. "The investment will provide life-changing impact for many injured people," Allen concluded on stage. "I have no words to express my gratitude. Thank you."

"That was the basis of the whole symposium: to thank the legislators. It was a show of return on the investment," she said of the symposium.

Allen, despite being in a wheelchair for the past 11 years, still sees herself walking. When she dreams, she's never in a wheelchair (though sometimes she is trying to find it). Through epidural spinal cord stimulation, her dream of walking could come true.