



NANDAN LAD, M.D. PH.D.  
INNOVATIVE NEUROSURGERY

## From Surviving to Living Again

*After decades of pain and a roller-coaster of failed surgeries, Nevro HF10 therapy delivers relief at last*



*Fox says his Nevro HF10 spinal cord stimulator has been 'like the difference between light and dark.'*

For Gregory Fox, now 55, the back pain started more than 20 years ago. The cause was lumbar disc degeneration, but it was aggravated by stenosis (narrowing of the spinal canal) and the years Fox spent on the road as a drummer and a bus driver.

Spinal fusion surgery in 1999 brought him relief for a time, but by 2013, he had started to lose sensation from the waist down. The spinal fusion had started to disintegrate, and his spine was shifting. The numbness worsened to the point where Fox was unable to get out of bed.

In an effort to salvage the disintegrating scaffolding of his spine, he had metal rods surgically implanted to stabilize his back. "I woke up from that surgery with pain and I thought that was great, because I hadn't been able to feel anything before," Fox recalls. "But it was nerve pain—and it was bad."

Fox went to see Dr. Nandan Lad in 2016, who implanted a low frequency spinal cord stimulation device developed by St. Jude Medical. It relieved the pain in his back and legs for a while, but the relief didn't last. He worked diligently with representatives from the company to try to find the best settings to optimize his pain relief. Finally, Fox decided he had had enough.

"I went to see Dr. Lad this February and I told him to take my legs off," he says. "I told him that I would get a wheelchair and make do. I was in so much pain I was in bed most of the time. That really seemed like a better option."

### A last-ditch effort

Dr. Lad had one more therapy he wanted to try. On March 17, which happened to be Fox's 55th birthday, Fox underwent surgery to remove the old stimulator and have a Nevro HF10 spinal cord stimulator implanted.

Nevro HF10 therapy involves implanting a spinal cord stimulation device that delivers high-frequency electrical signals to quiet nerves that contribute to chronic pain. It has hardware that is similar to other spinal cord stimulators, but appears to work in a different way to stop pain signals from reaching the brain and has been shown to offer greater pain relief for some patients.

Dr. Lad placed 2 leads in the space outside the covering of the spinal cord and underneath the bone, known as the epidural space. An internal pulse generator or battery pack provides the electrical current. Fox can change the power settings and turn the system on and off using a remote control. Astonishingly quickly, Fox had his life back. "It's been like the difference between light and dark," he says.

### 'I knew right away'

Before the Nevro HF10, Fox spent most of his days lying in bed in excruciating pain. Now, only a few months after surgery, he can hike four miles, enjoy his grandchildren and drive a car. While he still copes with some pain, he no longer takes opioids. He's working with a personal trainer to build core strength, and hopes to get back to golfing and fishing someday. Most importantly, he is now able to drive the 4-hour round trip to visit his ailing mother.

"I knew right away when I came out of the surgery that it had worked," says Fox. "I could feel the difference. I had pain, but it was at the incision. I didn't feel the other pain. It was immediate relief. With the pain controlled, I've gone from surviving to living again."

Fox added that another benefit of the Nevro HF10 device is that it doesn't cause tingling and burning sensations like his other neurostimulator did.

### A huge change

Fox has only praise for Dr. Lad and the professionals in his office, saying that "good" doesn't come close to describing how the team treated and cared for him. In particular, Physician Assistant Beth Parente was instrumental in encouraging him to not give up hope, he says.

If someone dealing with spinal pain were to ask him about visiting Dr. Lad and trying Nevro HF10 therapy, Fox knows exactly what he would say. "I wouldn't only recommend they see Dr. Lad, I would put them in my car and drive them there," he says. "That's how much of a change it has been for me. I still have pain and I probably always will, but it is not constant and it is manageable. I had no life and now I do."



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