

## Implanted device allows Haverhill musician to march again



COURTESY PHOTOS

Maria Karavetsos, who plays the mellophone, can now perform in marching bands after an electronic implant was attached to her leg to help control pain.

## Back in step

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Haverhill — This past summer, and for the first time in the past five years, Maria Karavetsos was able to march pain free as a member of the Boston Crusaders Senior Drum and Bugle Corps.

Her knees had long given her trouble, in fact



Maria Karavetsos of Haverhill could barely walk before she had this electronic implant attached to her leg, which allows her to walk and stand with less pain.

ever since high school, resulting in extreme discomfort. In recent years, she's avoided marching whenever she could or

else risk collapsing in pain.

Multiple arthroscopic surgeries beginning in her teenage years did

little to ease the discomfort, while a knee replacement five years ago offered some relief ...

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# DEVICE

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until the pain returned.

Then, her pain management doctor suggested a device that sends electrical signals to the nerves in her knee to ease the pain. It was the solution she'd been waiting nearly four decades for.

"This past summer, I was able to march a full 16-minute long field show without falling down," said Karavetsos, who plays a mellophone in the band.

"I was able to move and play without worrying about where I would plant my feet. It's given me back a lot of freedom of movement. I also did a parade last summer which I would not have been able to do without the device, which is called a StimRouter. It's something I'm glad I did and which I wish I'd done sooner."

According to the manufacturer, the StimRouter is a treatment for chronic peripheral nerve pain.

"This is the first time since I was in high school that I've had little or no pain," she added. "This device has been a blessing and I'm looking forward to the next season with the drum corps."

She said a small device she attaches to an electrode implanted in her leg sends an electrical signal through a flexible needle into the nerve in her left knee.

"They installed it at St. Elizabeth in Boston during a 20-minute long day procedure," said Karavetsos, 54, of Haverhill.

"Initially they had to run a test with a needle to see if there was an effect on my knee. The test worked like a charm and, after insurance approval, they called me in for the procedure."

A member of Haverhill High School's Class of 1987, she learned to play trumpet from a friend and was in the high school marching band for four years.

She is in customer service for a medical company in Danvers that makes heart pumps for temporary use.

In addition to playing the mellophone, a type of brass instrument that is similar to a trumpet, she also plays the trumpet with the Merrimack Valley Concert Band. Several years ago she saw her dream come true when she was invited to perform with the Boston Symphony Orchestra through a raffle for amateur musicians.

"They mailed me the music and we had three



TIM JEAN/Staff photo

## **Maria Karavetsos of Haverhill could barely walk before she had an electronic implant attached to her leg.**

rehearsals then a live concert," she said. "It was nice being on stage in Symphony Hall."

She said that during her high school years and in college she was "the fat kid" and that the extra weight damaged both her knees.

"I ended up losing about 200 pounds, which helped, but the damage was already done and I was left in pain," she said.

About 20 years ago, she underwent a successful partial right knee replacement. Then pain developed in her left knee and 15 years ago she underwent a partial replacement.

"Then came another procedure to realign my knee cap," she said. "The partial replacement required rehab, during which a physical therapy student stretched my left knee too far and it damaged the implant, so I ended up with a full knee replacement five years ago as I was in great pain, which soon returned."

She said nothing surgically could be done and she wasn't able to march in the drum corps during a full parade, only a short one, else she'd have to step out.

"I still played with them during outdoor summer shows where we don't have to march, otherwise I can sit for hours and play," she said.

After enduring nearly five years of extreme discomfort, about a year ago she sought help from the Holy Family Hospital Pain Management in Andover.

"I had some cortisone and anti-inflammatory injections that helped a little, but, since I'm diabetic, the cortisone messed with my blood glucose and after several shots my doctor, Stephanie Gianoukas, suggested the nerve stimulator," she said.



COURTESY PHOTO

## **Maria Karavetsos plays the mellophone in a local marching band.**

"When they installed it I felt near-instant relief. I only use it on days when I'm on my feet, especially when I'm walking around at work as the battery pack is removable. I attach it to a pad attached to my leg — which I replace every few days with a new one as there's an electrode under my skin."

She said she has become so used to having it on that it's always a good day, noting she controls the device with an App on her phone.

"The unit is about the size of a business card and about a half inch thick and attaches to a pad with two snaps," she said, recalling many days in the past when she had to resort to painkillers.

Dr. Gianoukas, who now sees patients at Agility Orthopedics in Stoneham, said she learned about the StimRouter five years ago and began recommending it to her patients, particularly those experiencing peripheral nerve issues resulting from surgery.

"With the StimRouter we can implant something over the nerve," she said. "Some patients either had surgery but still have pain or are

not candidates for surgery. In my experience, I've used the device for knee pain and shoulder pain, whether they've had surgery or not."

She said a lead inserted near the nerve causing pain communicates with an external device that sends electrical signals that create a numbing or tingling sensation.

"As a result their brains no longer perceive the pain signals," Gianoukas said. "The device overwhelms the brain with positive pleasant signals, which medically is called parathesia."

She said the StimRouter is most popular for knees and shoulders but also can be used for hip or groin pain, foot or ankle pain and even back pain.

"Maria was my third or fourth patient and I've also used the device also for lower and upper leg pain for which my patients are equally happy with the results as Maria is," she said.

"The device is recommended for orthopedic patients. For some people it doesn't work, but for the ones who make it through the process, they are very happy with the results."