

Nurse tests fibromyalgia therapy

May 29 2014, by Todd R. Mcadam

Lynn Baniak crosses her arms when she gets anxious. What does she have to be anxious about?

She is a nurse in a building full of engineers. She is studying a treatment for a common yet poorly understood [musculoskeletal disorder](#). She is years away from the oncology nursing she's familiar with and the doctorate that will label her an expert.

Nothing to be anxious about.

"I don't follow the herd. It makes you kind of fearless," she says. "And I don't like failing."

The treatment she researches has too much potential for her to accept failure. It would help 12 million Americans with fibromyalgia enjoy a better quality of life.

No pressure.

Fibromyalgia, which causes widespread pain and tenderness, has been linked to depression, stiffness and a host of fatigue-related symptoms either caused by or in conjunction with [poor sleep](#).

Working with data and theories developed by her Binghamton University advisors—Carolyn Pierce, an associate professor of nursing, and Kenneth McLeod, a professor of bioengineering—Baniak began testing an observation: that stimulating a nerve cluster around the balls of the

feet provokes the soleus muscle in the calf to greater activity.

The soleus pumps body fluids from the legs back toward the heart. Poor circulation is linked to poor sleep in patients with disorders ranging from fibromyalgia to congestive heart failure.

Baniak recruited hundreds of people in 2011 and 2012 and began tests on 31 of them with a device that stimulates the Meissner's corpuscles by vibrating the feet back and forth 45 times a second for an hour each day. Ten finished the trial.

The result? It works. Patients went from an average score of 53 on the FIQR scale—a measure of a [fibromyalgia](#) patient's quality of life—to 33 in just 12 weeks. A typical nonfibromyalgia score would be below 10.

Next Baniak must explain why it works. Why does it improve sleep? Does improved sleep in itself reduce pain? Or does it improve the ability to cope with the same pain?

Pierce says Baniak's work requires a flexibility of interest, unlike colleagues who base their research on prior nursing experience, like the oncology that filled Baniak's career at the Mayo Clinic in Minnesota. "Lynn was very open to doing the hands-on clinical research with engineers," Pierce says. "She was particularly able to see what the applications were."

And to what can this treatment be applied? Fibromyalgia, sure, but how about [congestive heart failure](#)? Edema? Sleep apnea? That will come later. Baniak is already considering post-doctoral research.

The possibilities leave Baniak a little anxious: "It's almost a test to me," she says. You can't be productive or successful if you can't face your fear."

Provided by Binghamton University

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