



Playing the classical guitar and challenging her endurance and strength remain important parts of Dr. Duncan's life, as she focuses in her practice on the relief of pain for each of her patients.

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## RELIEVING PAIN

Dr. Duncan offers many approaches to help patients overcome pain, including:

- **Radiofrequency Ablation:** An electrical current produced by a radio wave to heat up a small area of nerve tissue, thereby decreasing pain signals from that specific area.
- **Botox injections** for the treatment and prevention of migraine headaches.
- **Electromyography (EMG),** to measure muscle response or electrical activity in response to a nerve's stimulation of the muscle. The test is used to help detect neuromuscular abnormalities.
- **Epidural Steroid Injections (ESIs),** a common method of treating inflammation associated with low back related leg pain, or neck related arm pain.
- **FACET Joint Injections** of a steroid medication to reduce inflammation in the small joints at each segment of the spine that provide stability and help guide motion.
- **Spinal Cord Stimulation,** applying an electrical current to the source of chronic pain. This creates a pleasant sensation that blocks the brain's ability to sense the previously perceived pain.
- **Viscosupplementation:** an injection of hyaluronic acid into the knee and into the synovial fluid for the treatment of knee osteoarthritis—to increase lubrication in the joint, making joint movement much easier.
- **Prolotherapy:** an injection technique that stimulates growth of cells and tissue that stabilize and strengthen weakened joints, cartilage, ligaments and tendons.
- **A sacroiliac (SI) joint injection—** also called a sacroiliac joint block—primarily used to diagnose or treat low back pain and/or sciatica symptoms associated with sacroiliac joint dysfunction.

## HER CAREER GOAL: EASING AND RESOLVING PAIN

Dr. Duncan, a graduate of the Ohio University College of Osteopathic Medicine, completed the residency program in physical medicine and rehabilitation at Case Western Reserve University, aligned with the MetroHealth Medical Center in Cleveland.

She is board certified by the American Board of Physical Medicine and Rehabilitation, the American Osteopathic Board of Rehabilitation Medicine, and in the subspecialty of Pain Medicine, and is a member in good standing of the American Academy of Physical Medicine and Rehabilitation, the American Osteopathic College of Physical Medicine and Rehabilitation, the American Osteopathic Association, and the International Spine Intervention Society.

In her practice at Atlantic Spine and Pain, in Apex, and in her life, Dr. Catherine Duncan is relentless in her search for pain relief and healing for her patients and for herself.

Her career plans shifted when, as a classical guitar major in college, severe back pain led her to seek out effective osteopathic treatment. While her love of music remains, the focus of her energy and expertise shifted to provide the most effective treatment and therapies for pain relief and rehabilitation.

“I still quite frequently see patients in pain who are either musicians or dancers—or who are involved in some other kind of athletic activity—and because I have an understanding of the mechanics involved in what they are doing, I can be helpful,” she says.

“I have a patient right now, for example, who is a pianist, and she is having a lot of difficulty with her lower back. When she is performing, she puts a lot of strain on that area. She is responding well to physical therapy, and to therapeutic injections.

“There are other musicians who tend to get upper extremity problems and pain in their neck. Neck issues, for example, are very common with violinists, along with tendonitis in the elbow and shoulder.”

Noting that she has been involved in a number of martial arts activities over the years, Dr. Duncan explains that “martial arts really emphasize good strong body mechanics. And I have an understanding of the consequences if those mechanics are even slightly off kilter, which results in pain.

“I see quite a number of martial artists in my practice, and often they are surprised that I have any clue about the nature of their pain. They may injure their hamstring from doing a

high kick, for example, or engage in bad technique resulting in low-back pain. And as the saying goes, I can feel their pain because I have engaged in these same kinds of activities.”

### TRIATHLON EXPERIENCES

To test her knowledge and endurance, Dr. Duncan will occasionally engage in triathlon events, which, she admits, “can be very challenging.” A few years ago she was in Florida to participate in a triathlon, after working 10 hours a week for months in preparation for the event—which began with a one-mile race in the ocean, followed immediately with a 25 mile bicycle race, capped with a 6.2 mile run.

“This was challenging,” she says. “It was one of the hardest things I’ve ever done. The entire event took about three and a half hours.” The fact that she completed the ordeal makes her a winner.

### HOLISTIC PAIN RELIEF

Reflecting on her pain relief practice, Dr. Duncan notes that as a result of her many years of training and hands-on experience, “I think it's fair to say that I take a holistic approach to pain relief with all of my patients, understanding as best I can the source of their pain and the best possible options to relieve that pain. There are issues such as stress management, life balance, and restful sleep that are often related to pain—and certainly are related to pain relief.

“I urge patients to be kind to themselves, and to get relief when they need it—and not ‘grin and bear it.’ Here is probably my best guideline: If someone you love had the pain you are now experiencing, would you want them to see a pain specialist? If the answer is yes, you need to see a doctor.” *h&h*