

THE GOAL: PAIN RELIEF

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.

For more information about resolution of pain issues, contact:

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Dr. Duncan views images of the spine as she considers treatment options to relieve pain.

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.

ESIs, Pain Relief, and Appreciating Longevity

Dr. Catherine Duncan is a “hands-on” physician, relentless in finding the cause of pain that a patient may be experiencing and passionate in finding the best path forward to relieve that pain. Her attractive solo practice is Atlantic Spine and Pain, in Apex.

“My first task,” she says, “is to get a complete history from a new patient, who may tell me, for example, that they were lifting a heavy box and felt a sharp pain in their back, and the next day the pain started going down their leg, leading to numbness that’s getting worse and clearly needs attention.

“The first step with such a patient will be a thorough physical exam, which will include evaluating range of motion, assessing any tender spots, and doing a thorough neurological exam testing reflexes along with a sensory exam and a test of their strength. I would of course want to view images if available, such as an MRI or X-ray.”

This thorough hands-on testing, ex-

plains Dr. Duncan, “helps to confirm and reinforce my impression of the condition based on the clinical exam. Sometimes the patient may not need an MRI, and I may simply send them to physical therapy for a support program; rehabilitation is a critical component of our work. An indication of motor weakness, on the other hand, suggests the value of imaging—it could be an indication that there is some pinching of the nerves. About 90 percent of the diagnosis relies on the very thorough, hands-on clinical evaluation.

“In instances where the MRI, the history, and the physical exam all match up,” she continues, “we might suggest a procedure such as an epidural steroid injection (an ESI) that typically would provide a very good outcome.”

An ESI, Dr. Duncan explains, “is an injection procedure, a combination of a corticosteroid with a local anesthetic pain relief medicine. Corticosteroids are strong anti-inflammatory medicines. Relieving swelling and inflammation can take pressure off nerves and other soft tissues, which can relieve pain. The local anesthetic medicine helps provide immediate pain relief. Corticosteroid medicines take longer to have an effect.”

BRIEF PROCEDURE

The entire ESI procedure usually requires about 30 minutes, Dr. Duncan notes. “We use our fluoroscopy device to guide the needle placement for an ESI.

“I remind my patients that all medicines have side effects. But many people don’t feel side effects or, at most, have very mild reaction to the ESI medication.”

“Every patient responds to [ESI] treatment in a unique way.”

Ralph—an assumed name for an 83-year-old patient, who says he still covets longevity—has an MRI confirming that he has severe lumbar spinal stenosis. He has now had the ESI treatment on two occasions with Dr. Duncan, with excellent results. A third injection is planned in about a month.

“Before ESI treatments,” he says, “I had persistent lower back pain, radiating into my legs and buttocks, on an every-day basis, ranging from mild but unpleasant to barely tolerable. I was only pain-free when sitting; all other movement induced some level of pain.

“After the first ESI injection, I was amazed when I awoke the following day *completely pain free*, and remained free of pain for several days. And then the pain slowly returned, but with noticeably less intensity. The experience with the second ESI injection has been similar: a period of complete absence of pain, and then a slow return of the pain at a lower, more tolerable level.

“Dr. Duncan emphasizes that every patient responds to this treatment in a unique way. Based on my experience to date, it seems that ESI injections will serve me well for an indefinite period. I understand the injections can be safely administered as many as three or four times a year.” **h&h**