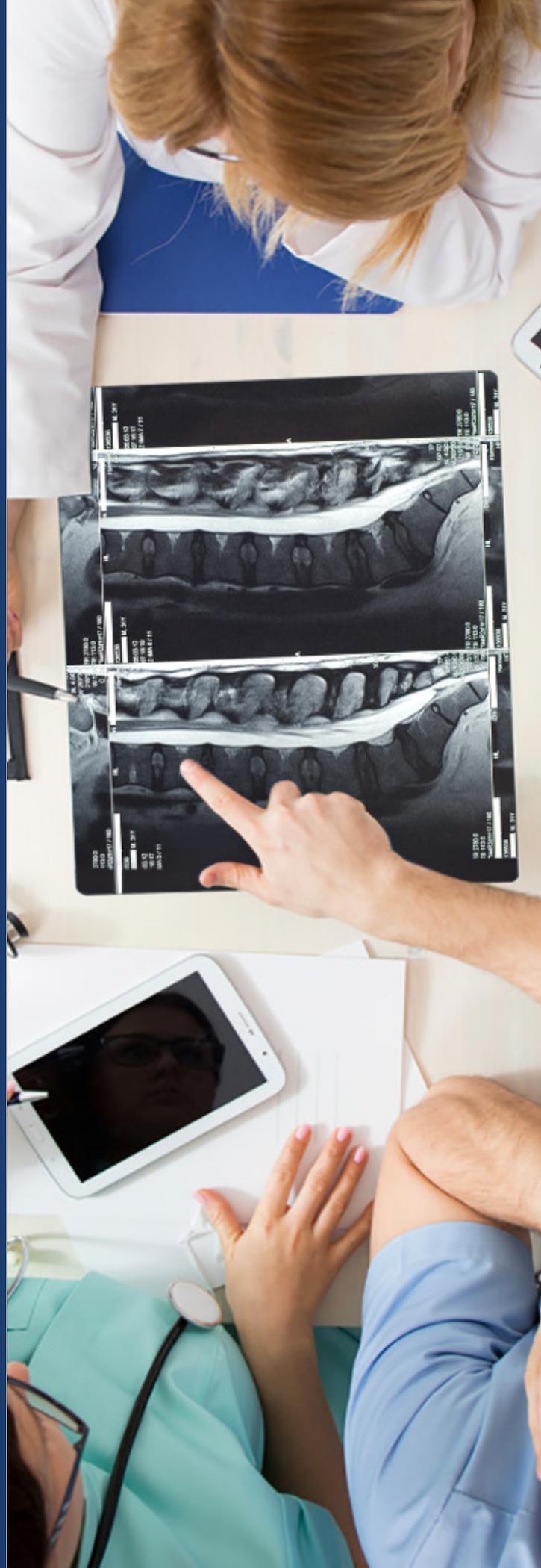


PROCEDURES WE PERFORM

*Decompression,
Stabilization, and More*

North American Spine offers a family of advanced, minimally invasive procedures that are highly effective in treating most forms of chronic back and neck pain. Partner physicians regularly undergo advanced training to keep up to date on the latest and most innovative technology and techniques. In general, North American Spine partner physicians treat issues involving soft tissue, vertebral bones and joints, spinal discs, and problematic scar tissue. We are proud to provide a comprehensive suite of procedures to treat almost any spinal condition, and each treatment plan is tailored to the individual.

The following pages will introduce most, but not all, of the procedures we perform at North American Spine.



Most Common Procedures for Each Section of the Spine

- IntelliSpine Cervical Laser Procedure: Discectomy with Neural Decompression (DND)
- Anterior Cervical Discectomy & Fusion (ACDF)
- Cervical Disc Replacement (CDR)
- Foraminotomy

*Cervical
C1-C7*

- IntelliSpine Thoracic Laser Procedure: Discectomy with Neural Decompression (DND)
- Kyphoplasty

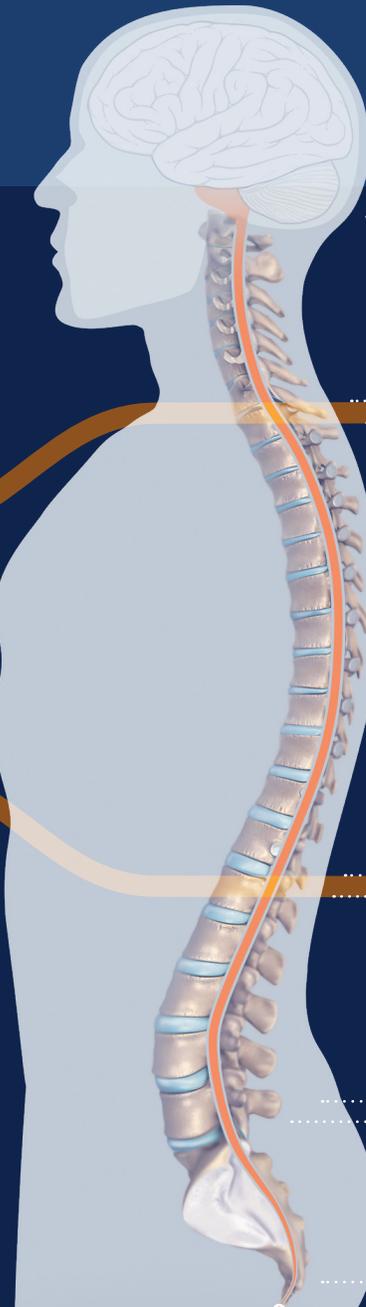
*Thoracic
T1-T12*

- IntelliSpine Lumbar Laser Procedure: Discectomy with Neural Decompression (DND)
- Discectomy
- Laminectomy
- Laminotomy
- Anterior Lumbar Interbody Fusion (ALIF)
- Posterior Lumbar Interbody Fusion (PLIF)
- Transforaminal Lumbar Interbody Fusion (TLIF)
- Lateral Interbody Fusion (XLIF)
- Kyphoplasty
- Spinal Cord Stimulator

*Lumbar
L1-L5*

Sacrum

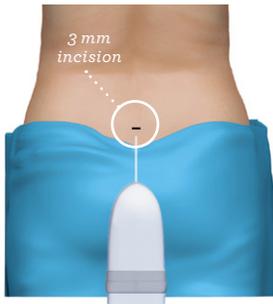
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Decompression Procedures

Minimally invasive decompression surgery aims to relieve pressure on the nerves of the spine, commonly caused by stenosis, bulging or herniated discs, and more. This can be achieved with several procedures, whether by removing soft tissue (disc material or scar tissue) or bone (bone spurs, sections of the lamina or foramina) to decompress the affected nerve.

- **IntelliSpine Laser Procedure**
- **Discectomy**
- **Foraminotomy**
- **Laminectomy**
- **Laminotomy**



Laser Spine Procedure (Sacral Approach)

This procedure treats soft tissue problems such as herniated disc or scar tissue, and the innovative approach is exclusive to North American Spine.

In the “**sacral**” approach, the physician will insert an endoscopic fiber optic scope through a tiny incision and into the sacrum, the natural opening at the base of the spine. Through direct visualization of the entire lumbar spine, the physician is able to examine the inside of the spinal canal and the discs of the lumbar spine to identify any tears, ruptures, herniation, bulges, or other abnormalities. The physician then uses the laser to shrink the damaged disc material and relieve pressure on the spinal nerves. Also performed is the “**posterior lateral**” approach, in which your doctor uses a hollow needle and fiber optic scope to travel directly to the problem area in any section of the spine.

“[I had] immediate spasms and severe pain in my low back, sometimes a burning going down my leg. My outer thigh had become numb. I would take Flexeril and Tylenol 3 for weeks to control pain. Could not get comfortable laying down, which caused a bit of sleep deprivation... I have had ZERO pain since the procedure. It feels like a new back—very solid and totally pain free.”

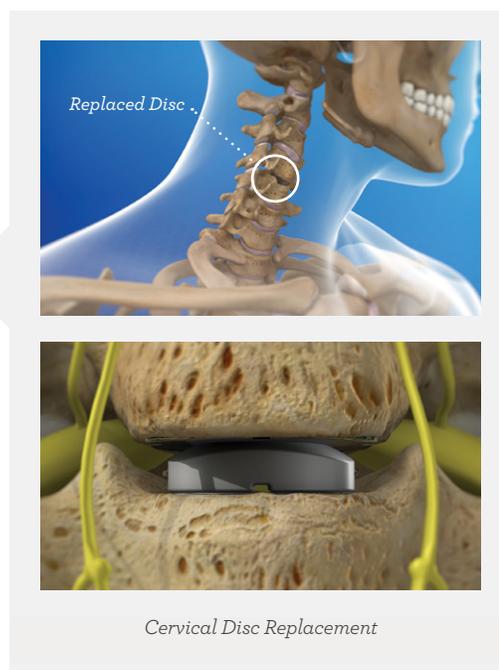
—Dave P., Lumbar IntelliSpine Laser Procedure

Stabilization Procedures

Minimally invasive stabilization surgery aims to restore stability to the spine. Instability is commonly caused by a severely collapsed disc or discs, degenerative discs, spondylolisthesis (a disorder in which a vertebra slips forward onto the vertebra below), and more. The fusion surgeries are similar in goal—to remove damaged disc tissue and replace with a spacer to fuse the bones together—but differ in the approach (incision on the back, side, or abdomen) and whether or not specialized hardware is used to reinforce stability. We also perform artificial disc replacement, in which a cervical disc is replaced with a synthetic disc, and to preserve mobility, and the vertebrae are not fused together, to preserve mobility.

- **Anterior Lumbar Interbody Fusion (ALIF)**
- **Posterior Lumbar Interbody Fusion (PLIF)**
- **Transforaminal Lumbar Interbody Fusion (TLIF)**
- **Lateral Interbody Fusion (XLIF)**
- **Anterior Cervical Discectomy and Fusion (ACDF)**
- **Cervical Disc Replacement (CDR)**

In some cases, a combination of the decompression and stabilization procedures above may be performed.



“The second week after surgery, I went to the mall and walked around with a friend. The fourth week after surgery, I was throwing out the garbage, climbing stairs and going to the grocery store by myself—pain free. On August 29, 2016, I returned to my former employer and am once again gainfully employed. My back is 100% pain free!”

—Mary K., Lateral Interbody Fusion (XLIF)

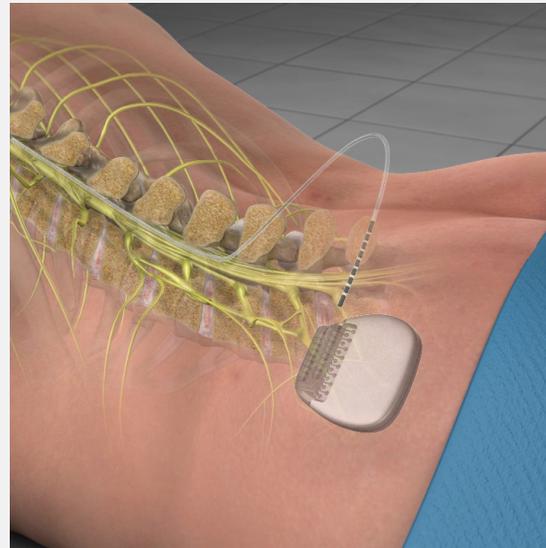
Other Spine Procedures

- **Kyphoplasty**

Kyphoplasty treats fractures of the vertebrae by restoring vertebral stability. This involves the injection of a medical-grade cement-like material to restore height and space lost to compression fractures in vertebrae.

- **Spinal Cord Stimulator (SCS)**

To treat patients with Failed Back Surgery Syndrome (FBSS), complex regional pain syndrome, or for patients whose pain cannot be managed or resolved with decompression or stabilization, a Spinal Cord Stimulator (SCS) may be implanted. Using tiny leads (similar in size to a fishing line) under the skin, this device sends electronic pulses over the painful area, which interferes with the brain's ability to register pain signals.



Spinal Cord Stimulator

“All I can say is, wow, what a miracle! At my two week post-op appointment, I gave my doctor a big hug and cried, telling him that he saved my life. I don't have the back pain at all. I have so much more energy and I'm sleeping better—quality vs. quantity. I can stay up later and get out of bed sooner. I wake up feeling refreshed, not exhausted like I used to. People who knew me before my procedure say that my face doesn't show the pain anymore and my demeanor is improved. The procedure completely changed my life and who I am.”

—Edie S., Spinal Cord Stimulator

