



SPINAL PATHOLOGY: NEW TREATMENTS FOR OLD PROBLEMS

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North American Spine & Pain



WHY DID I BECOME A DOCTOR

Enjoyed learning:

- Sciences
- Human Anatomy
- Surgical Work
- Research/Discovery

Doing things with my hands and the “practice” of medicine

- Worked as an EMT and volunteered in the hospital

Talking to people and helping them

Lots of variety

EDUCATION

Grew up in Virginia - great public school system – George C. Marshall High School

University of Virginia - college and medical school

- EMT with the Charlottesville EMT Squad during college
- Performed research with the Human Genome Project at NIH and Multiple Projects at UVA

University of Pennsylvania - residency and fellowship

- Board certified in Anesthesiology and Critical Care Medicine
- Board certified in Pain Medicine and Interventional Spine



Worked in Academics at
University of Pennsylvania

Started a new department at
a hospital – Virtua Pain &
Spine

Started a private practice 9
years ago – North American
Spine & Pain



CAREER PATH

LOW BACK PAIN

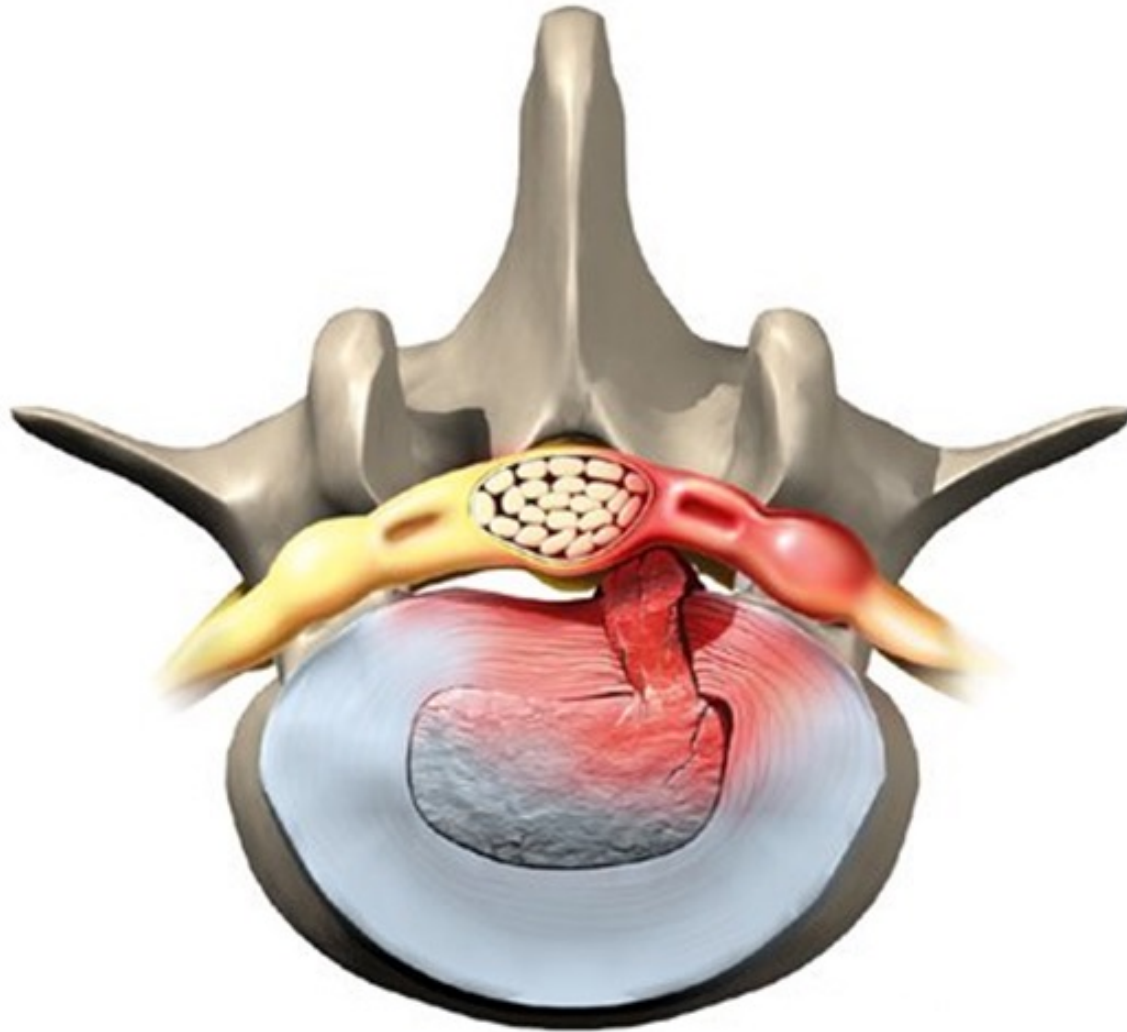
Low back pain is 2nd most common reason for patients to visit their doctor

About 25% of the US adults report low back pain lasting a whole day in last 3 months

About 8% report severe low back pain in last year (one third sought medical care)

80% of adults have at least one case of severe disabling back pain in their life

SCIATICA PAIN

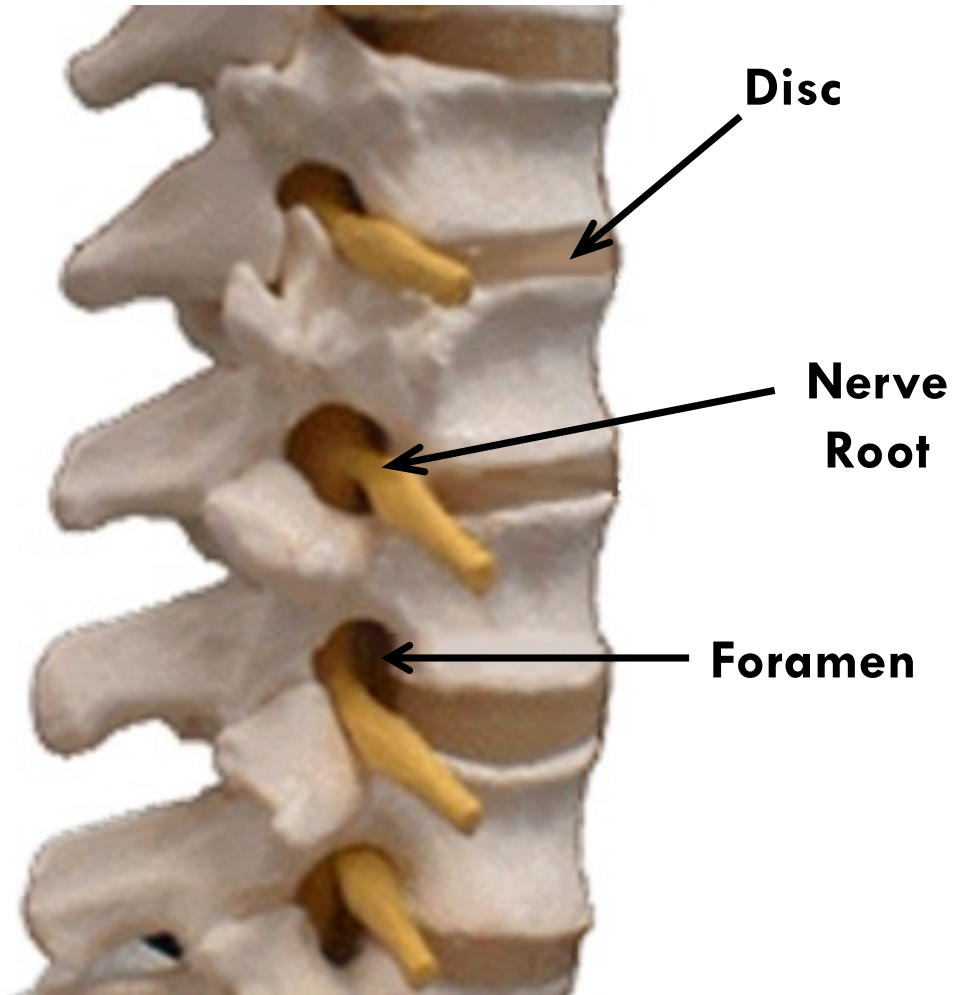
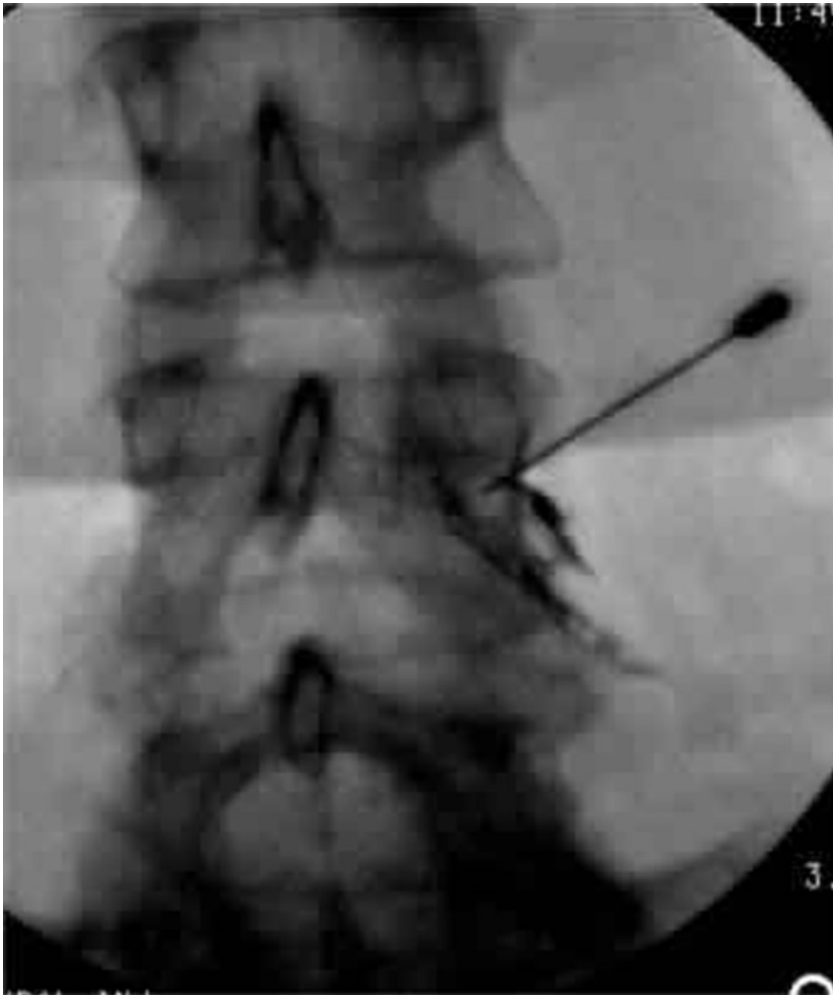


Lumbar Disc
Herniation

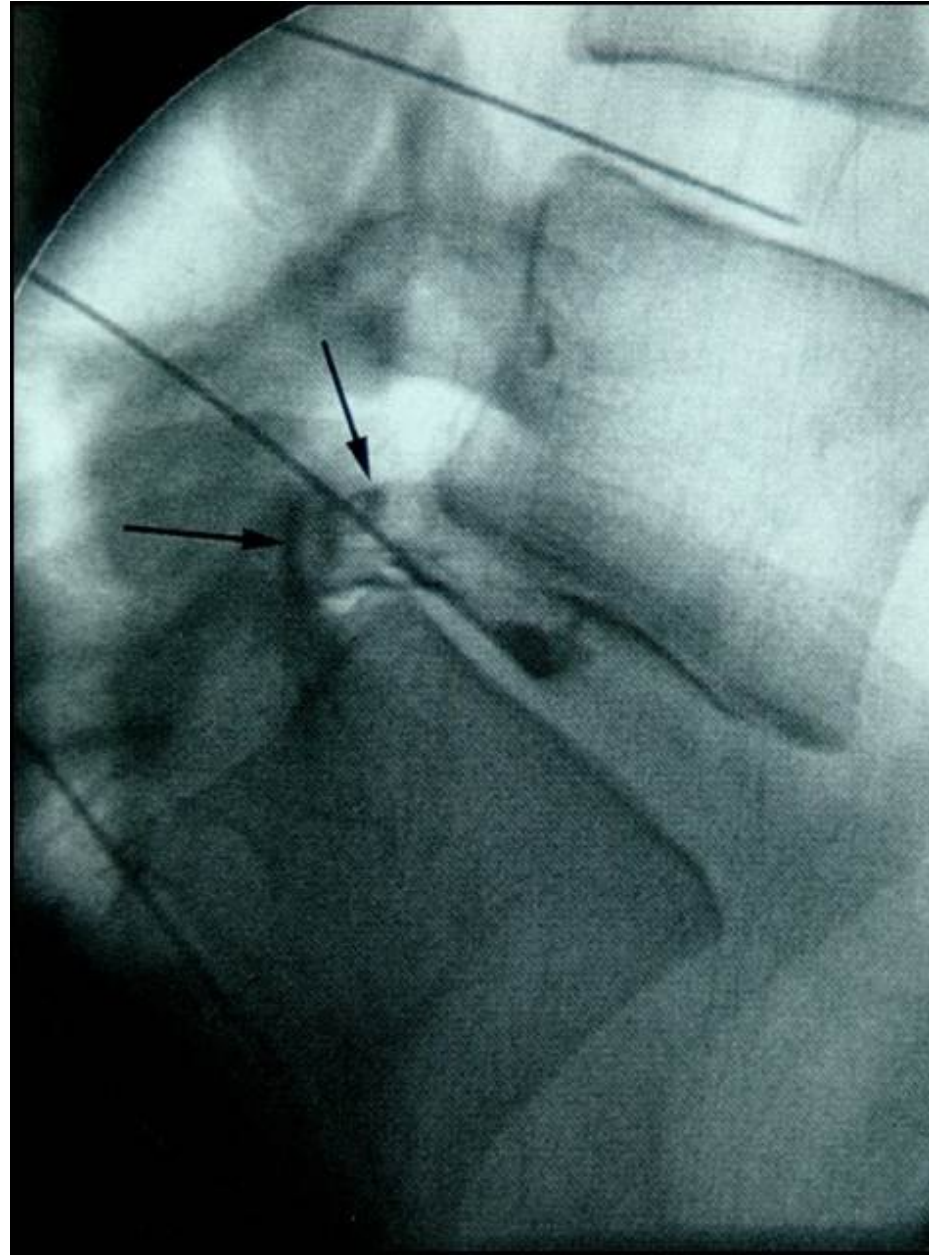
HERNIATED DISC PAIN



EPIDURAL INJECTION FOR PAIN



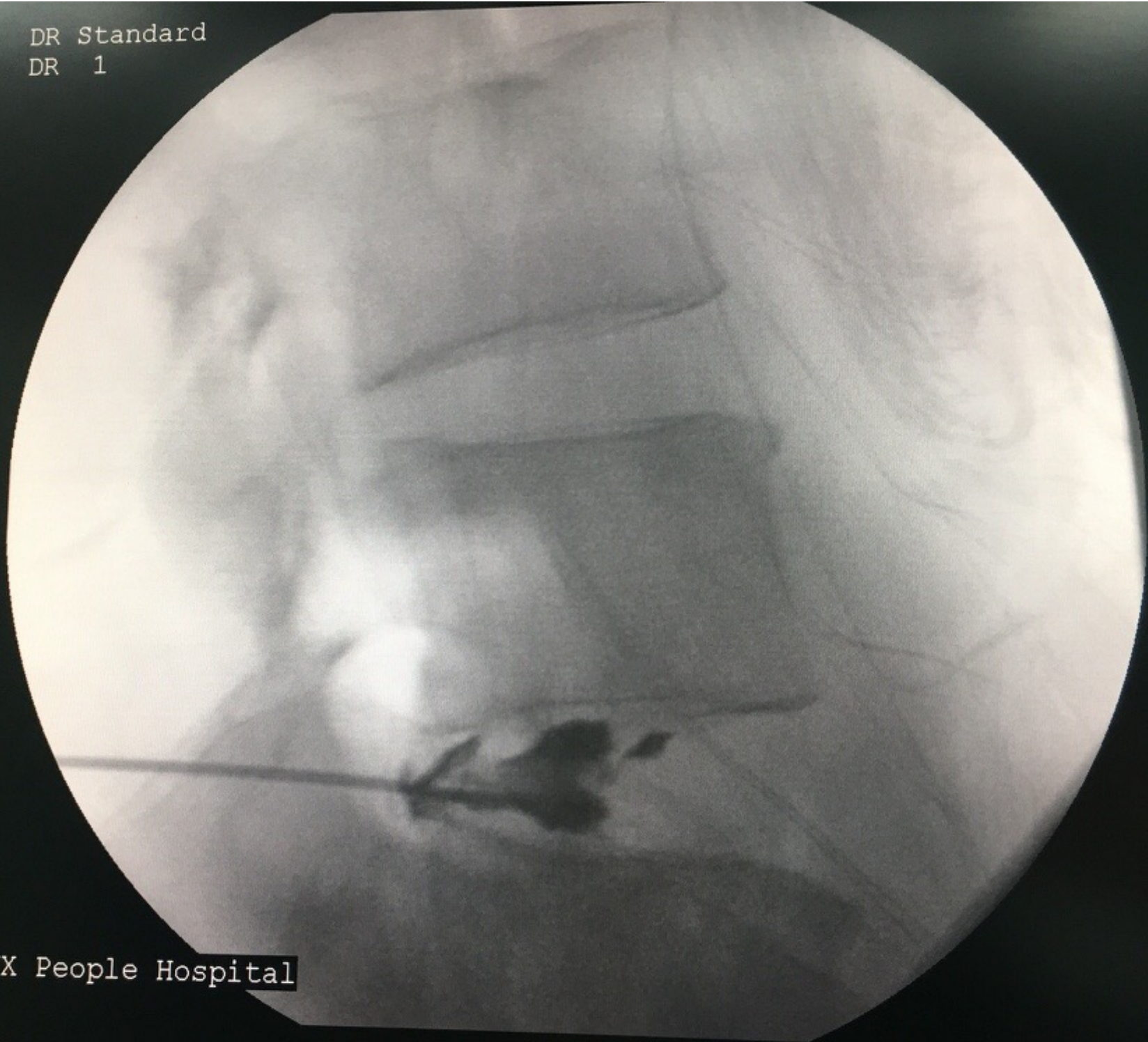
DISCOGRAPHY



ENDOSCOPY DISCECTOMY



DR Standard
DR 1



JX People Hospital

13/

14

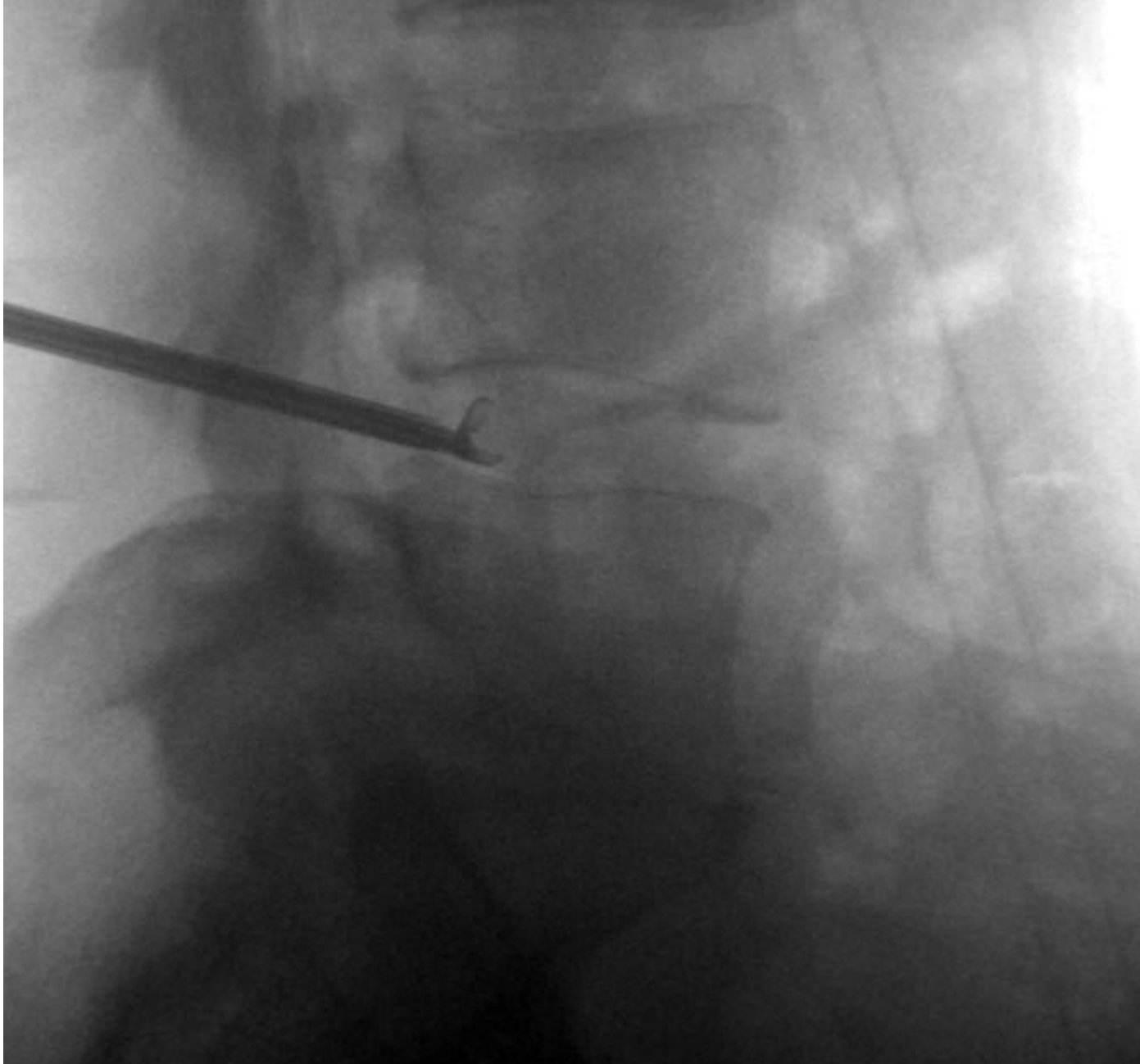
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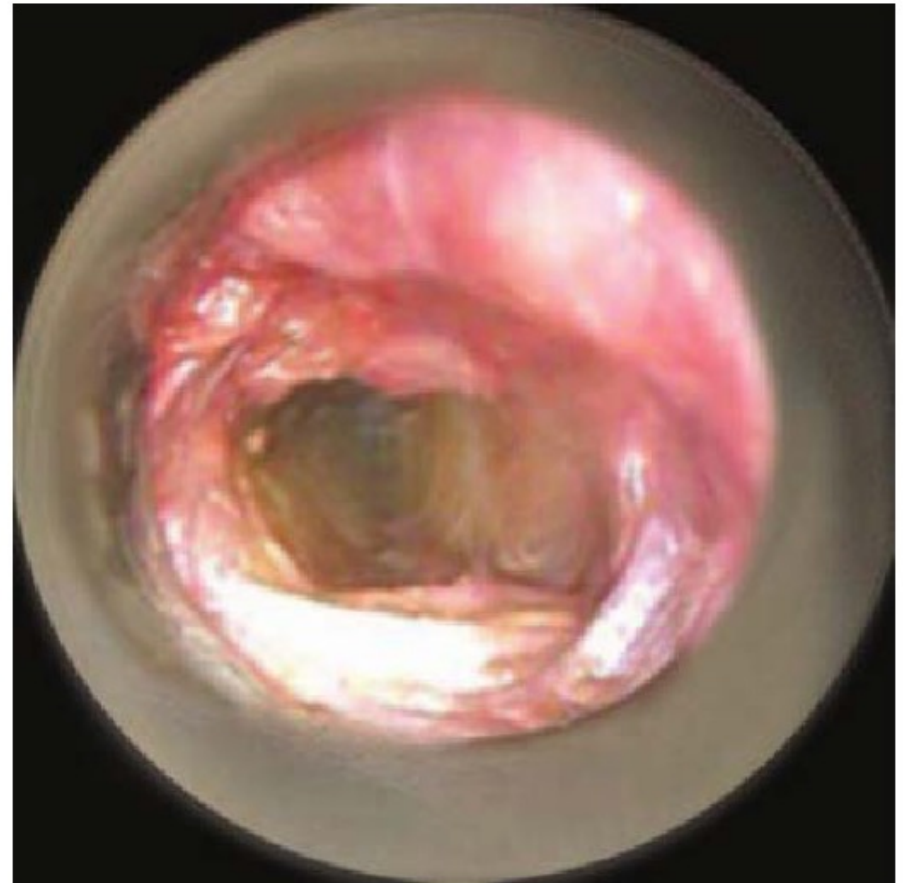
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DISC HERNIATION CAVITY CREATION

Figure 6: Decompression of Intervertebral Discs and Spinal Canal Visualised with Endoscopic Control

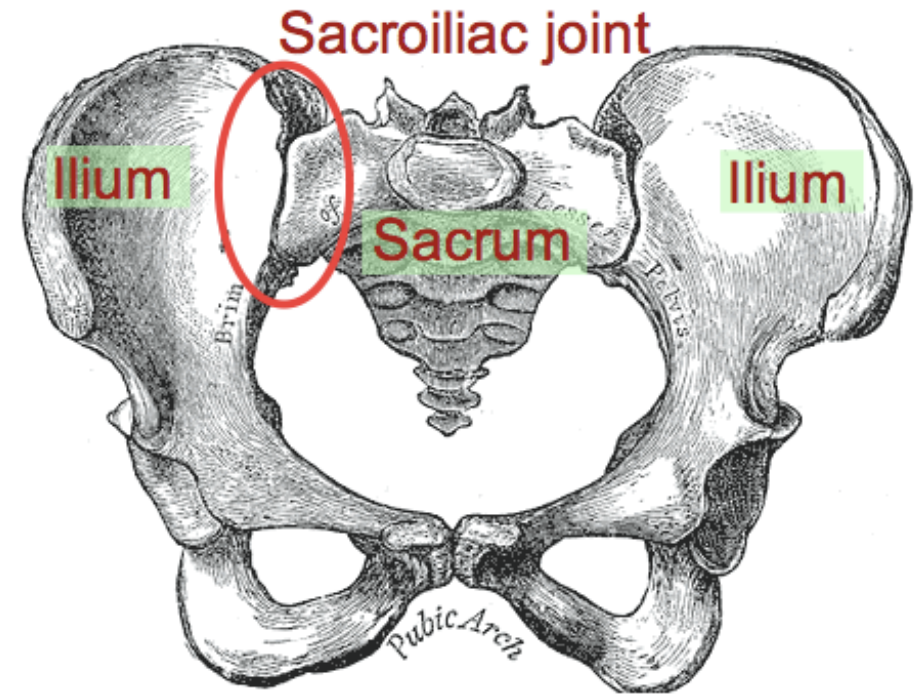




SACROILIAC JOINT PAIN

Buttock & Hip Pain

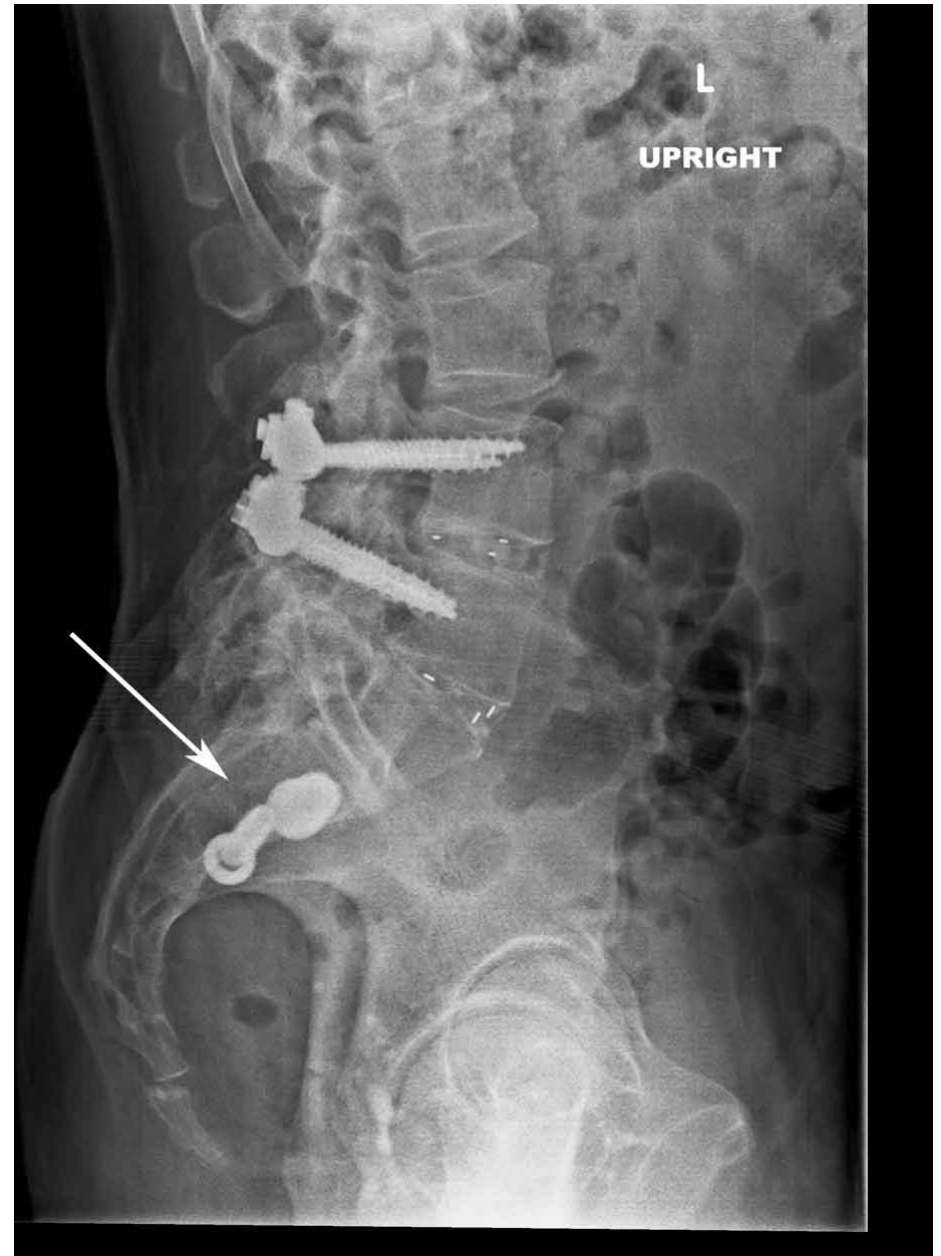
Radiates to Groin



SI JOINT FUSION



SI JOINT FUSION




MILD VS. OPEN SURGERY—BENEFITS TO PATIENTS

Ultra Minimally-Invasive Approach Results in
Shorter Treatment Time and Low Complication Rate

	<i>mild</i> Patients	Open Surgery*
	N≈350	N=394
Intra-Operative Blood Transfusion	0%	10%
Post-Operative Blood Transfusion	0%	5%
Dural Tear	0%	9%
Anesthesia Time— <u>Median</u>	Local / MAC	2 Hours
Hospital Days—Average	< 24 Hours	3.5 Days

MILD



mild Procedure
Epidurogram

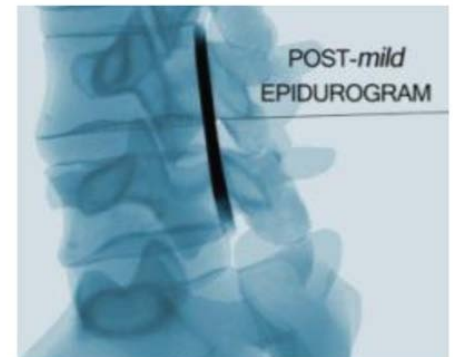
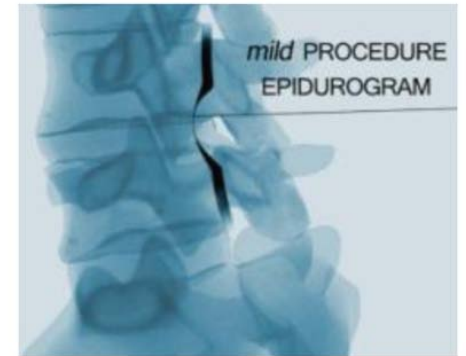
MILD — MINIMALLY INVASIVE LUMBAR DECOMPRESSION



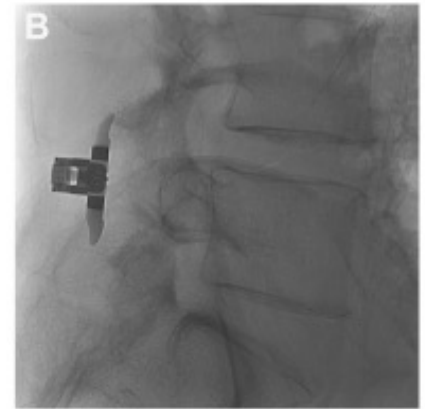
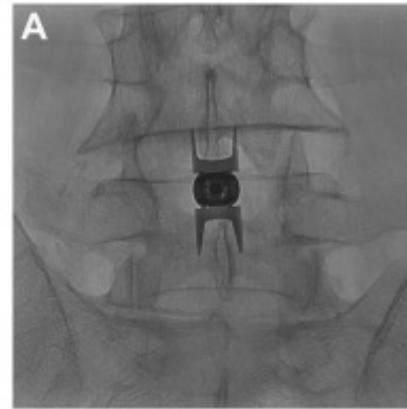
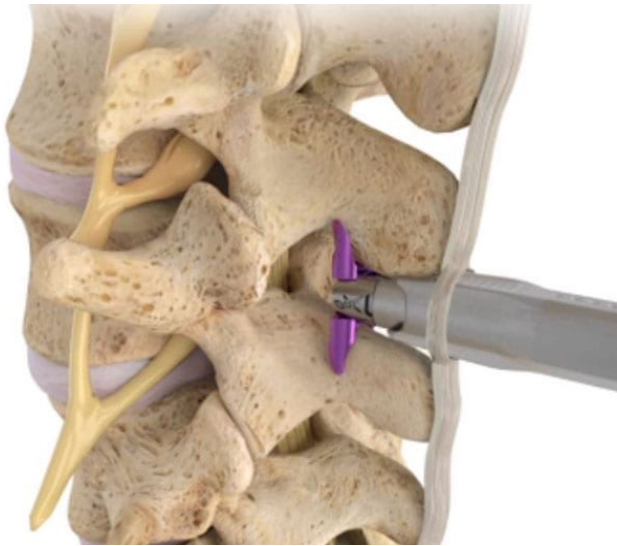
Debulk The Ligamentum Flavum

treats LSS by debulking the ligamentum flavum and portions of the lamina to restore space in the spinal canal.

The restoration of space in the canal can be confirmed during the procedure utilizing the epidurogram.



SPINAL STENOSIS

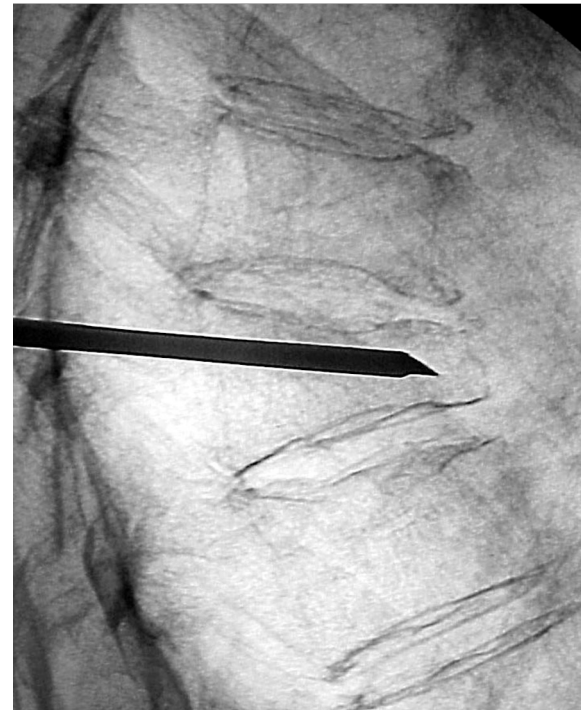


VERTEBRAL COMPRESSION FRACTURES

Options:

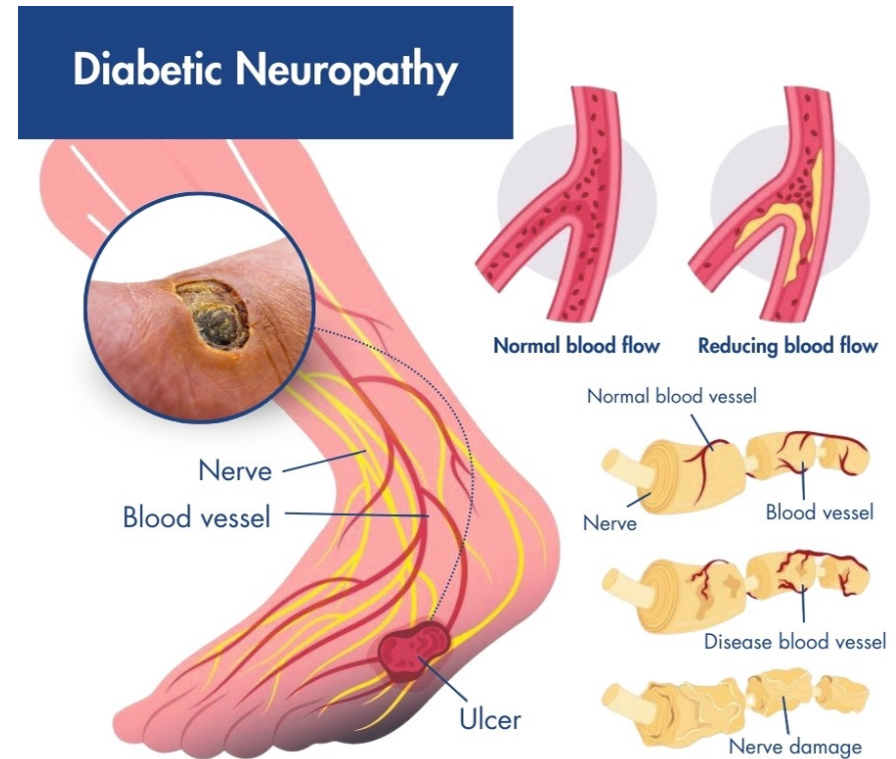
- Vertebroplasty
- Kyphoplasty
- Vertebral Augmentation

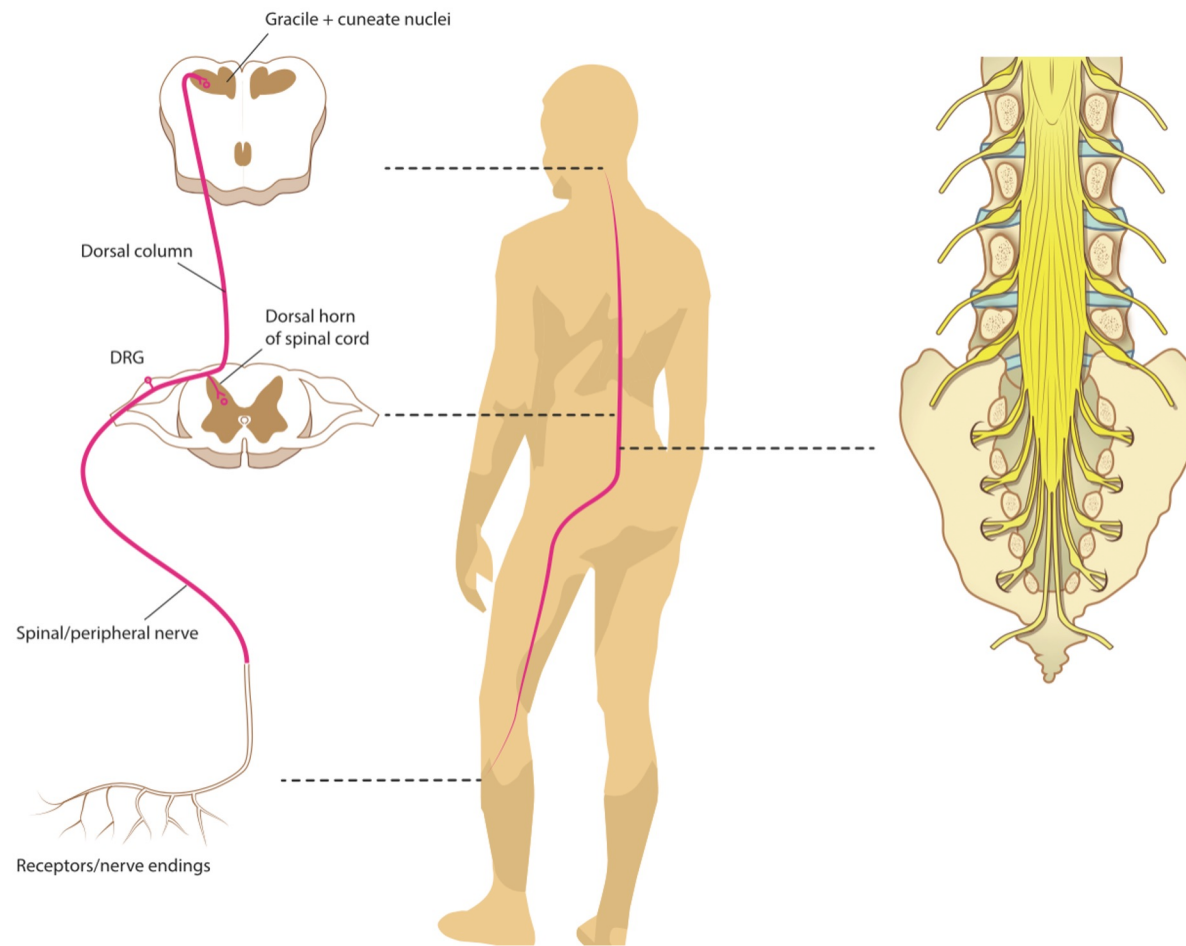
All variations of the same concept.

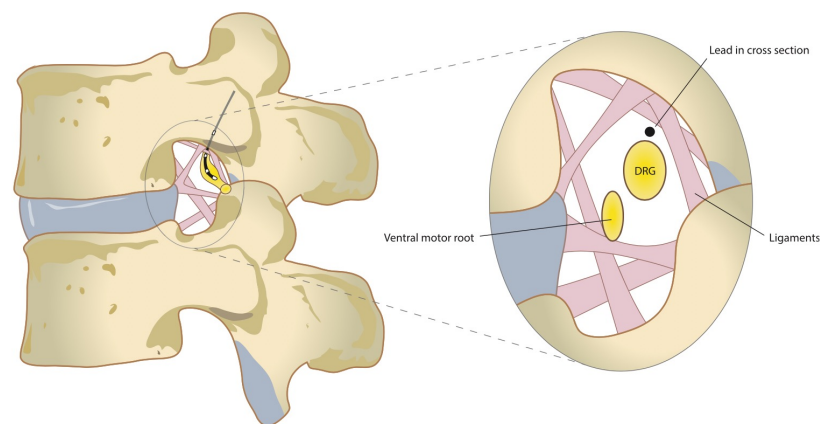
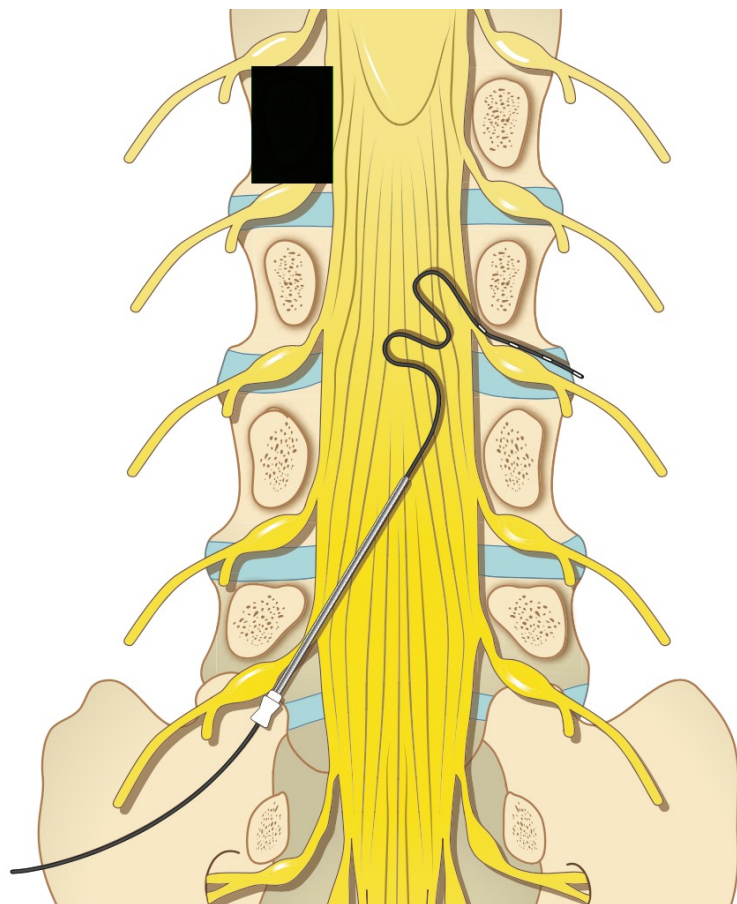


PAINFUL NEUROPATHY — DIABETES

Approximately one in five people with diabetes develop painful diabetic neuropathy (pDPN), with estimates ranging from 15% to 30% in the US. This means that out of the millions affected by diabetes, a significant portion will experience the debilitating pain associated with pDPN.








DORSAL ROOT GANGLION SCS

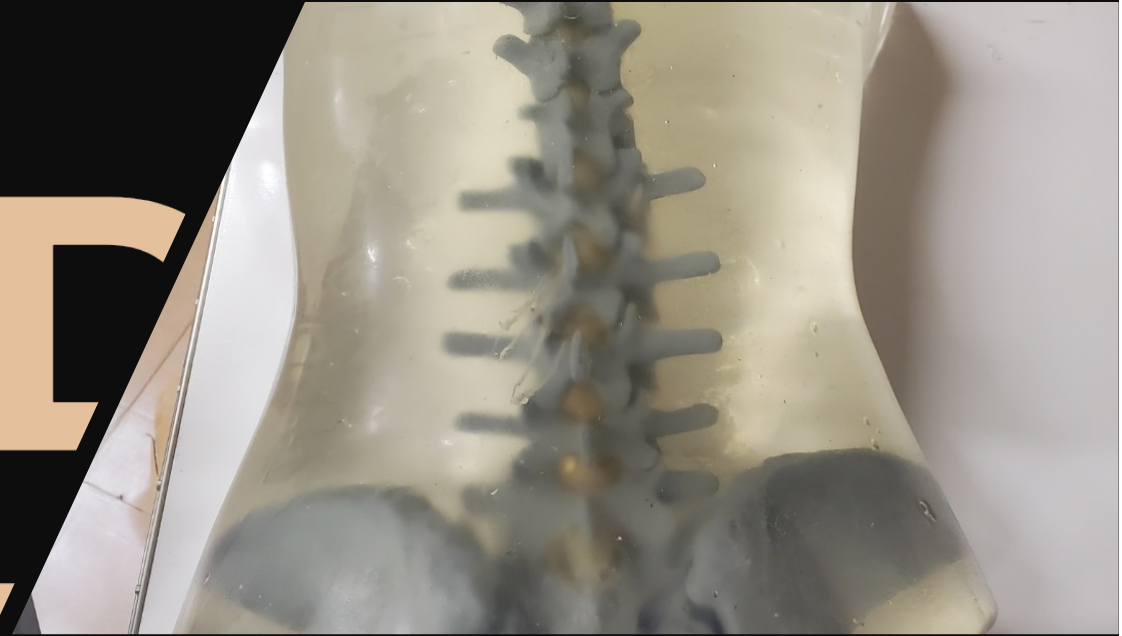
Figure 2. The narrow, flexible dorsal root ganglion (DRG) stimulation lead is maneuvered via an epidural needle into the vertebral foramen to appose the DRG. An S-shaped strain relief loop is placed in the epidural space, and tissue anchors (not pictured) are employed.



MEDC

MEDICAL EDUCATION CO

YARD Science Science F



QUESTIONS?





YARD
Education
Foundation

Education Reimagined



YARD
Sciences

Science Reimagined

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Q & A

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