
Evidence based management of low back pain – surprising findings from historical research

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Non-specific low back pain

Chris Maher, Martin Underwood, Rachele Buchbinder

Lancet 2017; 389: 736–47

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(Prof C Maher PhD); Warwick

Non-specific low back pain affects people of all ages and is a leading contributor to disease burden worldwide. Management guidelines endorse triage to identify the rare cases of low back pain that are caused by medically serious pathology, and so require diagnostic work-up or specialist referral, or both. Because non-specific low back pain does not have a known pathoanatomical cause, treatment focuses on reducing pain and its consequences. Management consists of education and reassurance, analgesic medicines, non-pharmacological therapies, and timely review. The clinical course of low back pain is often favourable, thus many patients require little if any formal medical care. Two treatment strategies are currently used, a stepped approach beginning with more simple care that is progressed if the patient does not respond, and the use of simple risk prediction methods to individualise the amount and type of care provided. The overuse of imaging, opioids, and surgery remains a widespread problem.

“non-specific low back pain does not have a known pathoanatomical cause”

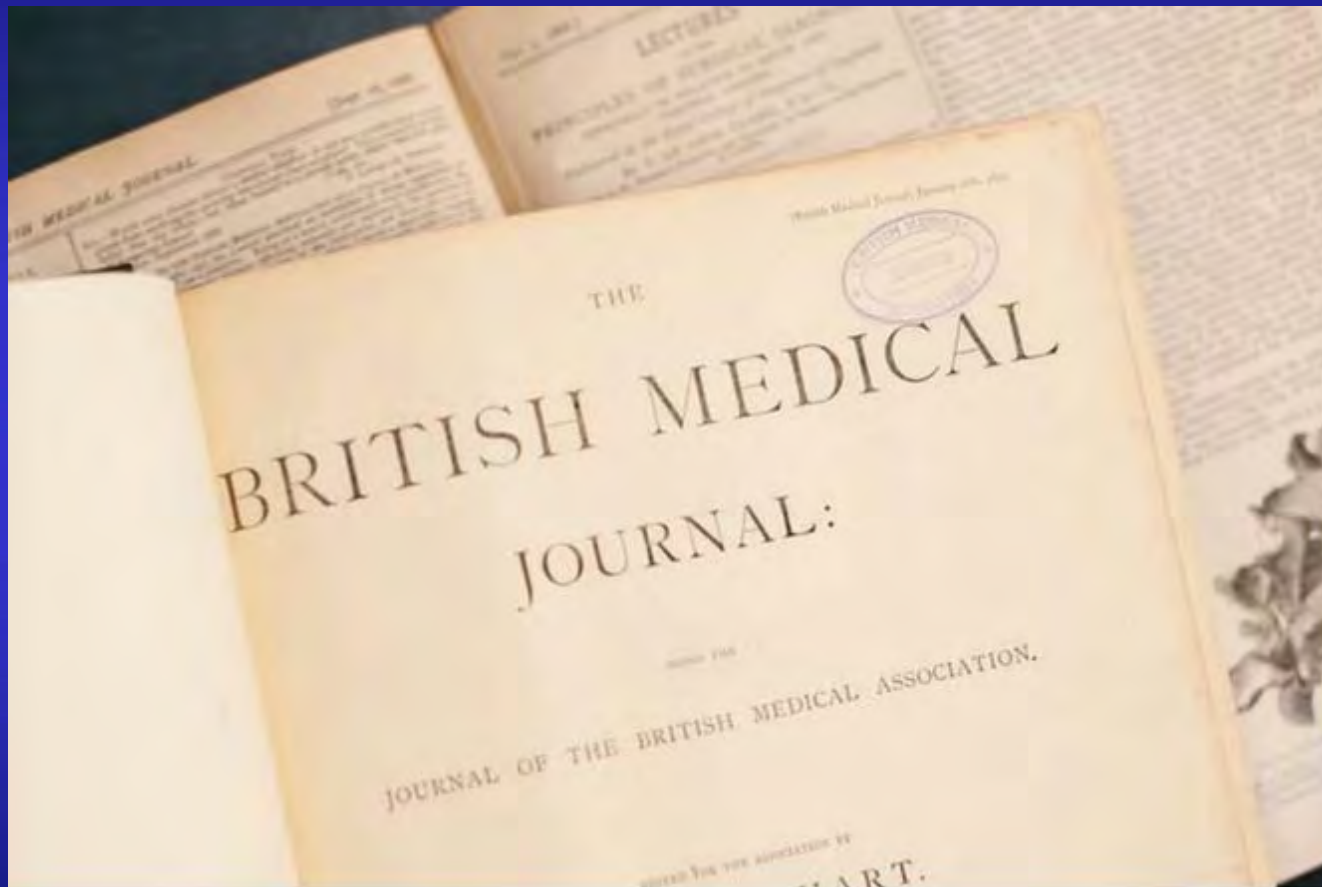


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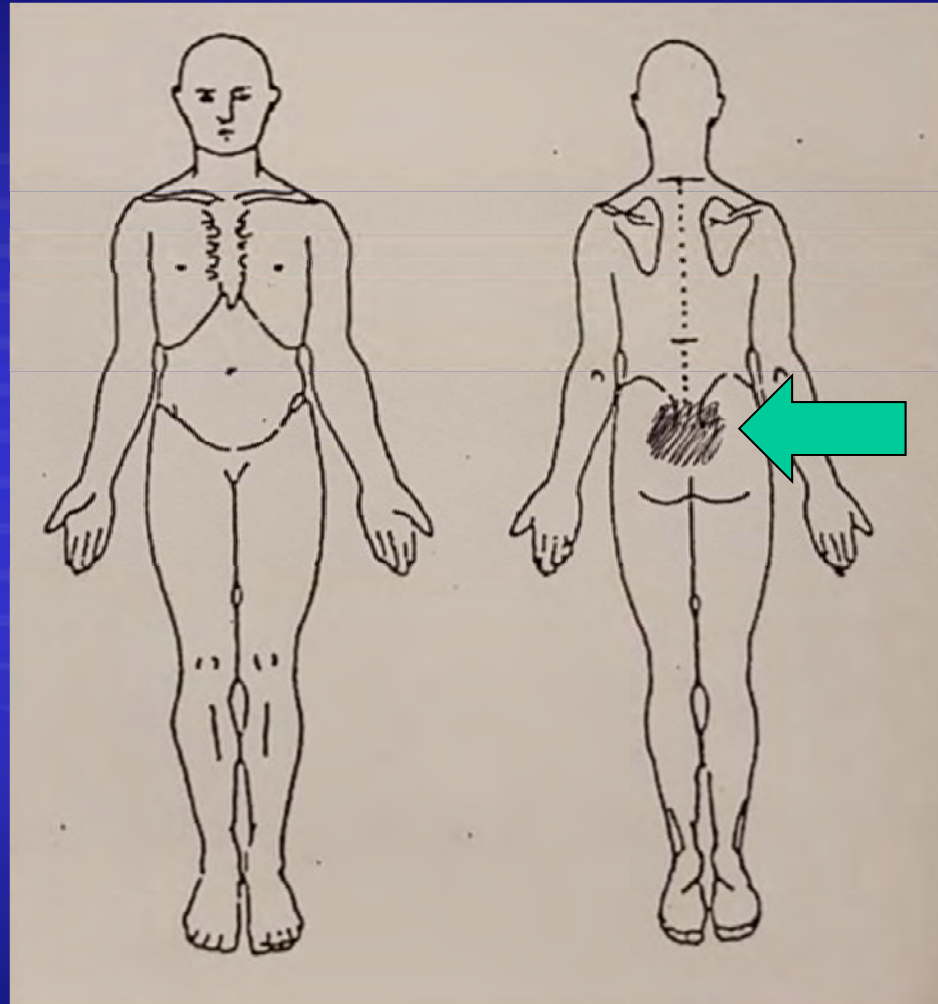
Maher, C., Underwood, M., & Buchbinder, R. (2017). Non-specific low back pain. *The Lancet*, 389(10070), 736–747.

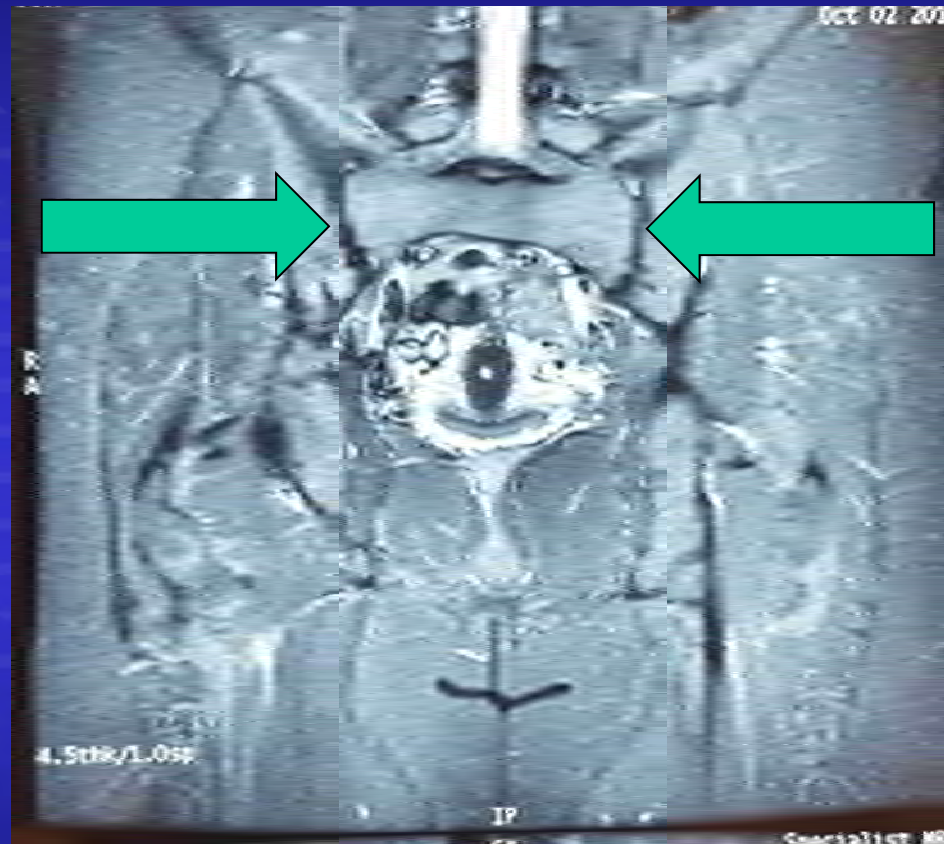
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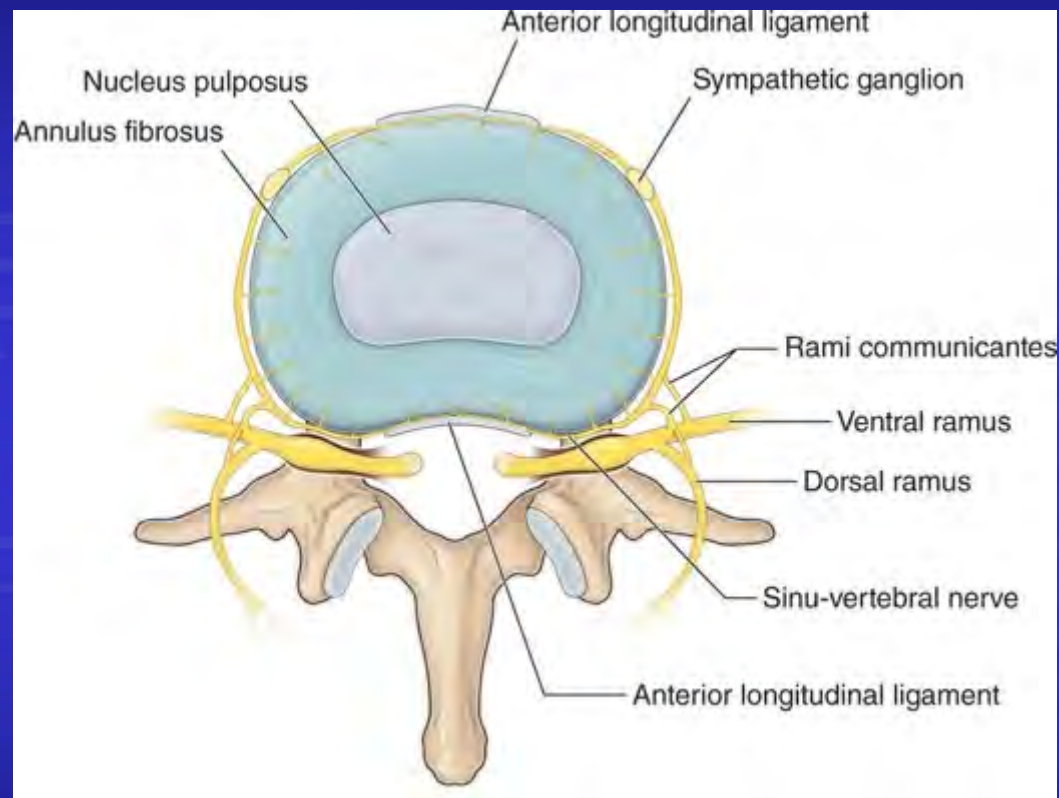


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<https://aneskey.com/intradiscal-electrothermal-therapy/>



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*FROM THE ORTHOPAEDIC CLINIC, LUND, SWEDEN.
HEAD: PROFESSOR GUNNAR WIBERG*

**BACK PAIN IN RELATION TO THE NERVE SUPPLY
OF THE INTERVERTEBRAL DISC**



Gunnar Wiberg (1949) Back Pain in Relation to
the Nerve Supply of the Intervertebral Disc, *Acta
Orthopaedica Scandinavica*, 19:2, 211-221.

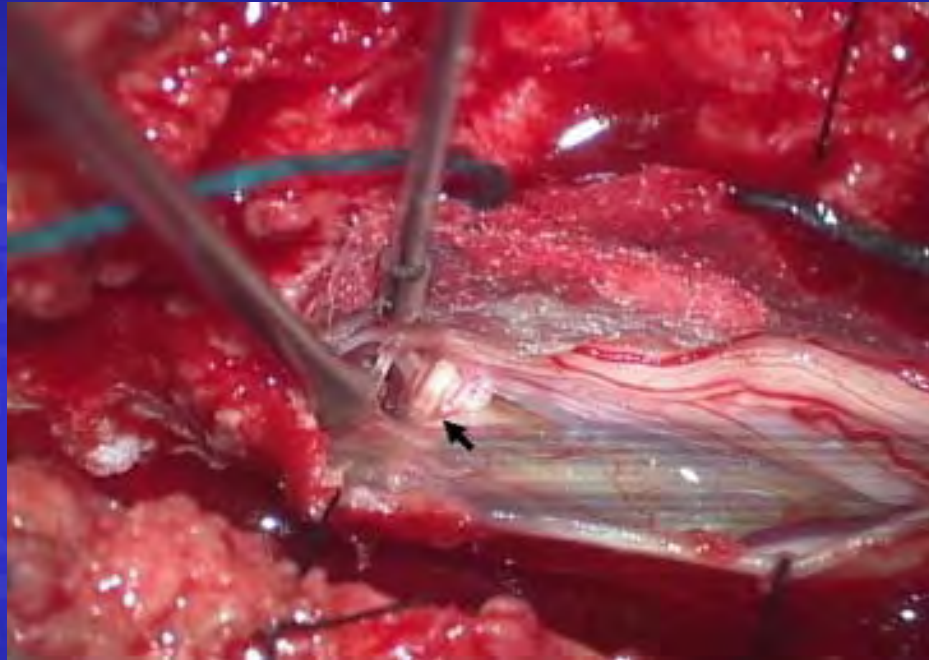
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“....touching the disc
itself caused pain of
lumbosacral distribution
in nearly all cases...”



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Gunnar Wiberg (1949) Back Pain in Relation to
the Nerve Supply of the Intervertebral Disc, Acta
Orthopaedica Scandinavica, 19:2, 211-221.

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*FROM KAROLINSKA INSTITUTET, ORTHOPAEDIC CLINIC,
STOCKHOLM*

CHIEF: PROFESSOR STEN FRIBERG

**AN ATTEMPT TO DIAGNOSE THE LEVEL
OF A DISC LESION CLINICALLY BY
DISC PUNCTURE**

BY

CARL HIRSCH, M.D.



Carl Hirsch (1949) An Attempt to Diagnose
the Level of a Disc Lesion Clinically by Disc
Puncture, Acta Orthopaedica Scandinavica.



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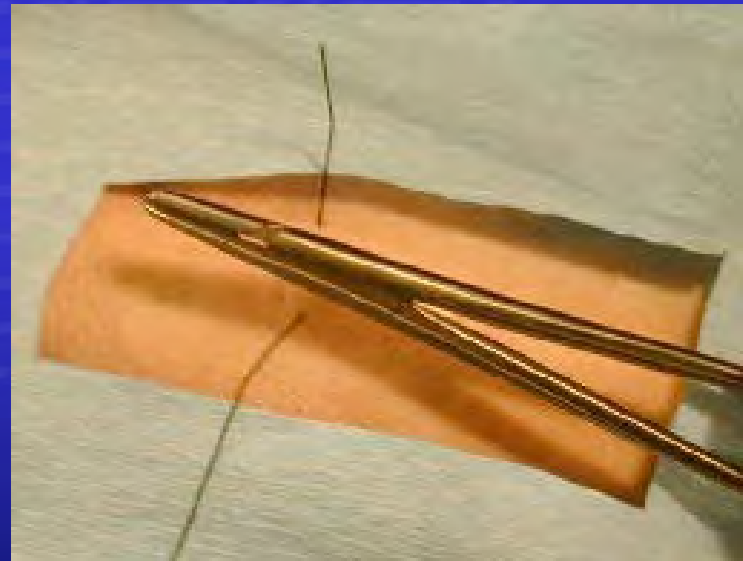
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Sciatica and the Intervertebral Disc

AN EXPERIMENTAL STUDY

BY M. J. SMYTH, M.B., B.CH., F.R.C.S., AND V. WRIGHT, M.D., M.R.C.P.,
LEEDS, ENGLAND

From the Orthopaedic Department, St. James's Hospital, and the University of Leeds, Leeds



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Sciatica and the intervertebral disc; an experimental study. J Bone Joint Surg Am. 1958 Dec;40-A(6):1401-18.

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The Tissue Origin of Low Back Pain and Sciatica:

A Report of Pain Response to Tissue Stimulation
During Operations on the Lumbar Spine Using
Local Anesthesia

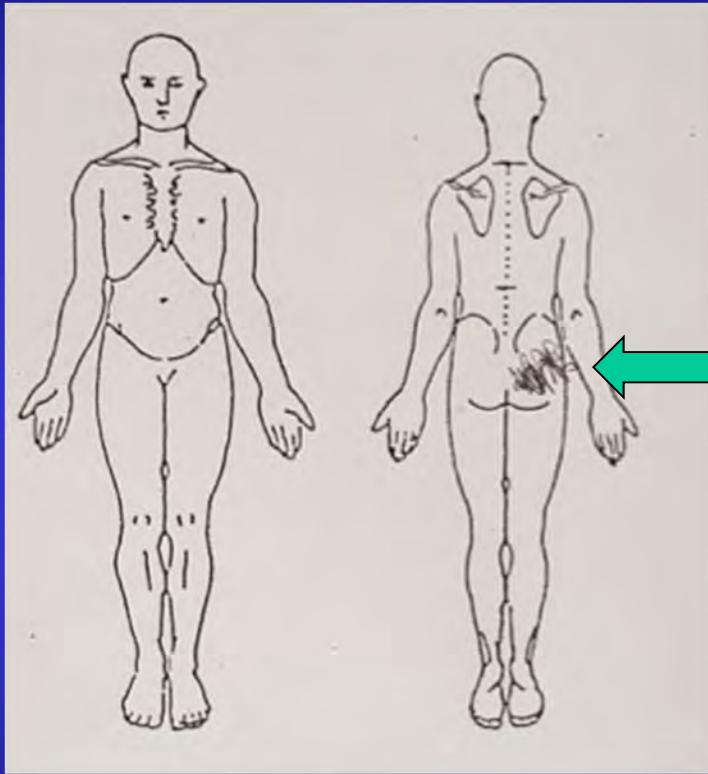


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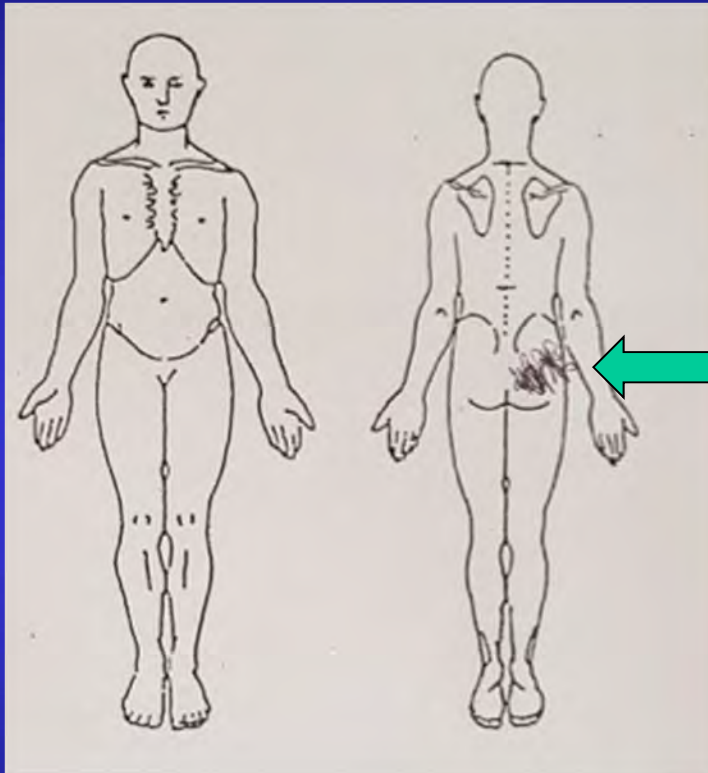


January 2018

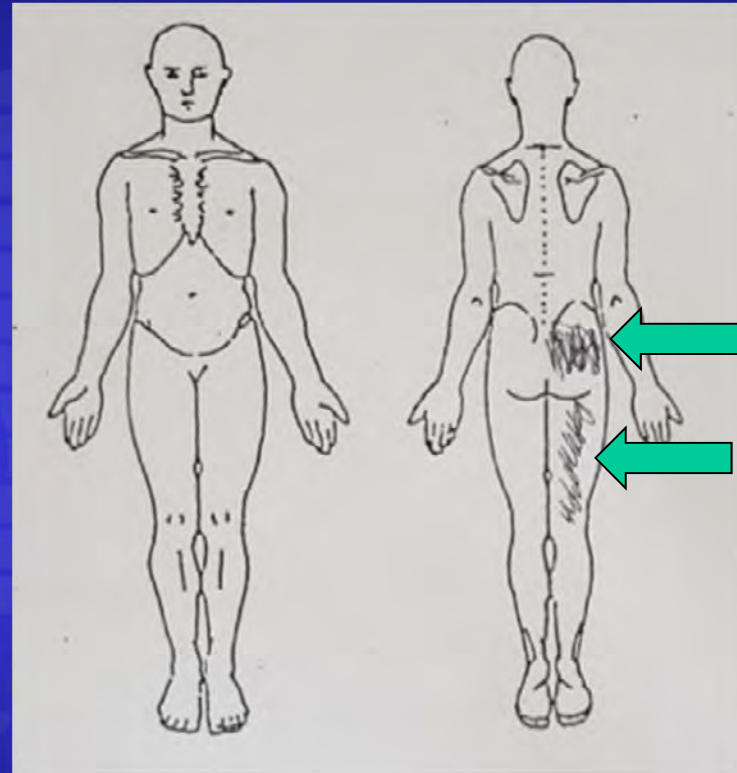


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January 2018



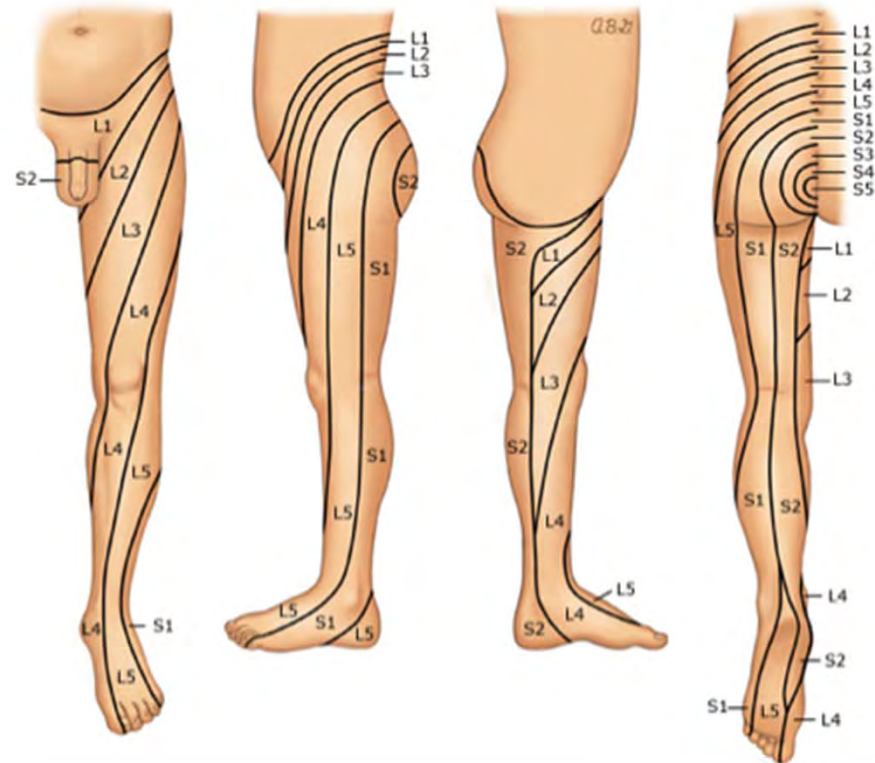
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Lumbosacral dermatomes



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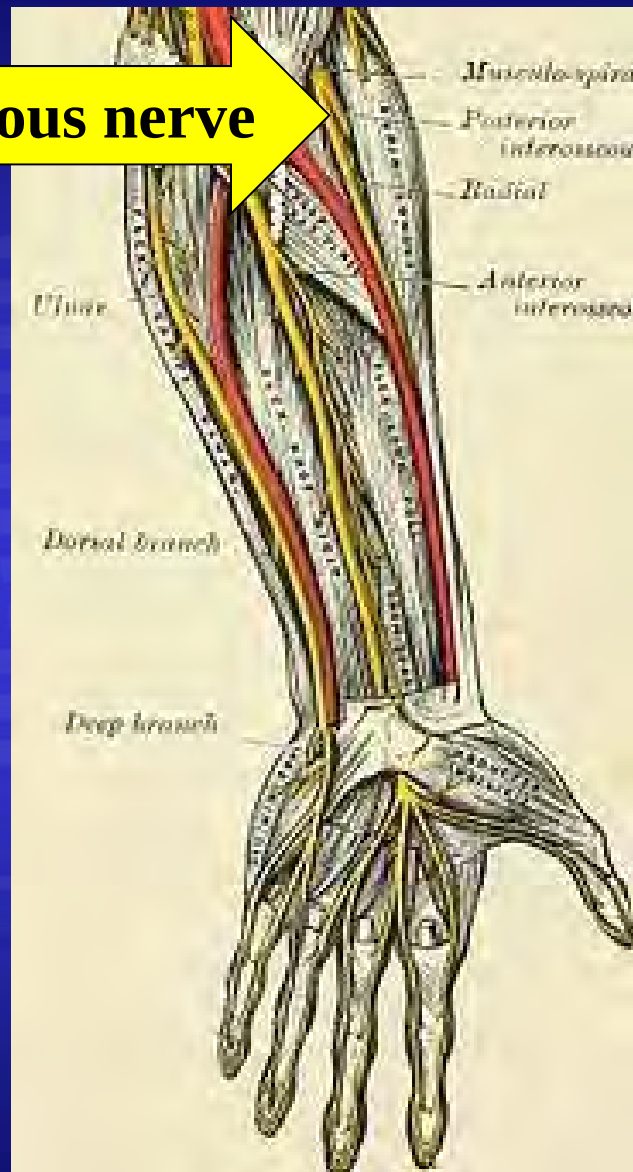


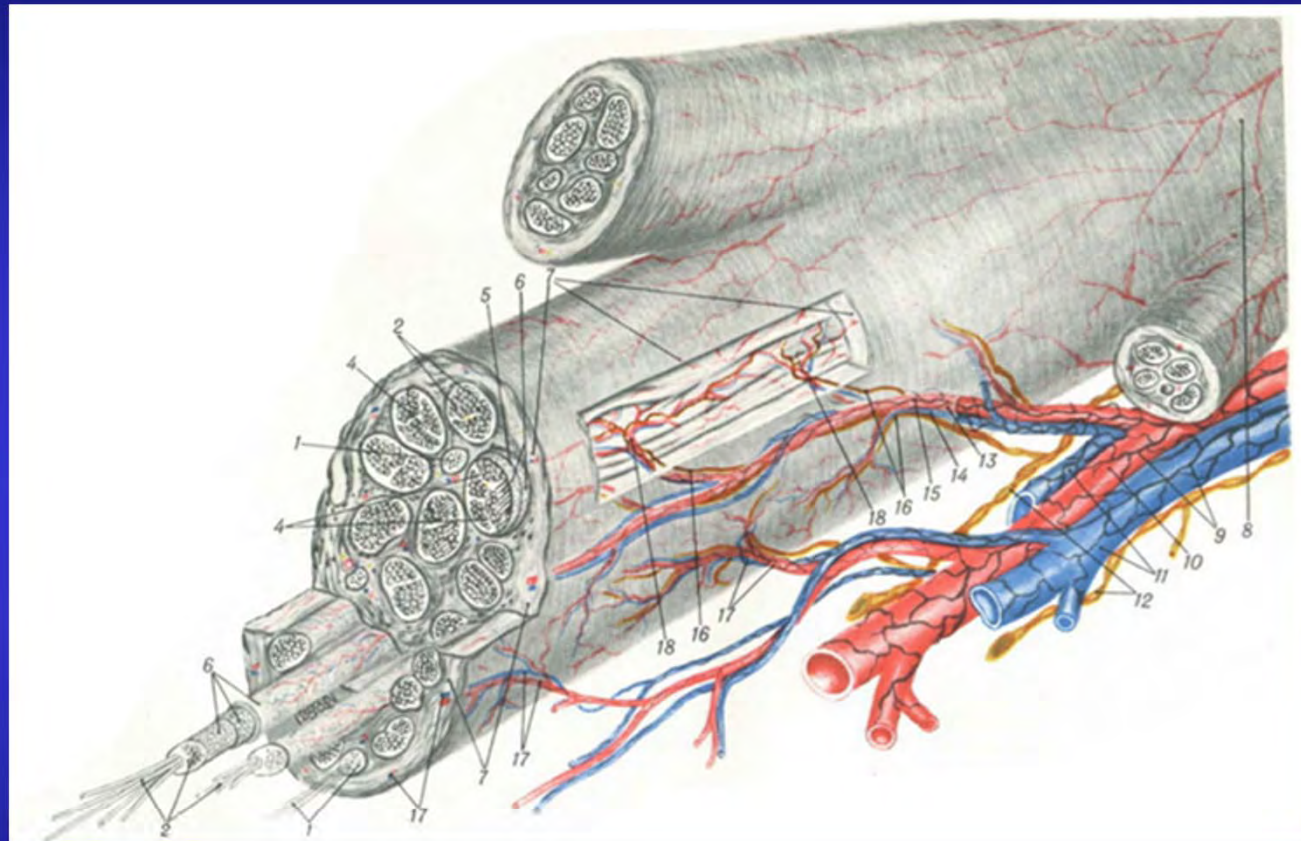
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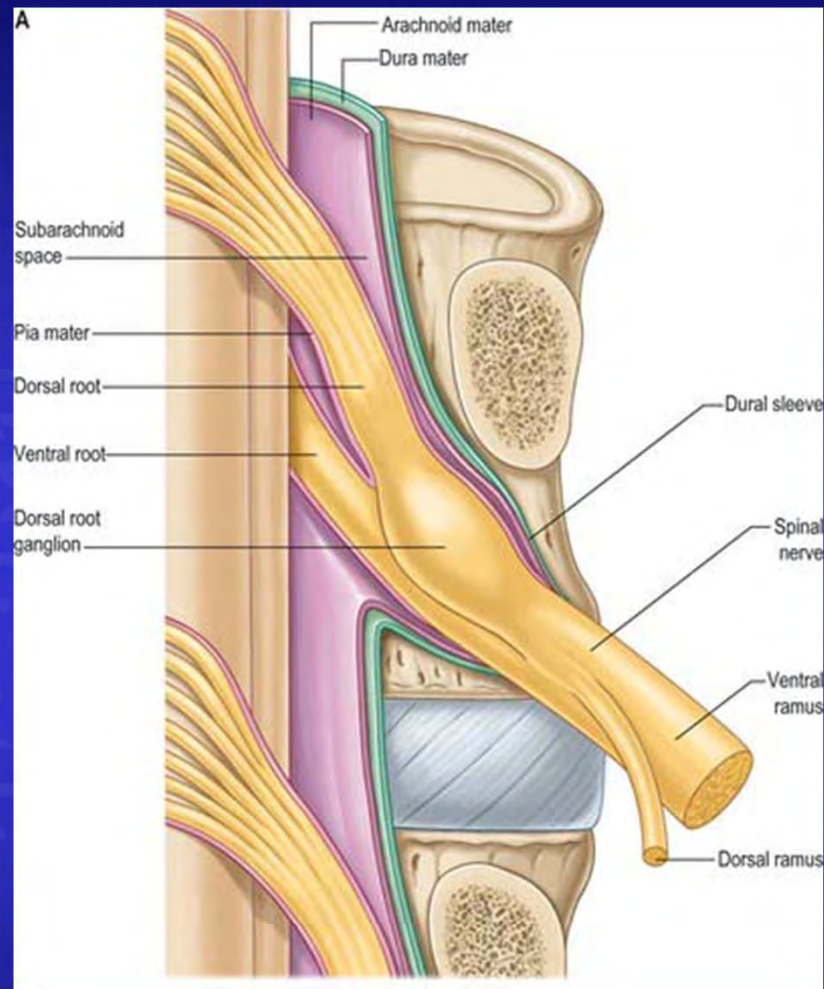
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Posterior interosseous nerve







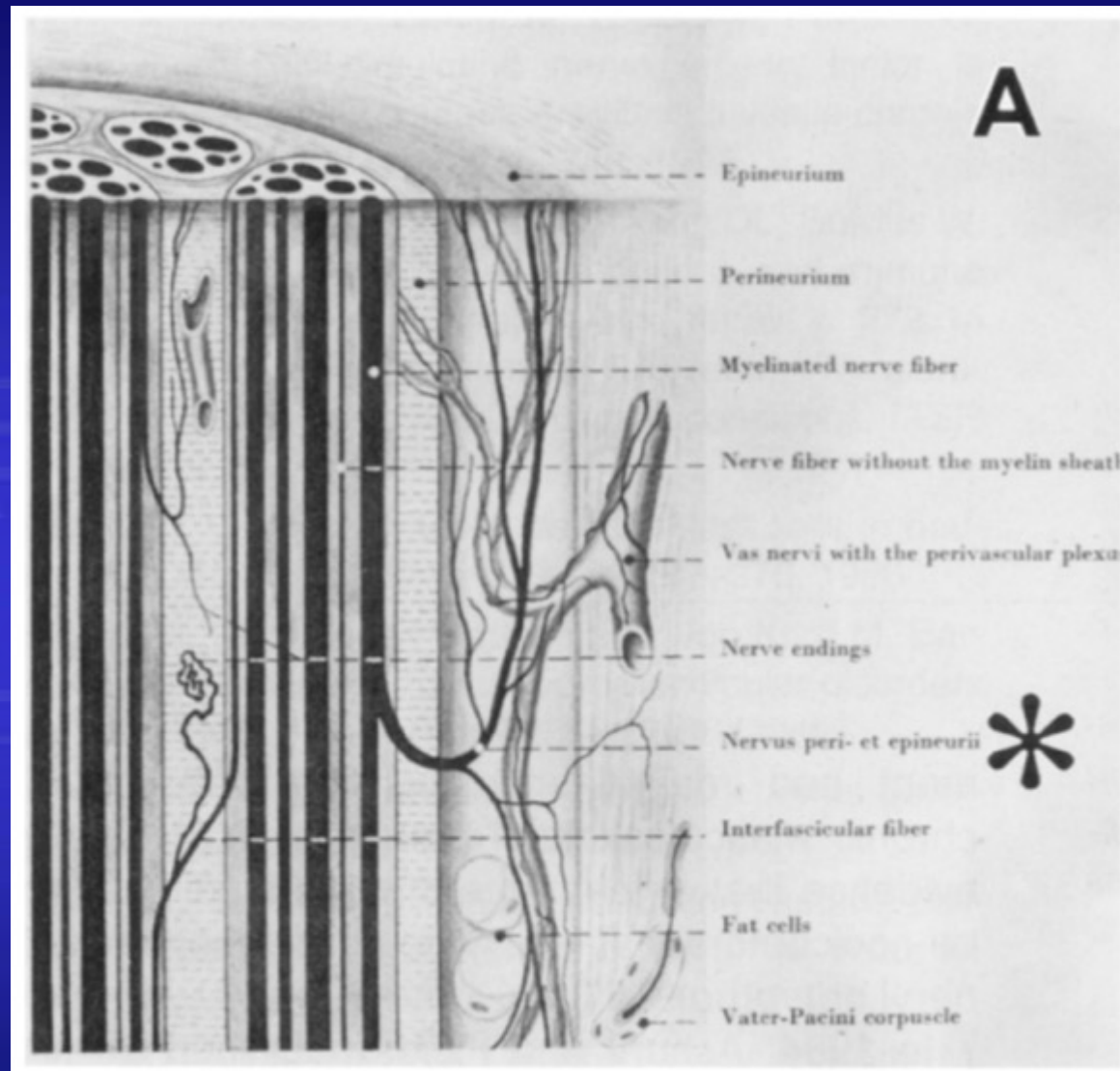
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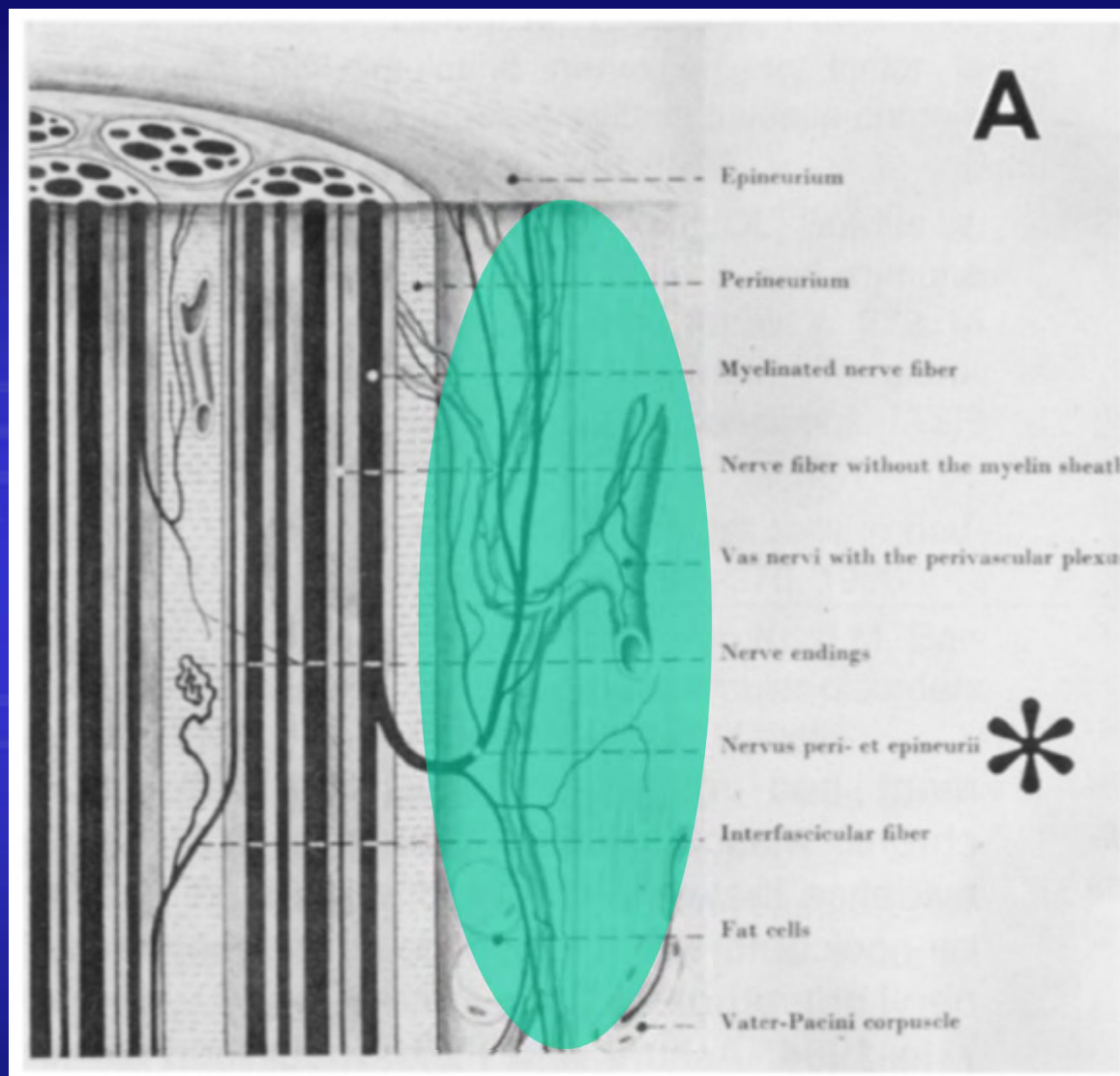


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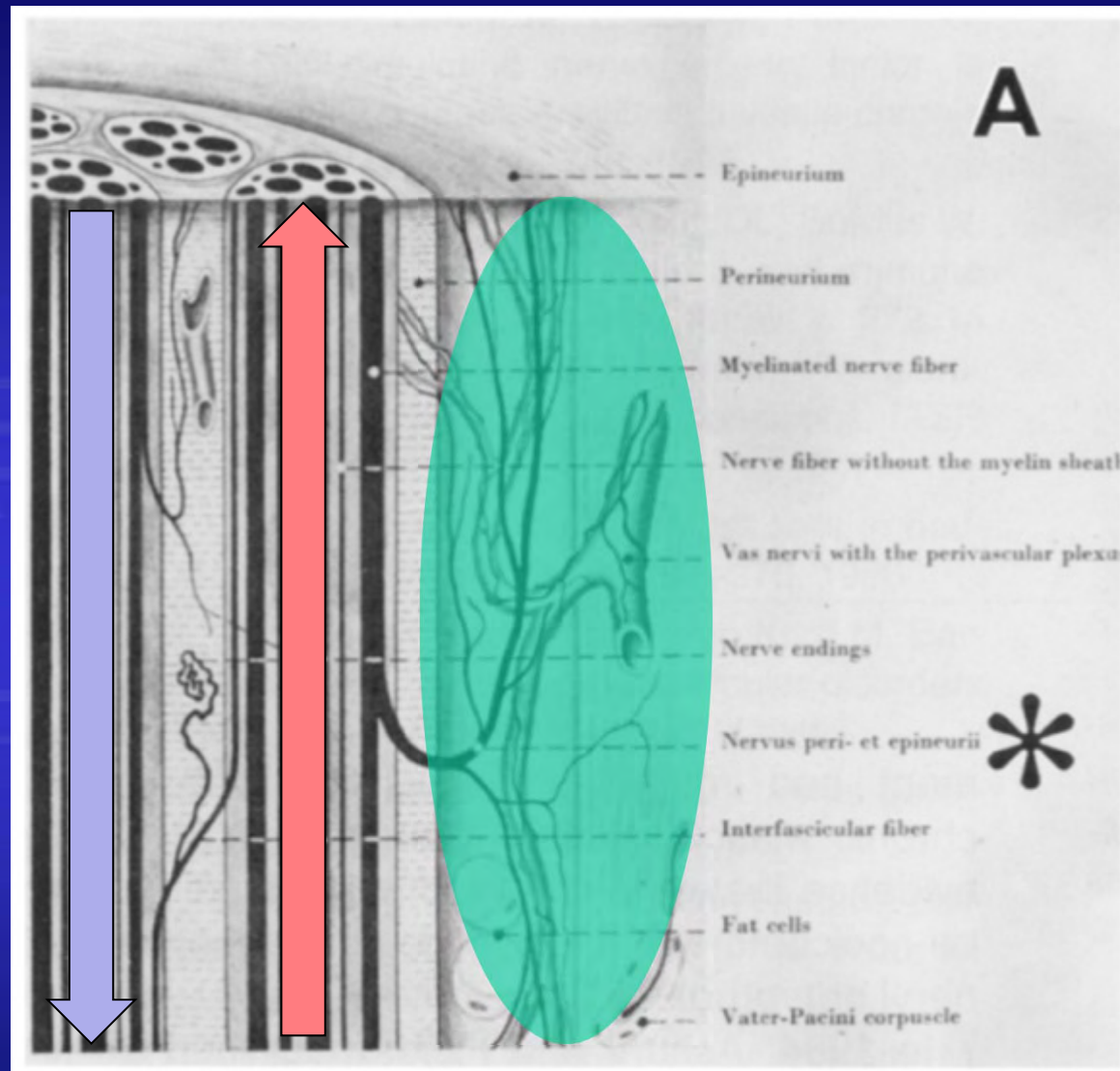


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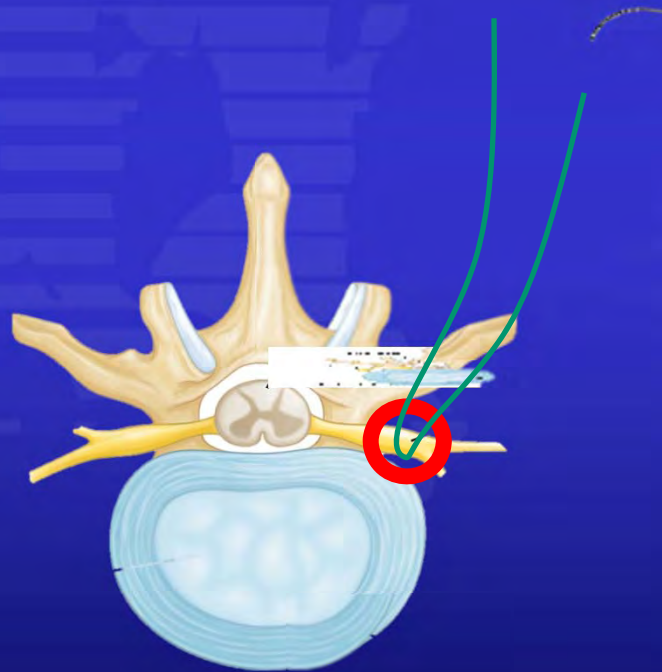
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Sciatica and the Intervertebral Disc

AN EXPERIMENTAL STUDY

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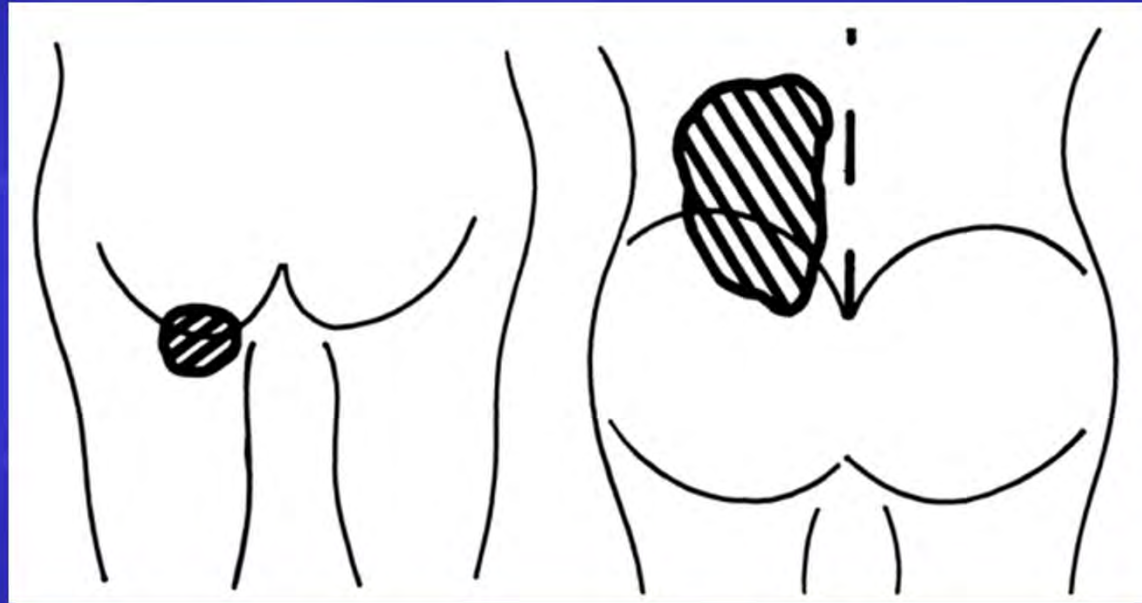


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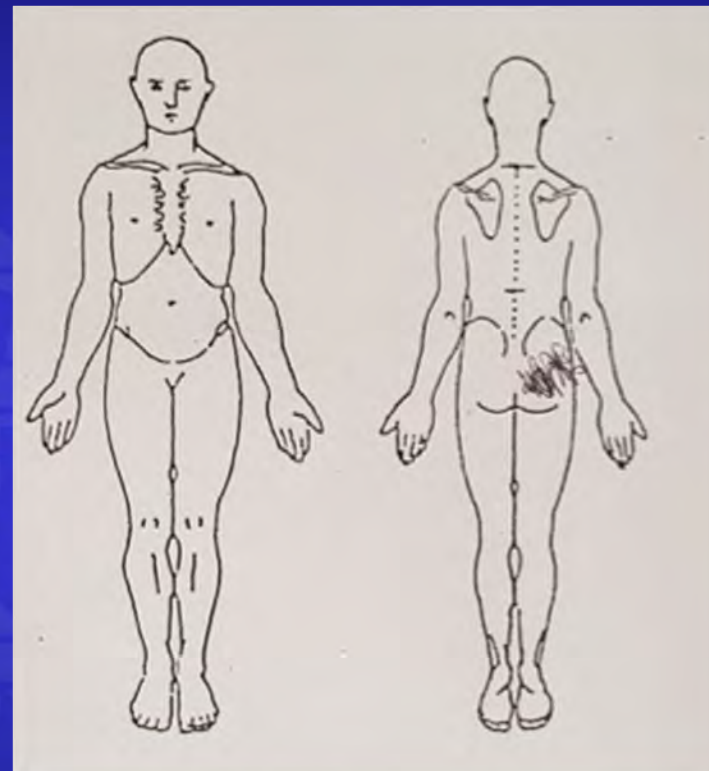
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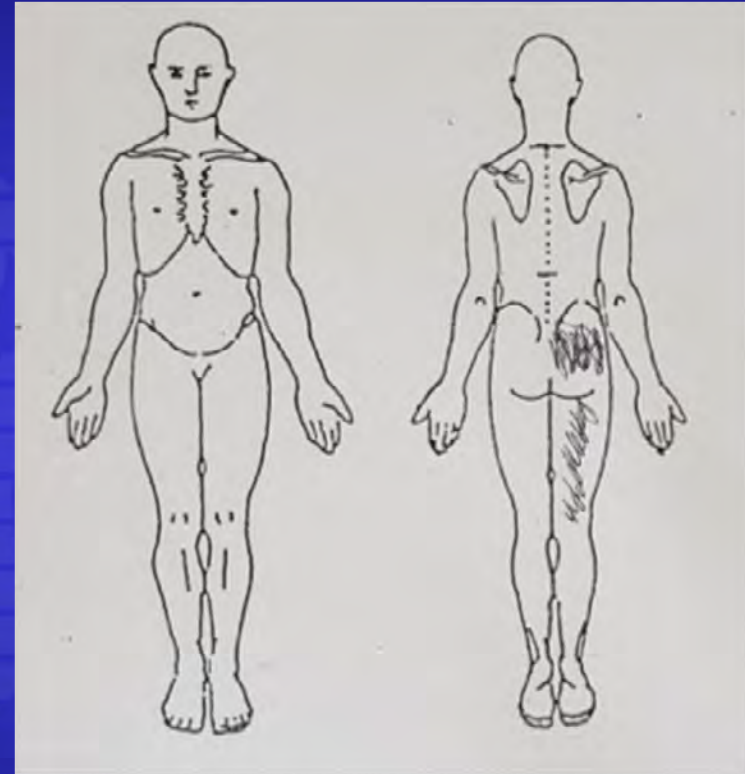
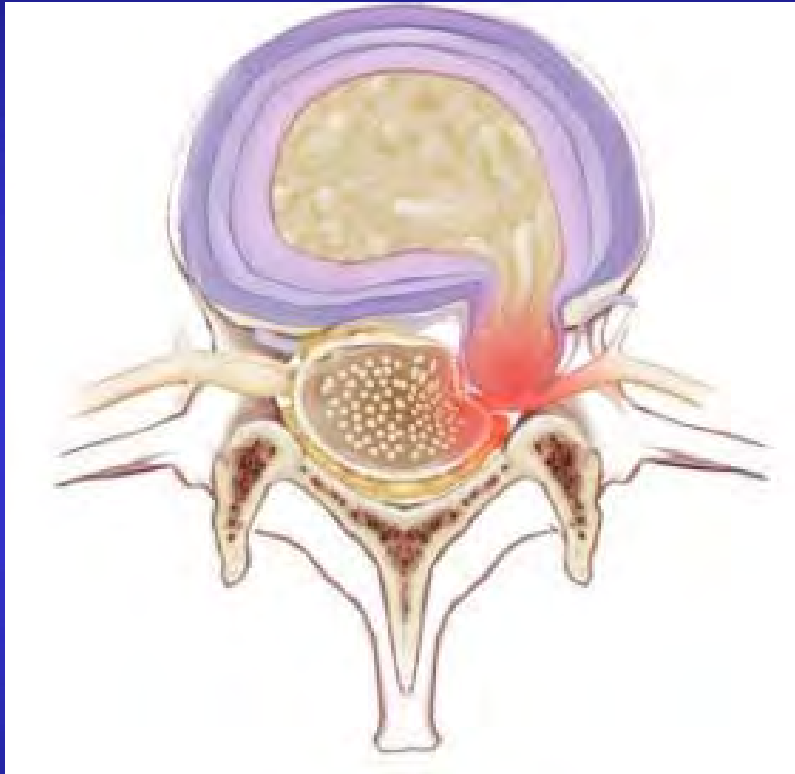


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SPINE Volume 23, Number 23, pp 2601-2607
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The Reduction of Chronic Nonspecific Low Back Pain Through the Control of Early Morning Lumbar Flexion

A Randomized Controlled Trial



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The Reduction of Chronic Nonspecific Low Back Pain Through the Control of Early Morning Lumbar Flexion: A Randomized Controlled Trial. Spine (Phila Pa 1976). 1998 Dec 1;23(23):2601-7.

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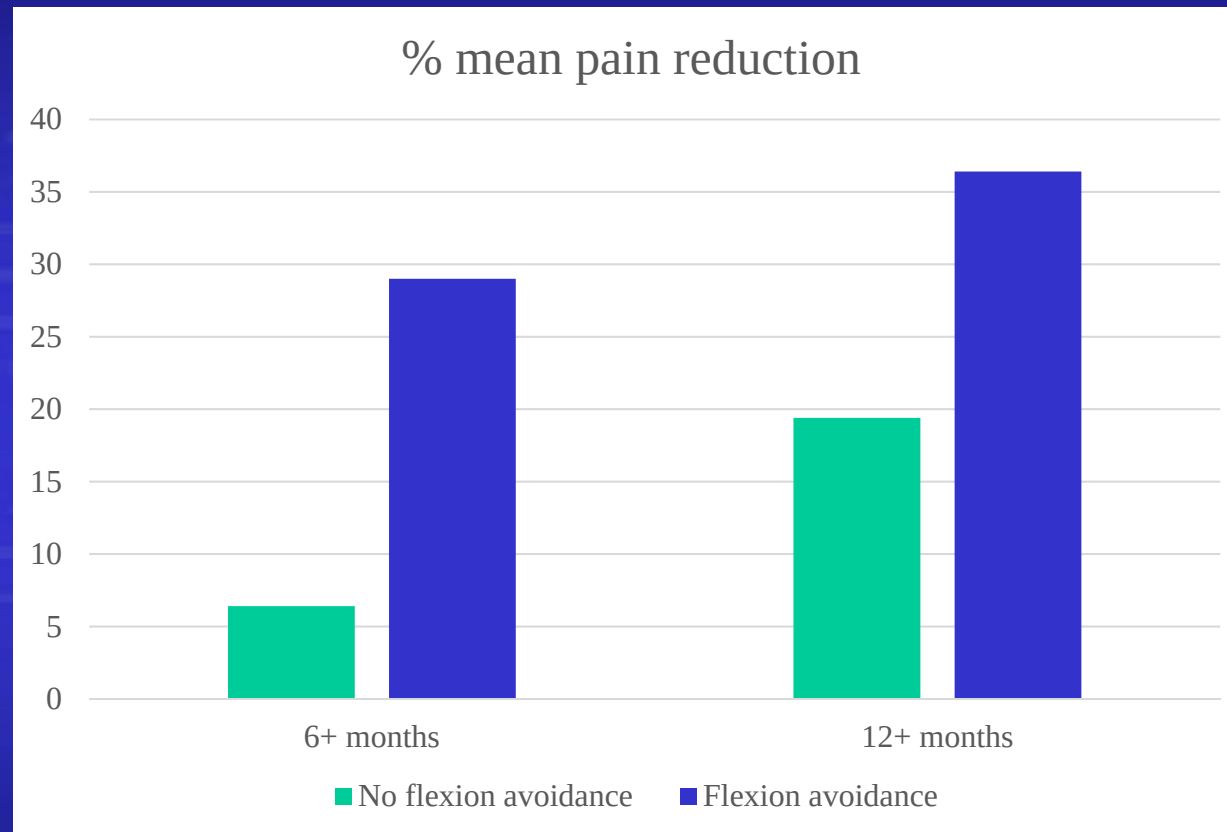


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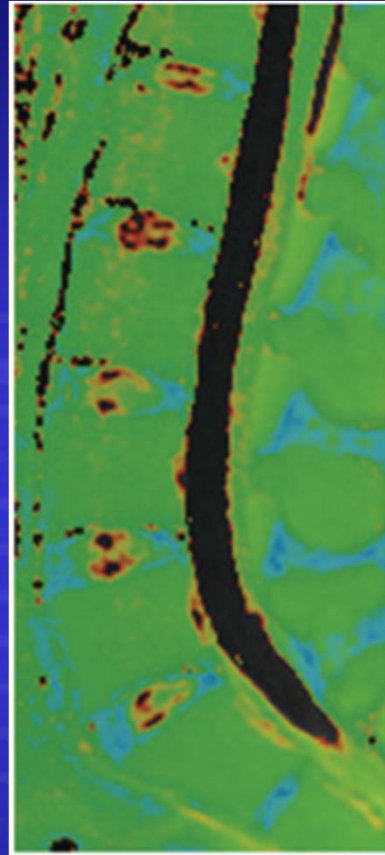
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Morning

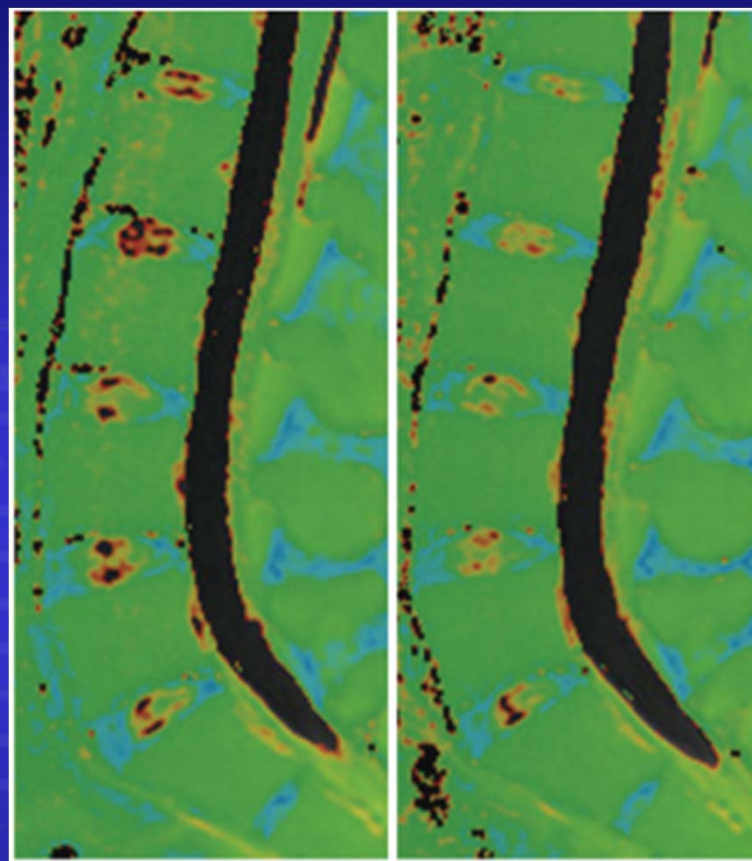


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Morning

Evening



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Segmental Quantitative MR Imaging Analysis of Diurnal Variation of Water Content in the Lumbar Intervertebral Discs. Korean Journal of Radiology. 2015;16(1):139-145. doi:10.3348/kjr.2015.16.1.139.

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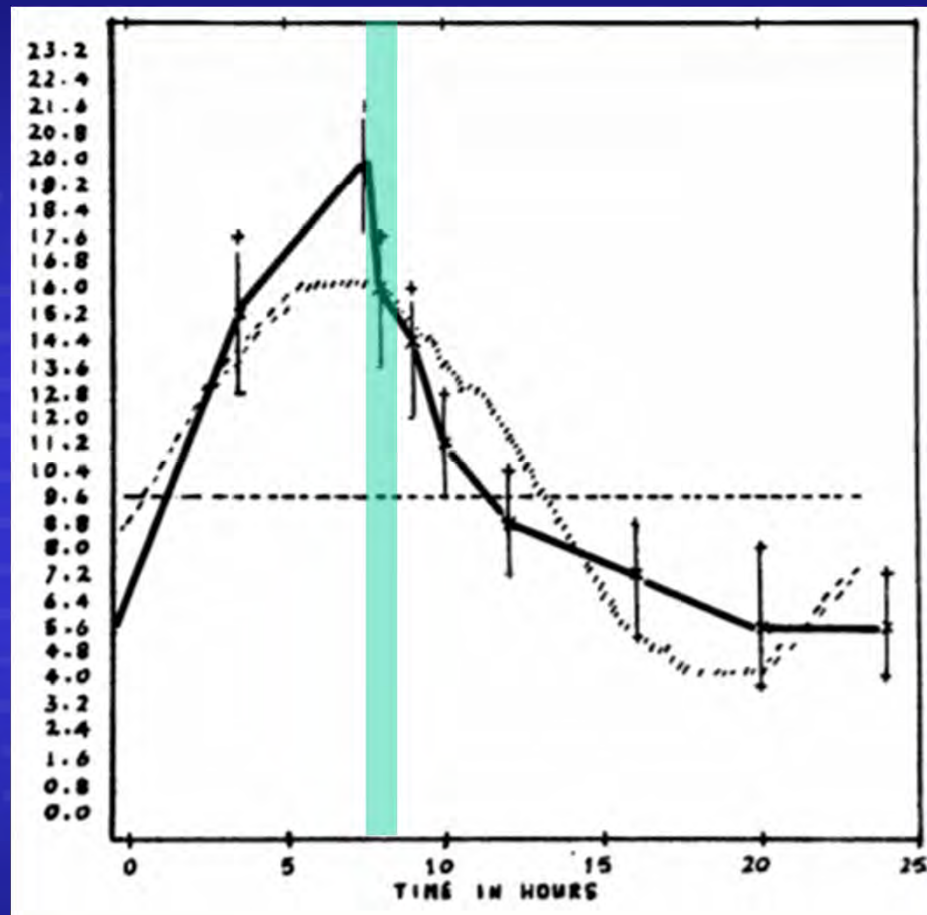


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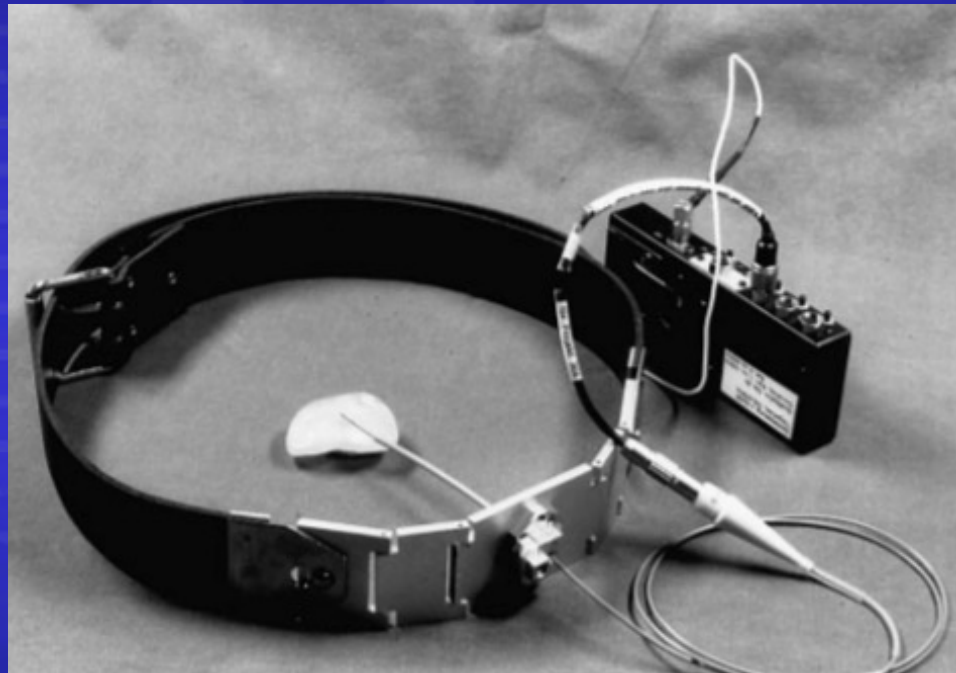


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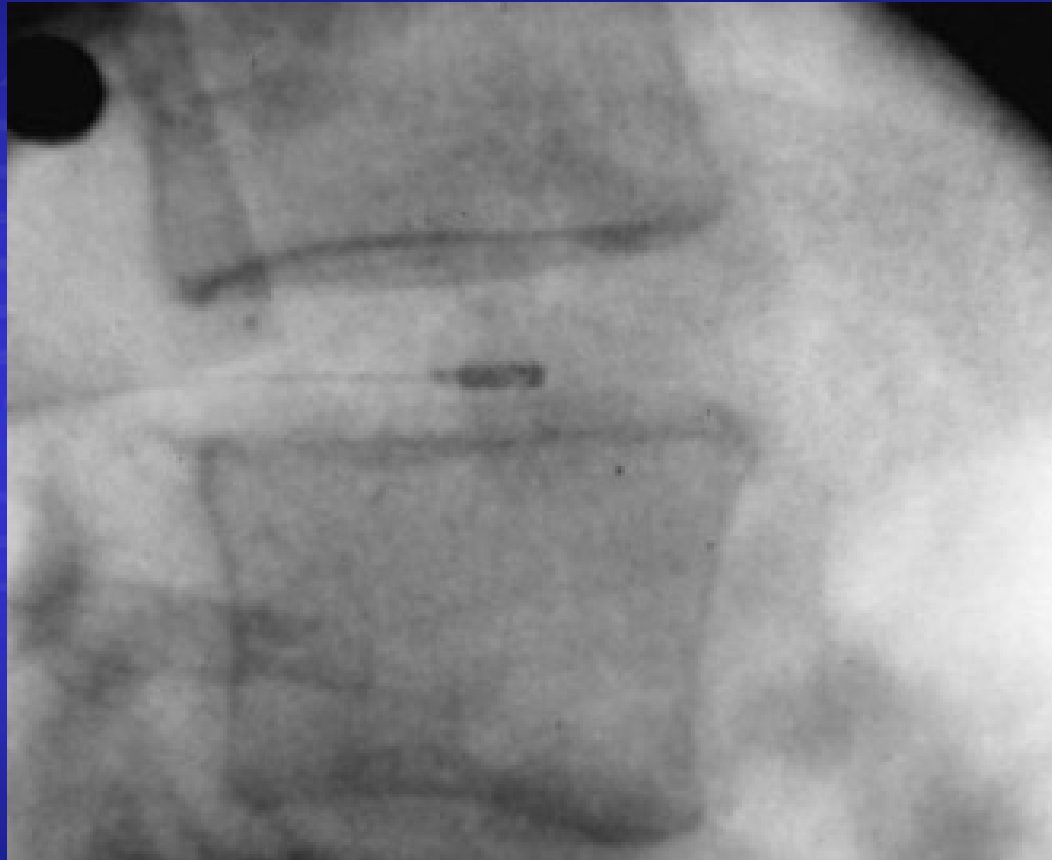
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New In Vivo Measurements of Pressures in the Intervertebral Disc
in Daily Life. Spine (Phila Pa 1976). 1999 Apr 15;24(8):755-62.

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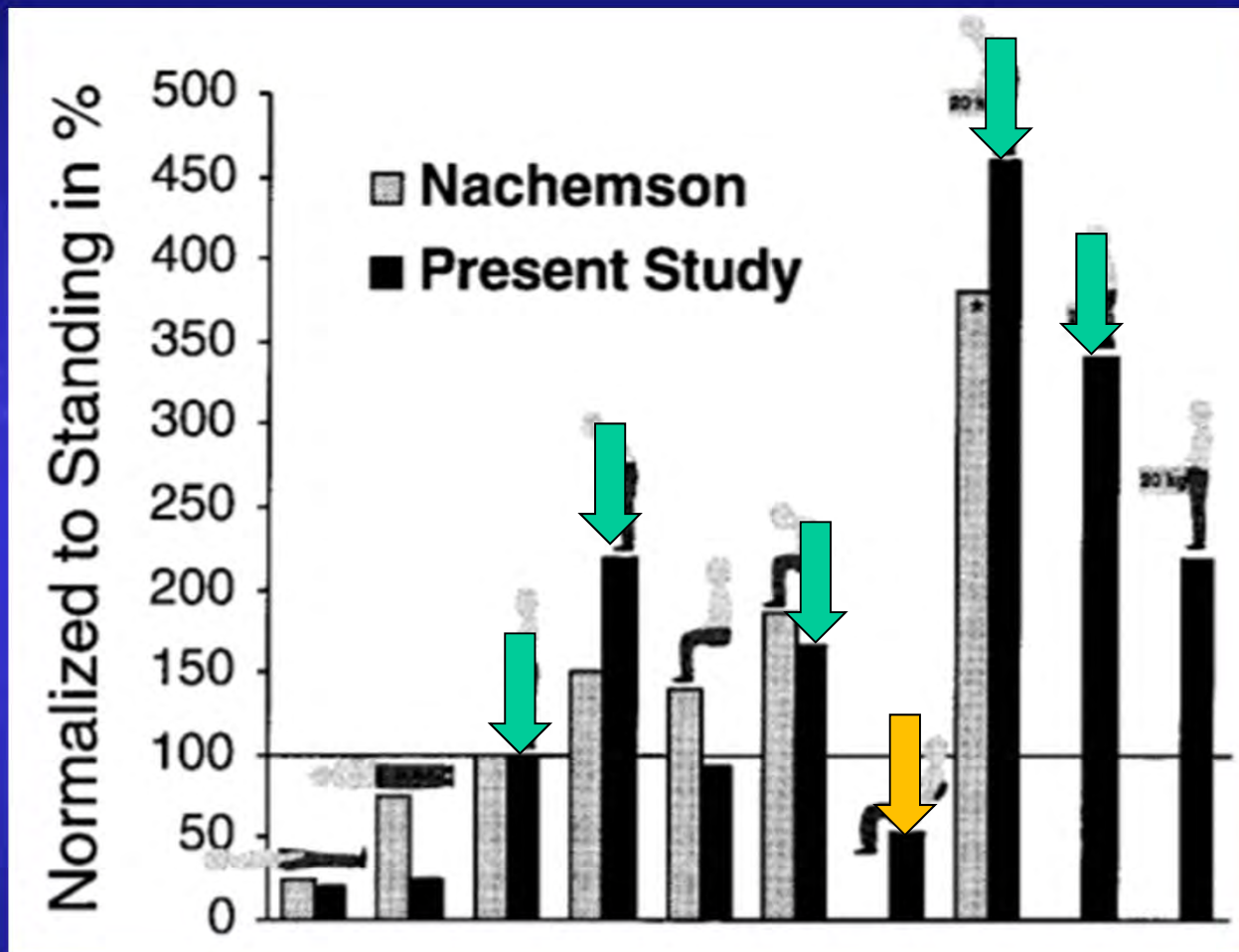
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Diurnal variations in the stresses on the lumbar spine. Spine (Phila Pa 1976). 1987 Mar;12(2):130-7.

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Original research

Are flexibility and muscle-strengthening activities associated with a higher risk of developing low back pain?

Robert D. Sandler^a, Xuemei Sui^{b,*}, Timothy S. Church^d, Stacy L. Fritz^b, Paul F. Beattie^b, Steven N. Blair^{b,c}

^a University of Sheffield Medical School, Beech Hill Road, Sheffield S10 2RX, UK

^b University of South Carolina, Arnold School of Public Health, Department of Exercise Science, Columbia, SC 29208, USA

^c Department of Epidemiology and Biostatistics, Columbia, SC 29208, USA

^d Pennington Biomedical, Louisiana State University, Baton Rouge, LA, USA



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Sandler, R. D., Sui, X., Church, T. S., Fritz, S. L., Beattie, P. F., & Blair, S. N. (2014). Are flexibility and muscle-strengthening activities associated with a higher risk of developing low back pain? *Journal of Science and Medicine in Sport*, 17(4), 361–365.

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Specific flexibility activity

Stretching

No	464/3776	1.00
Yes	126/834	1.29 (1.04–1.59)
<i>P</i> value		0.02



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Sandler, R. D., Sui, X., Church, T. S., Fritz, S. L., Beattie, P. F., & Blair, S. N. (2014). Are flexibility and muscle-strengthening activities associated with a higher risk of developing low back pain? *Journal of Science and Medicine in Sport*, 17(4), 361–365.

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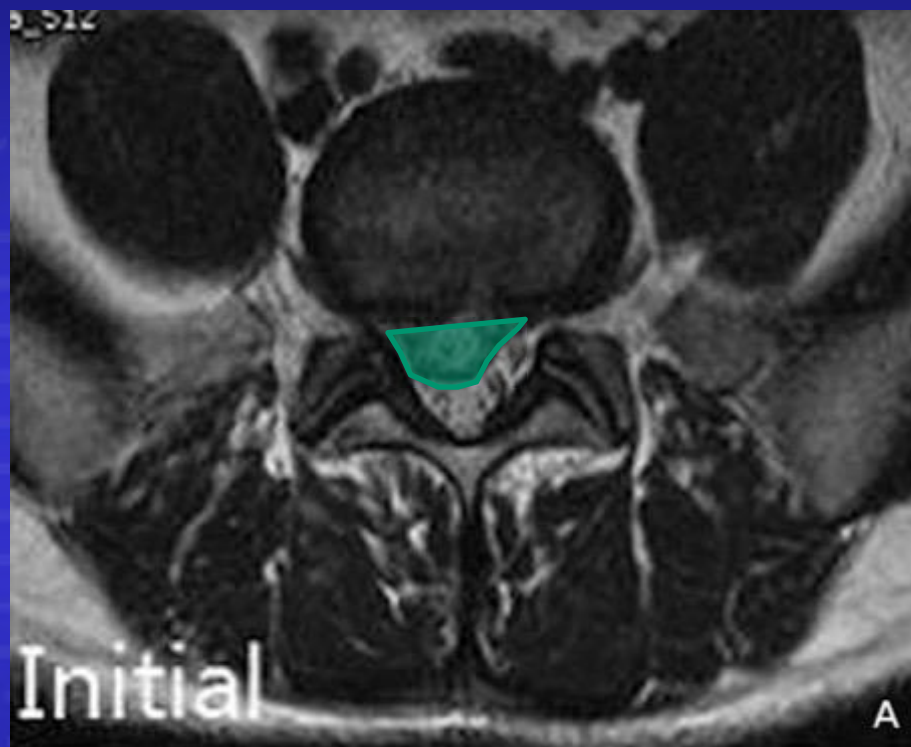


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Pain Physician. 2017 Jan-Feb;20(1):E45-E52.
Incidence of Spontaneous Resorption of Lumbar
Disc Herniation: A Meta-Analysis.

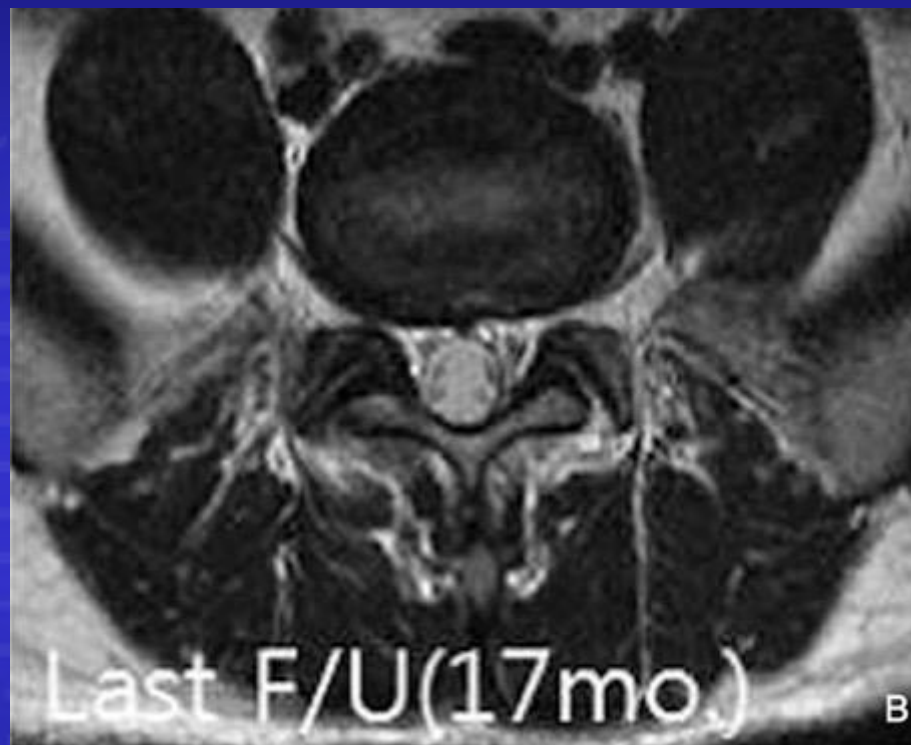
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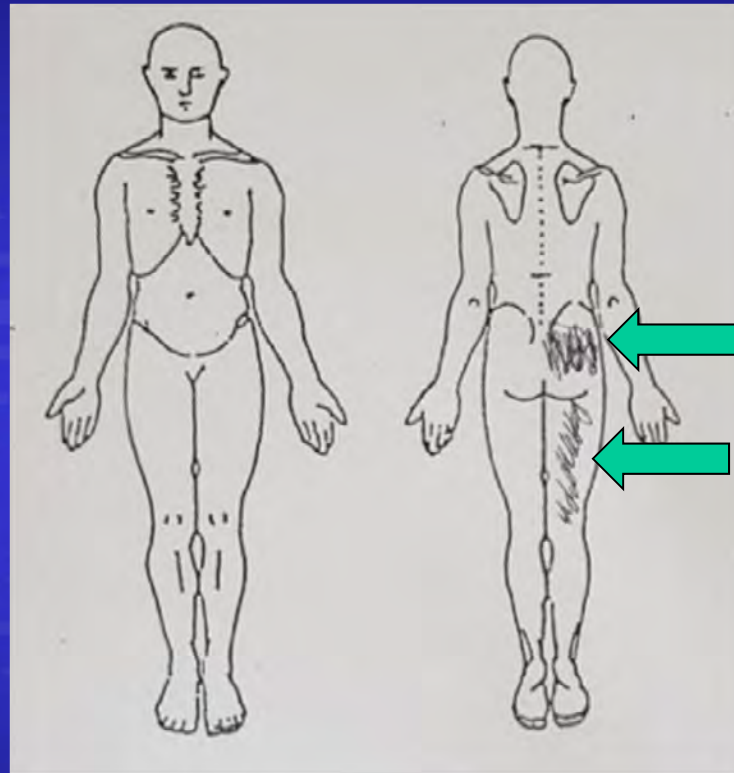


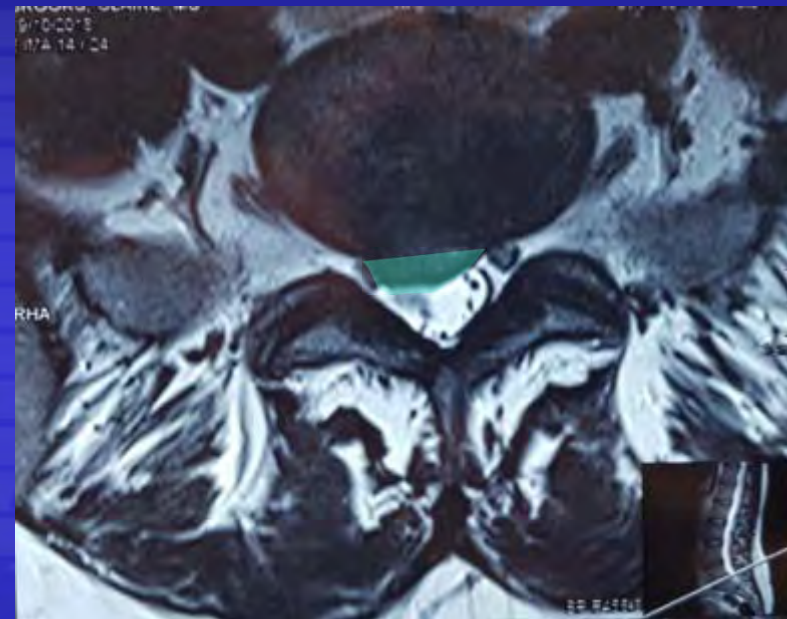
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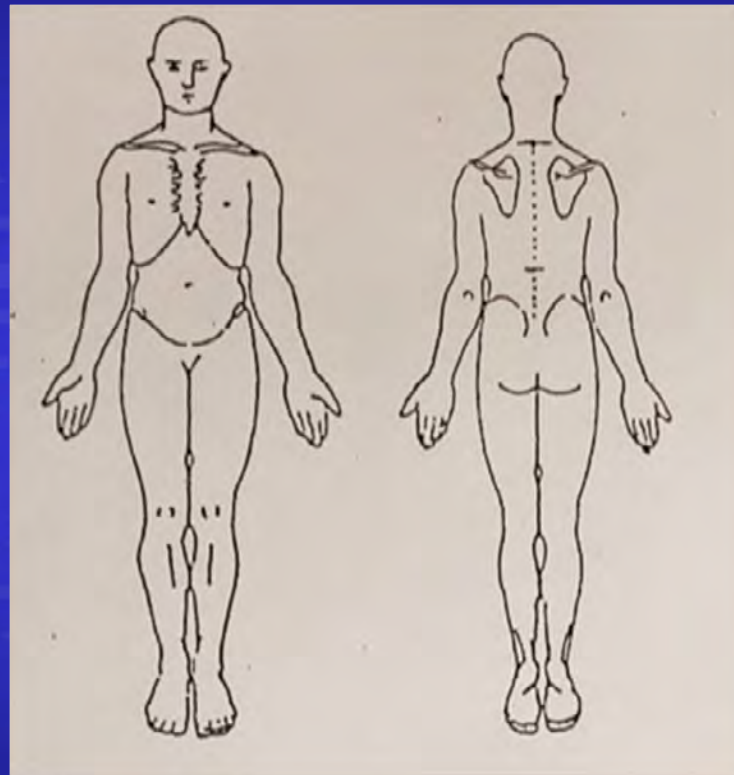
Low Back Disorders, Second Edition
2nd Edition. Stuart McGill

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