

Aug 19, 2025

Effectiveness of Nerve-Based Physical Therapy for Chronic Low Back Pain

DOI

<https://dx.doi.org/10.17504/protocols.io.5qpvod3k9g4o/v1>

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Protocol Citation: Umma Maliha Nitu, Dr. Sharmila Jahan 2025. Effectiveness of Nerve-Based Physical Therapy for Chronic Low Back Pain. protocols.io <https://dx.doi.org/10.17504/protocols.io.5qpvod3k9g4o/v1>

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Protocol status: Working

We use this protocol and it's working

Created: August 16, 2025

Last Modified: August 19, 2025

Protocol Integer ID: 224816

Keywords: Function Induced Neural Stretching, Distalo-Proximal Release Technique, Chronic Low Back Pain with Referred Symptoms, physical therapy for chronic low back pain, chronic low back pain, effectiveness of function induced neural stretching, reducing pain, function induced neural stretching, effectiveness of nerve, conventional physiotherapy, neural mechanosensitivity in patient, decreasing neural mechanosensitivity, based physical therapy, nerve, proximal release technique

Abstract

This randomized controlled trial will evaluate the effectiveness of Function Induced Neural Stretching (FINS) and Distalo-Proximal Release Technique (DPRT) in reducing pain, improving function, and decreasing neural mechanosensitivity in patients with chronic low back pain with referred symptoms, compared to conventional physiotherapy. Findings may establish a novel, safe, and evidence-based conservative intervention for this condition.

Attachments



[Institutional Review...](#)

213KB



[Treatment Protocol.p...](#)

138KB

Materials

Visual Analogue Scale (VAS): A 10 cm scale used to measure pain intensity, where patients rate their pain from "no pain" to "worst imaginable pain."

Pressure Pain Threshold (PPT): The minimum force applied by an algometer that induces pain, providing an objective measure of mechanical pain sensitivity.

Range of Motion (ROM) by Digital Goniometer: A device-based measurement of spinal mobility, providing accurate angular values for movement limitations.

Oswestry Disability Index (ODI): A standardized questionnaire assessing functional disability related to low back pain across daily activities.

Straight Leg Raise (SLR) Test: Measures the degree of hip flexion at which radicular symptoms appear, reflecting neural mobility and tension.

Patient-Specific Functional Scale (PSFS): A patient-reported tool where individuals rate difficulty in performing self-identified functional tasks.

Protocol references

1. Airaksinen, O., Brox, J. I., Cedraschi, C., Hildebrandt, J., Klaber-Moffett, J., Kovacs, F., ... COST B13 Working Group on Guidelines for Chronic Low Back Pain. (2006, March). Chapter 4. European guidelines for the management of chronic nonspecific low back pain. *European Spine Journal*, 15(Suppl 2), S192–S300. <https://doi.org/10.1007/s00586-006-1072-1>
2. Knezevic, N. N., Candido, K. D., Vlaeyen, J. W. S., Van Zundert, J., & Cohen, S. P. (2021, July 3). Low back pain. *The Lancet*, 398(10294), 78–92. [https://doi.org/10.1016/S0140-6736\(21\)00733-9](https://doi.org/10.1016/S0140-6736(21)00733-9)
3. Čolaković, H., & Avdić, D. (2013, September 15). Effects of neural mobilization on pain, straight leg raise test and disability in patients with radicular low back pain. *Journal of Health Sciences*, 3(2), 109–112. <https://doi.org/10.17532/jhsci.2013.73>
4. Henschke, N., Ostelo, R. W., van Tulder, M. W., Vlaeyen, J. W. S., Morley, S., Assendelft, W. J. J., & Main, C. J. (2010, July). Behavioural treatment for chronic low-back pain. *Cochrane Database of Systematic Reviews*, Issue 7: Article No. CD002014. <https://doi.org/10.1002/14651858.CD002014.pub3>
5. Boonstra, A. M., Schiphorst Preuper, H. R., Reneman, M., Posthumus, J. B., & Stewart, R. E. (2008, June). Reliability and validity of the visual analogue scale for disability in patients with chronic musculoskeletal pain. *International Journal of Rehabilitation Research*, 31(2), 165–169. <https://doi.org/10.1097/MRR.0b013e3282fc0f93>
6. Paungmali, A., Sitilertpisan, P., Taneyhill, K., et al. (2012). Intrarater reliability of pain intensity, tissue blood flow, thermal pain threshold, pressure pain threshold, and lumbo-pelvic stability tests in subjects with low back pain. *Asian Journal of Sports Medicine*, 3, e8. <https://doi.org/10.5812/asjsm.34718>
7. Jeong, U.-C., Kim, C.-Y., Park, Y.-H., Hwang-Bo, G., & Nam, C.-W. (2016, January 30). The effects of self-mobilization techniques for the sciatic nerves on physical functions and health of low back pain patients with lower limb radiating pain. *Journal of Physical Therapy Science*, 28(1), 46–50. <https://doi.org/10.1589/jpts.28.46>
8. Lin, L.-H., Lin, T.-Y., Chang, K.-V., Wu, W.-T., & Özçakar, L. (2023, November 26). Neural Mobilization for Reducing Pain and Disability in Patients with Lumbar Radiculopathy: A Systematic Review and Meta-Analysis. *Life*, 13(12), 2255. <https://doi.org/10.3390/life13122255>
9. Sharma, S. S., & Sheth, M. S. (2018). Effect of neurodynamic mobilization on pain and function in subjects with lumbo-sacral radiculopathy. *Medicine Science International Medical Journal*, 7(1), 5–8. <https://doi.org/10.5455/medscience.2017.06.8664>
10. Bialosky, J. E., Bishop, M. D., Price, D. D., Robinson, M. E., & George, S. Z. (2009). The mechanisms of manual therapy in the treatment of musculoskeletal pain: A comprehensive model. *Manual Therapy*, 14(5), 531–538. <https://doi.org/10.1016/j.math.2008.09.001>

Acknowledgements

This research is partially funded by Department of Physiotherapy and Rehabilitation, Jashore University of Science and Technology, Jashore-7408, Bangladesh