

# PRELIMINARY RESULTS FROM THE STUDY

## EFFICACY OF SPINAL DECOMPRESSION THERAPY IN INDIVIDUALS WITH CERVICAL DISC HERNIATION - A RANDOMIZED CONTROLLED TRIAL

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### ABSTRACT

**Background:** Cervical disc herniation is characterized by breakage of disc material into the spinal canal leading to various symptoms such as arm and neck pain, paresthesias and movement limitations. Current options for pain management include drug therapy, physiotherapy, acupuncture and surgical care. Alternative spinal decompression therapy achieves clinical effectiveness in reducing pain, disability and improving quality of life.

**Aim:** The primary aim of this randomized controlled trial was to evaluate the effect of spinal decompression therapy along the conventional therapy and cervical stability exercises in treatment of individuals with cervical intervertebral disc herniation.

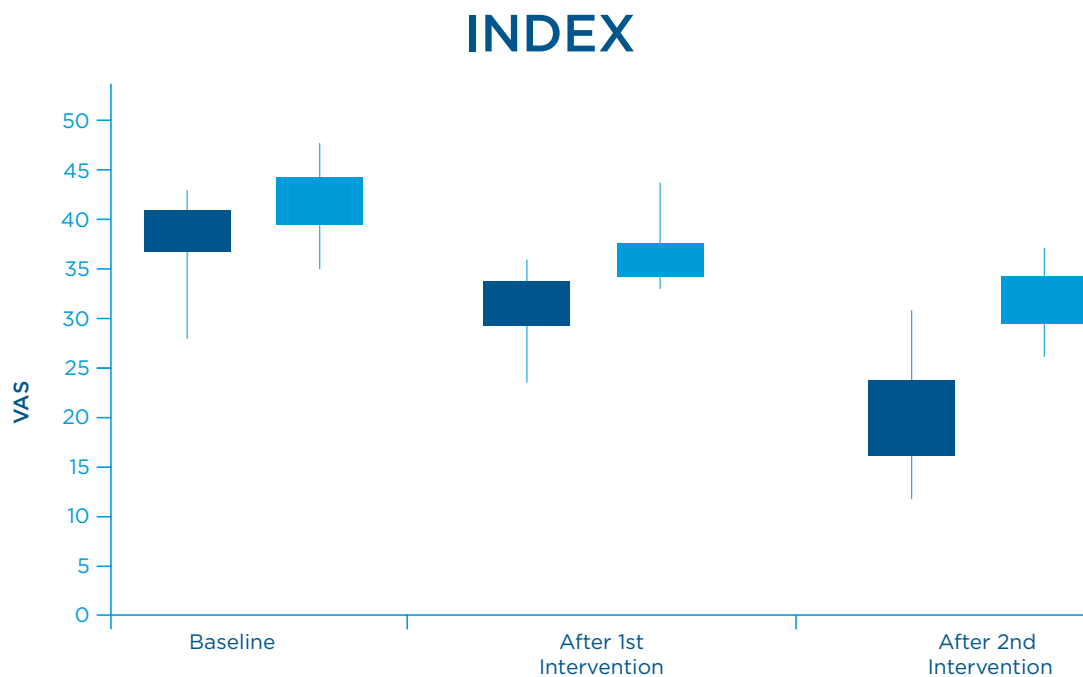
**Methods:** Participants were randomly assigned into two groups. Each participant underwent nine treatment sessions over the course of three weeks (3 therapy sessions/week).

**Experimental group:** 15 participants underwent treatment with spinal decompression device (BTL Industries Ltd.) along with conventional therapy and cervical stability exercises. **Control group:** 15 participants' underwent conventional therapy along with cervical stability exercises. All participants' pain and disability perception were evaluated via Numeric Pain Rating (NPR) scale and Neck Disability Index (NDI) obtained prior to the first treatment and at day 10 and 21 of the clinical trial.

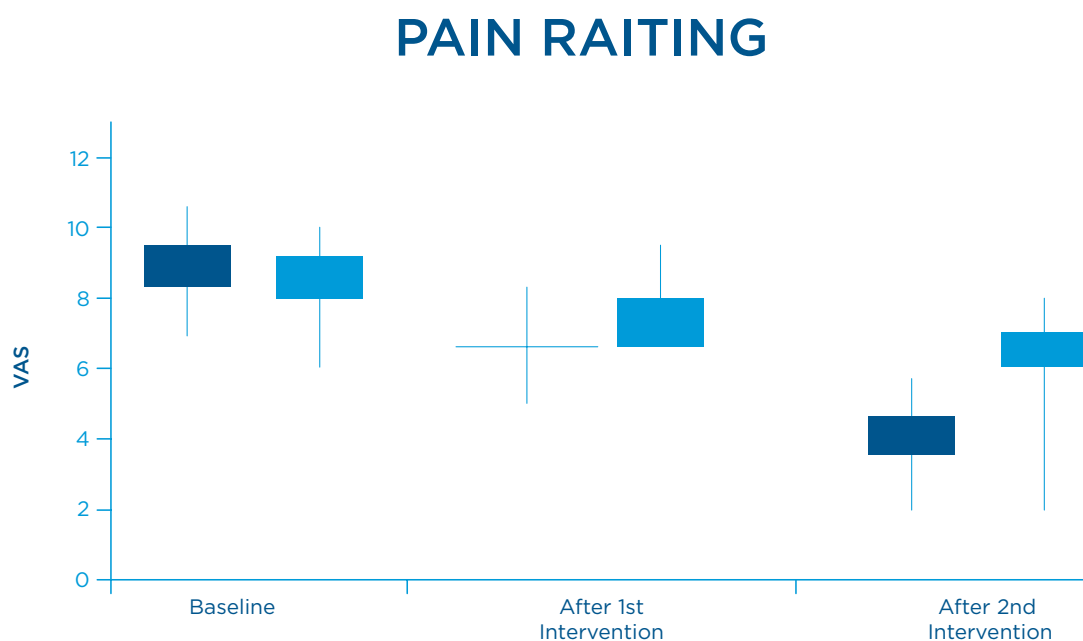
**Results:** The non-parametric Wilcoxon sign rank test confirmed a significant improvement in Neck Disability Index and Numeric Pain Rating scale for both groups. Spinal decompression therapy proved to be effective as the experimental group achieved about 19% better NDI and 24% better NPR score difference than the control group.

**Conclusion:** Spinal decompression therapy as a part of conventional physiotherapy program proved to have a significant impact on pain and disability enhancement in participants with cervical intervertebral disc herniation.

**Keywords:** Spinal decompression therapy, Cervical intervertebral disc herniation, Neck disability index, Numeric pain rating scale.



*Visual Evaluation of Neck Index values obtained throughout the study course for experimental (blue) and control (red) groups.*



*Figure 2: Visual Evaluation of Numeric Pain Rating scale values obtained throughout the study course for experimental (blue) and control (red) groups.*