

## PILLAR

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The sedentary nature of modern work creates specific biomechanical challenges that Eldoa directly addresses. Sitting for over 80% of the workday has become the norm rather than the exception, fundamentally altering spinal loading patterns and muscle activation sequences that maintained spinal health through millions of years of evolution. The human spine, designed for dynamic movement and varied positioning, suffers predictable breakdown when subjected to sustained static postures, creating an urgent need for interventions like Eldoa that can be integrated into the modern work environment.

## Disc Decompression

Clinical evidence demonstrates Eldoa's particular effectiveness for disc-related pathology, with a landmark trial comparing Eldoa to mechanical decompression for lumbar disc protrusion revealing striking superiority. Patients receiving Eldoa treatment achieved back pain scores of  $1.13 \pm 0.72$  compared to  $1.75 \pm 0.57$  in the mechanical decompression group, while disability scores showed even more dramatic differences at  $17.53 \pm 4.27$  versus  $72.12 \pm 8.17$ , respectively. Both differences reached high statistical significance ( $p < 0.001$ ), suggesting that the active nature of Eldoa creates therapeutic benefits beyond simple mechanical separation of vertebrae.

The mechanism through which Eldoa achieves superior outcomes likely relates to the comprehensive nature of the intervention. While mechanical decompression provides passive vertebral separation, Eldoa creates targeted decompression through fascial tension while simultaneously improving neuromuscular control, enhancing proprioception, and promoting active patient engagement in the healing process. The sustained nature of the holds allows for viscoelastic changes in the disc and surrounding tissues, while the specific positioning ensures that decompression occurs precisely at the affected segment. Enhanced disc nutrition occurs through improved fluid exchange during the decompression phase, supporting the healing process and potentially preventing further degenerative changes. Perhaps most importantly, the self-administered nature of Eldoa provides patients with long-term management strategies, reducing dependence on passive treatments and empowering active participation in recovery.

## Dizziness Handicap Inventory

This validated assessment tool demonstrates effect sizes of 0.35-1.12 for vestibular rehabilitation therapy, providing a benchmark for evaluating interventions targeting dizziness and balance dysfunction. The absence of studies using this measure to assess Eldoa's effectiveness for vestibular dysfunction represents a critical research gap, particularly given the theoretical mechanisms through which cervical spine normalization could address cervicogenic dizziness. The established moderate evidence for manual therapy in treating cervicogenic dizziness suggests that Eldoa's targeted cervical decompression could provide similar benefits, but without proper assessment using validated tools like the Dizziness Handicap Inventory, such claims remain speculative.