

Ammendolia, Carlo, et al, 2019 Abstract

Effect Of Active TENS Versus De-tuned TENS On LSS Patients

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Objective

The objective of the study was to evaluate whether patients with lumbar spinal stenosis (LSS) where active para-spinal **transcutaneous electrical nerve stimulation (TENS)** was applied while walking can improve walking distance compared to de-tuned **TENS**.

Results

The researchers found that the application of active TENS to be no better than de-tuned TENS in improving walking ability among patients with neurogenic claudication. However, both the active TENS and de-tuned TENS participants demonstrated significant and clinically important improvement in walking ability, with a large proportion of participants in both groups demonstrating at least 30% improvement in their walking ability.

Participants and Researchers

The researchers recruited 104 participants, all over 50 years of age or older with neurogenic claudication, imaging confirmed LSS and limited walking ability. The mean age of the study sample was 70 years, with 57% being female.

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Methods

Half the participants received the TENS or de-tuned intervention first while the other half received the prototype belt or back support first. Following a minimum two-day washout period, participants initially receiving the TENS or de-tuned TENS received the prototype belt or back support and those who initially received the prototype belt or back support, received the TENS or de-tuned TENS interventions.

The **NeuroTrac TENS** unit (Verity Medical) was used for the **transcutaneous electrical nerve stimulation**. The active TENS group received paraspinal TENS turned on two minutes before the start and maintained during the self-paced walking test (SPWT). The de-tuned TENS group received similarly applied TENS for 30 seconds followed by ramping down to zero stimulus and turned off before the start and during the SPWT.

The full abstract can be found at <https://pubmed.ncbi.nlm.nih.gov/31244992/>.