



Musculoskeletal

Motor skills training in individuals with low back pain

A way to reduce pain and positively affect lumbar movement patterns?

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Individuals with low back pain (LBP) frequently present with altered movement patterns, such as increased initiating movements through the lumbar spine. The findings of this study suggest that training individuals with LBP to alter their movement pattern can dramatically reduce their pain and alter their lumbar movement pattern.

26 people with chronic LBP and 16 without LBP were recruited. Participants were subjected to the 'Pick Up an Object (PUO) functional activity test' with their pain scores and lumbar movement patterns measured.

Following this, each participant underwent 20 minutes of physiotherapist-led motor skill training. This involved the physiotherapist prompting the participant to alter the way they performed the PUO based on what the participant reported they could feel (e.g., tightness in the lower back). If the participant

had difficulty with this, the physiotherapist would progress to providing external feedback which included visual or auditory cues.

Following the training, those with LBP demonstrated a significant decrease in their early-phase lumbar excursion, similar to the baseline of those with healthy backs.

Furthermore, of the 42% of the participants with LBP who initially reported increased pain during the PUO test, 91% of them reported they no longer experienced an increase in pain with the test following motor skills training.

This study suggests that a single session of motor skills training for individuals with LBP can provide an immediate short-term reduction in pain and positive changes to lumbar spine movement patterns.



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