

ORIGINAL RESEARCH

THE IMMEDIATE AND LONG-TERM EFFECTS OF KINESIOTAPE® ON BALANCE AND FUNCTIONAL PERFORMANCE

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ABSTRACT

Background: The application of Kinesio Tex® tape (KT) results, in theory, in the improvement of muscle contractibility by supporting weakened muscles. The effect of KT on muscle strength has been investigated by numerous researchers who have theorized that KT facilitates an immediate increase in muscle strength by generating a concentric pull on the fascia. The effect of KT on balance and functional performance has been controversial because of the inconsistencies of tension and direction of pull required during application of KT and whether its use on healthy individuals provides therapeutic benefits.

Hypotheses/Purpose: The purpose of the present study was to investigate the immediate and long-term effects of the prescribed application (for facilitation) of KT when applied to the dominant lower extremity of healthy individuals. The hypothesis was that balance and functional performance would improve with the prescribed application of KT versus the sham application.

Study Design: Pretest-posttest repeated measures control group design.

Methods: Seventeen healthy subjects (9 males; 8 females) ranging from 18-35 years of age (mean age 23.3 ± 0.72), volunteered to participate in this study. KT was applied to the gastrocnemius of the participant's dominant leg using a prescribed application to facilitate muscle performance for the experimental group versus a sham application for the control group. The Biodex Balance System and four hop tests were utilized to assess balance, proprioception, and functional performance beginning on the first day including pre- and immediately post-KT application measurements. Subsequent measurements were performed 24, 72, and 120 hours after tape application. Repeated measures ANOVA's were performed for each individual dependent variable.

Results: There were no significant differences for main and interaction effects between KT and sham groups for the balance and four hop tests.

Conclusion: The results of the present study did not indicate any significant differences in balance and functional performance when KT was applied to the gastrocnemius muscle of the lower extremity.

Level of evidence: Level 1- Randomized Clinical Trial

Keywords: Balance, functional performance, kinesiotaping

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