



Immediate Effects of Ankle Kinesiotaping on Static and Dynamic Balance in Healthy Asymptomatic Adults

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Background and Aim. Kinesiotaping (KT) is widely used to enhance proprioception and neuromuscular control through cutaneous stimulation around joints. While commonly applied for ankle stabilisation, evidence regarding its immediate effects on balance in healthy asymptomatic adults remains inconclusive. This study aimed to investigate the immediate effects of KT applied to the dominant ankle on static and dynamic balance and compare outcomes with a sham taping condition.

Methods. A sham-controlled experimental study included 30 participants allocated to an experimental group ($n = 15$, kinesiotaping at 50% stretch) and a sham group ($n = 15$, tape applied without tension in a non-corrective manner). Static balance was assessed using a BioWare Kistler force plate across Single Leg Stance, Tandem Stance, and Jump conditions (eyes open and closed). Dynamic balance was evaluated using the Y-Balance Test (Composite Score and Limb Symmetry Index). Mixed ANOVA and Wilcoxon Signed-Rank tests were applied for statistical analysis.

Results. Kinesiotaping improved tandem stance balance and dynamic reach performance more effectively than sham taping, particularly under eyes-closed conditions when proprioceptive reliance was the greatest. Bilateral improvements in Y-Balance composite scores were observed in the kinesiotaping group, with greater posterolateral reach compared to sham. Sway reductions were more pronounced during single leg and tandem stance in the kinesiotaping group. No meaningful improvements were observed during jump tasks in either group.

Conclusions. Ankle kinesiotaping demonstrated immediate improvements in both static and dynamic balance performance in healthy asymptomatic adults compared to sham taping, with significant effects observed during tandem stance and Y-Balance reach performance. These findings suggest that kinesiotaping may acutely enhance proprioceptive-mediated postural stability even in uninjured individuals.

Keywords: Kinesiotaping; balance; Y-Balance Test; force plate; ankle stability

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Informed Consent Statement: This study was approved by the Ethics Committee of Lithuanian Sports University (No. MNL-KIN (M)-2025-833, dated 17 12 2025). All participants provided written informed consent prior to participation. The study was conducted in accordance with the Declaration of Helsinki.

