

ORIGINAL RESEARCH

THE EFFECTS OF VARIED TENSIONS OF KINESIOLOGY TAPING ON QUADRICEPS STRENGTH AND LOWER LIMB FUNCTION

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ABSTRACT

Background: Kinesiology Taping (KT) may promote changes in muscle strength and motor performance, topics of great interest in the sports-medicine sciences. These characteristics are purported to be associated with the tension generated by the KT on the skin. However, the most suitable tension for the attainment of these strength and performance effects has not yet been confirmed.

Hypothesis/Purpose: The purpose of the present study was to analyze the effects of different tensions of KT on the isometric contraction of the quadriceps and lower limb function of healthy individuals over a period of seven days.

Study Design: Blind, randomized, clinical trial.

Methods: One hundred and thirty healthy individuals were distributed into the following five groups: control (without KT); KT0 (KT without tension); KT50; KT75 and KT100 (approximately 50%, 75% and 100% tension applied to the tape, respectively). Assessments of isometric quadriceps strength were conducted using a hand held dynamometer. Lower limb function was assessed through Single Hop Test for Distance, with five measurement periods: baseline; immediately after KT application; three days after KT; five days after KT; and 72h after KT removal (follow-up).

Results: There were no statistically significant differences ($p > 0.05$) at any of the studied periods on participants' quadriceps strength nor in the function of the lower dominant limb, based on comparisons between the control group and the experimental groups.

Conclusion: KT applied with different tensions did not produce modulations, in short or long-term, on quadriceps' strength or lower limb function of healthy individuals. Therefore, this type of KT application, when seeking these objectives, should be reconsidered.

Level of Evidence: 1b

Keywords: Kinesiology taping; athletic performance; muscle strength dynamometer; lower limb function

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