

Short-term Effects of Kinesio Taping on Muscle Recruitment Order During a Vertical Jump: A Pilot Study.

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ABSTRACT

CONTEXT:

Kinesio taping is commonly used in sports and rehabilitation settings with the aim of prevention and treatment of musculoskeletal injuries. However, limited evidence exists regarding the effects of 24 and 72 h of kinesio taping on trunk and lower limb neuromuscular and kinetic performance during a vertical jump.

OBJECTIVE:

The purpose of this study was to analyze the short-term effects of kinesio taping on the height and ground reaction force during a vertical jump, in addition to trunk and lower limb muscle latency and recruitment order.

DESIGN:

Single-group pretest-posttest.

SETTING:

University Laboratory.

PARTICIPANTS:

12 male athletes from different sport (track and field, basketball, and soccer).

INTERVENTIONS:

They completed a single squat and countermovement jump at basal time (no kinesio taping), 24 and 72 h of kinesio taping application on the gluteus maximus, biceps femoris, rectus femoris, gastrocnemius medialis, and longissimus.

MAIN OUTCOME MEASURES:

Muscle onset latencies were assessed by electromyography during a squat and countermovement jump, in addition to measurements of the jump height and normalized ground reaction force.

RESULTS:

The kinesio taping had no effect after 24 h on either the countermovement or squat jump. However, 72 h the kinesio taping increased the jump height ($P = .023$; $d = 0.36$) and normalized ground reaction force ($P = 0.001$; $d = 0.45$) during the countermovement jump. In addition, 72 h kinesio taping reduced longissimus onset latency ($P = .027$; $d = 1.34$) and improved muscle recruitment order during a countermovement jump.

CONCLUSIONS:

These findings suggest that kinesio taping may improve neuromuscular and kinetic performance during a countermovement jump only after 72 h of application on healthy and uninjured male athletes. However, no changes were observed on a squat jump. Future studies should incorporate a control group to verify kinesio taping effects and its influence on injured athletes.