

## JOURNAL of SPORTS SCIENCE & MEDICINE

ISSN: 1303 - 2968

SCI mago 2014 SJR: 0.504 Cites per Doc. 2-Year: 1.31 3-Year: 1.51 4-Year: 1.64 Journal Citation Reports 2014 IF 2-Year: 1.025 5-Year: 1.441

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©Journal of Sports Science and Medicine (2011) 10, 707 - 711

Research article





The Effect of Patellar Taping on Some Landing Characteristics During Counter Movement Jumps in Healthy Subjects

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Received: 26-07-2011 -- Accepted: 29-09-2011 -- Published (online): 01-12-2011

The aim of the present study was to determine the effect of patellar taping (PT) on landing characteristics of the vertical ground reaction force (VGRF) and on flight time during a counter movement jump (CMJ). Eleven healthy male subjects (age:  $31.1 \pm 4.2$  years) volunteered for the study. Each subject performed six CMJs under two male subjects (age:  $31.1 \pm 4.2$  years) volunteered for the study. Each subject performed six curus under two different jumping conditions: with PT and without PT (WPT). The order of the two conditions was randomized. All of the measured variables had fair-to-good reliability (intra-class correlation coefficient > 0.75). When we compared the PT and WPT groups, we did not find a significant difference in the magnitude of the first (F1) and second (F2) peaks of the VGRF. We also did not find a significant difference in the time to production of these peaks (T1 and T2), and the time to stabilization (TTS) (p < 0.05). Furthermore, the flight time was similar in the two groups (0.475  $\pm$  0.046 and 0.474  $\pm$  0.056 s, respectively, for PT and WPT). These results suggest that PT does not jeopardize performance during CMJ. Furthermore, it also does not soften the VGRF generated during the landing, indicating that PT may be of limited utility in preventing injuries associated with this type of movement.

Key words: Biomechanics, force platform, vertical ground reaction force, landing phase

## **Key Points**

- · We investigated whether patellar taping interferes with athletic performance, as has been suggested by previous studies.
- We also explored the effect of patellar taping on the forces generated during the landing phase of counter movement jumps
- Patellar taping had no effect on the flight time during counter movement jumps.
- Patellar taping also had no effect on the vertical ground reaction force variables measured

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