

Kinesio Taping does not Alter Muscular Performance of Lower Extremity in Obese Adults

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ABSTRACT

Obese adults often experience a weight burden imposed on the joints during physical activities. Taping is known as an effective therapy that can lessen the stress on joints during physical activity. Specially, Kinesio taping has gained recognition to improve exercise performance. However, the acute effects of Kinesio taping using obese population have not been well established. The purpose of this study was to examine the acute effects of Kinesio taping on the muscular strength, power, and endurance of lower extremity in obese adults. This study was conducted in randomized crossover design with 7 days washout periods. Fourteen obese adults (male: 5, female: 9), mean age of 24.0 ± 3.04 years and percent body fat of 37.44 ± 7.64 % (male: 33.25 ± 8.12 , female: 38.16 ± 6.91) took part in the study. All subjects underwent three different trials which were no taping, placebo taping (3M tape), and Kinesio taping. The tape was applied to the rectus femoris, tibialis anterior, and patella ligament based on the Kinesio taping techniques. Subjects wore an eye mask and the taped leg was covered by clothes for preventing subjects and researchers from identifying different tapings (double-blind). Muscular power, isometric muscle strength, and muscle endurance of lower extremity were assessed. Repeated measures one-way analysis of variance (ANOVA) was used to determine differences among three trials. There were no statistical differences in peak power ($F= 0.978$, $p= .402$), mean power ($F=1.386$, $p=.285$), muscular strength (extension: $F= 1.138$, $p= .350$; flexion: $F= 3.326$, $p= .068$, and endurance ($F= 3.675$, $p= .060$) among three trials. Interpretation of these findings suggests that the Kinesio tape did not improve lower limb performance in obese adults. Short application period may affect to the non-significance result. Further studies are needed to investigate the effective period of taping on lower limb exercise performance in obese adults.