

The Effect of Kinesio® Tape on Shoulder Joint Range of Motion and Strength

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ABSTRACT

While research has been conducted to examine the effects of Kinesio® Tape as a treatment modality and as a preventative measure for injury, little research has been conducted regarding the potential ergogenic effects of Kinesio® Tape on healthy, uninjured shoulders. More specifically, the effect of Kinesio® Tape on healthy shoulders has not been investigated thoroughly in regards to range of motion and strength. **PURPOSE:** To examine the effect of Kinesio® Tape on joint range of motion and strength in healthy, uninjured shoulders. **METHODS:** Twelve male subjects were recruited ranging from 19-29 years of age. Only subjects classified as having no prior shoulder injury were allowed to participate. Subjects were allowed 3 familiarity trials for goniometry (5 tests) and the isometric strength test prior to exercise testing. All subjects underwent three experimental trials [Kinesio® Tape treatment (KNT), placebo tape treatment (PLT), and a no tape control (CON)] during a single testing session using a double blind balanced cross-over design. During the treatment trials, the subjects were blindfolded and taped with either KNT or PLT on both shoulders and upper back. Each experimental trial was comprised of a test for shoulder/upper back isometric strength, and 5 tests for preferred shoulder joint range of motion via goniometry. Differences in shoulder/back strength (kg) and joint range of motion (°) across the three experimental trials (KNT, PLT, CON) were analyzed using an ANOVA with repeated measures, $\alpha=0.05$. *Post-hoc* tests were used to make all pairwise comparisons for specific differences between the three experimental trials while maintaining the overall error rate at 0.05. **RESULTS:** Shoulder isometric strength did not differ significantly ($p>0.05$) between the treatments (KNT=65.2±14.1 kg, PLT=65.7±17.3 kg, CON=66.6±19.8 kg). Shoulder horizontal adduction did differ between the treatments ($p<0.05$) where KNT (120.9±8.5°) > CON (117.3±7.8°), but neither was significantly different from PLC (119.6±9.5°). The treatments also differed significantly ($p<0.05$) in horizontal abduction, where KNT (44.3±9.5°) > PLT (40.7±7.6°), but neither were significantly different from CON (43.0±9.2°). Shoulder abduction, flexion, and extension did not differ significantly between the treatments ($p>0.05$). **CONCLUSION:** While Kinesio® Tape had no effect on shoulder/upper back isometric strength, abduction, flexion or extension, KNT did appear to have an effect on motion through the horizontal plane. However, the present sample size appears to have been inadequate to detect specific differences between KNT and both PLC and CON for both horizontal adduction and horizontal abduction.