A Comparison of Ankle Strapping and Spatting on Range of Motion and Performance
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**Context:** Ankle injuries are common in sport and tend to reoccur. To decrease the risk of reinjury, ankle strapping is commonly used to limit range of motion (ROM), specifically plantarflexion (PF) and inversion (INV). The loosening characteristics of taping over the skin have prompted clinicians to use other restrictive techniques such as spatting. However, the efficacy of spatting and comparisons to traditional strapping have not been extensively researched. **Objective:** To examine and compare the effects of traditional ankle strapping and spatting and their combination on ankle ROM and performance. **Design:** A randomized cross-over design. **Setting:** Research laboratory. **Participants:** Ten healthy varsity athlete and recreationally active males (age=20.5±.97 y, height=181.02±6.45 cm, mass=87.05±10.02 kg) volunteered. **Interventions:** Each participant reported to the laboratory on one occasion and participated in four conditions; no tape (C), ankle strapping (T), spatting (S), and combined strapping and spatting (TS). The order of conditions was randomly assigned and all tape application was performed by a Certified Athletic Trainer using 3.81-cm Jaybird® tape. The T condition consisted of a Gibney closed-basket-weave with heel-lock and figure-eight strips directly applied to pre-wrapped skin. The same Gibney technique was used over the sock and shoe for the S condition. The TS condition consisted of a combination of both techniques, while no tape was used during the C condition. **Main Outcome Measures:** PF and IV ROM were assessed immediately prior to and following application of each condition using Saunders® digital inclinometers and were assessed passively and actively using standard methods. Passive ROM was also assessed with overpressure as the clinician applied a force equivalent to 10% of the participant’s body mass using a hand-held dynamometer (Hoggan Scientific, Salt Lake City, Utah). Immediately following ROM assessment, participants were assessed for maximum vertical jump height (Vert\textsuperscript{max}) and agility using a three cone drill. The tape was then removed and identical procedures were followed under the remaining conditions. **Results:** All three taping conditions significantly decreased passive (F\textsubscript{3,27}=17.03, p=.001), active (F\textsubscript{3,27}=8.29, p=.001) and overpressure (F\textsubscript{3,27}=16.28, p=.001) PF with the TS condition providing the greatest restriction. All three conditions also decreased passive (F\textsubscript{3,27}=4.35, p=.013), active (F\textsubscript{3,27}=6.48, p=.002) and overpressure (F\textsubscript{3,27}=4.73, p=.009) INV however no differences between techniques were observed. Vert\textsuperscript{max} during the C condition was significantly greater than the taping conditions while no differences were noted when comparing taping conditions (F\textsubscript{3,27}=5.90, p=.003). Time to complete the three cone drill was significantly greater during the TS condition as compared to the C condition (F\textsubscript{3,27}=3.61, p=.026), while no other differences were noted. **Conclusions:** The results suggest that all taping conditions decreased ROM with the combination of ankle strapping and spatting providing the greatest restriction. While the taping conditions impaired performance, neither was found to impair performance more than the others. **Word Count:** 450.