

maneuvers. The FEP was designed to simulate sport-like activities and intensity. Following the FEP, ankle laxity was again assessed before and after removal of the EPS. Subjects were tested using a counterbalanced order on 3 separate days, with each day utilizing a different EPS: **Main Outcome Measures:** Ankle anterior displacement (ANT), inversion rotation (INV), and eversion rotation (EVR) measured under three conditions (Tape, Brace, None) and in three groups (FAI, SPR, CON). A 3-way repeated measures ANOVA was utilized to analyze differences between the groups and within EPS type and pre-post exercise. An alpha level of 0.05 was set *a priori*. **Results:** Taping and bracing each decreased laxity from pre-application (ANT=6.1±2.0mm; INV=25.0±6.9°; EVR= 17.5±7.0°) to pre-exercise (Tape: ANT= 2.9±.96mm, INV=11.3±3.9°, EVR= 7.6±3.1°; Brace: ANT=3.0±1.4mm, INV=12.6±5.4°, EVR=8.4±4.0°; p<.05) and post-exercise (Tape: ANT=4.1±1.1mm, INV=14.0±4.2°, EVR=9.1±3.5°; Brace: ANT=3.8±1.6mm, INV=16.8±6.4°, EVR=10.9±4.9°; None: ANT=6.3±2.3mm, INV=26.1±6.9°, EVR= 17.61±4.6°; p<.05). Tape provided greater restriction post exercise in inversion and eversion rotation (p<.05). Additionally, the FAI group demonstrated significantly greater ANT post-exercise after removal of the brace compared to other groups (FAI=7.3±1.6mm, SPR=5.5±2.5mm, CON=5.8±1.8mm p<.05). **Conclusions:** The use of EPS at the ankle appears to significantly decrease ankle laxity before and after physical activity as compared to a control no tape/brace condition. While neither taping nor bracing was more effective than the other, bracing appeared to cause a greater increase in post-exercise laxity in subjects with complaints of ankle instability.

The Effect of Kinesio Taping on Proprioception in Shoulder Impingement Syndrome

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Context: Shoulder impingement syndrome (SIS) is most common cause of shoulder pain in young athlete with over-head activities. Theoretically, Kinesio tape may improve sensorimotor control by proprioceptive feedback and facilitate muscle activities. **Objective:** To determine if Kinesio tape increase shoulder proprioception in SIS subjects. **Design:** Randomized controlled trial. **Setting:** Controlled, laboratory setting. **Participants:** Fifteen healthy subjects (6F, 9M; F; 22.5 ±1.9 years, 157.5±5.5cm, 63.1 ±6.7kg, M; 22.9 ±1.4 years, 174.4±7.4cm, 88.5 ±14.4kg) and fifteen SIS group (7F, 8M; F; 23.3 ±3.4years, 161.8±7.6cm, 65.1 ±16.7kg, M; 24.9±2.9 years, 180.9±7.1cm, 84.0±9.2kg). Inclusion criteria were: 1) positive Hawkins-Kennedy or Neer's test and 2) weakness or reproduction of pain during Empty Can Test. All subjects did not have surgeries within the past two years. **Interventions:** The Biodex 4 isokinetic dynamometer (Shirley, NY) measured both passive and active joint position sense. Subjects were asked to wear a blindfold and earplugs to minimize their visual and auditory senses throughout each testing session. The emergency stop button was utilized when subjects believed their shoulder reached a previously designated target angles. Target angles evaluated passive ER75°, active FR (AER), 45°, 75° and active IR30°. Neutral shoulder position was set at 90° flexion and 90° abduction with 90° elbow flexion. Subjects had three attempts on each target angle in randomized order, and investigators recorded the angles, which each subject reproduced. Average absolute angular error (AAAE) is an average of angular error (the difference between target angle and reproduced angle among three trials. **Main Outcome Measures:** AAAE was recorded at PROM ER75°

and AROM IR30°, ER 45°, 75°. **Result:** A significant interaction exists between the tape application and health status variables, F(1,27) = 9.98, p= .004. For the healthy subjects the response was higher with the KT (6.83 ± 4.85°) than without it (6.39 ± 4.86°). However, for the SIS subjects, the mean response with the KT (5.38 ± 3.26°) was lower than without it (7.45 ± 5.93°). This effect was consistent across all angles tested, since the interaction among tape, health status, and angle failed to achieve significance, F(3,81) = 0.51, p = .677. **Conclusion:** The study reported AAAE to significantly lower in SIS group after Kinesio tape application. This suggests Kinesio tape may improve shoulder proprioception in SIS population.

The Stabilizing Effect Of Soft Shell Ankle Bracing On Combined Talocrural-Subtalar Joint Motions

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Context: External ankle support appliances are constructed of various materials depending on the design. Conventional ankle bracing may be constructed of thermoplastic polymer material (e.g., semirigid). Recent technology in ankle brace design incorporates Performathane™ soft-shell technology (Zoom, Ultra Athlete) as an alternative. **Objective:** To compare the effects of a soft-shell hinged ankle brace with those of a hinged semirigid shell ankle brace (Ultra Ankle 2) on rotary displacements of the foot. **Design:** Repeated measures study. **Setting:** Research laboratory. **Participants:** Six normal fresh-frozen cadaver ankle specimens. **Interventions:** The specimen was mounted to a jig proximally via a tibial rod cemented into the tibial medullary cavity and distally via an athletic shoe fixed to a mounting plate of the testing machine. The specimens were loaded