## TACSM Abstract

## Effect of the Negative Ion Band on Athletic Performance

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## **ABSTRACT**

Negative Ion bands have been suggested to increase various areas of athletic performance. At this time, the authors are not aware of any studies on these bands. Purpose: To determine if a True Power Energy Band (True Power LLC, Melrose, MA) had an effect on various measures of performance. Methods: Forty-one subjects (age =  $29.3\pm7.1$  yrs, ht =  $171.5\pm9.7$  cm, wt =  $85.4\pm23.2$  kg) had their height and weight measured and were then randomized to wear the True Power band (TB) or a silver bracelet placebo band (PB) (Hobby Lobby). After 5 days, subjects were assessed on reaction time using a color response test and a response test in which the subject clicked a highlighted dot as it appeared in a 5x5 table (www.intelligencetest.com/reflex/index). The subjects then performed a standard balance test (stork test) without shoes, two flexibility tests (V-sit-and-reach & trunk rotation), and two strength tests (hand grip using a dynamometer & push-ups to exhaustion). The tests were conducted in this order with as much rest between trials as needed. One week later, this same procedure was followed but with the opposing band. Repeated measures ANOVA was used to determine if differences exist between the bands, with Alpha set at .05. **Results**: There were no significant differences in the tests of color (TB =  $0.43\pm0.14$ , PB =  $0.41\pm0.11$  sec), dots (TB =  $16.9\pm3.0$ , PB =  $17.0\pm2.6$  score), stork (TB =  $4.4\pm3.4$ , PB =  $4.7\pm4.1$  sec), V-sit-andreach (TB =  $15.2\pm16.8$ , PB =  $15.5\pm17.3$  cm), trunk rotation (TB =  $35.8\pm15.0$ , PB =  $37.3\pm14.0$  cm), hand grip  $(TB = 42.4 \pm 12.1, PB = 42.8 \pm 11.0 \text{ kg})$ , and push-ups  $(TB = 23.4 \pm 10.5, PB = 25.8 \pm 11.7 \text{ total})$ , p > .05 for alltests. Conclusion: There seems to be no effect of Negative Ion bands on tests of reaction time, balance, flexibility, or muscular strength. The claims of performance in these types of bands have yet to be validated.