

## Comparing The Effect Of Overspeed Training On NCAA Division III Lacrosse Athletes

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**PURPOSE:** The purpose of this study was to compare a short term (4-week) speed training program using a specialized curved non-motorized overspeed treadmill (TM) with a traditional over ground speed training program for improving sprint velocity and acceleration. **METHODS:** 17 male and 13 female NCAA Division III lacrosse athletes participated in a four-week speed training intervention. The athletes were randomly assigned to either a curve speed-training group (9 male and 6 female) or a traditional speed-training group (8 male and 7 female). Pre- and post-testing consisted of measuring a 40-yd dash with chronologic splits at 10, 20 and 40 yards. Each training regimen utilized various speed training techniques; however, the curved TM group received training sessions on the curved treadmill whereas the over ground group performed standard sprints on the ground. Training volume was matched for each group. Group comparisons were determined by using 2 (group) X 2 (time) x 2 (gender) ANOVA with repeated measures for each segment of the 40-yd dash. **RESULTS:** The main effect of group showed no significant difference. The main effect of time demonstrated that following a 4-week speed intervention both the traditional and curve TM groups regardless of sex were able to significantly ( $p < 0.05$ ) decrease their 10 yd sprint times. For the 10-yd sprint, men and women demonstrated a 0.14s and 0.24s decrease. There were no interaction effects. **CONCLUSIONS:** The curved TM intervention was effective at increasing the acceleration of athletes over the first 10 yards of a 40-yd dash. These improvements could be due to neuromuscular adaptations and the functional aspects of the training regiment. This mode of training could potentially be effective for athletes that need to rapidly accelerate over short distances.