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Upper Body Training Methods and their Effect on Lower Body Performance Tests

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There is considerable literature reinforcing the fact that lower-body resistance training will increase lower-body power. However, there is little research on the effect of upper-body training on lower-body performance tests. Both plyometric (PLYO) and resistance training (RT) are viable options for inducing neurological and muscular adaptations; yet it is unknown as to which method applied to upper-body training will have more or less of an effect on lower-body performance tests. **PURPOSE:** To assess the effects of upper body RT versus upper-body PLYO training on short sprint performance, vertical jump height and peak power. **METHODS:** Six recreationally active males were randomly selected and placed into one of the following groups: control (30±7yrs), RT (23±1yrs) or the PLYO (20±2yrs) training group. The duration of the study design was four weeks, with two training sessions per week. Each group underwent specific training methods for a total of eight sessions, with the sessions lasting roughly one hour. Each group had similar exercises to work the same muscles and used the same set and repetition structure of 3x5. All subjects did a pre and post baseline testing, which included: two trials of 40-yard-dash and three trials of vertical jump (best trials taken). **RESULTS:** Both PLYO protocol subjects lowered their 40-yard dash time by an average of 0.235 seconds, while the resistance training protocol had a 0.065 second increase in 40-yard time. The PLYO group also increased their jump height by an average of 2.15 inches while the resistance training group only improved on average by 0.45 inches. Power in Watts was calculated using the Harman Equation. The PLYO group increased by an average of 26.295 Watts while the resistance training group increased on average by 44.16 Watts. **CONCLUSION:** While both training protocols demonstrated improvements, the PLYO training subjects elicited the most improvements compared to the other two training protocols.