

ABSTRACT

THREE DIFFERENT INTENSE CONCENTRIC EXERCISE BOUTS FAIL TO EVOKE POSTACTIVATION POTENTIATION

Standardized methods to elicit postactivation potentiation (PAP) are unknown; therefore, we examined the effect that three different conditioning exercise intensities had on potentiating power during the concentric bench press throw (BPT) in college-aged men (N=12). Each session consisted of a warm-up, 3 BPT (pre), a conditioning exercise, and 3 BPT (post). The conditioning exercises consisted of 5 bench press repetitions using 55, 70, or 86% of 1 repetition maximum. Average and peak acceleration was collected using an accelerometer sampling at 1000 Hz. Simultaneously, average, peak, and median electromyography (EMG) of the triceps brachii was collected. Neither acceleration nor triceps EMG ($p>0.05$) were affected by any conditioning exercise intensity. These findings refute the hypothesis that PAP is evoked predominantly by a transient shift of the concentric force-velocity relationship. Research on PAP and eccentric actions is warranted.

Chad Arthur Cabrera
December 2007