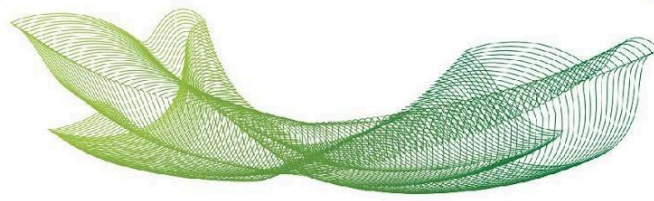


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Resumo	<p>Introduction: Resistance exercise can significantly increase serum steroid concentrations after an exercise bout. Steroid hormones are involved in the regulation of several important bodily functions (e.g., muscle growth) through both systemic delivery and local production. Thus, we aimed to determine whether resistance exercise-induced increases in serum steroid hormone concentrations are accompanied by enhanced skeletal muscle steroid concentrations, or whether muscle contractions per se induced by resistance exercise can increase intramuscular steroid concentrations. Methods: A counterbalanced, within-subject, crossover design was applied. Six resistance-trained men (26 ± 5 years; 79 ± 8 kg; 179 ± 10 cm) performed a single-arm lateral raise exercise (10 sets of 8 to 12 RM - 3 min rest between sets) targeting the deltoid muscle followed by either squat exercise (10 sets of 8 to 12 RM - 1 min rest) to induce a hormonal response (high hormone [HH] condition) or rest (low hormone [LH] condition). Blood samples were obtained pre-exercise and 15 min and 30 min post-exercise; muscle specimens were harvested preexercise and 45 min post-exercise. Immunoassays were used to measure serum and muscle steroids (total and free testosterone, dehydroepiandrosterone sulfate, dihydrotestosterone, and cortisol; free testosterone measured only in serum and dehydroepiandrosterone only in muscle) at these time points. Results: In the serum, only cortisol significantly increased after the HH protocol. There were no significant changes in muscle steroid concentrations after the protocols. Discussion: Our study provides evidence that serum steroid concentration increases (cortisol only) seem not to be aligned with muscle steroid concentrations. The lack of change in muscle steroid after protocols suggests that resistance-trained individuals were desensitized to the exercise stimuli. It is also possible that the single postexercise timepoint investigated in this study might be too</p>



early or too late to observe changes. Thus, additional timepoints should be examined to determine if RE can indeed change muscle steroid concentrations either by skeletal muscle uptake of these hormones or the intramuscular steroidogenesis process.

Fomento