

ABSTRACT

Chase A. Overpeck: Does Testing Order Impact Maximal Strength and Oxygen Uptake?

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PURPOSE: Evaluation of both cardiorespiratory fitness (CRF) and muscular strength occasionally dictate that maximal strength and aerobic assessments be conducted within the same session. There is a lack of literature concerning the acute interference effect between concurrent exercise tests. **METHODS:** 7 healthy, young adults that were resistance trained and regularly active in aerobic activities completed both possible orders of 1 repetition maximum (1RM) leg press and maximum oxygen uptake (VO_2 max) as well as supramaximal VO_2 at 105% peak power output (PPO) via cycle ergometer. **RESULTS:** Fatigued 1RM leg press performance non-significantly decreased 2.0% (mean difference: -7.9kg, 95% CI: -28.5-12.7kg, $p=0.386$, $d=-0.353$) and fatigued VO_2 peak performance non-significantly increased 1.1% (mean difference: 0.5 ml/kg/min, 95% CI: -3.1-4.1 ml/kg/min, $p=0.725$, $d=0.139$). **CONCLUSION:** Our preliminary findings suggest a lack of acute interference between maximal strength and oxygen uptake assessments. To minimize potential interference, the assessment of greater priority should be placed first in the testing order.