β-Alanine Supplementation Has No Effect on Rowing Performance in College Age Athletes

Benjamin J. Chrisfield, Trevor D. Stutzman, Zach Schutte, Isaac Starr, Amy B. Porto, H. Scott Kieffer, FACSM.
Messiah College, Mechanicsburg, PA

β-alanine supplementation has been shown to increase the buffering capacity of the cell during short high intensity activity (S-HI). However, the usefulness of β-alanine across sports that combine endurance high intensity activity (E-HI) with S-HI is limited. **PURPOSE:** The purpose of this study was to examine the effects of β-alanine supplementation on performance measured during E-HI and subsequent S-HI power performance. **METHODS:** Eleven men (mean±SD: age = 20±1.3 years; weight=75.0±7.9 kg; height=177.7±6.7 cm) and twelve women (age=20.2±1.5 years; weight=66.1±16.9 kg; height=165.5±46.5 cm) participated in a six-week, double-blind, quasi-experimental study and were randomly assigned to one of two groups: β-alanine (BLA)(n=11(6 women, 5 men); 800 mg tablets, 4 times daily) or placebo (PLA) (n=12 (6 women, 6 men); 800 mg maltodextrin tablets, 4 times daily). The cohort consisted of NCAA Division III track, swimming, wrestling, and soccer athletes who were actively training in their respective sports. Prior to, and immediately following supplementation, participants performed a 2000 meter row at full exertion followed by two modified rowing Wingate tests (WAnT) with three minutes of rest between each exercise. Researchers measured total time and peak power (PP) for the mean value of both pre-supplementation and post-supplementation testing for each treatment. Data were analyzed with a two-way factorial ANOVA using SPSS (v. 21) ($p < 0.05$). **RESULTS:** No significant treatment effects were observed for the 2000 meter row for time to completion for men or women ($p>0.05$, Post-treatment results: BLA males=446.5±8.7 seconds, PLA males=445.2±20.4 seconds, BLA females=554.7±51.3 seconds, and PLA females=513.9±42.5 seconds). Additionally, no significance difference was found in PP for either WAnT ($p > 0.05$, Post-treatment results $WAnT_1$: BLA males=478.6±88.3 watts (W), PLA males=490.2±82.0 W, BLA females=293.3±54.6 W, and PLA females=287±57.5 W. $WAnT_2$: BLA males=458.2±79.1 W, PLA males=482.0±79.1 W, BLA females=298.5±57.8 W, and PLA females=287.2±57.5 W) **CONCLUSION:** This data suggests that β-alanine may not enhance performance that utilizes E-HI or S-HI among different sport activities in a group of diversely trained athletes.