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Research article

Pre-Workout Carbohydrate Supplementation does not Affect Measures of Selfassessed Vitality and Affect in College Swimmers

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ABSTRACT

Beneficial effects of dietary carbohydrate (CHO) on physical and psychological parameters have been demonstrated in athletes. Because affect, or mood, can predict athletic performance, the main objective of this study was to determine the effect of pre-workout CHO on affect in swimmers. College swimmers (n = 37) participated in a randomized crossover experiment of the effects of a pre-workout CHO supplement on vitality and affect. Subjects consumed a CHO supplement or placebo for two days before morning practice. After each morning practice, swimmers completed measures of affect and feelings of vitality. Pearson correlations were performed to describe relationships among variables. Differences in means between the CHO and placebo conditions were determined by paired t-tests. Independent t-tests were used to determine differences in variables between the highest and lowest tertiles of breakfast consumption frequency. All statistical analyses were performed using SAS 9.1.3 (Cary, NC) and statistical significance was set at $\alpha = 0.05$. There were no significant differences in affect or feelings of vitality between the CHO supplement and placebo conditions (all $p \geq 0.15$). Our results do not support a beneficial effect of CHO supplementation before morning swim practice on affect or feelings of vitality in swimmers.

Key words: Nutrition, swimmers, mood

Key Points

- Pre-workout carbohydrate did not affect post-workout measures of vitality or affect in collegiate swimmers.

- Avoidance of feeling nauseous/ill' and 'lack of time' were the most frequent reasons reported by swimmers for forgoing breakfast before morning swim practice.
- A longer trial of carbohydrate supplementation is needed to verify if there is indeed no effect of pre-workout carbohydrate on post-workout measures of vitality or affect in swimmers.

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