The Effects of an Energy Increasing Supplement on Markers of VO₂ max, Body Composition, and Anaerobic Power

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Int J Exerc Sci 2(1): S17, 2009. Research suggests that energy increasing supplement ingestion prior to prolonged aerobic exercise (>60 minutes) can improve aerobic capacity (VO₂ Max). Energy increasing supplements affect on reduced aerobic training periods (<60 minutes) lack definitive empirical evidence. **PURPOSE:** To investigate the potential impact of an energy increasing supplement on aerobic training, body composition and anaerobic power. **METHODS:** Thirty-three healthy male and female subjects (18-30yrs) participated in an equated volume supervised running workout for six weeks utilizing long slow distance. Group one (N = 17, 21 ± 3 yr) participated in long slow distance training as a Placebo group void of any dietary instructions or interventions. Group two (N = 16, 21 ± 3 yr) participated in long slow distance training and was provided with a GU Energy Gel packet and 8 oz. of water fifteen minutes prior to the workout. All subjects participated in a familiarity session (FAM), a Pre-Test (T1) and a Post-Test (T2). Each testing session consisted of a VO₂ Max, a 30 second Wingate and body composition assessment. Data were analyzed by a two-way ANOVA with repeated measures. Significance was set at p < 0.05 and adopted throughout. **RESULTS:** The GU and Placebo groups experienced significant increases (p < 0.001), in VO₂ max, with 9.71% (4.06 ± 2.68 ml/kg/min) and 2.81% (1.26 ± 2.25 ml/kg/min) increases respectively. A significant interaction (p < 0.005) in VO₂ max occurred between groups, as the GU group displayed a 322% greater increase when compared to the Placebo group. Body fat percentage significantly decreased (p < 0.05) in the GU (0.76 ± 2.47%) and Placebo (1.55 ± 3.21%) groups without a significant reduction in total body weight at a p < 0.05 significant level. No change was observed in Wingate peak or mean power (p < 0.05). **CONCLUSION:** The findings of this study suggest GU Energy Gel supplementation has a more profound impact on aerobic capacity when compared to a Placebo under identical training protocols. However, both GU Energy Gel and Placebo supplementation had a significant effect on aerobic capacity and body fat percentage.