

## The Effect of a Commercially Available Pre-Workout Supplement (The Bracket™) on Wingate Anaerobic Cycle Test Performance in Athletic Females

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### ABSTRACT

The Bracket™ is a proprietary blend, pre-workout supplement whose primary active ingredients consists mostly of a mixture of creatine, B-complex vitamins, and a glycerol/taurine combination. It has been third party tested for ingredient accuracy, and is also certified by NSF, meaning that it is certified for sports consumption. Previous research has been done on the ingredients within the supplement utilizing male demographics. However, there is limited research done on the pre-workout supplement as a whole. The little research done has showed no increases in any variables such as power output (relative/absolute) and/or rate of fatigue. Very little research has been done utilizing a female population, let alone athletic females. PURPOSE: To examine the effect of a commercially available pre-workout supplement (The Bracket™), in athletic females, on absolute peak power (APP), absolute mean power (AMP), relative peak power (RPP), relative mean power (RMP), rate of fatigue (FTR), absolute total work (ATW), and relative total work (RTW) utilizing the Wingate Anaerobic Cycle Test (WACT), a 30-s supra maximal exercise protocol. METHODS: Thirteen athletic females, ages 18-30, with no prior hamstrings or quadriceps injuries within the last years were recruited. All subjects underwent three experimental trials [treatment (TRT, supplement with Gatorade®), placebo (PLC, Gatorade®), and a control (CON, water)] in a single blind balanced crossover design. During the trials the subjects had to ingest one of the three liquids in an 8 ounce serving thirty minutes prior to engaging in the WACT. Each trial was performed approximately one week apart. The differences in the dependent variables between treatments were analyzed using an ANOVA (0 between, 1 within),  $\alpha=0.05$ . RESULTS: No significant difference between trials were seen for APP (TRT=715  $\pm$  126 W; PLC=716  $\pm$  125 W; CON=696  $\pm$  147 W) ( $p=0.2940$ ), AMP (TRT=446  $\pm$  94 W; PLC=436  $\pm$  85 W; CON=441  $\pm$  91 W) ( $p=0.3930$ ), RPP (TRT=11.6  $\pm$  1.4 W  $\cdot$  kg<sup>-1</sup>; PLC=11.6  $\pm$  1.5 W  $\cdot$  kg<sup>-1</sup>; CON=11.3  $\pm$  1.5 W  $\cdot$  kg<sup>-1</sup>) ( $p=0.2280$ ), RMP (TRT=7.3  $\pm$  1.4 W  $\cdot$  kg<sup>-1</sup>; PLC=7.1  $\pm$  1.1 W  $\cdot$  kg<sup>-1</sup>; CON=7.2  $\pm$  1.3 W  $\cdot$  kg<sup>-1</sup>) ( $p=0.3920$ ), FTR (TRT=62  $\pm$  13%; PLC=61  $\pm$  11%; CON=59  $\pm$  11%) ( $p=0.1920$ ), ATW (TRT=13368  $\pm$  2798 J; PLC=13066  $\pm$  2550 J; CON=13246  $\pm$  2749 J) ( $p=0.4100$ ), or RTW (TRT=218  $\pm$  42 J  $\cdot$  kg<sup>-1</sup>; PLC=212  $\pm$  33 J  $\cdot$  kg<sup>-1</sup>; CON=215  $\pm$  38 J  $\cdot$  kg<sup>-1</sup>) ( $p=0.4080$ ). CONCLUSION: Ingestion of (The Bracket™) prior to exercise does not affect performance on the WACT in athletic females.

