Effects of Acute Caffeine and B-vitamin Consumption on Golf Performance during a 36-hole Competitive Tournament

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Studies have validated the performance enhancing properties of caffeine and its effects on sports performance. However, little is known about the effects of caffeine and B-vitamins on golf performance. **PURPOSE:** To determine the effects of acute caffeine and B-vitamin supplementation on psychophysiological measures of golf-specific performance during a competitive golf tournament. **METHODS:** 12 healthy caffeine-habituated males (34.8 ± 13.9 yrs, 175.9 ± 9.3 cm, 81.23 ± 13.14 kg), with a USGA handicap of 3-10, participated in a double-blind placebo-controlled crossover trial. Participants played two 18-hole rounds of golf on separate days and were randomly assigned to consume either a placebo (PLA) or caffeine and B-vitamin (CAF+B) supplement. PLA/CAF+B were consumed before and after 9 holes during each 18-hole round. Golf-specific measures of performance (total score, drive distance, fairways in regulation (FIR), greens in regulation (GIR), and putt distances were recorded. Heart rates (HR), breathing rates (BR), peak trunk accelerations (g’s) and trunk posture (deg) immediately before drives and putting were collected using a Zephyr Bioharness. Self-reported perceptual measures of energy, fatigue, alertness and concentration were collected before, during and following each round using a visual analogue scale questionnaire. **RESULTS:** total score (76.9 ± 8.1 vs 79.4 ± 9.1, p=0.039), GIR (8.6 ± 3.3 vs 6.9 ± 4.6, p=0.035) and drive distance (239.9 ± 33.8 vs 233.2 ± 32.4, p=0.047) were significantly better under the CAF+B condition compared to PLA, with no difference (p>0.05) in FIR, number of putts or putt distance. Perceptual measures of alertness and confidence significantly decreased over the round regardless of condition (p =.006). However, there were significant main effects for condition (p<0.05) and time (p<0.001) for perceived feelings of energy and fatigue. Compared to PLA, CAF+B had higher (p=0.025) energy and experienced less fatigue over the round. There were no differences in peak acceleration, putt or drive posture between conditions or across the round (p>0.05). **CONCLUSION:** Consumption of CAF+B improves golf-specific measures of performance. This effect appears to be due to central rather than peripheral mechanisms. Financial Support Provided by MusclePharm Inc.