

Poster presentation

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The effect of ingesting a caffeine-enhanced sport drink on resting energy expenditures and blood pressure in females

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Background

The effects of caffeine-enhanced drinks on resting energy expenditure and blood pressure have not been studied extensively in recreationally active females. The purpose of this study was to evaluate the effects of a thermogenic supplement, Redline Princess, on resting energy expenditure, resting blood pressure, and resting heart rate. In addition, the effect of the pre-exercise drink on subjective feelings of fatigue and vigor was also explored.

Methods

Six recreationally active females (age 24.50 ± 2.17 years; height, 162.56 ± 8.27 cm; weight 55.80 ± 7.44 kg), who were apparently healthy and recreationally active individuals, reported to the Resting Metabolic Laboratory for two separate testing sessions to participate in a randomized, double-blind crossover design. While in a fasted state, the participants were provided with either 240 ml of a caffeine-enhanced sport drink, Redline Princess (SUP), or 240 ml of a placebo (PL). Resting energy expenditure (REE), resting blood pressure (RBP), and resting heart rate (RHR) were assessed at 1-hour, 2-hour, and 3-hours post ingestion. A Profile of Moods State (POMS) questionnaire was completed each hour to assess fatigue and vigor. A two-day wash-out period was required between sessions. Data were analyzed by two-factor (group \times time) ANOVA using SAS version 9.1.3.

Results

The Redline Princess supplementation did result in a significant increase ($p = 0.045$) in REE when compared to the placebo at 60 minutes ($1.07 \pm .15$ vs. $.96 \pm .20$ kcal/min), 120 minutes ($1.02 \pm .16$ vs. $.94 \pm .19$ kcal/min), and at 180 minutes ($1.03 \pm .15$ vs. $.95 \pm .20$ kcal/min) post-ingestion. No significant differences were observed for BP, HR, fatigue or vigor ($p > 0.05$) for either group.

Conclusion

In this study, Redline Princess did have an acute significant impact on resting energy expenditure more than the placebo for several hours after ingestion in fully rested states.

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