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Poster presentation

## 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  $24.50 \pm 2.17$  years; height,  $162.56 \pm 8.27$  cm; weight  $55.80 \pm 7.44$  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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