WHAT ARE THE EFFECTS OF A SHEET ENERGY STRIP ON MAXIMAL EXERCISE PERFORMANCE

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Abstract

INTRODUCTION: One of the newest ways to consume energy is by taking Sheet Energy Strips. This new supplement was recently introduced to the market in July 2011. These strips are placed on the tongue and dissolve 100 mg of caffeine per strip and B vitamins into the body. It claims to have the same effects as energy drinks but with no sugar, calories, or after crash effects. **PURPOSE:** The purpose of this study was to examine the metabolic and physical effects of orally intake of caffeine through Sheet Energy Strips on a maximal exercise test. **METHODS:** Five physically fit males, who were non- regular caffeine users, 130 mg to 300 mg per day, participated in this study. At the start of each trial, subjects administered Sheets Energy Strip or placebo based on their body weight, 2 mg of caffeine for every 1 kilogram of body weight. There was a 10 minute gap between Sheets Energy Strip or placebo intake and the test. The subjects were tested twice using the Bruce Protocol, in randomized order with 48 hour rest period between each test. The subject's HR, BP, RPE, and VO_2 max were recorded. **RESULTS:** After analyzing the data on Excel Spreadsheet, using a repeated measure T-test, the results showed that there was no significant difference in HR (p= 0.665), SBP (p=0.223), DBP (p=0.178), and RPE (p=0.235). However, it was revealed that there was a significant difference in VO_2 max (p=0.013). **CONCLUSION:** Although the Sheets Energy Strips showed no significant difference in HR, BP, and RPE it did show a significant difference in VO_2 max. This may suggest that the caffeine in the Sheets Energy Strips played a role in improving performance on the maximal exercise test.

Purpose

The purpose of this study was to examine the metabolic and physical effects of orally intake of caffeine through Sheet Energy Strips, strips that are dissolved on the tongue releasing 100 mg of caffeine per strip and B vitamins, on a maximal exercise test.

Methods

Subjects

- The selection of subjects began with a random verbal questionnaire about their habitual caffeine use
- Five physically fit male students were selected based on the criteria of non- regular caffeine use, caffeine intake of 130 mg to 300 mg per day.

Instrumentation

- Polar heart rate monitor (FS1 series) to record heart rate
- American Diagnostic Corporation blood pressure cuff to record blood pressure
- The Borg scale of Perceived Exertion to measure the RPE
- The metabolic cart to measure VO_2
- Bruce protocol for the treadmill test
- Sheets Energy Strips
- Listerine Strips for placebo

Procedure

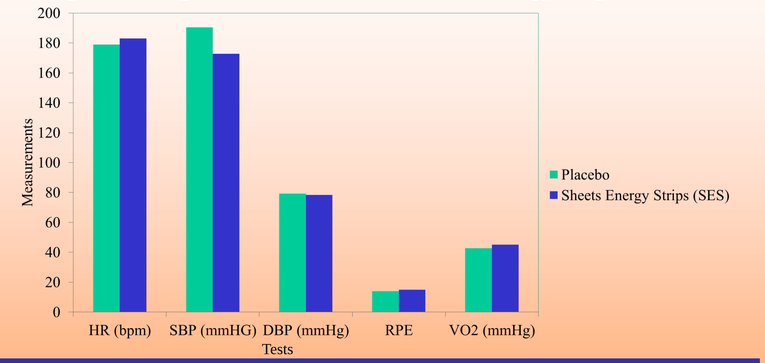
- The same procedure was performed on two different days with 48 hours of rest in between.
- Subjects were instructed to abstain from any caffeine intake 12 hours prior to each trial, as well as refrain from food and beverage intake 3 hours prior to each trial.
- At the start of each trial subjects administered Sheets Energy Strip or placebo on their tongue based on their body weight, 2 mg of caffeine for every 1 kilogram of body weight.
- There was a 10 minute gap between Sheets Energy Strip or placebo intake and the test.
- The subjects were tested on the Bruce Protocol, in randomized order.

Results

Table 1: Related Variables

Variables	Mean	± SD	p value
HR Placebo	178.80	15.51	0.665
HR SES	183.00	16.81	
SBP Placebo	190.40	12.68	0.223
SBP SES	172.80	18.36	
DBP Placebo	79.20	1.10	0.178
DBP SES	78.40	0.89	
RPE Placebo	14	0.89	0.235
RPE SES	15	0.89	
VO_2 Placebo	42.56	8.62	0.013
VO_2 SES	45.20	8.66	

Figure1: Comparison of Placebo and Sheets Energy Strips



Conclusions

- There was no significant difference in HR, BP, and RPE between the two trials.
- There was significant difference in max VO_2
- This experiment revealed that even thoughVO_2 increased, HR did not suggesting that caffeine may have played a role in increasing performance during the maximal exercise test.