THE EFFECTS OF OXYELITE PRO ON THE RESPONSE TO MAXIMAL EXERCISE

Author: **Vanessa Romero Faculty Sponsor: J.R. Wilson, Ph.D. : Cardio-Pulmonary Research Laboratory, The University of Texas at Arlington, Arlington, TX;**

Abstract

INTRODUCTION:
Caffeine has been recognized for years as an ergogenic aid to exercise performance. Commonly found in energy drinks, sports gels and pre workout supplements caffeine is also a primary ingredient in one of American's highly sought after quick fix__ diet aids. Not regulated by the FDA and commonly abused, diet pills fail to address what impact, if any, they may have on one's exercise response that could compromise safety. With recent research finding exercise performance to be enhanced after ingestion of caffeine and appetite suppressant mixture as compared to either drug alone, this study sets out to investigate the effects of a comparable mixture, OxyElite Pro on an individual's exercise response.

PURPOSE: The purpose of this study was to investigate the effects of OxyElite Pro on an individual heart rate (HR), rate of perceived exertion (RPE), respiratory exchange ratio (RER), maximal oxygen consumption (VO2max), and time to exhaustion (T) during an incremental exercise test from rest to maximal levels.

METHODS: Five female (age 21.6 + 1.34 yrs) UTA students volunteered to participate in this single blind study. Pre-screened by a caffeine consumption questionnaire all subjects self reported the daily caffeine intake of 100-500 mg needed to qualify for participation. Each subject had their height and weight recorded and body composition assessed by three site skinfolds (triceps, suprailiac, thigh). Randomly assigned to one of two treatment conditions, all subjects completed two graded exercise test on the treadmill with increasing speed and elevation until exhaustion. Treatment A) was with OxyElite Pro Supplementation and B) was with an empty capsule to serve as placebo. All subjects ingested their respective supplement thirty minutes prior to testing. During each test HR and RPE were recorded along with the maximal values measured by the metabolic cart for VO2max and RER. Treatments were counterbalanced among subjects and all tests were performed with a minimum of 48 rest time in between.

RESULTS: The percent body fat calculated from the three skinfold sites was 22.8 ± 5.0% . In the placebo group measured variables are as follows: resting HR (79 + 7 bpm); Max HR (191+ 4.3 bpm); RPE at max (17.4 +1.5); VO2 Max (33.3 ± 6.0 ml/kg/min); RER (1.2+ .22) and T (613 + 63.8 sec). In the treatment condition: resting HR (83 + 5 bpm); Max HR (192+ 3.8 bpm); RPE at max (17.2 +1.5); VO2 Max (35.8 ± 3.4 ml/kg/min); RER (1.2+ .2) T (598.4 + 45.6 sec). Dependent t test for measured variables found no significant difference (p > 0.05) among treatment groups.

CONCLUSION: The results of this study indicated that ingestion of OxyElite Pro had no significant impact on an individual's response to maximal exercise.

Purpose

The purpose of this study was to investigate the effects of OxyElite Pro on an individuals heart rate (HR), rate of perceived exertion (RPE), respiratory exchange ratio (RER), test maximal oxygen consumption (VO2max), and time to exhaustion (T) during an incremental exercise test from rest to maximal levels.

Methods

Subjects
5 female UTA students within the ages of 21-24 participated in this study. Participants ranged from being recreationally active to highly physically active working out anywhere from 1-6 times per week. Additionally all subjects completed a pre-screening questionnaire self reporting a daily caffeine intake of 100-500 mg of caffeine which allowed them to qualify as participants.

All participants had their height and weight recorded and body composition assessed by 3 site skinfolds. Descriptive statistics for age, height, weight and % body fat are listed in the table that follows:

Participants:	5 Females
Age (yrs)	21.6 ± 1.34
Height (in)	65.7 ±4.30
Weight (lbs)	157.2 ±10.8
% Body Fat	22.84 ± 5.04

Methods (cont'd)

Supplementation
All participants were subject to two treatment conditions in this single blind counterbalanced study. Treatment A) was 1 OxyElitePro pill and B) was 1 empty OxyElite Pro capsule that served as placebo. 2 females began in treatment group A and three females began in treatment group B. On test day every participant was provided with their respective supplement.

Max Exercise Test
A max exercise test (Bruce Protocol) was administered 30 minutes following treatment supplementation. A heart rate monitor was attached to the subjects chest to allow measurement of their heart rate and all subjects were fitted with headgear, a mouthpiece and nose clip to ensure that exhaled air could be collected in a metabolic cart (PARVO or SensorMedics). This allowed for the calculation of the subjects relative maximal oxygen consumption (VO_2 max) and respiratory exchange ratio (RER) during exercise. (RPE) with ratings from 6 (rest) to 20 (maximal exercise) were recorded every third minute of exercise along with heart rate. Once started the treadmill protocol consisted of an increase in speed and elevation every third minute of exercise until subjects could not go any further and time to exhaustion (T) was recorded.

Following a minimum of 48 hours rest time, subjects again reported to the Cardio Pulmonary lab at UTA and testing procedures where repeated under the alternate treatment condition. It is important to note that prior to both tests all participants had been asked to fast for 3 hours prior to the test, avoid caffeine on test day and get a good nights sleep the night before.

Statistical Analysis
Paired t- test were used to investigate differences in each of the following variables among treatment groups: resting heart rate, max heart rate , RPE at max, VO_2 max, RER at max, and time to exhaustion (T). Significance value was set at $p \leq .05$.

Results

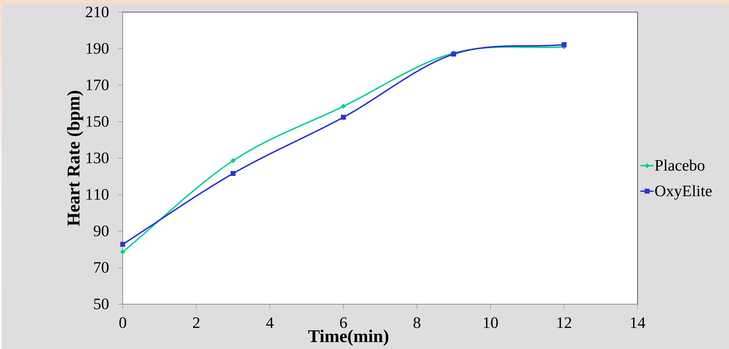

Figure 1: The Heart Rate Response To Graded Exercise Under Two Separate Treatment Conditions

Treatment:	Placebo Control	OxyElite Pro	t-test
Resting Heart Rate	79 ± 7 bpm	83 ± 5 bpm	p=0.241
Max Heart Rate	191± 4.3 bpm	192± 3.8 bpm	p=0.719
RPE at Max	17.4 ±1.5	17.2 ±1.5	P=0.110
VO_2 Max	33.3 ± 6.0 ml/kg/min	35.8 ± 3.4 ml/kg/min	p=0.232
RER (Max)	1.2± .22	1.2± .2	p=0.605
Time to Exhaustion	613 ± 63.8 sec	598.4 ± 45.6 sec	P=0.451

Conclusions

In this study ingestion of OxyElite Pro had no significant impact on an individual's response to maximal exercise (p>.05) Future studies are recommended to add support to this conclusion.