The Effects of N.O.-Xplode 2.0 Supplementation on Aerobic Performance.

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Introduction

N.O.-Xplode 2.0 is a popular supplement with marketing claims to support strength, endurance, training energy, and nitric oxide production. Nitric oxide (NO) is a gaseous, labile molecule known for assisting in vasodilation, blood flow regulation, mitochondrial respiration, and platelet function. Aerobic performance, or aerobic capacity, is most commonly measured though maximal oxygen consumption (VO_{2max}). VO_{2max} is the maximum capacity of the body to transport and utilize oxygen during incremental exercise to exhaustion. Several studies have been performed with NO supplementation on male subjects of varying fitness levels (untrained, moderately trained, and highly trained). However, there have not been any studies performed with NO supplementation on females. This study was designed to examine and quantitatively analyze recreationally active females during aerobic exercise.

Purpose

The purpose of this research study was to measure and record the effects of N.O.-Xplode 2.0 supplementation on female exercisers during a VO_{2max} test using the Bruce protocol.

Methods

Five females from the UTA Kinesiology department volunteered to participate in this study. All of the participants completed an eligibility questionnaire prior to testing. The eligibility questionnaire was used in order to find a group of females with several common attributes including: fitness level, supplementation history, and age.

Methods (cont'd)

Each subject performed two graded exercise tests on the treadmill with a minimum of 48 hours of rest between each test. The subjects randomly received either the placebo or the supplement on their first visit and the opposing product on their second visit. Subjects were not informed of which product they had until both trials were completed. During each test oxygen consumption (VO_2), heart rate (HR), respiratory rate (RR), respiratory quotient (RQ), and test duration were measured and recorded. The alpha level for significance in this study was set at $p \leq 0.05$.

Results

Five females participated in and completed this study. The results of the analyses indicated that the differences between the placebo and supplement were not significant for any of the tested variables (VO_{2max}, p = 0.73, HR max, p = 0.69, RQ max, = 0.90, RR max, = 0.77, and test duration, p = 0.89).

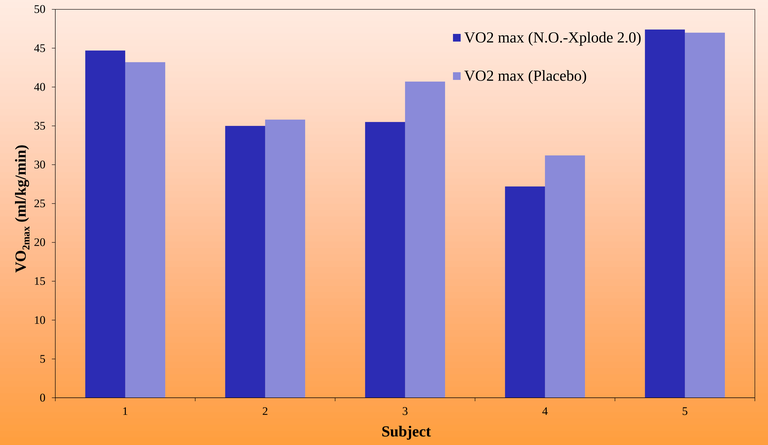

Figure 1: The Relationship Between VO_{2max} (ml/kg/min) With N.O.Xplode 2.0 And With A Placebo

Results (cont'd)

Variables	Mean Values (±SD)
Age (years)	22.20 (± 1.92)
Height (cm)	164.59 (± 10.06)
Weight (kg)	58.82 (± 9.13)
VO_{2max} (ml/kg/min)	
N.O.-Xplode 2.0	37.96 (± 8.14)
Placebo	39.58 (± 6.20)
HR max (bpm)	
N.O.-Xplode 2.0	185.60 (± 14.88)
Placebo	189.00 (± 11.31)
RR max (breaths/min)	
N.O.-Xplode 2.0	45.00 (± 6.52)
Placebo	44.40 (± 7.44)
RQ max	
N.O.-Xplode 2.0	1.22 (± 0.10)
Placebo	1.23 (± 0.09)
Test Duration (min:sec)	
N.O.-Xplode 2.0	11:42 (± 2:11)
Placebo	11:31 (± 1:48)

Conclusions

The results of this study suggest that although there were differences amongst the testing variables, these differences were not significant. Further studies should examine the effects of N.O.-Xplode 2.0 on females of different fitness levels, age groups, and possibly estrogen status.