



The Effects of O₂ Gold Advanced on a VO₂ Max Test

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Abstract

INTRODUCTION: Maximal oxygen consumption (VO₂max) is the maximum capacity of the body to transport and utilize oxygen during incremental exercise. It is expressed either as an absolute rate in liters of oxygen per minute (L/min) or as a relative rate in milliliters of oxygen per kilogram of body weight per minute (ml/kg/min). Research has shown that nitric oxide (NO) is an important regulator of blood flow and mitochondrial respiration during physical exercise. The specific purpose of this research study is to determine the effects of nitric oxide supplements, specifically O₂ Gold Advanced, on maximal testing and whether it increases VO₂ max.

METHODS: Four men (M; age 24.25 ± 4.03 years) of the UTA Kinesiology department, volunteered to participate in this study. Each subject had body composition assessed by three site skinfolds (chest, abdomen, thigh). Each subject performed two graded exercise tests on the treadmill, one with a placebo (P) and one with the supplement (S), with increasing speed and elevation until exhaustion. During each test, heart rate (HR) and rate of perceived exertion (RPE) were recorded along with the maximal values measured by the metabolic cart, relative maximal oxygen consumption (VO₂max) and time to exhaustion (T).

RESULTS: The maximal values: HR (P: 184.25 ± 18 bpm; S: 187 ± 12.4 bpm); T (P: 10:58 ± 0.06 min; S: 11:34 ± 0.033 min); RPE (P: 17 ± 1.63; S: 16.75 ± 2.06); and VO₂ max (P: 36.5 ± 7.38 mL/kg/min; S: 38.6 ± 4.92 mL/kg/min) were not significantly different between the supplement and placebo (p > 0.05). However, when looking at the mean difference between the two, the averages of the data obtained when consuming the supplement were slightly higher than that of the placebo for all variables.

CONCLUSION: The results of this study indicate that nitric oxide does not have much of an effect, if any, on a VO₂ max test. However, the lack of differences measured during the VO₂ max test may be attributed to a small subject pool as well as other factors such as stress, illness, or prior fatigue.

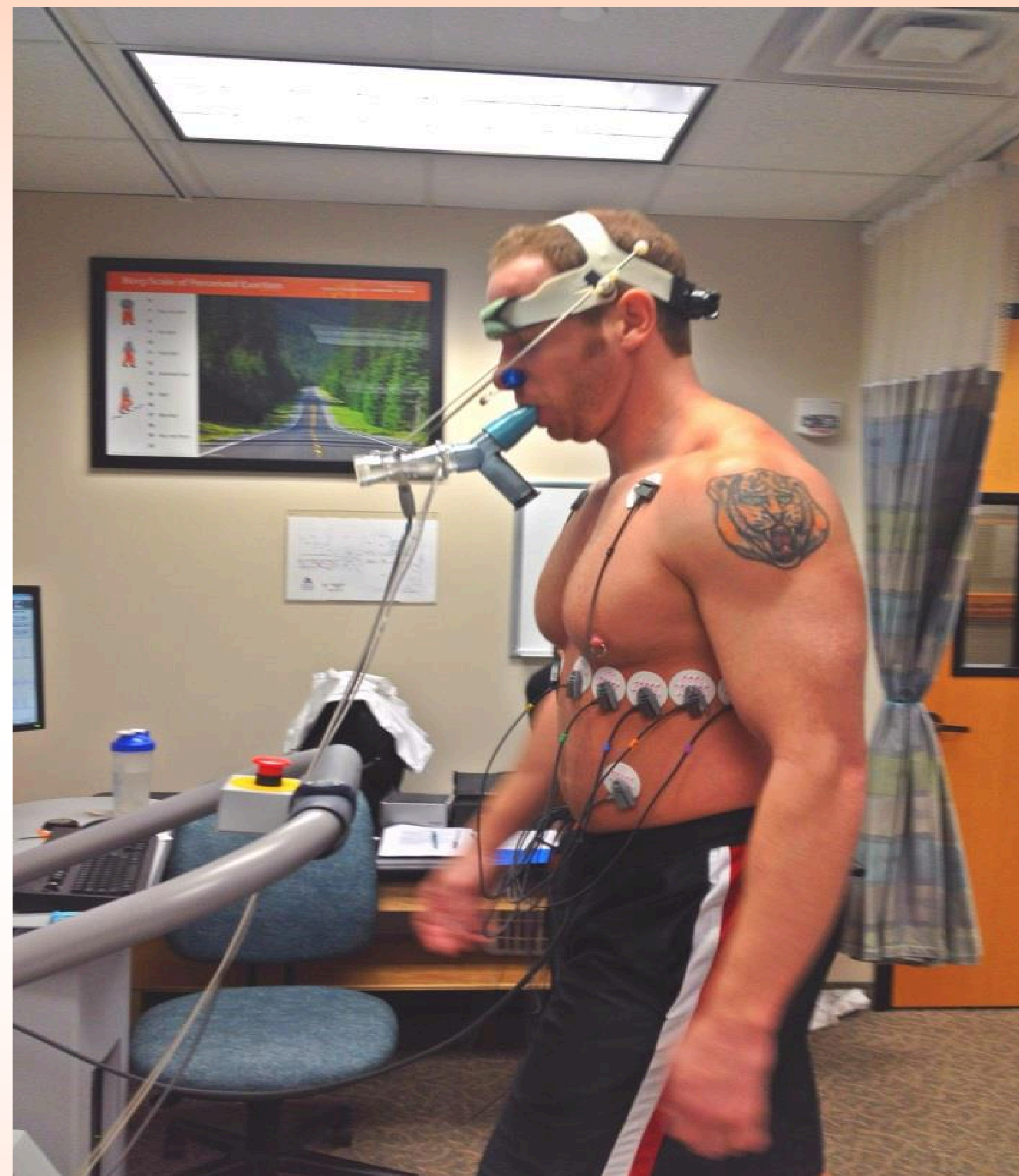
Purpose

The specific purpose of this research study is to determine the effects of nitric oxide supplements, specifically O₂ Gold Advanced, on maximal testing and whether it increases VO₂ max.

Methods

Four men (M; age 24.25 ± 4.03 years) of the UTA Kinesiology department, volunteered to participate in this study. Each subject had body composition assessed by three site skinfolds (chest, abdomen, thigh). Each subject performed two graded exercise tests on the treadmill, one with a placebo (P) and one with the supplement (S), with increasing speed and elevation until exhaustion. During each test, heart rate (HR) and rate of perceived exertion (RPE) were recorded along with the maximal values measured by the metabolic cart, relative maximal oxygen consumption (VO₂max) and time to exhaustion (T).

Methods (cont'd)

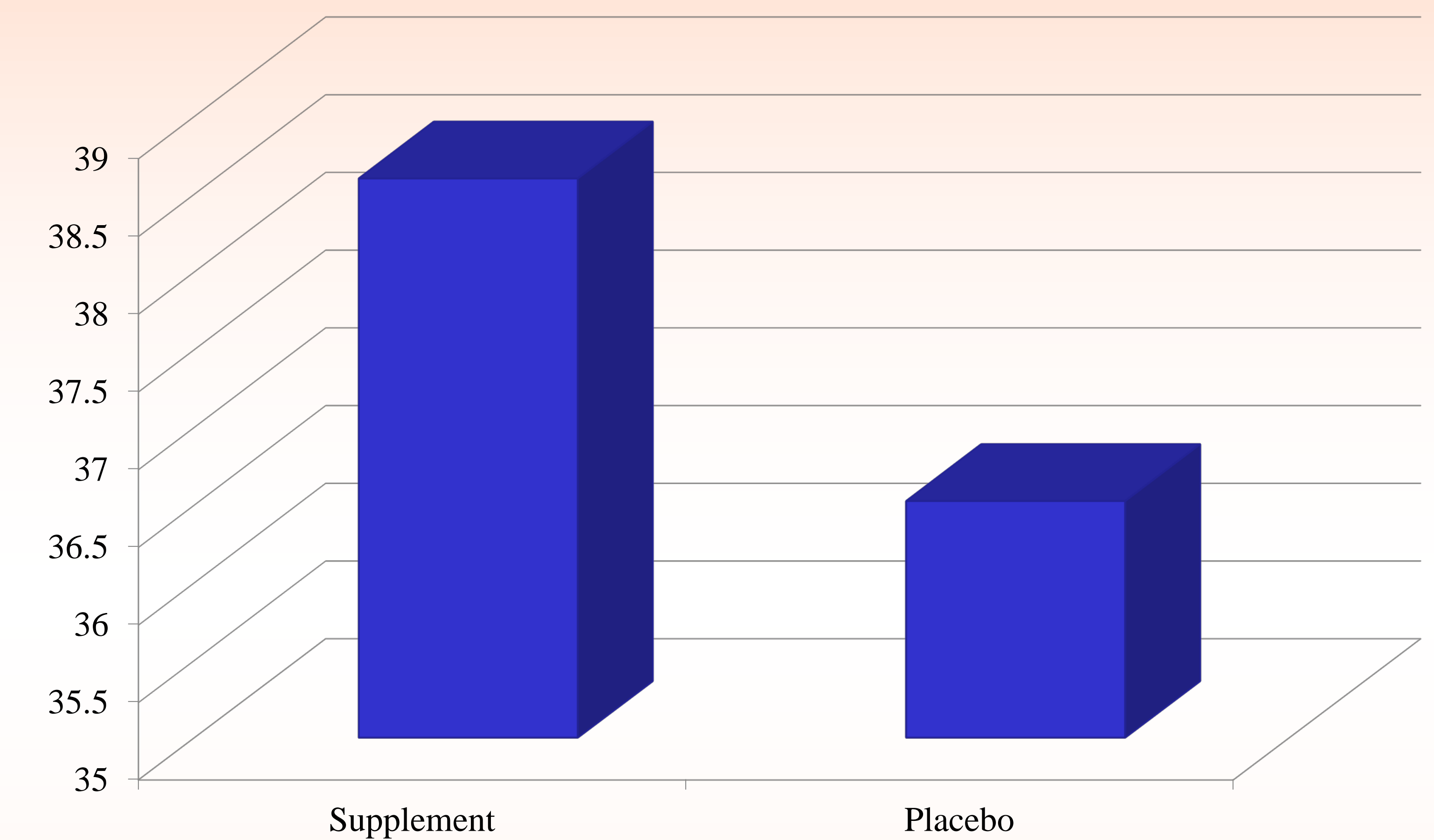


Results

The maximal values: HR (P: 184.25 ± 18 bpm; S: 187 ± 12.4 bpm); T (P: 10:58 ± 0.06 min; S: 11:34 ± 0.033 min); RPE (P: 17 ± 1.63; S: 16.75 ± 2.06); and VO₂ max (P: 36.5 ± 7.38 mL/kg/min; S: 38.6 ± 4.92 mL/kg/min, see Fig. 1) were not significantly different between the supplement and placebo (p > 0.05). However, when looking at the mean difference between the two, the averages of the data obtained when consuming the supplement were slightly higher than that of the placebo for all variables.

Results (cont'd)

Figure 1: Comparison Of VO₂ Max (ml/kg/min)



Conclusions

The results of this study indicate that nitric oxide does not have much of an effect, if any, on a VO₂ max test. However, the lack of differences measured during the VO₂ max test may be attributed to a small subject pool as well as other factors such as stress, illness, or prior fatigue.