

The Effects of Ox66™ Supplementation on Ventilatory Threshold Performance Measures

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ABSTRACT

Ox66™ claims to be the only solid form of oxygen known to be in existence. It is an aluminum hydroxide clathrate that can trap oxygen molecules within its structure and when digested the oxygen molecules can be absorbed into the portal bloodstream. It has previously been implemented in clinical settings to reduce hypoxia related medical conditions. However, it is currently unknown whether Ox66™ has an effect on performance measures at or near the ventilatory threshold during high intensity exercise. **PURPOSE:** The purpose of this study was to evaluate the ergogenic impact of acute Ox66™ ingestion on submaximal aerobic performance measures and ventilatory threshold during exercise testing using Bruce protocol. **METHODS:** 36 college age participants (20 males and 16 females) were recruited to complete this study. Participants attended three testing sessions. During the first session, baseline measurements were acquired and participants were familiarized with the testing procedures. During the second and third tests participants were randomized to receive either a placebo or the Ox66™ supplement. Heart rate, ventilatory threshold, respiratory exchange ratio and rating of perceived exertion (RPE) were recorded throughout each test. **RESULTS:** Overall there were no consistent differences between the placebo and Ox66™ conditions for all participants combined. However, when men and women were evaluated separately, there were a few significant differences. Under the Ox66™ condition men had a slightly higher $\dot{V}O_2$ ($p=0.045$) and higher heart rate ($p=0.046$) at ventilatory threshold. Women had a slightly lower RPE ($p=0.047$) at ventilatory threshold with the Ox66™ supplement. **CONCLUSION:** Ox66™ supplementation resulted in small improvements in a few submaximal aerobic performance measures. Although these results are statistically significant, it is unlikely that Ox66™ supplementation actually causes ergogenic performance benefits.