EFFECT OF A PRE-WORKOUT SUPPLEMENT ON PREFORMANCE DURING A MAXIMAL EXERTION (VO₂ max) TEST

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Abstract

PURPOSE: The purpose of this study was to evaluate the effect of a pre-workout supplement (MusclePrime) on exercise performance during a VO2 max test of men and women.

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 indicates that with pre-workout administration of a supplement, VO2max increased in young males and females.

METHODS: Three women (W; age 22 ± 1.3 yrs, height 67.5 ± 3 inches, weight 72.4 ± 4.6 kg) and three men (M; age 29.3 ± 7.1 yrs, height 70.5 ± 1 inches, weight 84.8 ± 2.6 kg) of the UTA Kinesiology department, volunteered to participate in this study. Each subject had body composition assessed by three site skinfolds (Men: chest, abdominal, thigh; Women: tricep, suprailiac, thigh). The purpose of this study was to evaluate the effect of a pre-workout supplement (MusclePrime) on exercise performance during a VO2 max test of men and women.

RESULTS: The percent body fat calculated from the three skinfold sites was 17.0 ± 3.0% (M) and 22.8 ± 0.8% (W). The maximal values with the supplement were as follows: HR (M: 187.7 ± 9.8 beats/min; W: 184.3 ± 10.1 beats/min), VO2 (M: 47.5 ± 6.1 ml/kg/min; W: 35.3 ± 4.8 ml/kg/min), Time to Exhaustion (TTE) (M: 22.1 ± 5.3 minutes; W: 16.5 ± 2.1 minutes).

CONCLUSIONS: The results of the study demonstrated that men and women both experienced higher VO2max and time to exhaustion levels. However it was only the males that experienced VO2max levels that were significant with the use of a pre-workout supplement (MusclePrime) in maximal exercise exertion testing.

Results (cont’d)

Methods (cont’d)

The treadmill protocol increases speed and elevation every three minutes until they cannot go any further. Because of the mouthpiece, the subjects communicated with hand signals. A "thumbs up" indicated continuing to exercise, a "waggle" of the hand, palm down, indicated not much longer. They were then asked to continue "another 30 sec" or "into the next workload" prior to stopping. This allowed the collection of final or maximal values.

Results

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