Introduction

Anabolic hormones are recognized as the premier compound to facilitate improvements in exercise performance. As an alternative to hormone use, testosterone-boosting supplements (TB) may be consumed to increase testosterone for performance enhancement. While these supplements may fail to augment testosterone in eugonadal men, they may still exert an ergogenic effect.

Purpose

Thus, the purpose of this investigation was to examine the effects of a commercially produced TB on maximal strength, power, and anaerobic power in healthy, active individuals within the context of a periodized resistance training program.

Methods

Eighteen trained men (25.8 ± 4.3y; 176.7 ± 5.0cm; 80.4 ± 12.0kg) completed a double-blind, placebo-controlled study consisting of 10 total weeks resistance training. The TB group supplemented daily with 2 doses of a multi-ingredient TB, and the placebo (PLA) group supplemented with an equal volume, visually identical placebo in the same manner. The first 8 weeks consisted of daily undulating periodized resistance training 3 days per week, focusing on either muscular hypertrophy, power, or strength. The final 2 weeks featured an overreach and taper phase. Tests consisted of 1RM strength of the bench press and leg press, a 30s Wingate, bench press peak power and velocity, and vertical jump height, peak power, and peak velocity.

Results

No differences existed between groups at baseline. Independent T-tests revealed a significant (p<0.05) difference in delta values from week 8 to 9 for bench press peak power. Wherein, PLA decreased (-29.4 W) and TB remained the same (+2.1 W). This corresponded with a significant (p<0.05) difference in bench press peak velocity for the same time period. However, the changes were divergent in this case (TB: +0.06 m/s; PLA: -0.05 m/s). A significant (p<0.05) difference was found for leg press 1RM from week 4 to 9 (TB: +31.7 kg; PLA: +13.1 kg), and trends were observed from week 4 to 10 (p=0.054; TB: +40.2 kg; PLA: +21.9 kg) and from week 8 to 9 (p=0.093; TB: +10.6 kg; PLA: -0.3 kg). A significant (p<0.05) effect was observed for bench press 1RM from week 0 to 4 (TB: +5.5 kg; PLA: +1.7 kg), which seemed to reverse from week 4 to week 8 (p=0.02; TB: +1.8 kg; PLA: +4.0 kg). No other significant interactions were observed.

Conclusions

A TB supplement may be efficacious for increasing maximal strength and preventing the performance decrements associated with overreaching.

References

Willoughby DS, Leutholtz B: D-aspartic acid supplementation combined with 28 days of heavy resistance training has no effect on body composition, muscle strength, and serum hormones associated with the hypothalamo-pituitary-gonadal axis in resistance-trained men. Nutrition research 2013, 33:803-810.


Acknowledgements: This study was supported by MusclePharm Corp.