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Effect of an herbal/botanical supplement on strength, balance, and muscle function following 12-weeks of resistance training: a placebo controlled study

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Abstract

Background

StemSport (SS; StemTech International, Inc. San Clemente, CA) contains a proprietary blend of the botanical Aphanizomenon flos-aquae and several herbal antioxidant and anti-inflammatory substances. SS has been purported to accelerate tissue repair and restore muscle function following resistance exercise. Here, we examine the effects of SS supplementation on strength adaptations resulting from a 12-week resistance training program in healthy young adults.

Methods

Twenty-four young adults (16 males, 8 females, mean age = 20.5 ± 1.9 years, mass = 70.9 ± 11.0 kg, stature = 176.6 ± 9.0 cm) completed the twelve-week training program. The study design

11.9 kg, stature = 176.6 ± 9.9 cm) completed the twelve week training program. The study design was a double-blind, placebo controlled parallel group trial. Subjects either received placebo or StemSport supplement (SS; mg/day) during the training. 1-RM bench press, 1-RM leg press, vertical jump height, balance (star excursion and center of mass excursion), isokinetic strength (elbow and knee flexion/extension) and perception of recovery were measured at baseline and following the 12-week training intervention.

Results

Resistance training increased 1-RM strength ($p < 0.008$), vertical jump height ($p < 0.03$), and isokinetic strength ($p < 0.05$) in both SS and placebo groups. No significant group-by-time interactions were observed (all p -values > 0.10).

Conclusions

These data suggest that compared to placebo, the SS herbal/botanical supplement did not enhance training induced adaptations to strength, balance, and muscle function above strength training alone.

Keywords: Anti-oxidant; Blue-green Algae; Strength exercise

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