

POSTER PRESENTATION

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Effects of 8 weeks of Stealth[®] supplementation on body composition, muscle strength and mass, markers of satellite cell activation, and clinical safety markers in males

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Purposes

This study determined the effect of 8 weeks of heavy resistance exercise combined with oral ingestion of either a placebo or Stealth[®] dietary supplement on body composition, muscle strength and mass, hemodynamics, myofibrillar protein content, serum (IGF-1, HGF, GH), muscle total DNA content, c-Met, and the myogenic regulatory factors (Myo-D, Myogenin, MRF-4).

Methods

Twenty non-resistance-trained males were randomly matched by age and body mass in a double-blind fashion being assigned to either a placebo (maltodextrose) or Stealth[®] group. Testing was conducted at baseline (day 0) followed by 8 weeks of a periodized 4-day per week resistance training program of 3 × 10 reps at 70-80% of their 1-RM. The program was split into two upper and two lower extremity workouts per week with post testing occurring at (day 57). Both groups consumed 2 servings (312g) (1248 kcals) per day. During exercise sessions the placebo group consumed (156g) of maltodextrose 30 min before and after exercise. The Stealth[®] group consumed (22g fat, 158g carbohydrates, 94g protein). During non-training days both groups consumed the 2 servings in the morning upon waking. Both the placebo and Stealth[®] groups consumed an isocaloric diet (~2500 kcals) and the additional (1,248 kcals) for a total of (~3750 kcals) each day. Data were analyzed with separate 2 × 2 factorial analyses of variance (ANOVA) with repeated measures ($p < 0.05$).

Results

For dietary intake, there were no significant differences in total calories ($p = 0.346$), protein ($p = 0.689$), and fat ($p = 0.275$) between testing sessions. A significant difference in carbohydrate ($p = 0.003$) between testing session was shown, but no difference ($p = 0.737$) between groups was observed. Hemodynamic measurement between testing session for resting heart rate ($p = 0.208$) and SBP ($p = 0.192$) were not significant between testing sessions. However, DBP ($p = 0.047$) was significant but no differences ($p = 0.686$) between groups were observed. A significant increase in body mass ($p = 0.001$), body water ($p = 0.001$), body fat % ($p = 0.001$), and fat mass ($p = 0.001$) were shown between testing sessions. Only body water was significantly ($p = 0.030$) greater within the stealth[®] group. No significant difference in fat free mass ($p = 0.068$) was shown between testing session for either group. A significant difference in upper body strength ($p = 0.024$) and lower body strength ($p = 0.001$) was shown between testing sessions for both groups. However, no significant difference between upper body ($p = 0.989$) and lower body ($p = 0.097$) strength was observed between the supplement groups. Serum IGF-1 ($p = 0.270$), HGF ($p = 0.070$), and GH ($p = 0.397$) were not significantly different between testing sessions. No significant difference between testing sessions for myofibrillar protein ($p = 0.108$), total DNA ($p = 0.217$), Myo-D ($p = 0.093$), and Myogenin ($p = 0.070$) were observed. A significant difference between testing session in c-MET ($p = 0.023$) and MRF-4 ($p = 0.044$) were shown. Only the placebo ($p = 0.047$) group was < Stealth[®] for c-Met.

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Conclusions

Heavy resistance training with a high caloric proprietary blend weight gain dietary supplement does not improve markers for skeletal muscle hypertrophy. Significant increases in body mass, fat mass and body fat % were shown for both placebo and Stealth[®].

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