SizeOn™ Clinical Trial

OHIO RESEARCH GROUP

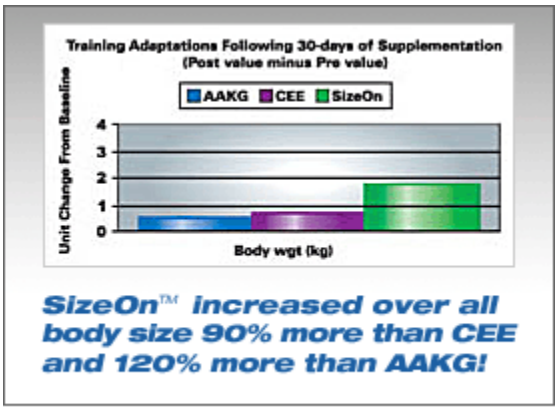
Ziegenfuss T.N., Mendel R.W., and Hofheins J.E. **Comparison of Purported Anabolic Supplements on Body Composition and Muscular Performance**. Ohio Research Group. Wadsworth, Ohio 44281, USA. tim@ohioresearchgroup.com

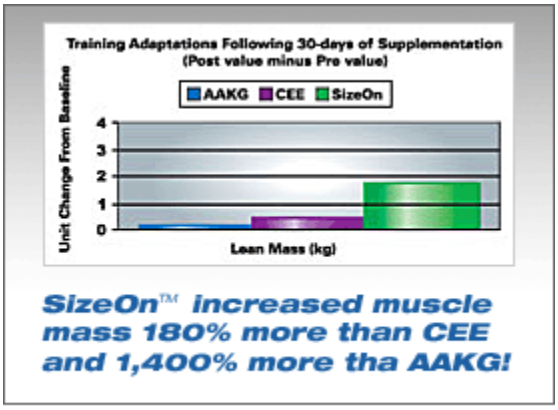
Objective: The purpose of this study was to compare the effects of three purported anabolic dietary supplements (arginine alphaketoglutarate, AAKG; creatine ethyl ester, CEE; SizeOnÔ, SO) on training-induced changes in body composition and muscular performance.

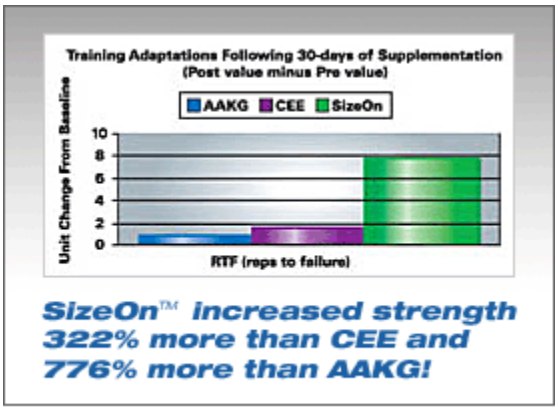
Methods: Using a randomized, double-blind design, 30 healthy men (mean ± SD age, height, weight, 1-RM bench press: 29.9 ± 6.8 y, 179.3 ± 6.4 cm, 84.8 ± 13.5 kg, 118.4 ± 21.5 kg) were matched for training experience and randomly assigned to ingest one serving per day of AAKG (3 g + 31 g carbohydrate, N=10), CEE (3 g + 31 g carbohydrate, N=10), or SO (1 scoop) for one month. Verification of ingredient purity and potency by an external laboratory is pending. Body composition (DEXA) and muscular performance (1-RM bench press and repetitions to failure [RTF: 3 sets x baseline body weight, 60-sec rest between sets]) were measured at baseline, day 7, and day 28. Blood samples were obtained at baseline and after 4-weeks of supplementation and training. Subjects were required to maintain their normal dietary and training patterns during the study. Data were analyzed via ANOVA and (where necessary) Newman-Keuls post-hoc tests. An intent-to-treat approach was used and statistical significance was accepted at $p \leq 0.05$.

Results: Body weight increased in SO (+1.9%; 91.82 ± 16.99 [baseline] to 93.59 ± 17.30 kg [day 28], $p<0.0002$), whereas no changes were observed in AAKG (-0.7%; 82.92 ± 5.39 [baseline] to 82.33 ± 6.31 kg [day 28], $p<0.25$). Body weight tended to increase in CEE (+1.0%; 79.58 ± 13.31 [baseline] to 80.35 ± 12.9 kg [day 28], $p<0.10$). Similarly, lean mass increased in SO (+2.8%; 64.79 ± 3.84 [baseline] to 66.61 ± 3.55 kg [day 28], $p<0.0001$), did not change in AAKG (+0.2%; 62.38 ± 5.22 [baseline] to 62.49 ± 4.92 kg [day 28], $p<0.74$), and tended to increase in CEE (1.0%; 61.50 ± 5.80 [baseline] to 62.05 ± 5.83 kg [day 28], $p<0.10$). No significant changes in % fat or fat mass were noted between or within groups. All groups had significant increases in 1-RM bench press from baseline to day 28, however, no between-group changes were noted. RTF increased in SO (+28.7%; 27.2 ± 12.2 [baseline] to 35.0 ± 17.0 reps [day 28], $p<0.0001$), but did not change in CEE (+8.9%; 30.4 ± 13.4 [baseline] to 33.1 ± 15.9 reps [day 28], $p<0.16$), or AAKG (+3.7%; 21.6 ± 8.5 [baseline] to 22.4 ± 8.1 reps [day 28], $p<0.51$).

Conclusions: Within the framework of the current experimental design, these preliminary data indicate that four weeks of AAKG administration has no effect on adaptations to resistance training (body weight, % fat, lean mass, or muscular performance). In contrast, CEE may have modest effects on body weight and lean mass, while SO significantly increases body weight, lean mass, and RTF during resistance training. We are currently examining the safety profile of each of these supplements, and plan to confirm and refine these results in a larger sample size. Future research is warranted to determine the mechanisms responsible for the noted improvements in training adaptations for SO.







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