P30

The effects of 8 weeks of colostrum and bio-active peptide supplementation on body composition in recreational male weight lifters

A. Kreutzer[1], P. Zavala[2], S. Fleming[2], M. Jones[3], J. M. Oliver[1], A. Jagim[2]
[1]Exercise & Sport Performance Laboratory, Kinesiology Department, Texas Christian University, Fort Worth, TX, USA; [2] Exercise & Sport Science Department, University of Wisconsin – La Crosse, La Crosse, WI, USA; [3] Division of Health and Human Performance, George Mason University, Fairfax, VA, USA
Correspondence: A. Kreutzer (a.kreutzer@tcu.edu) – Exercise & Sport Performance Laboratory, Kinesiology Department, Texas Christian University, Fort Worth, TX, USA
Journal of the International Society of Sports Nutrition 2016, **13(Suppl 1):**P30

Background

A commercially available bio-active peptide product (Bio-Gro™) as well as bovine colostrum have previously been shown to increase fat-free mass gains when used in conjunction with a structured training program. To our knowledge, no study has compared the efficacy of these supplements in augmenting fat-free mass gains during a program designed to elicit hypertrophy. Therefore, the purpose of this study was to compare the effects of bio-active peptides and bovine colostrum in combination with hypertrophy-specific resistance training on body composition in recreationally trained men.

Methods

Thirty-two resistance trained men (20±1 y; 179.9±5.9 cm; 78.4 ±6.1 kg) participated in a double-blind, placebo controlled design to determine the effects of bio-active peptides and colostrum on body composition changes induced by a hypertrophic strength training protocol. Body mass (BM), fat-free mass (FFM), fat mass (FM), and percent body fat (PBF) were assessed before and after training using air displacement plethysmography (*BODPOD, Cosmed, USA*). Participants were matched for FFM following baseline testing, and randomly assigned to ingest Bio-Gro™ (*Isatori, USA* [BIO]; n = 12), colostrum (*Isatori, USA* [COL]; n = 9) or Placebo (PLA; n = 11). All groups completed an 8-week resistance training program consisting of a 4-day split designed to elicit muscle hypertrophy. In addition, each participant was provided instructions on total energy and macronutrient content to facilitate increases in FFM.

Results

BM increased significantly ($p < 0.001$) in all three groups (PLA: 1.6±1.8 kg; COL: 1.9±2.1 kg; BIO: 1.7±1.9 kg), with no Group*Time interactions present ($p = 0.925$). FFM increase was greater ($p = 0.008$) in COL (2.5±1.0 kg) when compared with PLA (0.8±1.3 kg), and trended toward being greater ($p = 0.090$) in COL when compared with BIO (1.5±1.6 kg). There was no difference in FFM gain between BIO and PLA ($p = 0.233$). FM increased in PLA (+0.9±1.1 kg; $p = 0.044$), did not change significantly in BIO (0.5±1.8 kg; $p = 0.228$), and trended toward a decrease in COL (-0.9±1.2 kg; $p = 0.071$). Participants in the PLA group experienced a PBF gain of 1.0±1.3 % ($p = 0.058$), while PBF decreased by 1.4±1.2 % ($p < 0.05$) in those supplementing with COL. No change ($p = 0.464$) in PBF was found in participants in the BIO group.

Conclusion

The addition of bovine colostrum to a resistance program designed to elicit hypertrophy appears to augment FFM gains to a greater degree when compared with a commercially available bio-active peptide supplement. Furthermore, bovine colostrum seems to allow decreases in fat mass and percent body fat concurrent with increases in FFM. However, further study is warranted in a larger sample size to elucidate differences in the effects of colostrum and bio-active peptide supplements on the body composition of resistance trained individuals engaging in a strength training program designed to elicit hypertrophy.