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Kinetic Analysis of Energy/Caloric Metabolism Activity of a Single Bout of Consuming Various Beverages and Dietary Supplements in Healthy Human Adults: Comparison of Lycium barbarum-containing Liquid Dietary Supplements to Caffeinated Beverages

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Abstract Body: Lycium barbarum (L. barbarum) is known to increase metabolism, but little is known of its mechanism. The objective of this clinical study was to compare the impact of L. barbarum-containing 3 different liquid dietary supplements on energy/caloric metabolism activity compared to caffeine and various common caffeinated beverages (tea, coffee, and other commercially available products). The tested products were GoChi®= Product 1 (non-caffeinated L. barbarum juice); Chi3™= Product 2(caffeinated L. barbarum juice with B vitamins, folate, taurine, L-phenylalanine, N-acetyl-L-tyrosine, gluconolactone and green tea extract) and TAslim™= Product 3 (caffeinated L. barbarum juice with soluble indigestible fiber, L-phenylalanine, N-acetyl-L-tyrosine and standardized tea polyphenols). Resting metabolic rate (RMR) was analyzed by breath oxygen volume using hand-held indirect calorimeter in healthy adults (average age=34.5 y). Subjects consumed single bout of one serving of test samples on different days after a 12 hour fast. RMR was measured immediately before (baseline), 1, 2 and 4 h after sample intake. Intake of caffeine and all beverages including Product 1-3 increased RMR by 100-300 kcal over baseline (1,823 kcal) within 1-2 hour post-intake. However, at 4 hours post-intake, RMR in subjects taking caffeine and all non-L. barbarum-containing caffeinated beverages had returned to baseline level. Conversely, in the groups of Product 1(n=4), Product 2 (n=5) and Product 3 (n=7), RMR was increased by 153, 105 and 211 kcal over baseline, respectively, representing statistically higher levels than those observed for caffeine and other beverages (P < 0.05). These results suggest that, compared to caffeine and common caffeinated beverages, L. barbarum-containing products exhibit longer-lasting stimulating effects on energy/caloric metabolism in humans.

Other Information:

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Financial Disclosures:

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