

Effects of peptide supplement on calorie restriction diet in obese adults

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The proposed study was to determine the effects of peptide supplement on calorie restriction diet in obese adults. There were 30 obese subjects, with a BMI range 23.8-35.0 kg/m² and age between 19-40 yrs, were recruited and randomized to receive either peptide 30 gm (n=15, 3M and 12F) supplement or sucrose 30 gm (n=15, 3M and 12F) supplement (Control group) with a 6-week 1200 kcal calorie restriction diet. In result, the average weight loss in peptide group were greater than Control group in a 6-week intervention, however lack of significant difference in two groups (3.98±2.07 vs 2.97±2.05 kg, p=0.22). The mean fat mass loss of peptide group were greater than Control group (2.23±1.91 vs 1.05±1.30%, p=0.024). Meanwhile, the mean daily nitrogen balance was significantly restored in the peptide-supplemented subjects (-2.72 ± 3.25 to -0.29±4.04, p=0.004) than in the sucrose-supplement subjects (-1.65±5.03 to -2.64±4.67, p=0.533). In peptide group, the subjects showed lower level of total cholesterol, LDL-c, and triglycerides and higher albumin, BUN, creatinine and uric acid statistically, however no changes in placebo group in 6-week intervention. On the other hand, the fasting glucose, insulin level and resting metabolic rate were decreased after weight reduction, but there were no difference in two groups. Peptide supplement with calorie restriction diet, though unable to enhance diet-induced weight reduction, was effective in increasing albumin and nitrogen balance, and in decreasing LDL-c and triglycerides. In conclusion, the high-protein diets show a higher efficiency on weight loss compared to high carbohydrate diets in 6-week peptide intervention, however the weight loss mechanism still remained unknown.