

Supplemental Material

Supplemental Table 1. The per protocol analysis of the effects of oral energy supplements on nutritional status.

Supplemental Table 2. Effects of the 12-week energy supplementation on other laboratory markers.

Supplemental Table 1. The per protocol analysis of the effects of oral energy supplements on nutritional status.

| Variables, change ^a | Control 112 | Intervention 98 | Group difference mean (95%CI) | P ^b |
|---|-----------------|--------------------|----------------------------------|----------------|
| Phase angle, mean \pm SD, ° | 0 \pm 0.5 | 0 \pm 0.6 | 0 (-0.1, 0.2) | 0.64 |
| BMI, mean \pm SD, kg/m ² | 0 \pm 0.5 | 0.2 \pm 0.5 | 0.2 (0.1, 0.3) | 0.003 |
| Handgrip strength, mean \pm SD, kg | 0.2 \pm 5.3 | 0.8 \pm 5.9 | 0.6 (-0.9, 2.2) | 0.42 |
| Mid-arm muscle circumference, mean \pm SD, cm | 0.1 \pm 1 | 0.2 \pm 1.1 | 0.1 (-0.2, 0.4) | 0.25 |
| Albumin, mean \pm SD, g/dL | -0.1 \pm 0.3 | 0.1 \pm 0.3 | 0.1 (0, 0.2) | 0.002 |
| Prealbumin, mean \pm SD, mg/dL | -0.8 \pm 8.1 | 0 \pm 4.4 | 0.8 (-0.9, 2.5) | 0.97 |
| Transferrin, mean \pm SD, mg/dL | -2.6 \pm 27.1 | 3.5 \pm 27.4 | 6.1 (-1.3, 13.6) | 0.40 |
| Hemoglobin, mean \pm SD, g/dL | 0 \pm 1.9 | 0.3 \pm 1.8 | 0.3 (-0.2, 0.8) | 0.32 |
| Lean tissue index, mean \pm SD, kg/m ² | -0.1 \pm 1.1 | -0.4 \pm 1.1 | -0.3 (-0.6, 0) | 0.08 |
| Fat tissue index, mean \pm SD, kg/m ² | 0.1 \pm 1.1 | 0.7 \pm 1.1 | 0.6 (0.3, 0.9) | <0.001 |

Abbreviations: BMI, body mass index.

^a Change was defined as the value at week 12 minus the value at baseline.

^b Difference in the change between groups was compared and tested using Wilcoxon-Mann-Whitney test.

Supplemental Table 2. Effects of the 12-week energy supplementation on other laboratory markers.

| Variables | Control 117 | Intervention 119 | Group difference mean(95%CI) | P |
|---|----------------|----------------------------|---------------------------------|------|
| Triglyceride, mean ± SD, mg/dL | | | | |
| Baseline | 154.3 ± 118.4 | 168.3 ± 136.5 | 14 (-18.9 , 46.8) | 0.4 |
| 12-week | 165.5 ± 122.9 | 194.3 ± 170.4 ^b | 28.8 (-9.4 , 67) | 0.14 |
| Change ^a | 10.9 ± 102.6 | 25.1 ± 133.1 | 14.2 (-16.4 , 44.8) | 0.82 |
| Total cholesterol, mean ± SD, mg/dL | | | | |
| Baseline | 161.7 ± 41.2 | 158.8 ± 34.5 | -2.9 (-12.7 , 6.9) | 0.56 |
| 12-week | 157.4 ± 39.8 | 160.1 ± 33.8 | 2.8 (-6.7 , 12.2) | 0.57 |
| Change ^a | -3.8 ± 24.4 | 1.3 ± 28.3 | 5.1 (-1.7 , 11.9) | 0.29 |
| HDL, mean ± SD, mg/dL | | | | |
| Baseline | 40.3 ± 10.2 | 39.6 ± 11.1 | -0.7 (-3.5 , 2) | 0.6 |
| 12-week | 39.9 ± 9.4 | 40.1 ± 11.2 | 0.3 (-2.4 , 2.9) | 0.85 |
| Change ^a | -0.3 ± 8.4 | 0.6 ± 6.7 | 0.9 (-1.1 , 2.8) | 0.28 |
| LDL, mean ± SD, mg/dL | | | | |
| Baseline | 93.5 ± 31.5 | 90.7 ± 26.8 | -2.8 (-10.4 , 4.8) | 0.46 |
| 12-week | 94 ± 31.3 | 93.9 ± 26.2 | -0.1 (-7.5 , 7.3) | 0.98 |
| Change ^a | 0.4 ± 20.9 | 3.3 ± 18.9 | 2.9 (-2.2 , 8.1) | 0.23 |
| BUN, mean ± SD, mg/dL | | | | |
| Baseline | 74.1 ± 17.4 | 75.1 ± 19.2 | 1 (-3.7 , 5.7) | 0.67 |
| 12-week | 72.9 ± 15.4 | 68.4 ± 16.5 ^b | -4.5 (-8.6 , -0.4) | 0.03 |
| Change ^a | -1.1 ± 19.7 | -6.6 ± 17.1 | -5.5 (-10.2 , -0.8) | 0.05 |
| Phosphorus, mean ± SD, mg/dL | | | | |
| Baseline | 6.7 ± 2.2 | 7 ± 1.9 | 0.3 (-0.2 , 0.9) | 0.22 |
| 12-week | 6.4 ± 2 | 6.4 ± 1.9 ^b | 0 (-0.5 , 0.6) | 0.85 |
| Change ^a | -0.3 ± 2 | -0.6 ± 1.9 | -0.3 (-0.8 , 0.2) | 0.22 |
| CRP, median (IQR), mg/dL | | | | |
| Baseline | 0.2 (0.1-0.3) | 0.2 (0.1-0.4) | 0 (-0.2 , 0.2) | 0.8 |
| 12-week | 0.2 (0.1-0.3) | 0.2 (0.1-0.4) | 0 (-0.2 , 0.2) | 0.27 |
| Change ^a | 0 ± 0.9 | 0 ± 0.4 | 0 (-0.2 , 0.2) | 0.42 |
| White blood cell, mean ± SD, 10³/ul | | | | |
| Baseline | 6.1 ± 1.7 | 6.1 ± 1.5 | 0 (-0.4 , 0.4) | 0.96 |
| 12-week | 6.2 ± 1.9 | 6.2 ± 1.5 | 0 (-0.5 , 0.4) | 0.91 |
| Change ^a | 0 ± 1.4 | 0.1 ± 1.2 | 0.1 (-0.3 , 0.4) | 0.76 |

Abbreviation: HDL, high-density lipoprotein; LDL, low-density lipoprotein; BUN, blood urea nitrogen; CRP, C-reactive protein.

^a Change was defined as the value at week 12 minus the value at baseline.

^b P<0.05, compared with the intervention group at baseline.