

Effects of Multi-Ingredient Preworkout Supplementation across a Five-Day Resistance and Endurance Training Microcycle in Middle-Aged Adults

PUENTE-FERNÁNDEZ, Joel, SEIJO, Marcos, LARUMBE-ZABALA, Eneko, JIMÉNEZ, Alfonso <<http://orcid.org/0000-0001-5295-9668>>, LIGUORI, Gary, ROSSATO, Claire JL, MAYO, Xian <<http://orcid.org/0000-0002-4143-701X>> and NACLERIO, Fernando <<http://orcid.org/0000-0001-7405-4894>>

Available from Sheffield Hallam University Research Archive (SHURA) at:
<https://shura.shu.ac.uk/27769/>

This document is the Supplemental Material

Citation:

PUENTE-FERNÁNDEZ, Joel, SEIJO, Marcos, LARUMBE-ZABALA, Eneko, JIMÉNEZ, Alfonso, LIGUORI, Gary, ROSSATO, Claire JL, MAYO, Xian and NACLERIO, Fernando (2020). Effects of Multi-Ingredient Preworkout Supplementation across a Five-Day Resistance and Endurance Training Microcycle in Middle-Aged Adults. *Nutrients*, 12 (12), p. 3778. [Article]

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

Table S1. Mean (M) \pm standard deviation (SD) and 95% CI of the differences measured after the three resistance training sessions for the tensiomyography variables determined in the two assessed conditions.

| Muscles | Conditions | PREW (n=14) | | | CHO (n=14) | | | ANOVA Repeated Measures (3 workouts x 2 supplements) |
|--------------------------|------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|--|
| | Variables | RT 1 | RT 2 | RT 3 | RT 1 | RT 2 | RT 3 | |
| Anterior Deltoids | Vc (ms ⁻¹) | 0.002 \pm 0.04 [-0.02, 0.03] | 0.01 \pm 0.1 [-0.02, 0.04] | 0.02 \pm 0.1 [-0.02, 0.05] | -0.001 \pm 0.1 [-0.03, 0.03] | 0.01 \pm 0.1 [-0.03, 0.05] | 0.00 \pm 0.1 [-0.04, 0.05] | Workout: F(2,24)=0.970; p=0.392; η^2 = 0.009 Supplement: F(1,13)=0.393; p=0.542; η^2 = 0.003 Workout x Supplement: F(2,24)=0.797; p=0.461; η^2 = 0.004 |
| | Dm (mm) | -0.08 \pm 1.7 [-1.11, 0.95] | 0.53 \pm 2.1 [-0.75, 1.82] | 0.58 \pm 2.2 [-0.72, 1.89] | -0.18 \pm 2.1 [-1.47, 1.10] | 0.53 \pm 2.6 [-1.05, 2.11] | -0.02 \pm 2.8 [-1.72, 1.68] | Workout: F(2,24)=1.325; p=0.283; η^2 = 0.014 Supplement: F(1,13)=0.447; p=0.516; η^2 = 0.003 Workout x Supplement: F(2,24)=0.457; p=0.638; η^2 = 0.003 |
| | Tc (ms) | 0.04 \pm 2.4 [-1.42, 1.49] | 0.52 \pm 2.0 [-0.69, 1.73] | 0.46 \pm 2.4 [-0.96, 1.87] | -0.03 \pm 2.1 [-1.30, 1.24] | 0.31 \pm 2.3 [-1.09, 1.71] | -0.08 \pm 1.8 [-1.18, 1.02] | Workout: F(2,26)=0.490; p=0.618; η^2 =0.006 Supplement: F(1,13)=0.623; p=0.444; η^2 =0.004 Workout x Supplement: F(2,26)=0.199; p=0.821; η^2 =0.002 |
| Biceps Femoris Long Head | Vc (ms ⁻¹) | 0.001 \pm 0.02 [-0.01, 0.02] | 0.01 \pm 0.02 [-0.01, 0.02] | 0.02 \pm 0.02 [0, 0.03] | -0.004 \pm 0.02 [-0.02, 0.01] | 0.001 \pm 0.03 [-0.02, 0.02] | 0.002 \pm 0.03 [-0.02, 0.02] | Workout: F(2,24)=1.141; p=0.336; η^2 = 0.008 Supplement: F(1,12)=0.001; p=0.976; η^2 = 0.001 Workout x Supplement: F(2,24)=0.503; p=0.611; η^2 = 0.001 |
| | Dm (mm) | -0.12 \pm 1.3 [-0.94, 0.7] | 0.23 \pm 1.43 [-0.67, 1.13] | 0.32 \pm 1.46 [-0.60, 1.24] | -0.28 \pm 1.20 [-1.03, 0.47] | -0.28 \pm 1.70 [-1.35, 0.79] | -0.20 \pm 1.75 [-1.29, 0.91] | Workout: F(2,24)=0.272; p=0.765; η^2 = 0.001 Supplement: F(1,12)=0.026; p=0.874; η^2 = 0.000 Workout x Supplement: F(2,24)=0.040; p=0.961; η^2 = 0.000 |
| | Tc (ms) | -1.20 \pm 10.78 [-7.81, 5.42] | -1.46 \pm 8.94 [-6.77, 3.85] | -3.05 \pm 9.49 [-8.56, 2.47] | -0.20 \pm 8.4 [-5.16, 4.76] | -3.6 \pm 8.85 [-8.43, 1.23] | -2.83 \pm 7.98 [-7.33, 1.67] | Workout: F(2,24)=0.397; p=0.677; η^2 = 0.003 Supplement: F(1,12)=0.266; p=0.615; η^2 = 0.001 Workout x Supplement: F(2,24)= 0.474; p=0.628; η^2 = 0.038 |
| Vastus Medialis | Vc (ms ⁻¹) | -0.004 \pm 0.02 [-0.02, 0.01] | 0.001 \pm 0.03 [-0.02, 0.02] | -0.02 \pm 0.02 [-0.02, 0.01] | -0.006 \pm 0.02 [-0.02, 0.01] | -0.002 \pm 0.02 [-0.02, 0.01] | -0.01 \pm 0.02 [-0.02, 0.00] | Workout: F(1,12)=1.561; p=0.231; η^2 = 0.019 Supplement: F(1,12)=0.992; p=0.339; η^2 = 0.018 Workout x Supplement: F(2,24)=1.052; p=0.365; η^2 = 0.009 |
| | Dm (mm) | -7.14 \pm 1.5 [-1.64, 0.21] | -0.36 \pm 1.8 [-1.46, 0.74] | -0.63 \pm 1.4 [-1.44, 0.18] | -0.82 \pm 1.2 [-1.54, -0.1] | -0.59 \pm 1.16 [-1.3, 0.12] | -0.93 \pm 1.23 [-1.68, -0.17] | Workout: F(2,24)=1.779; p=0.190; η^2 = 0.013 Supplement: F(1,12)=1.364; p=0.265; η^2 = 0.013 Workout x Supplement: F(2,24)=0.542; p=0.589; η^2 = 0.004 |
| | Tc (ms) | -3.37 \pm 12.5 [-11.14, 4.4] | -2.57 \pm 13.3 [-10.88, 5.74] | -3.9 \pm 12.2 [-11.28, 3.48] | -3.62 \pm 12.2 [-11.19, 3.95] | -3.38 \pm 12.4 [-11.17, 4.42] | -3.37 \pm 11.3 [-10.44, 3.7] | Workout: F(2,24)=0.355; p=0.705; η^2 = 0.001 Supplement: F(1,12)=1.247; p=0.286; η^2 = 0.002 Workout x Supplement: F(2,24)=1.176; p=0.326; η^2 = 0.002 |

Notes: All values are adjusted using sex as covariate. All P>0.05

Table S2. Responses to the questionnaire of sensitive feelings

| Question | Condition | RT 1 | RT 2 | RT 3 | Average |
|-------------------------------------|-----------|-------------|-------------|-------------|-------------|
| My energy level is | PREW | 3.7 ± 1 | 3.5 ± 1 | 4.0 ± 1 | 3.7 ± 1 |
| | CHO | 3.7 ± 1 | 3.9 ± 1 | 3.7 ± 1 | 3.8 ± 1 |
| My fatigue level is | PREW | 1.9 ± 1 | 3.5 ± 1 | 2.0 ± 1 | 2.1 ± 1 |
| | CHO | 1.9 ± 1 | 3.9 ± 1 | 1.9 ± 1 | 1.9 ± 1 |
| My feeling of alertness is | PREW | 3.7 ± 1 | 3.6 ± 1 | 3.8 ± 1 | 3.7 ± 1 |
| | CHO | 3.6 ± 1 | 4.0 ± 1 | 3.9 ± 1 | 3.9 ± 1 |
| My feeling of focus for task is: | PREW | 3.8 ± 1 | 3.9 ± 1 | 4.1 ± 1 | 3.9 ± 1 |
| | CHO | 3.6 ± 1 | 4.0 ± 1 | 4.0 ± 1 | 3.9 ± 1 |

PREW = Preworkout supplement; CHO = Carbohydrate supplement. All data are reported as Mean \pm SD.