Supplementary material

Selected metabolites serum concentration in L-carnitine and *placebo* groups before and after 24 weeks of supplementation.

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|  | L-carnitine | *placebo* | ANOVA |
| before | after | before | after | time | group | time x group |
| urea (mg·dL-1) | 31.6 ± 2.3 | 29.8 ± 3.1 | 32.3 ± 3.2 | 33.1 ± 3.1 | .703 | .511 | .525 |
| creatinine (mg·dL-1) | 0.81 ± 0.04 | 0.77 ± 0.03 | 0.82 ± 0.05 | 0.76 ± 0.05 | **.014** | .987 | .789 |
| glucose (mg·dL-1) | 96 ± 4 | 96 ± 2 | 98 ± 4 | 98 ± 2 | .949 | .613 | .979 |
| insulin (mIU·L-1) | 12.1 ± 2.5 | 12.7 ± 2.8 | 8.3 ± 1.9 | 8.4 ± 1.7 | .595 | .335 | .923 |
| HOMA-IR  | 3.0 ± 0.7 | 3.1 ± 0.7 | 2.0 ± 0.5 | 2.1 ± 0.5 | .604 | .419 | .920 |
| Alt (IU·L-1) | 17.1 ± 2.0 | 15.9 ± 1.8 | 17.8 ± 3.2 | 19.5 ± 3.4 | .959 | .617 | .440 |

HOMA-IR: homeostasis model assessment of insulin resistance

The markers of blood samples taken after 12 weeks of supplementation (mid-point). The statistical analyses have been performed for three time points (before, mid-point, after), and the results are presented in the tables.

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|  | L-carnitine | *placebo* | ANOVA |
| mid-point | mid-point | time | group | time x group |
| VCAM-1 (µg·L-1) | 329 ± 25 | 432 ± 45 | .240 | .101 | .172 |
| ICAM-1(µg·L-1) | 234 ± 34 | 239 ± 19 | .854 | .957 | .762 |
| SELL (µg·L-1) | 363 ± 27 | 384 ± 29 | .645 | .711 | .740 |
| SELP (µg·L-1) | 225 ± 22 | 229 ± 22 | .817 | .351 | .228 |
| CRP \*(mg·L-1) | 2.5 ± 0.4 | 1.8 ± 0.4 | .577 | .084 | .686 |
| TNFα (ng·L-1) | 0.65 ± 0.10 | 0.68 ± 0.15 | .184 | .725 | .746 |

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| --- | --- | --- | --- |
|  | L-carnitine | *placebo* | ANOVA |
| mid-point | mid-point | time | group | time x group |
| TCh (mg·dL-1) | 248 ± 17 | 227 ± 10 | **.001** | .287 | .652 |
| HDL(mg·dL-1) | 73 ± 6 | 66 ± 5 | .061 | .467 | .166 |
| LDL(mg·dL-1) | 148 ± 16 | 136 ± 10 | **.027** | .420 | .898 |
| TG (mg·dL-1) | 135 ± 12 | 124 ± 22 | < **.001** | .602 | .852 |
| NEFA (µmol·L-1) | 475 ± 64 | 666 ± 132 | .255 | .563 | .243 |
| glycerol (µmol·L-1) | 94 ± 13 | 87 ± 23 | .900 | .707 | .774 |