

Supplementary material

Table 1. The effect of Vitamin D supplementation on aerobic and anaerobic capacity.

| Variables | PLA | | SUP | |
|--|--------------|-------------------------|-------------------------|---------------------------|
| | Pre | Post | Pre | Post |
| 25-OH-D ₃ [ng*ml ⁻¹] | 20.7 ± 6.8 | 21.2 ± 4.7 | 19.6 ± 5.4 | 58.4 ± 7.3 ^{ab} |
| 25-OH-D ₃ delta[ng*ml ⁻¹] | 0.5 ± 5.4 | | 38.8 ± 9.4 ^b | |
| VO _{2max} [ml*min*kg ⁻¹] | 50.8 ± 9.5 | 46.1 ± 7.6 ^a | 48.1 ± 6.4 | 48.9 ± 6.3 |
| VO _{2max} delta [ml*min*kg ⁻¹] | -4.71 ± 5.8 | | 0.71 ± 6.3 ^b | |
| VE _{max} [l*min ⁻¹] | 131.9 ± 29.6 | 137.0 ± 28.5 | 133.3 ± 21.1 | 154.6 ± 18.4 ^a |
| BF _{max} [1*min ⁻¹] | 49.7 ± 9.9 | 50.6 ± 8.8 | 51.7 ± 5.8 | 57.7 ± 9.1 ^a |
| MAP [W] | 263.9 ± 46.2 | 273.2 ± 45.7 | 257.1 ± 28.4 | 277.8 ± 33.5 ^a |
| MANP [W*kg ⁻¹] | 10.3 ± 0.7 | 10.7 ± 0.8 | 9.9 ± 0.9 | 10.7 ± 0.9 ^a |
| Work output [J*kg ⁻¹] | 246.9 ± 18.7 | 254.3 ± 17.6 | 239.6 ± 17.4 | 252.8 ± 17.7 ^a |

PLA: placebo group; SUP: supplemented group; values are mean ± SD expressed in absolute or relative values; 25-OH-D₃: 25-hydroxyvitamin D; VO_{2max}: maximal oxygen uptake; VE_{max}: maximal lung minute ventilation; BF_{max}: maximal breath frequency; MAP: maximal aerobic power; MANP: maximal anaerobic power.

a significant differences from pre-treatment.

b significant differences between groups.