







CORRIGENDUM: MELATONIN REDUCES MUSCLE DAMAGE, INFLAMMATION AND OXIDATIVE STRESS INDUCED BY EXHAUSTIVE EXERCISE IN PEOPLE WITH OVERWEIGHT/OBESITY

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In our article, the below sentences were inaccurately composed, therefore the article was modified with the following changes:

1. The last sentence of the results section in the abstract was corrected to: “Concerning the antioxidant status, MLT intake alleviated the decrease of Thiol ($P < 0.01$, $\eta p^2 = 0.26$) and Catalase ($P < 0.01$, $\eta p^2 = 0.32$) and the increase of Uric acid ($P = 0.02$, $\eta p^2 = 0.2$) and Total bilirubin ($P < 0.01$, $\eta p^2 = 0.33$).”

These changes are in order to avoid any misunderstanding since we deleted the difference Δ (MLT-PLA) in % which was positive for Thiol ($-8.86\% - (-32.67\%) = +23.81\%$, and Catalase ($-14.44\% - (-34.61\%) = +20.17\%$), and negative for Uric acid ($+3.55\% - (+5.96\%) = -2.41\%$) and Total bilirubin ($+4.8\% - (+11.37\%) = -6.57\%$).

2. In the last paragraph of “Materials and Methods” section (i.e., statistical analysis), on page 83, we deleted the following sentence: “The paired *t*-test or Wilcoxon test were performed to compare the percentage changes between both conditions.”
3. In Table 2, on page 84, as a part of post hoc test findings (i.e., differences between PLA and MLT sessions) we added the dash symbol “#” as follows:

We modified the last note under the same table as follows: “#, ##, ###: significant difference between PLA and MLT sessions ($P < 0.05$, $P < 0.01$ and $P < 0.001$, respectively).”

4. In the first paragraph of the “Results” section (i.e., Inflammation and immune responses), on page 85, the following sentence was corrected with deleting “that the rates of”: “However, the significant interaction (treatment \times exercise) reported lower increase pre-post exercise for WBC, CRP ($P < 0.001$, $\eta p^2 = 0.45$; for both) and neutrophils ($P < 0.01$, $\eta p^2 = 0.36$) after MLT condition.”
5. In the 3rd paragraph of the “Discussion” section, on page 86, a sentence was corrected with deleting “rate of”: “Additionally, the lower decrease pre-post exercise of Thiol and CAT during MLT condition may reflect the direct antioxidant and FR scavenging properties of MLT.”
6. In the 3rd paragraph of the “Discussion” section, on page 86, the information “shifts to a later time” was used only to clarify the phase delay (i.e., not valid for phase advances), therefore the following sentence was corrected to this: “However, exogenous melatonin induces phase delays (shifts to a later time) when administered in the morning, and phase advances (shifts to an earlier time) when given in the afternoon/evening.”
7. In the 4th paragraph of the “Discussion” section, page 86, “rate of” was deleted from the following sentence: “Our results showed a lower increase in TBIL and UA after exercise in MLT compared to PLA session.”





Variable	PLA		MLT		Anova		
	Pre	Post	Pre	Post	Exercise effect $F_{(1,22)} (P; \eta p^2)$	Melatonin effect $F_{(1,22)} (P; \eta p^2)$	Interaction $F_{(1,22)} (P; \eta p^2)$
Biomarkers of inflammation							
WBC ($10^3 \mu\text{L}^{-1}$)	7.8 \pm 2.3	9 \pm 2.4***	7.6 \pm 2.2	8 \pm 2*** ##	55.16 ($P < 0.001$; 0.71)	4.32 ($P = 0.049$; 0.16)	18.55 ($P < 0.001$; 0.45)
Neutrophils ($10^3 \mu\text{L}^{-1}$)	4.6 \pm 1.7	5.4 \pm 1.8***	4.3 \pm 1.4	4.6 \pm 1** ##	40.57 ($P < 0.001$; 0.64)	5.24 ($P = 0.032$; 0.19)	12.6 ($P < 0.01$; 0.36)
Lymphocytes ($10^3 \mu\text{L}^{-1}$)	2.4 \pm 0.6	2.6 \pm 0.74	2.4 \pm 0.7	2.6 \pm 0.7	4.02 $P = 0.057$	0.006 $P = 0.93$	0.86 $P = 0.36$
Monocytes ($10^3 \mu\text{L}^{-1}$)	0.5 \pm 0.1	0.6 \pm 0.1	0.5 \pm 0.2	0.6 \pm 0.2*	2.77 $P = 0.11$	0.29 $P = 0.59$	1.64 $P = 0.21$
CRP (mg L^{-1})	4.2 \pm 2.4	4.7 \pm 2.5***	4 \pm 2.7	4.3 \pm 2.9** ###	87.59 ($P < 0.001$; 0.79)	0.33 $P = 0.56$	18.09 ($P < 0.001$; 0.45)
Biomarkers of Muscle and liver damage							
ASAT (IU L^{-1})	17 \pm 3.2	19 \pm 3***	17.3 \pm 3	18 \pm 3.3*** ###	53.47 ($P < 0.001$; 0.7)	0.0004 $P = 0.98$	7.37 ($P < 0.01$; 0.25)
ALAT (IU L^{-1})	20.7 \pm 7	22.1 \pm 7.3 ***	21.3 \pm 3.9	22 \pm 4.2 * ###	16.78 ($P < 0.001$; 0.43)	0.06 $P = 0.81$	8.21 ($P < 0.01$; 0.27)
CPK (IU L^{-1})	126 \pm 44	139 \pm 52.6 ***	122 \pm 38.6	127 \pm 36.7 *** #	50.59 ($P < 0.001$; 0.69)	1.17 $P = 1.17$	6.63 ($P = 0.02$; 0.23)
LDH (IU L^{-1})	185.6 \pm 33	200 \pm 33 ***	183 \pm 34.8	193 \pm 39.7 **	23.65 ($P < 0.001$; 0.51)	1.59 $P = 0.22$	1.27 $P = 0.27$
Biomarkers of radical damage							
MDA ($\mu\text{mol L}^{-1}$)	5.9 \pm 3	7.3 \pm 3.8 ***	5.4 \pm 2.6	5.9 \pm 2.5* #	30.22 ($P < 0.001$; 0.57)	1.46 $P = 0.23$	5.39 ($P = 0.03$; 0.19)
AOPP ($\mu\text{mol L}^{-1}$)	49.4 \pm 10.8	66 \pm 15.3 ***	52 \pm 10.7	55.7 \pm 11.5 ** ###	51.5 ($P < 0.001$; 0.7)	2.53 $P = 0.12$	27.47 ($P < 0.001$; 0.55)
Biomarkers of antioxidant system							
CAT (U mL^{-1})	271.6 \pm 82.8	167.3 \pm 48.4***	248.8 \pm 65.8	207.3 \pm 63.9 * ##	50.8 ($P < 0.001$; 0.69)	0.34 $P = 0.56$	7.73 ($P < 0.01$; 0.26)
Thiol ($\mu\text{mol L}^{-1}$)	360.4 \pm 55.2	284.5 \pm 75 ***	371 \pm 92.8	343 \pm 83* ##	31.39 ($P < 0.001$; 0.58)	2.52 $P = 0.12$	10.72 ($P < 0.01$; 0.32)
UA ($\mu\text{mol L}^{-1}$)	311.6 \pm 71.5	327.8 \pm 73.6***	313.7 \pm 74	325.3 \pm 77.4 *** #	55.67 ($P < 0.001$; 0.71)	0.097 $P = 0.75$	5.8 ($P = 0.02$; 0.2)
TBIL ($\mu\text{mol L}^{-1}$)	6.7 \pm 2.4	7.7 \pm 2.9 ***	6.8 \pm 3	7.1 \pm 3* #	39.36 ($P < 0.001$; 0.64)	0.41 $P = 0.52$	11.19 ($P < 0.01$; 0.33)