

Molecular Hydrogen Affected Post-Exercise Recovery in Judo Athletes

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G-39 Free Communication/Poster - Recovery Saturday, June 4, 2016, 7: 30 AM - 11: 00 AM Room: Exhibit Hall A/B

Molecular hydrogen (H₂) recently appeared as a novel and safe ergogenic agent that might have beneficial effects in athletes. However, no information is available concerning the impact of H₂ on post-exercise recovery indices.

PURPOSE: To determine the effects of pre-exercise H₂ administration on post-exercise heart rate and blood lactate responses in judo athletes.

METHODS: Five athletes (24.4 ± 3.4 yrs, 74.8 ± 2.3 kg, 177.8 ± 2.5 cm) were recruited for this randomized, placebo-controlled, double-blind crossover pilot study. Participants were instructed to ingest formulation containing 6.4 g of H₂ or placebo ~ 30 minutes before repeated Special Judo Fitness Test (RSJFT). Blood lactates and heart rates were recorded during recovery period at 3 min, 5 min and 15 min, and 10 s, 20 s, 30 s, 60 s, 3 min and 15 min, respectively.

RESULTS: Molecular hydrogen significantly blunted lactate response during recovery period as compared to the placebo (7.23 ± 1.95 vs 9.22 ± 1.51 mmol/L; *p* = 0.011). Furthermore, a trend has been found for decreased post-exercise heart rate in group supplemented with H₂ (*p* = 0.111).

CONCLUSION: Hydrogen-rich water appears to be an appropriate strategy to positively affect post-exercise lactates in judo athletes.

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