Phosphatidylserine and caffeine attenuate postexercise mood disturbance and perception of fatigue in humans.


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OBJECTIVE: Phosphatidylserine (PS) may attenuate the adverse effects of physical fatigue. Therefore, we investigated the effects of a multi-ingredient supplement containing 400 mg/d PS and 100 mg/d caffeine (supplement [SUP]) for 2 weeks on measures of cognitive function (CF), reaction time (RT), and mood (MD) following an acute exercise stress. It is hypothesized that PS will maintain preexercise CF and RT scores, while attenuating postexercise fatigue.

METHODS: Participants completed 2 acute bouts of resistance exercise (T1 and T2) separated by 2-week ingestion of SUP or control (CON). Outcome measures were assessed pre- and postexercise.

RESULTS: When collapsed across groups, a significant decrease in RT performance was seen in the 60-second reaction drill from pre- to postexercise at T1. All other RT tests were similar from pre- to postexercise at T1. Reaction time was not significantly changed by PS. When collapsed across groups, a significant increase in performance of the serial subtraction test was seen. A significant increase (8.9% and 7.1%) in the number of correct answers and a significant decrease (8.0% and 7.5%) in time to answer were seen from pre- to postworkout at T1 and T2, respectively. A significant increase in total MD score from pre- to postworkout was observed for CON but not for PS at T2.

CONCLUSIONS: Phosphatidylserine significantly attenuated pre- to postexercise perception of fatigue compared to CON. Ingestion of SUP for 14 days appears to attenuate postexercise MD scores and perception of fatigue, but does not affect CF or RT, in recreationally trained individuals.

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