

## POSTER PRESENTATION

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# The effects of phosphatidylserine supplementation on cognitive functioning prior and following an acute bout of resistance training in young males

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## Background

Making quick decisions and reducing the amount of errors at the beginning of a competition are crucial to the success in team sports and individual events. Phosphatidylserine (PS) has been shown to reduce stress and increase performance in runners, cyclists and golfers. A randomized, double-blind, placebo-controlled, cross-over pilot study was performed to evaluate the effect of PS supplementation on cognitive function prior to and following an acute bout of resistance training in 18 males aged 18-30.

## Methods

During the first testing session, subjects were familiarized with the serial subtraction test (SST) and performed 1 repetition maximum (1RM) lifts in the smith machine squat (SQ), leg press (LP), and leg extension (LE). Subjects consumed PS (400 mg/day, SerinAid, Chemi Nutra) or placebo in a random, cross-over design for 14 days, with no washout period between supplementation. Following supplementation, subjects performed 5 sets of 10 repetitions at 70% of their 1RM on SQ, LP, and LE. SST was measured prior to exercise (PRE) and 5 (5POST) and 60 (60POST) minutes after exercise.

## Results

PS supplementation significantly reduced the time needed for a correct calculation by 19.8% (1.27 s per calculation; Placebo: 6.4 s, PS 5.13 s;  $p = 0.001$ ), and

reduced the total amount of errors by 33% (PRE: Placebo: 27, PS: 18,  $p = 0.18$ ) at PRE compared to placebo. Exercise significantly improved SST time ( $p = 0.03$ ). PS did not improve SST compared to placebo post exercise.

## Conclusion

PS supplementation significantly increased cognitive function prior to exercise. Improved cognitive function could benefit athletes and non-athletes alike. Further research is warranted to determine the effects of varying dosages and duration of PS supplementation on cognitive function during exercise.

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