

## Is the intention to use sport supplements a predictor of placebo and nocebo responding among athletes?

*Philip Hurst, Chris Beedie, Damian Coleman & Abby Foad*  
*Canterbury Christ Church University*

**Background:** Placebo and nocebo effects have been observed in relation to many interventions in sport.

Given variance in response, a key question is whether individual difference variables identify likely 'responders.' Hypothetically, such a variable might be the person's intention to use the intervention. We aimed to explore relationships between athletes' intention to use sport supplements and their responses to a placebo/nocebo intervention. **Methods:** Participants completed a single-item measure of intention to use sport supplements ('intending', 'undecided' or 'not intending') prior to 5×20-m sprints. Participants were then randomised to Placebo (n=219), Nocebo (n=168) and Control (n = 134) conditions. Participants in Placebo and Nocebo conditions were administered a capsule deceptively presented as a sport supplement that would have a positive (Placebo) or negative (Nocebo) effect on performance. Controls were provided with no instructions and received no capsule. After 20 minutes, all participants completed another set of 5×20-m sprints. **Results:** Among 'intending to use' participants, the Placebo treatment was associated with faster times than the Nocebo treatment ( $P=0.023$ , Cohen's  $d$  [d]=0.34). In the Placebo treatment, 'intending to use' participants were significantly faster than 'not intending to use' participants ( $P=0.004$ ,  $d=0.49$ ), as were 'intending to use' participants in relation to 'undecided' participants in the Nocebo treatment ( $P=0.044$ ,  $d=0.44$ ). No significant differences in performance by intention were observed in the Control condition. **Conclusions:** Placebo and nocebo responses appear to be mediated by the participant's intention to use supplements. These findings have value in explaining placebo/nocebo responses, and should be tested in clinical medical settings.