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Psychostimulant effects of Via[®] instant coffee as a pre-exercise beverage: Caffeine-habituated versus caffeine-naive

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Statement of the Problem: Coffee's ability to increase alertness and exercise performance are known. However, coffees vary in bioactive compounds (McCusker, 2003; Lang, 2013) and physically active university students consume specialty coffees with under-studied consequences. We previously reported a quantitative blunting of bench press enhancement among the caffeinehabituated (Mohney, 2015), so we aimed to determine if any psychometric blunting also takes place. It was hypothesized Starbucks Via* instant coffee (VIA) would enhance alertness, energy and focus when combined with resistance exercise, despite habituation, compared to decaffeinated Via (DCF). Methodology & Theoretical Orientation: As part of a larger study, VIA or DCF was given to 16 caffeine-habituated (H) and 14 caffeine-naïve (N) university students prior to bench pressing and squatting. Participants consumed two packets, waited 60 minutes, then exercised, after 24 hours dietary control and caffeine abstinence. Immediately post-exercise, subjects rated feelings of energy, alertness and focus on a Likert-type scale (Hoffman, 2009). Sessions were separated by 48-72 hours. Conclusion & Significance: Energy: Compared to DCF, VIA increased postexercise sense of energy 32.0% (H) and 27% (N), with a drink main effect of p<0.001. There was no drink-by-habituation interaction (p=0.804) suggesting similar enhancement regardless of usual intake. Alertness: Compared to DCF, VIA increased post-exercise alertness 27.0% (H) and 25.0% (N), with a drink main effect of p<0.001. There was no drink-by-habituation interaction (p=0.954) suggesting similar enhancement. Focus: Compared to DCF, VIA enhanced post-exercise mental focus 22% (H) and 15.0% (N), with a drink main effect of p<0.007. There was no drink-by-habituation interaction (p=0.650) suggesting similar effects. We conclude VIA enhances energy, alertness and focus in resistance-exercising university students, despite habituation.

Biography

Carolyn Balzano is a psychology major at the University of Mount Union with a minor in biology. Nicole Corkrean is an exercise science major at the University of Mount Union with a minor in psychology. Both Carolyn and Nicole are in their senior year and assisting faculty with research. After graduation, Carolyn and Nicole both plan to attend graduate school to further their education in their respective fields.

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