Abstract

Objective
Caffeinated energy drinks - alone or with alcohol - are heavily marketed to young adults, many of whom believe that caffeine counteracts some negative effects of alcohol intoxication. While the effects of caffeine and alcohol have been widely investigated, few studies have examined neuropsychological performance after consumption of a beverage containing both ingredients.

Methods
In a double-blind, placebo-controlled design, 27 non-caffeine-deprived female participants were randomly assigned to consume a caffeinated energy drink alone, one containing alcohol, or a non-alcoholic, non-caffeinated control beverage. Pre- and post-test assessments were conducted using alternate forms of the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS).

Results
Participants who consumed the energy drink plus alcohol evidenced significantly lower post-test performance on a global score of neuropsychological status. Specifically, deficits were found in both visuospatial/constructional and language performance scores. While participants who consumed the caffeinated beverage alone trended toward improved attention scores, neuropsychological status did not show meaningful changes from the pre- to post-test.

Conclusions
Consumption of an energy drink containing 6% alcohol by volume negatively influenced performance on a global measure of cognitive functioning. Copyright © 2009 John Wiley & Sons, Ltd.