Can “Energy Drinks” Delay the Development of Fatigue Symptoms During a Prolonged Drive?

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ABSTRACT

A common way for drivers to cope with long hours of driving is by drinking beverages containing caffeine. “Energy Drinks”, contain not only caffeine but also other active ingredients such as taurine and glucuronolactone, and are offered by different manufactures, as a quick and safe solution to cope with situations that require sustained performance. The purpose of this study was to evaluate the ability of “Energy Drinks” to delay the development of fatigue symptoms during a prolonged simulated drive. Nine healthy students participated each in three sessions; in session A they drank two cans (500ml) of a commercial Energy Drink (ED); in session B they drank the same volume of Energy Like (EL) liquid, which had the same sugar concentration with flavorings to give a similar taste. In session C, the control session, they drank 500ml of soda water. Sessions were counterbalanced among drivers.

Three measurement techniques were used: subjective, performance and physiological. The analysis of the subjective questionnaires indicated that ED enabled the participants to postpone fatigue onset, compared to EL or Soda. The analysis of the driving quality measures showed that three of the four measures were significantly better in the ED condition compared to the control session. Data derived from the electrocardiogram (ECG) recordings, showed that ED prevented the onset of relaxation. Further research is needed to assess the duration of this delay, and whether or not it leads to a depletion of the “physiological resources”, which in turn can lead to accidents by drivers who are unaware of their deteriorating resources.