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Long-Term Cognitive Effects of Kratom (*Mitragyna speciosa* Korth.) Use.

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Abstract

Kratom or *Mitragyna speciosa* (Korth.) is a medicinal plant of Southeast Asia. As a result of its opioid-like effects, it remains unknown whether consumption of kratom tea is associated with impaired cognitive function. We assessed the cognitive function of 70 regular kratom users and 25 control participants using the Cambridge Neuropsychological Test Automated Battery. Participants performed six neuropsychological tasks that assessed motor, learning and memory, attention and executive function. Relative to control participants, higher consumption (>3 glasses daily or mitragynine doses between 72.5 mg and 74.9 mg) of kratom tea was selectively associated with impaired performance on the Paired Associates Learning task, reflecting deficits in visual episodic memory and new learning. Overall, the performance of kratom users compared to control participants, and the performance of high (>3 glasses per day) as well as low (\leq 3 glasses per day) kratom using groups, were comparable on all neuropsychological domains. Higher intake of kratom juice (>3 glasses daily) did not appear to impair motor, memory, attention or executive function of regular kratom users.

KEYWORDS: CANTAB; Kratom; Paired Associates Learning; memory; mitragynine

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