Effects of Chronic L-theanine on Stress-related Symptoms and Cognitive Function in a Non-clinical Population: A Randomized Controlled Trial (P06-106-19)

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Objectives: This randomized, placebo-controlled, and double-blind, crossover study aimed to investigate the effects of chronic L-theanine (Suntheanine®) administration on stress-related symptoms and cognitive functions in a non-clinical population.

Methods: Participants were 9 men and 21 women (mean age: 48.3 ± 11.9 years) who had no psychiatric illness of clinical level. L-theanine (200 mg/day) or placebo tablets were randomly assigned to participants for 4 weeks administration. After 2 weeks of wash-out period, the crossover study was continued for 4 weeks. Stress related symptoms were assessed using Self-rating Depression Scale (SDS), State-Trait Anxiety Inventory (STAI), and Pittsburgh Sleep Quality Index (PSQI). Cognitive functions were assessed with Brief Assessment of Cognition in Schizophrenia (BACS).

Results: SDS, STAI-trait, and PSQI scores significantly decreased after 4 weeks of L-theanine administration, while there were no significant changes after placebo. Verbal fluency and executive function scores of BACS significantly increased ($p = 0.001$ and 0.031) after L-theanine, but not placebo, administration. Changes in sleep latency, sleep disturbance, and use of sleep medication subscales of PSQI were significantly better in the L-theanine than in the placebo group. Changes in SDS and PSQI total scores also tended to be better in L-theanine than in placebo group. The rate of individuals who showed an improvement in BACS executive function score (5 or more) was significantly greater in L-theanine group than in placebo group. There was no significant adverse event after chronic L-theanine administration.

Conclusions: The results suggest that 4 weeks of L-theanine (200 mg/day) administration is safe and effective on stress-related symptoms and cognitive functions in a non-clinical population.

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