

# An Open-label Exploratory Study Investigating BDNF Essentials® on Cognition in Healthy Adults with Self-reported Memory Complaints

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## ABSTRACT

### Background

An open-label, exploratory study has been conducted to investigate the efficacy of BDNF Essentials® for cognitive function and neurological health.

### Methods

Twenty healthy adults  $\geq 45$  years of age, with a score  $\geq 24$  on the Mini-Mental State Examination (MMSE-2) and self-reported memory complaints were supplemented with BDNF Essentials® for 84 days. Computerized Mental Performance Assessment System (COMPASS) tests for memory, attention, and processing speed were conducted, and change in plasma brain-derived neurotrophic factor (BDNF), Profile of Mood States (POMS), the Healthy People Sleep Quality Index (HPSQI), perceived stress scale (PSS), and salivary cortisol, interleukin (IL)-6, and tumour necrosis factor- $\alpha$  (TNF- $\alpha$ ) were assessed at baseline and days 28, 56, and 84.

## **Results**

Supplementation with BDNF Essentials® significantly increased COMPASS tests for memory, attention, and processing speed (all  $p < 0.05$ ). Salivary cortisol was found to be significantly decreased at days 56 and 84 ( $p < 0.05$ ), and IL-6 decreased at day 84 ( $P > 0.05$ ). A reduction in depression-dejection at day 56 and in confusion-bewilderment at day 84, and an improvement in sleep satisfaction at day 56 (all  $p < 0.05$ ) were reported.

## **Conclusion**

BDNF Essentials® improved reaction time in measures of working memory, episodic memory, and attention, reduced biomarkers of stress and inflammation, and improved mood and sleep. BDNF Essentials® has been found to be safe and well-tolerated in adults with self-reported memory complaints.

## **Registration Number**

Registered at Clinicaltrials.gov (NCT04860778).

**Keywords:** Cognition, BDNF, stress, inflammation, nutraceutical, dietary supplement.