## Cognizin® Citicoline Improves Overall Memory and Episodic Memory in Healthy Older Adults

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## **ABSTRACT**

**Background:** Supplementation of citicoline (CDP-choline), a naturally occurring mononucleotide, has shown beneficial effects on memory function and behavior in populations with a wide range of impairments. However, few studies have investigated its effect in healthy older populations.

**Objective:** The objective of this study was to investigate the effects of citicoline (Cognizin®), on memory in healthy elderly populations with age-associated memory impairment (AAMI).

**Methods:** A total of 100 healthy men and women aged between 50 and 85 y with AAMI participated in this randomized, double-blind, placebo-controlled trial. Participants were randomized to receive placebo (n = 51) or citicoline (n = 49; 500 mg/d) for 12 wk. Memory function was assessed at baseline and end of the intervention (12 wk) using computerized tests (Cambridge Brain Sciences, Ontario, Canada). Safety measurements included adverse events query, body weight, blood pressure, and hematology and metabolic panel. Intent-to-treat analysis was conducted using ANCOVA for the primary and secondary outcome variables with Bonferroni correction for multiple comparisons.

**Results:** A total of 99 out of 100 participants completed the study in its entirety. After the 12-wk intervention, participants supplemented with citicoline showed significantly greater improvements in secondary outcomes of episodic memory (assessed by the Paired Associate test), compared with those on placebo (mean: 0.15 vs. 0.06, respectively, P = 0.0025). Composite memory (secondary outcome), calculated using the scores of 4 memory tests, also significantly improved to a greater extent following citicoline supplementation (mean: 3.78) compared with placebo (mean: 0.72, P = 0.0052).

**Conclusions:** Dietary supplementation of citicoline for 12 wk improved overall memory performance, especially episodic memory, in healthy older males and females with AAMI. The findings suggest that regular consumption of citicoline may be safe and potentially beneficial against memory loss due to aging.