Cognizin® Science Snapshot

What is Cognizin® Citicoline? What does it do? What is citicoline? A naturally occurring nutrient Citicoline increases an important A clinically tested form of found in the brain. substance in the brain called citicoline that can supply your phosphatidylcholine that is critical brain with the nutrition it needs for healthy brain function. to stay sharp. Key studies that show Cognizin® Citicoline's support of focus and attention* Cognizin® Citicoline's effect on cellular 13.6% Increase in Energy **Utilization (Brain Energy)** synthesis and brain energy Researchers observed increases in brain activity 26% Increase in among middle-aged adults who had taken 500mg Membrane Turnover Cognizin® for six weeks*1 Cognizin® increased the formation of brain membranes by 26% and restored brain Placebo 6 weeks@500 mg/day Cognizin® energy by 13.6%.* Metabolite level (Phosphoethanolamine) Metabolite level (ATP) Cognizin® Citicoline's effect Decrease in on focus and attention **Commission Errors** Decrease in Cognizin® at 250mg / day improves attention **Omission Errors** and focus in middle-aged women*2 Women taking 250mg of Cognizin® Citicoline experienced fewer omission and Placebo 4 weeks@250 mg/day Cognizin® commission errors compared to placebo.* Cognizin® Citicoline's effect on motor Significant increase in motor Improved attention on Ruff 2 & 7 Speed Task test speed and attention in adolescent males speed on Finger Tap test Researchers observed an increase in both attention and psychomotor speed in adolescent Adolescent males taking 250mg or 500mg males after 28 days of Cognizin® supplementation*3 of Cognizin® exhibited improved attention and a significant increase in psychomotor 28 days@250 mg or 500 mg/day Cognizin® speed compared to placebo.* Changes of Total Score in Dominant Hand Change in Ruff 2 & 7 Speed Score Cognizin® Citicoline's Improvement in Overall Memory Improvement in Episodic Memory effect on memory Significantly improved to a greater extent Significantly greater improvements following citicoline supplementation in episodic memory Cognizin® at 500 mg/day can support Assessed using globally-renowned 3.78 episodic memory and overall memory Cambridge Brain Sciences standardized Composite Memory Score Paired Associate Score in healthy older adults (ages 50-85).*4 test, men and women taking Cognizin® Baseline experienced statistically significant increases Baseline Placebo in the score for episodic (recalling events) memory and overall memory.* Cognizin® Citicoline 500 mg/day Week 0 Week 12 Week 0

^{1.} Silveri MM et al. Citicoline enhances frontal lobe bioenergetics as measured by phosphorus magnetic resonance spectroscopy. NMR Biomed. 2008; 21(10):1066-75.

^{2.} McGlade E. et al. Improved Attentional Performance Following Citicoline Administration in Healthy Adult Women. Food and Nutrition Sciences. 2012;3:769-773

^{3.} McGlade E, et al. The Effect of Citicoline Supplementation on Motor Speed and Attention in Adolescent Males. Journal of Attention Disorders. 2015; 1557-1246.

^{4.} Nakazaki E, et al., J Nutr. 2021 Aug 7;151(8):2153-2160.