Nuts consumption and cognitive performance

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In the last twenty years nutritional neuroscience has developed into a recognized discipline with the potential to make significant contributions to our understanding of the relationship between nutrition and cognition. Some research has been conducted on animals and humans indicating that different neural systems might be affected by dietary manipulations including fruits, vegetables, fish and nuts.

Nuts contain a number of potentially neuroprotective compounds like vitamin E, folate, melatonin, several antioxidative polyphenols and omega-3 fatty acids which could be incorporated into the brain cell membranes and subsequently influence cognitive processing.

A study on aged rats reported improved working memory in the Moriss water maze on a 6% walnuts diet; nevertheless the 9% walnut diet showed impaired reference memory. Doetichen Cohort Study reported that higher intake of nuts was associated with a significantly better cognitive function (memory, speed, cognitive flexibility and global cognitive function) at baseline. However, there was no significant change observed in cognitive function at the second testing after five years.

We have conducted a study to determine the effect of walnuts on verbal and nonverbal reasoning, memory, and mood in young adults. No significant increases in cognitive functioning were detected for nonverbal reasoning, mood or for memory on the walnut supplemented diet. However, inferential verbal reasoning increased significantly by 11.2%, indicating a medium effect size (p=0.009; d=0.567). Further research is needed to study the long- and short term effects of nuts consumption on cognitive processes.

Biography

Peter Pribis graduated in 1988 from School of Medicine at King Charles University in Prague, Czech Republic. In 1996 he graduated from Loma Linda University, School of Public Health with Dr.P.H. in nutrition and epidemiology. He is the director of a MS in Nutrition and Wellness program at Andrews University in Berrien Springs, Michigan. He conducts research in the area of nuts, vegetarian lifestyle and omega-3 fatty acids. He publishes in peer reviewed journals and serves as reviewer an editorial board member of several magazines.

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