Concurrent Session 8: Diet and Cognition

Saccharide supplementation effects for cognition and well-being in middle-aged adults

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Background – There is a rapidly growing scientific interest in the potential for nutrition to influence various aspects of cognition and well-being. In particular, emerging evidence suggests beneficial effects of saccharides (i.e., biological sugars found in certain vegetables, fruit and nuts) via multiple underlying mechanisms (i.e., hippocampal, serotonergic).
Objective – The current study used a randomised, double-blind, placebo-controlled design to investigate the effects of saccharide supplementation on cognition and well-being in middle-aged adults.
Design – Participants (N=109) aged between 45 and 60 years took ±1.8 g of a combination of saccharides or a placebo twice daily for 12 weeks. Participants completed alternate forms of standardised tests of memory (working memory, immediate and delayed verbal recall, visual recall and recognition), speed of processing and attention, and self-report measures of mood (depression, anxiety and stress) before and after supplementation.
Outcomes – Overall, the results were positive with significant beneficial effects of saccharide supplementation on memory performance. In addition, there were beneficial effects on measures of tension, depression and anger with participants in the saccharide group reporting less tension and irritability, and a more positive outlook on life than those in the placebo condition.
Conclusion – The results make an important contribution to a growing literature that suggests beneficial effects of saccharide intake on cognition and well-being. In view of the increasing scientific interest in the potential for nutrition to influence various aspects of cognition and mood, the beneficial impact of saccharides on cognitive function and well-being in middle-age warrants investigation into the potential for saccharides to optimise cognitive function in older adults.

Lifetime diet and cognitive performance in an older community-dwelling population

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Background – Research has identified the possible role of diet in age related cognitive decline and cognitive impairment. Epidemiological studies suggest that dietary factors are associated with the aetiology of cancer and cardiovascular disease, playing a role several years before diagnosis. However, the possible long-term influence of diet on cognitive status in old age has not been investigated.
Design – A sample of community-dwelling older adults completed a food frequency questionnaire designed to assess lifetime diet. Factor analysis and cluster analysis were performed to determine possible lifetime dietary patterns as well as patterns within life periods. In addition, a diet score was calculated based on the consumption frequency of foods both positively and negatively associated with cognition. A battery of cognitive tasks, assessing reasoning, knowledge, perceptual speed, memory, choice-reaction time and inhibition were included. Relationships were examined between reported lifetime diet and performance on the cognitive tasks. Physical activity, smoking status and demographic variables were controlled for.
Outcomes – 391 older adults (46.3% male) aged 65-90 years (M = 73.1, SD = 5.5), with a mean of 12.9 years of education (SD = 3.8) completed the food frequency questionnaire. Factor scores derived from confirmatory factor analytic models of the cognitive domains were the dependant variables in these analyses.
Conclusion – Dietary intake across the lifetime, as measured by this retrospective food frequency questionnaire, may be related to cognitive status in later life.