

Nutrients Known to Support Cognitive Function Are Consumed Less by Many Older Adults: An Analysis of NHANES 2011–2014

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Objectives: An increasing number of adults are over the age of 65 and there is increasing prevalence of age-associated concerns with cognitive decline in older adults in the United States. Several nutrients are known to have important biological roles in brain health and neurological function, but many individuals fall short of recommended intake levels. The objective of this study was to examine the association between nutrient intake and cognitive function. We also explored whether nutrient intake was associated with depression.

Methods: This cross-sectional study was based on data from the National Health and Nutrition Examination Survey (NHANES) 2011–2014 and included participants ≥ 60 years of age who had reliable dietary recall data and either valid cognitive function data ($n = 2713$) or valid depression score data ($n = 2943$). The sample was stratified by sex, and

cognitive functioning test (CFT) composite z-scores were analyzed by quartiles.

Results: Higher intake of a number of different nutrients was associated with higher cognitive function in both males and females. Nutrients that showed consistent associations with cognitive function across intake analyses for both food and food plus supplements in males and females included folate, choline, magnesium, potassium, vitamin K, and lutein and zeaxanthin. These associations were positive with increasing intake associated with higher CFT composite z-scores. Analysis of nutrient intake and depression yielded results that differed by sex, with more nutrients inversely associated with depression in females than males. In females, nutrients that had consistent inverse associations with depression across intake analyses for both food and food plus supplements included EPA, DHA, magnesium, vitamin K, potassium, dietary fiber, and lutein and zeaxanthin.

Conclusions: Our findings suggest that many older adults consume less nutrients known to benefit and support cognitive function and mood.

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