

Mediterranean diet plus olive oil or nuts associated with improved cognitive function

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Credit: Wikipedia.

Supplementing the plant-based Mediterranean diet with antioxidant-rich extra virgin olive oil or mixed nuts was associated with improved cognitive function in a study of older adults in Spain but the authors warn more investigation is needed, according to an article published online by *JAMA Internal Medicine*.

Emerging evidence suggests associations between dietary habits and cognitive performance. Oxidative stress (the body's inability to appropriately detoxify itself) has long been considered to play a major role in [cognitive decline](#). Previous research suggests following a Mediterranean diet may relate to better cognitive function and a lower risk of dementia. However, the observational studies that have examined these associations have limitations, according to the study background.

Emilio Ros, M.D., Ph.D., of the Institut d'Investigacions Biomediques August Pi Sunyer, Hospital Clinic, Barcelona, and Ciber Fisiopatología de la Obesidad y Nutrición (CIBEROBN), Instituto de Salud Carlos III, Madrid, and coauthors compared a Mediterranean diet supplemented with [olive oil](#) or nuts with a low-fat control diet.

The randomized clinical trial included 447 cognitively healthy volunteers (223 were women; average age was nearly 67 years) who were at high cardiovascular risk and were enrolled in the Prevencion con Dieta Mediterranea nutrition intervention.

Of the participants, 155 individuals were assigned to supplement a Mediterranean diet with one liter of extra [virgin olive oil](#) per week; 147 were assigned to supplement a Mediterranean diet with 30 grams per day of a mix of walnuts, hazelnuts and almonds; and 145 individuals were assigned to follow a low-fat control diet.

The authors measured cognitive change over time with a battery of neuropsychological tests and they constructed three cognitive composites for memory, frontal (attention and executive function) and global cognition. After a median of four years of the intervention, follow-up tests were available on 334 participants.

At the end of the follow-up, there were 37 cases of [mild cognitive impairment](#): 17 (13.4 percent) in the Mediterranean diet plus olive oil group; eight (7.1 percent) in the Mediterranean diet plus nuts group; and 12 (12.6 percent) in the low-fat control group. No dementia cases were documented in patients who completed study follow-up.

The study found that individuals assigned to the low-fat control diet had a significant decrease from baseline in all composites of cognitive function. Compared with the control group, the memory composite improved significantly in the Mediterranean diet plus nuts, while the

frontal and global cognition composites improved in the Mediterranean diet plus olive oil group. The authors note the changes for the two Mediterranean diet arms in each composite were more like each other than when comparing the individual Mediterranean diet groups with the low-fat diet control group.

"Our results suggest that in an older population a Mediterranean diet supplemented with olive oil or nuts may counter-act age-related cognitive decline. The lack of effective treatments for cognitive decline and dementia points to the need of preventive strategies to delay the onset and/or minimize the effects of these devastating conditions. The present results with the Mediterranean [diet](#) are encouraging but further investigation is warranted," the study concludes.

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