

Third major study finds that multivitamin supplements improve memory and slow cognitive aging in older adults

January 18 2024



Credit: Unsplash/CC0 Public Domain

By 2060, according to the Alzheimer's Association, nearly one in four Americans will be in an age bracket at elevated risk of cognitive decline

and Alzheimer's disease unless interventions can help preserve cognitive function before deficits begin.

The COcoa Supplement and Multivitamin Outcomes Study (COSMOS) is a large-scale, nationwide, randomized trial rigorously testing cocoa extract and [multivitamin](#) supplements directed by researchers at Mass General Brigham. The paper, "Effect of multivitamin-mineral supplementation versus placebo on cognitive function: Results from the clinic sub-cohort of the COSMOS randomized clinical trial and meta-analysis of three cognition studies within COSMOS," has been published in [The American Journal of Clinical Nutrition](#).

Two previously published studies of cognition in COSMOS suggested a positive effect for a daily multivitamin. COSMOS researchers now report the results of a third study of cognition in COSMOS, which focused on participants who underwent in-person assessments, together with the results of a combined analysis from the three separate studies.

The results from this latest report confirm consistent and statistically significant benefits of a daily multivitamin versus placebo for both memory and global cognition.

"Cognitive decline is among the top health concerns for most [older adults](#), and a daily supplement of multivitamins has the potential as an appealing and accessible approach to slow cognitive aging," said first author Chirag Vyas, MBBS, MPH, instructor in investigation at the Department of Psychiatry at Massachusetts General Hospital (MGH), a founding member of the Mass General Brigham health care system.

In the in-clinic study, the researchers administered detailed, in-person cognitive assessments among 573 participants in the subset of COSMOS known as COSMOS-Clinic. Within COSMOS, two previous studies had tested multivitamin supplementation on cognition using telephone-based

cognitive assessments (COSMOS-MIND) and online web-based cognitive assessments (COSMOS-Web).

In their prespecified analyses of data from COSMOS-Clinic, investigators observed a modest benefit for the multivitamin, compared to placebo, on global cognition over two years. There was a statistically significant benefit of multivitamin supplementation for change in episodic memory, but not in executive function/attention.

The team also conducted a meta-analysis based on the three separate studies, with non-overlapping COSMOS participants (ranging two to three years in treatment duration), which showed strong evidence of benefits for both global cognition and episodic memory. The authors estimate that the daily multivitamin slowed global cognitive aging by the equivalent of two years compared to placebo.

Vyas said, "The [meta-analysis](#) of three separate cognition studies provides strong and consistent evidence that taking a daily multivitamin, containing more than 20 essential micronutrients, helps prevent memory loss and slow down cognitive aging."

Olivia Okereke, MD SM, senior author of the report and director of Geriatric Psychiatry at MGH, added "These findings will garner attention among many older adults who are, understandably, very interested in ways to preserve brain health, as they provide evidence for the role of a daily multivitamin in supporting better cognitive aging."

The overall COSMOS trial is led by JoAnn Manson, MD, DrPH, and Howard Sesso, ScD, MPH, both of Brigham and Women's Hospital (BWH), also a founding member of Mass General Brigham.

Manson, co-author of the report and Chief of the Division of Preventive Medicine at BWH, said, "The finding that a daily multivitamin improved

memory and slowed cognitive aging in three separate placebo-controlled studies in COSMOS is exciting and further supports the promise of multivitamins as a safe, accessible and affordable approach to protecting cognitive health in older adults."

The COSMOS consortium of cognitive studies represents a collaboration between MGH, BWH, Columbia University, and Wake Forest University, using both traditional and innovative approaches to assessing cognitive outcomes. These approaches allow large numbers of participants (>5,000 in total) to be included in cognitive studies in a high-quality and cost-efficient manner. COSMOS participants are aged 60 and older and reside throughout the U.S.

Sesso, also a co-author and the associate director of the BWH Division of Preventive Medicine, added, "With these three studies using different approaches for assessing cognition in COSMOS, each providing support for a daily multivitamin, it is now critical to understand the mechanisms by which a daily multivitamin may protect against memory loss and [cognitive decline](#) with a focus on [nutritional status](#) and other aging-related factors."

"For example, the modifying role of baseline nutritional status on protecting against cognitive decline has been shown for the COSMOS cocoa extract intervention. A typical multivitamin such as that tested in COSMOS contains many essential vitamins and minerals that could explain its potential benefits."

More information: Effect of multivitamin-mineral supplementation versus placebo on cognitive function: Results from the clinic sub-cohort of the COSMOS randomized clinical trial and meta-analysis of three cognition studies within COSMOS, *American Journal of Clinical Nutrition* (2024). [DOI: 10.1016/j.ajcnut.2023.12.011](https://doi.org/10.1016/j.ajcnut.2023.12.011)

Provided by Mass General Brigham

Citation: Third major study finds that multivitamin supplements improve memory and slow cognitive aging in older adults (2024, January 18) retrieved 28 April 2024 from <https://medicalxpress.com/news/2024-01-major-multivitamin-supplements-memory-cognitive.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.