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Why Most People Need a Multivitamin

Analysis by Dr. Joseph Mercola | November 06, 2023

STORY AT-A-GLANCE

- Older adults taking a multivitamin supplementation may experience memory improvements
- Taking a multivitamin improved performance by "the equivalent of 3.1 years of age-related memory change" compared to placebo and could not only help maintain cognitive functioning but potentially enhance it
- Separate research found three years of multivitamin supplementation translated to a 60% slowing of cognitive decline; Improvements in global cognition, episodic memory and executive function were noted
- Other research revealed daily multivitamins potentially reduced lung cancer by 38% and improved levels of several nutritional biomarkers
- While whole, nutrient-dense foods are the best source of nutrition, older adults may be at risk of nutrient deficiencies and some may benefit from multivitamin supplementation

Food is your best source of nutrients, but with soil health declining and many people not eating an ideal diet, multivitamins may help address any gaps. This may be particularly true for adults age 60 and over. A large study on the effects of multivitamins and cognitive function found the supplements have the potential to improve memory.[1]

It's the second study using data from the COcoa Supplement and Multivitamin Outcomes Study Web (COSMOS-Web), which was an ancillary study of COSMOS, to link

a daily multivitamin to better brain function. Separate research also linked multivitamins to improved cognition.[2]

"When we start seeing that kind of consistency across well-designed studies, it certainly helps convince me — the ultimate skeptic — that we're on to something real," professor Adam Brickman of Columbia University, who worked on the first study, told Insider. "… I started taking multivitamins the day we ran the analyses and saw the results, and I take 'em every morning."[3]

Daily Multivitamin Gives Memory a Boost

Scientists from Harvard Medical School and Columbia University demonstrated that older adults taking a multivitamin supplementation may experience memory improvements.[4] In this group of 3,562 older adults, including men over the age of 60 and women over 65, participants received either a multivitamin supplement or a placebo.

The participants were evaluated at baseline and each year using a battery of neuropsychological tests over a period of three years. Results showed that participants taking the multivitamin supplement had better immediate recall at the first year point, which was maintained during follow-up. Effects were most pronounced in people with cardiovascular disease.

"There is evidence that people with cardiovascular disease may have lower micronutrient levels that multivitamins may correct, but we don't really know right now why the effect is stronger in this group," Brickman said.[5]

The researchers estimated that taking a multivitamin improved performance by "the equivalent of 3.1 years of age-related memory change" compared to placebo[6] and could not only help maintain cognitive functioning but potentially enhance it later in life. The team concluded:[7]

> *"Vitamin supplementation is relatively inexpensive, accessible, and has a few adverse effects, and thus might be a potentially useful population health intervention … Daily multivitamin supplementation, compared with placebo,*

improves memory in older adults. Multivitamin supplementation holds promise as a safe and accessible approach to maintaining cognitive health in older age."

Multivitamins Offer Cognitive Benefits

A separate study involving 2,262 participants with a mean age of 73 tested whether cocoa extract versus placebo and a multivitamin supplement versus placebo improved cognition.[8] In addition to taking the supplement, the participants took tests designed to evaluate memory and other cognitive functions when the study started and annually.

Significant benefits were found from the daily multivitamin, with three years of such supplementation translating to a 60% slowing of cognitive decline, which is equivalent to about 1.8 years.[9]

Improvements in global cognition, episodic memory and executive function were noted, with the effects again most pronounced in people with cardiovascular disease. According to the study, which was published in the journal Alzheimer's & Dementia:[10]

"COSMOS-Mind provides the first evidence from a large-scale, long-term, pragmatic RCT [randomized controlled trial] to suggest that daily use of a safe, readily accessible, and relatively low-cost MVM [multivitamin-mineral] supplement has the potential to improve or protect cognitive function for older women and men.

An additional trial is needed to confirm these findings in a more representative cohort and to explore potential mechanisms for cognitive benefit. This work may ultimately have important public health implications for standard of care to improve or protect cognitive function in older adults."

Multivitamins May Lower Cancer Risk

The larger COSMOS study evaluated whether cocoa extract supplementation with and without a standard multivitamin affected the risk of developing cardiovascular disease

and cancer. The larger study enrolled 21,442 participants and found cocoa flavanol supplementation did not show a significant impact in reducing the total number of cardiovascular events.

However, when the data was evaluated further, they found daily multivitamins potentially reduced lung cancer by 38% and "did appear to improve levels of several nutritional biomarkers."[11] Previous research also found that daily multivitamin supplementation led to a statistically significant reduction in the incidence of total cancer among men aged 50 years or older.[12]

Other research found multivitamin use was associated with a 70% decrease in risk of non-cardia gastric cancer among Black participants in the Southern Community Cohort Study who were below the healthy eating index median, meaning they had a lower quality diet.[13]

B Vitamins May Also Slow Brain Aging

Many multivitamins contain B-complex vitamins, which are important for your brain. Vitamins B6, B9 (folate) and B12 support cognitive function as you age and have been shown to play a major role in the development of dementia. As noted in Nutrition Reviews:[14]

> *"Deficiencies of the vitamins folate, B12 and B6 are associated with neurological and psychological dysfunction … In the elderly, cognitive impairment and incident dementia may be related to the high prevalence of inadequate B vitamin status and to elevations of plasma homocysteine.*
>
> *Plausible mechanisms include homocysteine neurotoxicity, vasotoxicity and impaired S-adenosylmethionine-dependent methylation reactions vital to central nervous system function. In light of this, it is imperative to find safe ways of improving vitamin B status in the elderly …"*

Research published in PLOS One even suggests B vitamins may slow brain aging. It compared brain atrophy in participants taking folic acid (0.8 milligrams (mg) per day),

vitamin B12 (0.5 mg per day) and vitamin B6 (20 mg per day) for 24 months with that in patients taking a placebo.[15]

Those taking B vitamins had a lower rate of brain atrophy per year — 0.76% — than those not taking them, who had an atrophy rate of 1.08%. According to the researchers, "The accelerated rate of brain atrophy in elderly with mild cognitive impairment can be slowed by treatment with homocysteine-lowering B vitamins."[16]

Vitamin B3 is found in grass fed beef, mushrooms and avocados,[17] while vitamin B6 is plentiful in grass fed beef, potatoes, bananas and avocados.[18] You can find folate, or vitamin B9, spinach, broccoli, avocado and asparagus.[19]

Vitamin B12-rich foods include grass fed beef liver, wild rainbow trout and wild sockeye salmon. For more serious deficiency you may need weekly shots of vitamin B12 or daily high-dose B12 supplements.

Trace Nutrient Protects Brain Health

Another nutrient to be aware of as you age is nicotinamide riboside (NR), a precursor of nicotinamide adenine dinucleotide (NAD+) and a form of vitamin B3. Found in milk as well as in supplement form, NR may help to boost levels of NAD+, which typically declines in the brain with age, leading to metabolic and cellular dysfunction.[20] By raising NAD+ levels, NR may modify neurodegenerative disease in humans, helping to protect brain health.

In a study published in the journal Aging Cell, Martens and colleagues found that NR supplementation increases NAD+ levels and lowers biomarkers of neurodegeneration in plasma extracellular vesicles enriched for neuronal origin (NEVs).[21]

Among the 22 older adults who took NR at a dosage of 500 mg twice a day for six weeks, NAD+ levels in NEVs increased while kinases involved in insulin resistance and neuroinflammatory pathways decreased.[22] The results suggest NR, by increasing NAD+, could help ward off Alzheimer's disease.

The NAD+ precursor niacinamide is also beneficial, but it's not widely promoted because it costs much less than other NAD+ precursors, including NR. You can use 1 to 1/2 of 1/64th of a teaspoon of niacinamide powder three times a day (25 mg to 50 mg), but will need **special measuring spoons** to carefully measure it out. In this case, more is not better as too much can inhibit sirtuins, which are important longevity proteins.

Why Older Adults May Need a Nutritional Boost

Older adults may be perfect candidates for multivitamins as they may be predisposed to deficiencies and inadequacies in micronutrients. Nutrient absorption may decline with age, for instance, while gastrointestinal pH changes, existing diseases, the use of certain medications and inflammation in the gut can all contribute to nutrient deficiencies.[23]

In addition, older adults may use micronutrients in greater concentrations, making it difficult to maintain adequate levels.[24] Changes in eating habits and poor oral health, leading to tooth loss, can further affect older adults' ability to consume enough nutrients and in a wide enough variety.

Ideally, people of all ages should strive to get their nutrition from whole, nutrient-dense foods. "We're not suggesting that people should get their vitamin and nutrient intake from supplements — the primary source of that should be from whole and healthy foods," Brickman told Insider. "… I think that multivitamins, along with a lot of other things that we could potentially do as we age, might have a modest but meaningful effect on how we age, cognitively."[25]

He added in a news release, "Supplementation of any kind shouldn't take the place of more holistic ways of getting the same micronutrients."[26] In the event you feel you're not getting the nutrients you need from diet alone, however, you might want to consider a multivitamin.

They're among the most popular supplements in the U.S., with an estimated one-third of U.S. adults — and one-quarter of children and adolescents — using them.[27] If you decide

to add one to your daily routine, look for a manufacturer that has checks and balances in place to ensure a high-quality product.

Since multivitamins contain both water- and fat-soluble vitamins, it's generally recommended you take half your daily dose in the morning, with breakfast, and the other half with your main meal.

Sources and References

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