

Common Supplement Linked to Better Health for Seniors in 3-Year Study

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STORY AT-A-GLANCE

- › Multivitamins combine several vitamins and minerals in one product, and understanding how formulas, doses, and quality standards differ can help you choose one that better fits your needs
- › The three-year COcoa Supplement and Multivitamin Outcomes Study (COSMOS) followed 16,159 adults age 60 and older and found that daily multivitamin use led to small improvements in symptoms and overall functional health
- › A review of 19 studies found that memory showed the most consistent improvement, with B vitamins, vitamin C, and vitamin E among the nutrients most often linked to healthier brain function
- › A separate COSMOS analysis of 958 older adults found that multivitamins may slightly slow biological aging, with the greatest benefits appearing in people who were aging fastest at the start
- › Whole foods should remain the main source of nutrients, but a well-made, third-party-tested multivitamin may help fill nutritional gaps when diet alone falls short

Many people keep a multivitamin in their medicine cabinet as a kind of backup plan, helping fill in nutrients that might be missing from what they eat each day. This becomes even more important as people get older, since changes in appetite, digestion, and nutrient absorption can make it harder to get everything the body needs from food alone.

Good nutrition plays a big role in staying healthy, but scientists have long debated whether multivitamins do more than just prevent deficiencies. Before diving into what the research says, it helps to start with the basics: What exactly is a multivitamin, and how does it differ from a vitamin or a supplement?

Are Multivitamins the Same as Vitamins or Supplements?

Multivitamins are one of the most common supplements people take, but the terms "vitamin," "supplement," and "multivitamin" often get used interchangeably – even though they have certain distinctions.^{1,2,3}

- **Multivitamins combine several nutrients into one product** – A multivitamin/mineral (MVM) is a supplement that contains a mix of vitamins and minerals in a single pill, gummy, or powder. There's no official rule for what a multivitamin must contain, so the exact mix of nutrients and amounts varies widely from brand to brand.
- **A vitamin is just one nutrient, not a combination** – Vitamins like C, D, or B12 are individual nutrients your body needs in small amounts. A multivitamin bundles several of these vitamins together, often along with minerals like calcium or zinc, into one product.
- **Supplements are the bigger umbrella category** – Vitamins are just one type of supplement. The broader category also includes minerals, herbs, amino acids, and other nutritional products. In other words, all multivitamins are supplements, but not all supplements are multivitamins.
- **Not all multivitamins are the same type** – Some are "basic," providing modest amounts of nutrients close to daily recommended levels. Others are "high potency," with much higher doses, or "specialized," combining vitamins and minerals with other ingredients aimed at a specific goal, like immune support or energy.

- **Supplements aren't reviewed by the U.S. Food and Drug Administration (FDA) before they hit shelves** — Unlike medications, dietary supplements don't need FDA approval before they're sold. Manufacturers are responsible for making sure their products are safe and accurately labeled, which is part of why quality can vary so much between brands.

Can a Daily Multivitamin Help You Stay Active as You Age?

To better understand the role of multivitamins in healthy aging, researchers analyzed data from 16,027 adults aged 60 and older who participated in the COcoa Supplement and Multivitamin Outcomes Study (COSMOS).⁴ They examined whether daily multivitamin use could help preserve functional health and quality of life as participants aged. These findings were presented at NUTRITION 2026, the American Society for Nutrition's annual conference.^{5,6,7,8}

- **How did researchers test the effects of multivitamins?** COSMOS was a randomized, double-blind, placebo-controlled clinical trial that followed participants for three years. Participants were assigned to receive a daily multivitamin-mineral supplement, a cocoa extract supplement, both supplements, or matching placebos.
- **What was evaluated** — Rather than focusing solely on whether participants developed heart disease or other major illnesses, researchers measured how well they were able to manage everyday tasks and symptoms over time. Participants completed annual health assessments that examined:
 - **Physical ability** — Including walking, climbing stairs, bathing, dressing, exercising, and completing household chores.
 - **Symptom burden** — How many symptoms such as fatigue, shortness of breath, and swelling interfere with daily activities.
 - **Clinical summary score** — An overall measure combining physical function and symptom burden to provide a broader picture of health and quality of life.

Scores ranged from 0 to 100, with higher scores indicating better overall function and fewer symptoms.

- **Daily multivitamin users reported better functional health scores** — After three years, participants taking a multivitamin experienced significantly better symptom burden and clinical summary scores than those receiving a placebo. Symptom burden improved by an average of 0.45 points, while clinical summary scores improved by 0.30 points.

Although these improvements were relatively small, they suggest that participants experienced fewer symptoms that can limit daily function, including fatigue and shortness of breath.

- **A "hearty" benefit for those with thinning arteries** — Improvements were seen in 122 participants with carotid stenosis, a narrowing of the carotid arteries that carry blood from the heart to the brain.

In this subgroup, symptom burden scores improved by an average of 6.75 points, while clinical summary scores improved by 6.01 points. According to senior author Dr. Yanbin Dong, a cardiologist and director of the Georgia Prevention Institute at the Medical College of Georgia at Augusta University:

*"This means those who had a history of carotid stenosis and took multivitamin minerals will have a small clinical benefit of improving cardiovascular and functional health over time."*⁹

- **Researchers believe multivitamins may help address common nutrient shortfalls** — The authors suggest that multivitamins may support healthy aging by correcting micronutrient insufficiencies, or low levels of essential vitamins and minerals. These nutrients help support energy production, muscle function, blood vessel health, immune function, and inflammation control.

- **Looking beyond prevention studies** — Rather than asking whether the multivitamin prevented disease, this analysis looked at something more immediate: how people felt and functioned day to day. As Bayu B. Bekele, Ph.D., a postdoctoral fellow at the Georgia Prevention Institute, explained:

"What makes this work unique is our focus on functional health, how people actually feel and function in their daily lives rather than just the prevention of major diseases ...

*For older adults, these findings suggest that a daily multivitamin could be a helpful, low-risk addition to a healthy lifestyle to support physical well-being as they age, although it is not a substitute for a good diet or exercise."*¹⁰

Multivitamins May Help Protect Your Memory and Cognitive Function

In a 2026 narrative review published in *Annals of Medicine & Surgery*, researchers examined whether multivitamin supplementation could help support cognitive health in older adults.¹¹

They searched major scientific databases, including PubMed, Embase, and Google Scholar, for research on multivitamins and cognitive health, starting with 1,289 articles then narrowing the list down to 19 studies published between 2003 and 2023. Most focused on older adults with age-related cognitive decline, mild cognitive impairment (MCI), or early-stage dementia.

- **Several aspects of brain health were evaluated** — The studies examined memory, attention, processing speed, decision-making, and overall cognitive function. They compared people taking multivitamins with those receiving placebos or standard care to see whether supplementation influenced thinking skills over time.

- **Memory showed the most consistent improvements** — Of all the cognitive abilities studied, memory benefited most often from multivitamin use. Several studies reported improvements in:
 - **Episodic memory** — The ability to remember personal experiences and past events.
 - **Working memory** — The ability to temporarily hold and use information while completing a task.
 - **Overall cognitive performance** — Some studies found improvements in broader measures of thinking, learning, and information processing.
- **The vitamins that stood out** — B vitamins, particularly B6, B12, and folate, were among the nutrients most often linked to better cognitive outcomes. These vitamins help keep homocysteine, an amino acid associated with cognitive decline, at healthy levels. The review also highlighted vitamins C and E, which act as antioxidants that help protect brain cells from damage caused by everyday wear and tear.
- **Other ways multivitamins may help the brain** — The review found that multivitamins may help keep homocysteine levels in check, improve blood flow to the brain, reduce oxidative stress, and support communication between brain cells. Together, these effects may help support memory, attention, and overall cognitive function as people get older.

The review emphasized that improvements were concentrated in people with baseline nutrient deficiencies or mild cognitive impairment. In well-nourished, healthy older adults, most studies found little to no cognitive benefit, and several trials showed no difference between multivitamins and placebo. Differences in supplement formulation, dosage, study duration, and testing methods drove much of the inconsistency across studies.

Could Multivitamins Slow Biological Aging?

Beyond functional health and memory, scientists have also asked whether a daily multivitamin might affect aging at a cellular level. A 2026 analysis published in *Nature Medicine* examined whether multivitamin-mineral (MVM) supplementation could slow biological aging, measured through DNA methylation.^{12,13}

- **The analysis included 958 older adults** — Researchers analyzed blood samples from participants in the COSMOS trial, evenly split between men and women, with an average age of 70. Samples were collected at the start of the study and again after one and two years.
- **Researchers tracked five epigenetic clocks** — Epigenetic clocks are tools that estimate a person's biological age by measuring DNA methylation, a chemical marker on DNA that changes in predictable patterns as the body ages.
- **Benefits were strongest in those aging fastest** — Participants who already showed signs of accelerated biological aging at the start of the study saw the largest slowdown after taking a multivitamin, suggesting the supplement may help most in those who need it most.
- **Cocoa extract showed no effect** — Unlike the multivitamin, daily cocoa extract supplementation did not slow any of the five epigenetic clocks measured in the study.

Across these three studies, daily multivitamins were linked to easier daily function, better memory, and slightly slower biological aging. Researchers still agree that more research is needed. Before considering a multivitamin, it helps to understand where it fits into your overall diet.

Food First: Where Multivitamins Fit In

Ideally, everyone would get all the nutrients they need from whole, nutrient-dense foods, and for many people, that's genuinely achievable through diet alone. Still, nutrient deficiencies are surprisingly common, even among people who believe they're eating a balanced diet. These previously published studies spell out how big that gap really is, and whether a multivitamin can close it:

- **Nearly a third of Americans are at risk of a vitamin deficiency or anemia** — A 2017 analysis in *Nutrients* examined NHANES biochemical data from thousands of U.S. children and adults and found that 31% of the population was at risk of at least one vitamin deficiency or anemia, and that risk persisted even among people whose reported dietary intake looked adequate on paper.¹⁴
- **A six-month clinical trial found a daily multivitamin helped prevent similar declines in older men** — Researchers at Oregon State University's Linus Pauling Institute followed 35 healthy men age 68 and older in a randomized, double-blind, placebo-controlled trial, published in *Nutrients* in 2023.¹⁵

Half took a daily Centrum Silver Men's Formula multivitamin/multimineral; half took a placebo. Over six months, vitamin B6, vitamin E, beta-carotene, and vitamin D levels dropped in the placebo group but held steady or improved in the multivitamin group, which also avoided a decline in monocyte oxygen consumption, a marker of cellular energy metabolism. As the researchers put it:

*"Several of the participants assigned to the placebo group had blood nutrition biomarkers fall during the study ... We were amazed to find that the men who took the placebo showed reduction in cellular oxygen consumption."*¹⁶

- **A three-year trial linked daily multivitamin use to measurably better memory** — Published in the *American Journal of Clinical Nutrition* in 2023, a randomized clinical trial found that multivitamin users showed memory improvements equivalent to roughly three years of age-related decline compared to placebo.

The study, which followed more than 3,500 adults over age 60 for three years as part of the COSMOS-Web study, reported the largest gains in people who had cardiovascular disease.¹⁷

Note: This is a separate analysis from the COSMOS functional-health findings described earlier — same parent COSMOS trial and multivitamin intervention, but this ancillary study (COSMOS-Web) tracked online cognitive test performance in a subset of participants, rather than self-reported physical function.

Dr. Adam Brickman, a professor of neuropsychology at Columbia University, and the study's senior author, was careful to frame the finding in context. In an article published by Business Insider, he said:

*"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," he said. "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."*¹⁸

In a Columbia University Irving Medical Center release on the same study, he added: "Supplementation of any kind shouldn't take the place of more holistic ways of getting the same micronutrients."¹⁹

How to Get the Most Out of Your Multivitamin

Not all multivitamins are created equal, and even a high-quality product won't deliver results if it's poorly dosed, poorly timed, or taken in isolation from the rest of your health habits. Here's how to make sure your multivitamin routine is actually working for you.

- 1. Choose standardized, verified formulas** — Look for multivitamins that list exact doses of active ingredients rather than vague blends. A label that specifies milligrams per serving is far more trustworthy than one that just lists an ingredient name.²⁰

- 2. Check for third-party testing** — Seals from organizations like the U.S. Pharmacopeia (USP) or NSF International confirm that a multivitamin contains what the label claims and is free from harmful contaminants.²¹
- 3. Watch for fillers and additives** — Some multivitamins pad their formulas with sugar, artificial flavoring, or binders that dilute the active ingredients. Simpler formulations often deliver more of what you're paying for.²²
- 4. Pay attention to timing** — Some nutrients are better absorbed with food, while others work taken at specific times of day. Check the label or talk to a healthcare provider about optimal timing for your multivitamin.²³
- 5. Be mindful of interactions** — Some multivitamins can interact with medications or other supplements. If you're taking multiple products or prescription drugs, it's worth checking with a doctor or pharmacist before adding something new.²⁴
- 6. Reassess your needs periodically** — Nutrient needs change with age, health status, and diet. What worked for you five years ago may not be what your body needs today, so it's worth revisiting your multivitamin routine every so often.²⁵

Lifestyle Habits That Support Your Health Beyond Multivitamins

Multivitamins may help fill in nutritional gaps, but they are not a substitute for a balanced, whole-food diet and healthy daily habits. The foundation of good health still comes from how you eat, move, sleep, and manage stress. Here are four simple lifestyle practices that can support your overall well-being and complement your multivitamin routine.

- 1. Steer clear of seed oils** — Highly processed seed oils, including canola, soybean, sunflower, safflower, corn, and grapeseed oil, are loaded with **linoleic acid** (LA), a polyunsaturated fat linked to mitochondrial dysfunction when consumed in excess.

Swap them for grass-fed butter, ghee, or tallow, and choose grass-fed beef or lamb over chicken and pork, which tend to carry higher LA levels from conventional feed.

2. **Get active** — You don't need intense workouts to see benefits. Simple, regular movement like daily [walking](#), light strength training, or resistance bands helps your body use energy from food more efficiently, especially if you spend a lot of the day sitting.
3. **Get some natural sunshine** — Sunlight exposure triggers your body's own [vitamin D](#) production, something a pill can't fully replicate. The optimal window is between 10 a.m. and 2 p.m., when UVB rays needed for vitamin D synthesis are strongest.

But timing matters: LA from seed oils accumulates in your skin, and when it interacts with UV rays, it can oxidize and trigger inflammation and DNA damage. If you've been eating a lot of seed oils, it's worth cutting them out for about six months before spending extended time in peak sun.

4. **Enjoy the right carbohydrates to fuel your cells** — Carbs aren't the enemy; your body runs efficiently on glucose. Focus on easily digestible carbs like fruit and white rice, then gradually reintroduce root vegetables, legumes, and whole grains. Aim for around 250 grams of healthy carbs daily to support your metabolism, while skipping ultraprocessed and fast foods.

These findings are from research conducted in clinical settings. Results may not apply to all individuals. This article is for informational purposes only and does not constitute medical advice. Consult a qualified healthcare provider before making changes to your health regimen.

Frequently Asked Questions About Multivitamins and Healthy Aging

Q: What is the difference between a vitamin and a multivitamin?

A: A vitamin is one nutrient, such as vitamin C or vitamin D. A multivitamin combines several vitamins and minerals in one product. Formulas vary, so two products labeled "multivitamin" may contain very different nutrients and doses.

Q: What did the COSMOS trial find about multivitamins and daily function?

A: COSMOS followed 16,027 adults age 60 and older for three years. Those taking a daily multivitamin reported small improvements in symptom burden and overall functional health, including fewer problems related to fatigue and shortness of breath.

Q: Can a daily multivitamin help protect memory?

A: A review of 19 studies found that memory showed the most consistent improvement. Benefits were reported in episodic memory, working memory, and overall thinking ability, particularly among older adults experiencing mild cognitive decline.

Q: Could multivitamins slow biological aging?

A: An analysis of 958 older adults found that daily multivitamin use may slightly slow changes linked to biological aging. The strongest results appeared in participants who were aging faster than expected when the research began.

Q: Should a multivitamin replace a healthy diet?

A: No. Whole, nutrient-dense foods should remain the main source of vitamins and minerals. A multivitamin may help fill nutritional gaps, but it works best alongside healthy food, exercise, sleep, and other supportive habits.

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