

# COSMOS-Web Study

Centrum Silver significantly  
benefits memory in older adults<sup>1</sup>



**HALEON**

**Centrum**  
SILVER

## What is COSMOS-Web?

COSMOS-Web was a large-scale, long-term randomized control trial that examined the effect of daily multivitamin/multimineral (Centrum Silver) supplementation on memory in older adults.<sup>1</sup>

COSMOS-Web is one of three ancillary studies to the COSMOS study that looked at the effect of multivitamin/multimineral supplementation on aspects of cognitive health in adults 60+ years over 3 years.

## The study in context

Optimal nutrition is a cornerstone of cognitive health.<sup>4</sup> Micronutrients play a vital role in numerous biochemical processes in the brain, including neurotransmission, neurotransmitter synthesis and myelin formation.<sup>5,6</sup>

However, more than 2 billion people in the world today are estimated to be insufficient in key vitamins and minerals and this concern is likely to be magnified in older populations, as factors such as medication use, chronic conditions and reduced gastric acid production can all impede micronutrient absorption.<sup>7-10</sup>

**The COSMOS-Web study investigated if daily supplementation with Centrum Silver benefits memory in older adults** and was able to conclude that it is a safe and accessible approach to help slow cognitive decline as we age.<sup>1,3</sup>



## Key results<sup>1</sup>

### 01

The study demonstrated that daily use of Centrum Silver significantly **supports memory in older adults with benefits seen in just one year.**

### 02

Centrum Silver significantly **supports memory at 1 year with persistent effects over 3 years.**

### 03

The effect of Centrum Silver on **improvement in memory at 1 year was greater among those with a history of cardiovascular disease (CVD) compared to those without.**

## Estimations from secondary analysis

Daily use of Centrum Silver was estimated to improve episodic memory performance by 3.1 years of age-related change.\*

Episodic memory is linked with the ability to learn, store and retrieve information.<sup>11</sup>

\*Estimated via a cross-sectional regression analysis between age and ModRey Immediate Recall test wherein the expected memory decline for each year of ageing was derived from the 3-year COSMOS-Web randomised controlled trial, which randomly assigned participants to either a daily Centrum Silver supplement or placebo for the duration of the study

# COSMOS-Web Study Overview<sup>1</sup>

## Study objective

To examine the effect of:



Centrum Silver  
vs. Placebo

on



memory

in



older adults aged  
≥60 years old

## Design and population

### Randomized control trial



#### Methods:

Memory was annually evaluated using a self-administered internet-based range of neuropsychological tests for 3 years.



#### Primary endpoint:

change in episodic memory after 1 year of intervention.



#### Secondary endpoint:

Change in episodic memory after 2 and 3 years of intervention and changes in performance on neuropsychological tasks of novel object recognition and executive function over 3 years of intervention.

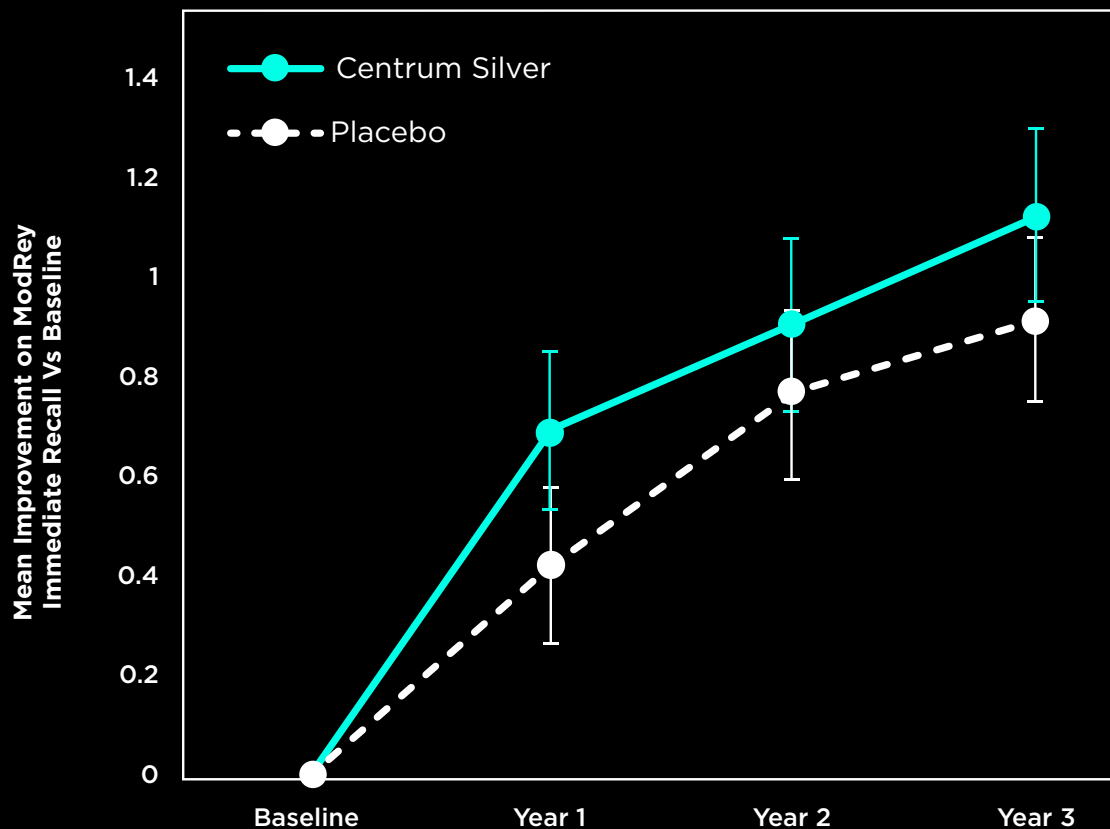
Number of participants:

**3,562**

## Results<sup>1</sup>

### Daily use of Centrum Silver compared to placebo resulted in statistically significant improvement in memory in older adults.

- Improvement was seen following 1 year of intervention with sustained effects over the 3 year follow-up.
- Use of Centrum Silver had no significant effect on novel object recognition and executive function.



Mean difference at 1 year:  $t(5889)=2.25$ ,  $p=0.025$ ; average at 3 years of follow-up:  $t(5889)=2.54$ , ( $p=0.011$ )

#### What does this mean for your patients?

Daily use of Centrum Silver was estimated to improve episodic memory performance by 3.1 years of age-related change.\*

Episodic memory is linked with the ability to learn, store and retrieve information.<sup>11</sup>

**3.1 years**

\*Estimated via a cross-sectional regression analysis between age and ModRey Immediate Recall test wherein the expected memory decline for each year of ageing was derived from the 3-year COSMOS-Web randomized controlled trial, which randomly assigned participants to either a daily Centrum Silver supplement or placebo for the duration of the study.

## Strengths<sup>1</sup>

- Large-scale, long-term randomized control trial
- High compliance with study pills
- An innovative and highly scalable cognitive assessment

## Limitations<sup>1</sup>

- Participants were required to have a computer, computer skills and internet connectivity
- Demographic make-up of participants included more highly educated, and mostly White individuals



## Conclusion<sup>1</sup>



---

### 01

Daily use of Centrum Silver significantly improved memory in older adults after one year, with persistent effects over 3 years.

---

### 02

COSMOS-Web was the second clinical trial to show Centrum Silver supports memory in older adults.

---

### 03

Among individuals with a history of Cardiovascular Disease (CVD) those that took Centrum Silver showed a significant benefit in memory at 1 year vs. placebo.

## Future directions<sup>1</sup>

The findings warrant further consideration of multivitamin supplementation as a targeted, safe and accessible approach to slow age-related cognitive decline in older adults.

## References

1. Yeung L et al. Multivitamin supplementation improves memory in older adults: a randomized clinical trial. *The American Journal of Clinical Nutrition*. 2023; 118(1): 273-282.
2. Sesso HD et al. Multivitamins in the prevention of cancer and cardiovascular disease: The COSMOS randomized clinical trial. *The American Journal of Clinical Nutrition*. 2022; 115(6): 1501-1510.
3. Baker L et al. Effects of cocoa extract and a multivitamin on cognitive function: a randomized clinical trial. *Alzheimer's & Dementia*. 2023; 19(4):1308-1319.
4. Global Council on Brain Health. How to Sustain Brain Health Behaviors: Applying lessons of Public Health and Science to Drive Change. Global Council on Brain Health. Available at [www.GlobalCouncilOnBrainHealth.org](http://www.GlobalCouncilOnBrainHealth.org) Accessed 09/10/2023.
5. Melzer T M et al. In Pursuit of Healthy Aging: Effects of Nutrition on Brain Function. *International Journal of Molecular Science*. 2021; 22: 5026.
6. Cognitive function in depth. Oregon State University. Available at: <https://lpi.oregonstate.edu/mic/health-disease/cognitive-function>.
7. Preventing and controlling micronutrient deficiencies in populations affected by an emergency. Joint statement by the World Health Organization, the World Food Programme and the United Nations Children's Fund. Available at <https://www.who.int/publications/m/item/WHO-WFP-UNICEF-statement-micronutrients-deficiencies-emergency>. Accessed 09/10/2023.
8. Nutrition concerns for aging populations. Providing healthy and safe foods as we age: workshop summary. Available at <https://www.ncbi.nlm.nih.gov/books/NBK51837>.
9. Chong R et al. Do medicines commonly used by older adults impact their nutrient status? Exploratory Research in Clinical and Social Pharmacy. 2021; 100067.
10. Vitamin B12. Fact sheet for Health Professionals. NIH. Available at <https://ods.od.nih.gov/factsheets/Vitaminb12-HealthProfessional/>. Accessed 09/10/2023.
11. Dickerson B et al. The Episodic Memory System: Neurocircuitry and Disorders. *Neuropsychopharmacology*. 2010, 35, 86-104.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



**HALEON**

Trademarks are owned by or licensed to the Haleon group of companies.  
PM-US-CNT-24-00089

**Centrum**  
SILVER