

COSMOS-Mind study:

Centrum Select 50+ is clinically shown to support cognitive health in older adults¹



What is COSMOS-Mind?¹

COSMOS-Mind is the first large-scale, long-term randomised control trial to assess the effects of a multivitamin and mineral supplement (Centrum Select 50+) and cocoa extract on global cognition in older women and men.

The study in context

Population ageing is one of the most significant demographic transformations of the 21st century.²

By 2030,

1 in 6 people

in the world will be aged
60 years or over.³

Maintaining an adequate nutritional status as well as a sufficient nutrient intake is key to health and quality of life as we age. However, older adults are susceptible to nutritional deficiencies through a variety of mechanisms.⁴

Insufficient nutrient intake and malnutrition negatively impact many facets of health, including cognition.^{4,5}

The COSMOS-Mind study investigated if daily supplementation with Centrum Select 50+ or cocoa extract improved cognitive function in older adults.¹



Key results¹



1

The study demonstrated that daily use of Centrum Select 50+ can **significantly improve cognitive function**

2

Centrum Select 50+ showed benefits in **memory and executive function**

3

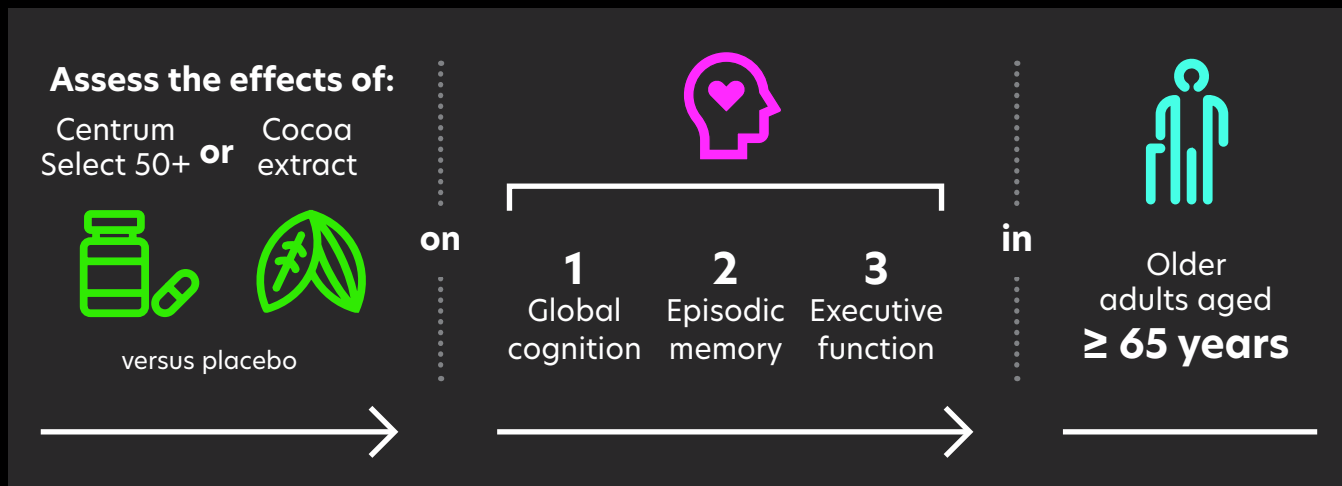
People with a **history of cardiovascular disease** received the greatest benefit

4

Cocoa extract did not significantly improve global cognition, memory or executive function

COSMOS-Mind study overview¹

Study Objective



Study Design and Population

Number of participants: **2,262**

Methods:

Cognition was assessed by **telephone** at baseline and then **annually for three years**



Primary endpoint:

Change in global cognition composite with **3 years of cocoa extract use**



Secondary endpoint:

Change in global cognition composite with **3 years of Centrum Select 50+ use**

Treatment effects were also examined for executive function and memory composite scores, and in pre-specified subgroups at higher risk for cognitive decline.

Endpoint definitions

Global cognition:

An umbrella term that refers to various aspects of cognitive performance like orientation, recall, attention, calculation, and language.⁶

Episodic memory:

The ability to encode, store and recollect events.⁶

Executive function:

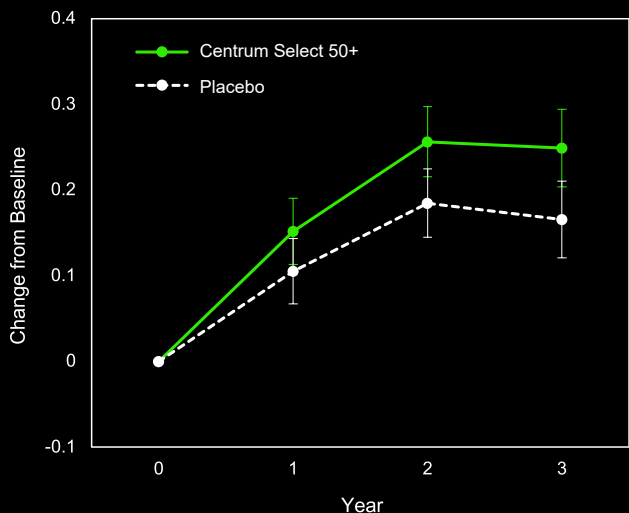
The ability to carry out goal-directed behavior through strategy planning and awareness of information.¹

Results

Global cognition

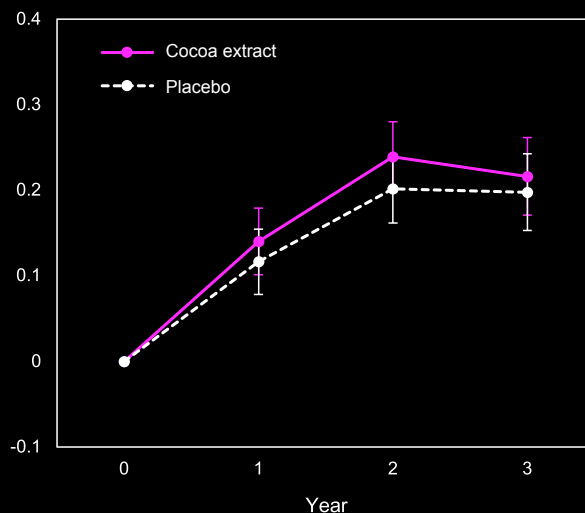
Daily use of Centrum Select 50+, relative to placebo, resulted in a **statistically significant benefit on global cognition**. No significant benefit was observed with cocoa extract.

Centrum Select 50+



mean change (Centrum Select 50+ minus Centrum Select 50+ placebo) z-score of 0.07 (95% CI: 0.02 to 0.12; P=0.007).

Cocoa extract



mean change (cocoa extract minus cocoa extract placebo) z-score for global cognition was 0.03 (95% CI: 0.02 to 0.08; P=0.28).

What does this mean for your patients?



Daily intake of **Centrum Select 50+** for three years may slow cognitive ageing by

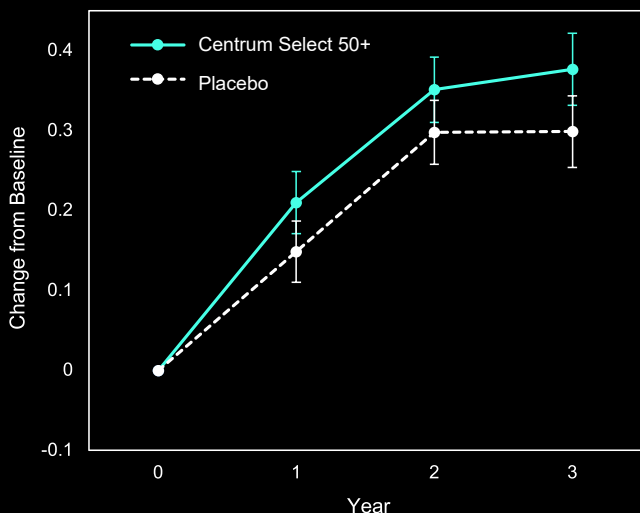
60%

*predicted model used to estimate age-related cognitive decline within the study with observed treatment-related protection against cognitive ageing of 1.8 years in 3 years

Memory and executive function

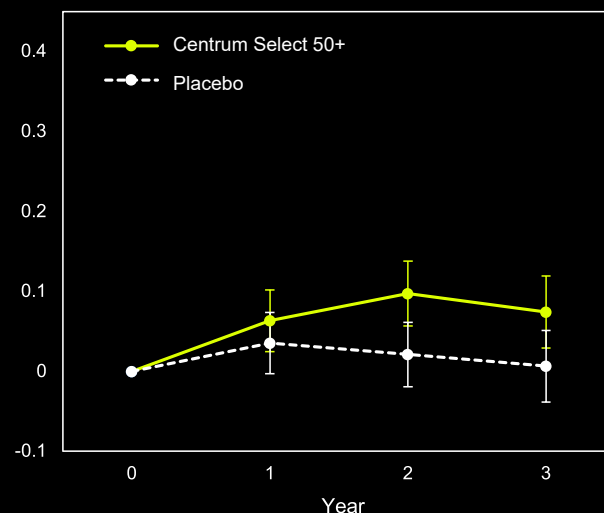
There were **significant improvements in episodic memory and executive function** with daily supplementation of **Centrum Select 50+** compared with placebo

Episodic Memory



mean change z-score = 0.06, 95% CI: 0.002 to 0.13; P=0.04

Executive Function



mean change z-score = 0.06, 95% CI: 0.01 to 0.11; P=0.02

Strengths

- Provides additional evidence to support why **older adults may benefit from supplementation** with a multivitamin, in addition to a healthy diet and exercise
- **Large-scale, long-term** randomised control trial
- COSMOS-Mind assessed a **safe,* affordable, readily accessible** multivitamin and mineral supplement

Limitations

- Only **11%** of participants were from traditionally underrepresented racial or ethnic minority groups
- Adherence to study pills and health history (e.g. cardiovascular disease) were **tracked using self-report**
- **Data were not collected to permit analyses of biomarkers** or potential effect modifiers

Conclusion



Daily supplementation with **Centrum Select 50+** is a safe,* readily accessible, and affordable intervention that has the potential to **improve cognitive function in older people**. The cognitive benefits of Centrum Select 50+ may also be **more pronounced among older adults with cardiovascular disease**.

Future directions



Results of COSMOS-Mind **challenge the current status quo regarding the use of supplementation** to support cognitive function and set the stage for new avenues of research



Additional research in a diverse cohort will help to build upon these findings and **could highlight potential underlying mechanisms** that might account for the observed benefit

*When used in accordance with its labelling.

References

1. Baker L et al. *Alzheimer's & Dementia*. 2022;1-12
2. United Nations. Global issues: Ageing. Available at: <https://www.un.org/en/global-issues/ageing> [accessed November 2022]
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4. Norman K, Haß, U, Pirlich M. *Nutrients*. 2021; 13(8):2764-2792.
5. Feng L, et al. *E Clinical Medicine*. 2022;47:101336.
6. Huang X, et al. *J Sport Health Sci*. 2022;11(2):212-223.

