

## **In Diverse Aging Population Mediterranean Diet Wins on Weight but Misses on Memory**

Researchers in Chicago, USA, investigated whether adopting a [Mediterranean Diet](#) (Med Diet) lifestyle, with or without calorie-restricted weight loss, improves cognition and cardiometabolic health over a 14-month period.



### **Study**

The Building Research in Diet and Cognition (BRIDGE) Randomized Controlled Trial (RCT) enrolled 185 community-dwelling adults aged 55-85 years with [obesity](#). Eligibility included Body Mass Index (BMI) 30-50 kg/m<sup>2</sup>, low Med Diet adherence, Montreal Cognitive Assessment scores  $\geq 19$ , and 91% identified as African American. Participants were randomized 2:2:1 to the Med Diet with Weight Loss (MedWL), the Med Diet alone (MedA), or the control group. Stratified blocks balanced age, cognition, and cohort; outcome assessors were blinded.

Both intervention groups attended twenty-five weekly classes for eight months, received extra-virgin olive oil and almonds, and learned to cook using the Mediterranean diet. MedWL additionally pursued 5-7% weight loss via a 25% [calorie](#) deficit and 150 minutes per week of moderate-to-vigorous physical activity coached by certified trainers.

All participants then completed a six-month low-contact maintenance phase. Cognition, attention, and information processing (AIP), executive function, and learning, memory, and recognition (LMR) were assessed with standard neuropsychological tests. Secondary outcomes encompassed diet quality, body weight, body composition assessed by [Dual-energy X-ray Absorptiometry](#) (DXA), Homeostasis Model Assessment of Insulin Resistance (HOMA-IR), High-Sensitivity C-Reactive Protein (hs-CRP), Hemoglobin A1c (HbA1c), and six-minute walk distance. Investigators analyzed intention-to-treat change from baseline to 14 months with linear mixed-effects models that adjusted for cohort, age, and baseline cognitive performance.

It is important to note that, for the third cohort, several physical activity and functional outcome measures, including the six-minute walk test, were affected by the [COVID-19](#) pandemic, as data collection for these outcomes had to be conducted virtually or was omitted due to restrictions.

### **Findings**

Among 185 randomized participants, 162 (88%) contributed outcome data at 14 months. The baseline mean age was 66 years, and the mean [BMI](#) was 37.1 kg/m<sup>2</sup>; 86% of the participants were female.

During the eight-month active phase, adherence to the Med Diet rose markedly in both intervention arms, and [weight loss](#) occurred primarily in the MedWL group; these trends largely persisted through the maintenance phase.

Over the full 14 months, adherence scores increased by 3.2 points for MedWL and 3.4 points for MedA, compared to 0.2 points for controls ( $P < 0.05$ ), indicating sustained [dietary change](#).

MedWL participants recorded an average [weight reduction](#) of 3.8 kg, compared with a non-significant 1.7 kg in MedA and 0.5 kg in controls; the difference between MedWL and both comparators was statistically significant.

[Visceral adipose tissue](#) mass declined by 151 g in MedWL, representing a significant reduction compared to the control group, but not in the other groups. Additionally, BMI fell by 1.4 kg/m<sup>2</sup> in MedWL only.

Despite these favorable [metabolic shifts](#), cognitive composites changed similarly across groups.

AIP, Executive Function, and LMR scores each improved modestly within all [arms](#), likely reflecting practice effects; however, no between-group differences emerged from baseline to 14 months or from 8 to 14 months.

Significant between-group differences were also seen in secondary outcomes, including Med Diet adherence, weight, BMI, and visceral [adipose tissue](#) mass.

For hs-CRP, the only statistically significant between-group difference was a larger drop in the MedWL group compared to MedA. Changes in other cardiometabolic outcomes such as HOMA-IR, HbA1c, fasting lipids, [blood pressure](#), and six-minute walk distance were modest and did not differ significantly between groups.

Sensitivity analyses excluding measures collected virtually during the [Coronavirus Disease 2019](#) pandemic or omitting tests unavailable to the third cohort yielded similar findings, supporting the accuracy of null cognitive results.

Notably, adherence to the Med Diet waned slightly during [maintenance](#), dropping 2.9 points in MedWL and 1.4 points in MedA; yet, it remained higher than baseline, and weight regain in MedWL was limited to approximately 0.9 kg.

Physical activity, as measured by the Godin questionnaire, increased during classes but remained essentially unchanged from baseline at the end of maintenance in MedWL (change of +0.2). The six-minute walk distance declined in some groups, although for the third cohort, this outcome was omitted due to [pandemic](#)-related restrictions.

Systolic and diastolic blood pressure remained unchanged. [Insulin](#) and triglyceride values showed wide confidence intervals and no group differences. The paper does not report on adverse events attributable to diet or exercise. These activity trends did not measurably mediate cognitive change.

## **Conclusion**

To summarize, an eight-month Med Diet lifestyle intervention, delivered with or without calorie-restricted weight loss and followed by six months of low-contact maintenance, did not enhance

cognition in older African American adults with obesity compared with a usual diet. Nevertheless, participants safely improved dietary quality, and the weight-loss arm achieved clinically meaningful reductions in body weight and [visceral adiposity](#).

These gains underscore the practicality of culturally sensitive group programs for cardiometabolic risk management but suggest that stronger or longer exposures may be required to translate metabolic benefits into [cognitive protection](#). Replication in larger, multi-ethnic cohorts and extended follow-up is warranted. Further research is needed to clarify long-term cognitive influence in diverse communities.

**Source:**

<https://www.news-medical.net/news/20250702/Mediterranean-diet-wins-on-weight-but-misses-on-memory-in-diverse-aging-population.aspx>