

Heart Disease Risk Cut by 26% with Plant-based Mediterranean-Style Diet

A recent study examined common dietary patterns in a Mediterranean cohort and assessed their long-term associations with [cardiovascular disease](#) (CVD) risk and outcomes. These patterns were evaluated through a sustainability lens.



Study

The ATTICA Study is a 20-year prospective cohort of 3,042 healthy adults from Attica, Greece, recruited by stratified random sampling. Follow-up assessments at 5, 10, and 20 years maintained high participation, with in-person evaluations for survivors and cause of death recorded for deceased participants. At 20 years, 1,988 participants had complete [cardiovascular data](#). Individuals lost to follow-up tended to have lower socioeconomic status.

Baseline assessments included questionnaires, physical exams, and [blood tests](#). Primary endpoints were fatal and non-fatal cardiovascular events, with non-CVD deaths also tracked for competing risk calculations.

Medical history targeted hypertension, [hypercholesterolemia](#), and type 2 diabetes. Standardized anthropometric measures included body weight, height, waist and hip circumference, with central obesity and body ratio calculations.

Smoking was classified as ever or never. [Physical activity](#) was measured with a validated questionnaire, with activity defined as recreational episodes of at least 10 minutes. Dietary intake was evaluated by trained dietitians using a detailed, validated questionnaire.

Findings

Analyses of 3,042 participants revealed three distinct dietary patterns, which together explained nearly half of the variation in [dietary habits](#). The first pattern was plant-based and sustainable, characterized by higher intakes of vegetables, fruits, plant proteins (legumes and nuts), grains, fish, seafood, and dairy. The second was a Western dietary pattern, high in red meat, potatoes, sweets, and eggs, reflecting greater reliance on animal-based and processed foods. The third pattern showed higher energy intake than metabolic needs and less white meat consumption. Participants were grouped by their level of adherence to each pattern.

Those with the highest adherence to the plant-based, sustainable pattern were generally older and led [healthier lifestyles](#). The Western pattern was more common among younger men, who also had lower smoking exposure and cholesterol issues, likely due to age distribution. High adherence to the high-calorie, low-white-meat pattern was linked to younger age, greater overweight and obesity, and less favorable body measurements.

During 20 years of follow-up, 36% of participants experienced a cardiovascular event, with fatal events being rare. Lower adherence to the plant-based pattern or higher adherence to the high-calorie, low-white-meat pattern was associated with increased lifetime [cardiovascular risk](#). Although the Western pattern was linked to earlier CVD onset, total CVD incidence appeared lower, possibly due to unmeasured factors. The apparent relationship between the Western dietary pattern and CVD largely disappeared after adjustment for age and other cardiovascular risk factors.

After adjusting for confounders, advanced statistical models showed that greater adherence to a plant-based, sustainable dietary pattern was associated with a significantly lower risk of CVD over 20 years. Specifically, each one-standard-deviation increase in adherence to the pattern was associated with a 26% lower hazard of developing CVD over 20 years. Participants in the highest-adherence group had a 61% lower adjusted hazard of 20-year CVD incidence than those in the lowest-adherence group, after accounting for demographic, socioeconomic, clinical, and [lifestyle factors](#).

Further analysis confirmed that greater adherence to the high-calorie, low-white-meat dietary pattern increased lifetime CVD risk and CVD burden, as measured by disability-adjusted life years (DALYs). Physical activity reduced CVD risk, while [smoking](#) increased it. Excluding early CVD cases did not change these findings, confirming their robustness.

Conclusion

Adopting a sustainable, plant-based dietary pattern resembling the traditional [Mediterranean diet](#) may benefit both cardiovascular health and the environment. The authors interpreted this dietary pattern as more sustainable because it emphasized plant-based foods and reduced reliance on resource-intensive animal products, although environmental impacts were not measured directly.

The findings should be interpreted in light of several limitations. Dietary intake was self-reported using a food-frequency questionnaire and may be subject to recall or measurement errors. The dietary patterns were derived using principal component analysis, which involves some degree of researcher interpretation. In addition, participants lost to follow-up tended to have lower [socioeconomic status](#), which could introduce selection bias. As an observational study conducted in a Mediterranean population, the results cannot establish causation and may not be fully generalizable to other populations.

Looking ahead, research should assess the long-term effects of such diets across diverse settings. Strong collaboration among stakeholders and ongoing innovation in [public health](#) and food systems will be key to building a healthier, more sustainable future.

Source:

<https://www.news-medical.net/news/20260624/Plant-based-Mediterranean-style-diet-cuts-heart-disease-risk-by-2625.aspx>