

# Simple food-based score predicts long-term overweight/obesity risk in healthy adults

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Spanish researchers have developed a new food-based score that is strongly associated with long-term risk of overweight or obesity across adulthood, according to new research being presented at this year's

European Congress on Obesity (ECO) in Vienna, Austria (23-26 May).

The Dietary Obesity Prevention Score (DOPS), which uses measures of dietary intake that can be obtained by simple food-frequency questionnaires, could help individuals improve their eating habits and raise awareness of their dietary risks, as well as help doctors identify high-risk individuals to provide preventive counselling before the onset of overweight/obesity.

Worldwide, one in five deaths are due to poor diet. An unhealthy diet is closely linked to cardiovascular disease, diabetes and some cancers. For decades, countries have been wrestling with the same problem—how to make nutritional messages more effective and help people eat better.

Researcher Clara Gómez-Donoso and colleagues from the University of Navarra in Spain created an evidence-based DOPS and examined the association between the [score](#) and the incidence of overweight/obesity in 11,349 middle-aged adults from the SUN Cohort, a prospective dynamic cohort of Spanish university graduates, who were initially normal weight at the start of the study.

To create the score, the intake of 14 food groups that have been shown to either promote or protect against obesity were adjusted for total energy intake. The DOPS positively weighted the consumption of vegetables, fruits, legumes, yogurt, nuts, fish, and vegetable to animal protein ratio; while red meat, processed meat, saturated animal fat, refined grains, ultra-processed food, sugar sweetened beverages, and beer and spirits were negatively weighted.

A validated food-frequency questionnaire was used to measure adherence to the DOPS at the start of the study and again 10 years later. Adherence to the DOPS ranged from 14 (non-adherence) to 42 (complete adherence). A higher score indicated a protective diet—one

with a higher consumption of mostly plant-based foods and a lower consumption of risk-promoting dietary components such as red and processed meat, ultraprocessed food and sugar sweetened beverages.

After a median (average) follow up of 9.3 years, 2153 participants became overweight/obese. The researchers found that participants with the highest adherence to the DOPS (score 35 or over) were almost half as likely to become overweight/obese as those with the lowest adherence to the DOPS (score 20 or under).

Each 4-point increment in the DOPS scale was associated with a 13% lower risk of developing overweight/obesity after adjusting for a variety of potential confounding factors including sex, age, baseline body mass index, family history of [obesity](#), smoking, sleep duration, and physical activity.

Professor Maria Bes-Rastrollo concludes: "We hope that our easy-to-implement preventive score might be developed into a rapid assessment tool to provide both individuals and doctors with helpful dietary guidance—raising awareness of diet susceptibility to weight gain in the long-term, and encouraging healthier eating patterns. The performance of the score has yet to be validated in independent cohorts. Future research will increase the accuracy of outcome predictions in different populations and age groups."

The authors acknowledge that their findings show observational differences rather than evidence of cause and effect. They point out some limitations inherent to the methodology, including that the results are based on self-reported [dietary intake](#) and that, although they performed multivariable analyses adjusting for a wide variety of confounders, some degree of residual confounding cannot be discarded. They also note that the study includes mainly Caucasian adults so the generalisability of the findings to other ethnicities are uncertain.

Provided by European Association for the Study of Obesity

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