INFOBITE

Cardiovascular Health & Diet

The effects of extra virgin olive oil or butter on cardiovascular biomarkers in European and Chinese males in the UK: A pilot randomised crossover trial

FAN LIANG, JULIE YOUNG, GEORGIOS KOUTSIDIS, JOSE LARA GALLEGOS
JOURNAL: NUTRITION AND HEALTH 2025;31(2):485-498

With Expert Review from Chloe Steele

Reviewed by OUR EXPERTS

The consumption of extra virgin olive oil (EVOO) has been associated with improved cardiovascular health as a result of its high monounsaturated fat content and the phenolic compounds it contains.

However, most research has been completed in individuals from Mediterranean countries, it is unclear whether ethnicity may influence metabolic responses to dietary fats.

This was a randomised control trial of 32 healthy adults of Chinese and European origin comparing the effects of consuming 30g EVOO to butter over a 2-week period.

The results showed that compared to butter, EVOO was associated with reduced blood pressure, and lower total cholesterol and low density lipoprotein cholesterol (LDL-c).Interestingly, ethnic differences were apparent.

Asian individuals reported significant improvements to systolic blood pressure and lower total cholesterol. While Caucasians reported lower diastolic blood pressure, lower LDL-c, and non-high density lipoprotein cholesterol (HDL-c). It was concluded that consumption of EVOO for 2-weeks instead of butter is associated with better markers of cardiovascular risk but differences in specific parameters were ethnically influenced.

Effects of fasting-mimicking diets with low and high protein content on cardiometabolic health and autophagy: a randomized, parallel group study

SARIR SARMAD, ANTONIO DI MAURO, SCOTT COOPER, KOSTAS TSINTZAS, LUCY BURNS, GUIDO FUNKE, GEORGE C GAITANOS
JOURNAL: CLINICAL NUTRITION (EDINBURGH, SCOTLAND) 2025;52():299-312

The fasting-mimicking diet (FMD), characterised by short-term periods of very low calorie and protein intake, has been associated with improved cardiovascular risk factors including weight loss, ketogenesis, and reduced blood glucose levels. Similarly high protein, low carbohydrate diets have also demonstrated benefits for body weight, body composition, and cardiometabolic markers. This was a 7-day randomised control trial of 59 healthy men and women looking at the effects of the FMD with differing protein and fat ratios whilst carbohydrate levels were maintained.

The results showed that regardless of whether the diet was high in protein and low in fat or low in protein and high in fat, body weight and fat mass were reduced compared to control, which was a weight maintaining diet. Some additional benefits were seen with the high protein low fat diet with reduced diastolic blood pressure and improved heart rate variability, triglycerides, and saturated fatty acids. It was concluded that FMDs improved cardiometabolic health but increasing the intake of protein and decreasing the intake of fat may further improve cardiometabolic health.

Pecan Intake Improves Lipoprotein Particle Concentrations Compared with Usual Intake in Adults at Increased Risk of Cardiometabolic Diseases: A Randomized Controlled Trial.

TRICIA L HART, ET AL.
THE JOURNAL OF NUTRITION 2025;155(5):1459-1465

Cardiometabolic diseases such as heart disease and type 2 diabetes are commonly associated with dyslipidaemia and insulin resistance. Dietary adjustments may help reduce these risk factors and the inclusion of nuts, which contain healthy fats, fibre, and compounds, may support cardiovascular and metabolic health.

This was a 12-week randomised control trial of 138 individuals incorporating 57g/day of pecan nuts in place of usual snacks for 12 weeks. The results showed that individuals given pecans had improved apolipoprotein-B, low density lipoprotein, triglycerides, measures of insulin resistance, and high density lipoproteins compared to individuals on their usual diet. It was concluded that replacing usual snacks with pecan nuts may reduce the risk for cardiometabolic diseases.

Dietary salt intake and cardiovascular outcomes: an umbrella review of meta-analyses and dose-response evidence.

FANJING KONG, QIAN LIU, QING ZHOU, PENGYANG XIAO, ET AL.
JOURNAL: ANNALS OF MEDICINE 2025;57(1):2582065

Hypertension is a risk factor for the development of cardiovascular disease and dietary salt intake plays an important role in blood pressure regulation. However the optimal level of sodium consumption remains controversial, with debate surrounding whether excessively low sodium intakes may also be associated with adverse health outcomes.

This umbrella review of 21 meta-analyses aimed to investigate the dose-response relationship between sodium intake and cardiovascular outcomes. The results showed that higher salt intake was associated with increased blood pressure and a higher risk of cardiovascular disease and stroke. Lower sodium intake was associated with improved blood vessel function and reduced risk for cardiovascular disease. However, the study did note the variability between studies and acknowledged that the effects of low intakes of sodium need further investigation.