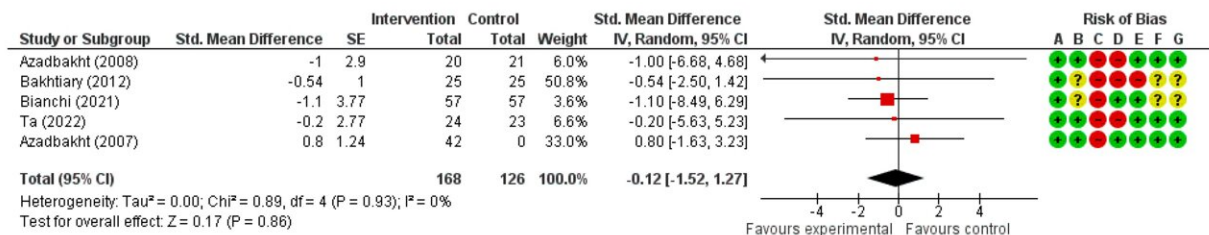


Meat alternatives can lower your cholesterol, study finds

March 8 2023



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Funding bias

The effect of meat substitutes on weight (Kg). Results are expressed as mean difference (95% confidence interval). Arrows indicate that the confidence interval exceeds the scale on the x-axis, red squares indicate the mean difference for individual studies, black diamond represents the aggregated mean difference and confidence interval. Credit: *Dietetics* (2023). DOI: 10.3390/dietetics2010009

Substituting meat with plant-based meat alternatives lowers "bad" cholesterol, according to new research from the University of Warwick.

In a study published in *Dietetics* on March 8, scientists show that replacing [meat](#) in the diet with plant-based alternatives is likely to benefit your [cholesterol levels](#) and possibly reduce your risk of heart attacks, strokes, and [cardiovascular disease](#) (CVD).

The study reviewed previous research from controlled clinical trials to compare diets with a high meat alternative content to omnivorous diets containing traditional meat.

Plant-based diets rich in fruits, vegetables, whole-grains, legumes, nuts, and seeds are known to improve important risk factors for CVD such as blood pressure, [cholesterol](#), and [body weight](#), and have been associated with reduced risk of developing and dying from CVD. Until now, it has been unknown whether plant-based diets containing large amounts of meat alternatives would have the same [cardiovascular benefits](#) as plant-based diets based on unprocessed plant foods.

This study included two types of meat alternative: plant-based and mycoprotein-based. Mycoprotein is sourced from a fungus and is commonly sold under the brand name Quorn. The plant-based meat alternatives were made from processed soy, wheat, peanut, or pea protein.

Lead author Joshua Gibbs, a Ph.D. student at Warwick Medical School, who holds a Economic and Social Research Council (ESRC) scholarship, said, "We reviewed 12 studies involving 459 participants, in which the effects of meat alternative consumption on cholesterol, [blood pressure](#), fasting [blood glucose](#), and body weight were studied in controlled clinical trials. Meta-analysis of these studies showed that meat alternative consumption lowers total cholesterol, LDL-cholesterol, and triglyceride levels. Meat alternative consumption reduced total cholesterol by half a point (0.5 mmol/L) and LDL cholesterol by 0.39 (mmol/L) when compared with omnivorous diets.

"Elevated levels of low-density lipoprotein (LDL) cholesterol, also known as 'bad' cholesterol, can lead to the buildup of fatty plaques in your arteries which restrict blood flow and increase your risk of heart attack and stroke.

"An LDL cholesterol reduction of the scale caused by meat alternative consumption would reduce the risk of developing heart disease by about 25% over a two-year period.

"This is a significant finding as it highlights that people can obtain some of the benefits of healthy plant-based diets whilst making minimal dietary change i.e., swapping animal meat with meat alternatives. It also supports the pledge to switch to meat alternatives to meet environmental sustainability goals. Plant-based and mycoprotein-based meat substitutes have been shown to have smaller carbon, land, and water footprints than conventional meat by up to 90% depending on the type of animal being substituted.

"People interested in making the switch to meat alternatives should try to avoid regularly consuming products that are high in saturated fat and salt as these ingredients may undermine the cardiovascular health benefits observed in our study."

More information: Joshua Gibbs et al, The Effect of Plant-Based and Mycoprotein-Based Meat Substitute Consumption on Cardiometabolic Risk Factors: A Systematic Review and Meta-Analysis of Controlled Intervention Trials, *Dietetics* (2023). [DOI: 10.3390/dietetics2010009](https://doi.org/10.3390/dietetics2010009)

Provided by University of Warwick

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