

# Study: Mediterranean and low fat diet programs lower risk of death and heart attack in patients at risk

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Mediterranean and low fat dietary programs reduce the likelihood of death and heart attack in patients at heightened risk of cardiovascular

disease, finds the first comparative review based on randomized trials of seven popular dietary programs published by *The BMJ* today.

Dietary programs are diets with or without exercise and other health behavior (eg. smoking cessation) support.

Mediterranean dietary programs are also likely to reduce [stroke risk](#), but other dietary programs showed little or no benefit over minimal intervention (e.g., usual diet or brief dietary advice from a health professional).

Current guidelines recommend various dietary programs for patients at increased cardiovascular risk, but they have typically relied on low certainty evidence from non-randomized studies.

Several analyses of randomized controlled trials have suggested that some diets and dietary programs can reduce major cardiovascular events, such as heart attacks ([myocardial infarction](#)) and strokes, but any beneficial impact on death is still uncertain.

To address this, researchers trawled databases for randomized trials looking at the impact of dietary programs for preventing [death](#) and major cardiovascular events in patients at increased risk of cardiovascular disease.

Forty eligible trials were identified involving 35,548 participants who were followed for an average of three years across seven named dietary programs (low fat, 18 trials; Mediterranean, 12; very low fat, 6; modified fat, 4; combined low fat and low sodium, 3; Ornish, 3; Pritikin, 1). Some [trials](#) compared two different diets (e.g., Mediterranean vs. low fat).

The researchers assessed the methodological quality of each trial and judged 13 to be at low overall risk of bias and 27 at high risk.

Based on moderate certainty evidence, Mediterranean dietary programs were better than minimal intervention at preventing all cause mortality (17 fewer deaths per 1000 over five years), non-fatal heart attack (17 fewer per 1000) and stroke (7 fewer per 1000) for patients at intermediate risk of cardiovascular disease.

Low fat programs were also superior to minimal intervention with moderate certainty for prevention of all cause mortality (9 fewer deaths per 1000) and non-fatal heart attack (7 fewer per 1000).

When compared with one another, there were no convincing differences between Mediterranean and low fat programs for mortality or non-fatal [heart attack](#).

The absolute effects for both dietary programs were more pronounced for [patients](#) at high risk of cardiovascular disease (36 fewer all-cause deaths per 1000 and 39 fewer cardiovascular deaths per 1000 among those that followed the Mediterranean dietary program over 5 years).

The five other dietary programs generally had little or no benefit compared with minimal intervention typically based on low to moderate certainty evidence.

The researchers acknowledge several limitations, such as being unable to measure adherence to dietary programs and the possibility that some of the benefits may have been due to other elements within the programs like [drug treatment](#) and support to stop smoking.

Nevertheless, this was a comprehensive review based on a thorough literature search, rigorous assessment of study bias, and adherence to recognized GRADE methods to assess the certainty of estimates.

As such, they conclude that Mediterranean and low fat dietary programs

"probably reduce the risk of mortality and non-fatal myocardial infarction in people at increased [cardiovascular risk](#)."

Mediterranean dietary programs are also likely to reduce the risk of stroke, while other named dietary programs were generally not superior to minimal intervention, they add.

**More information:** Comparison of seven popular structured dietary programmes and risk of mortality and major cardiovascular events in patients at increased cardiovascular risk: systematic review and network meta-analysis, *The BMJ* (2023). [DOI: 10.1136/bmj-2022-072003](https://doi.org/10.1136/bmj-2022-072003)

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