Numerous diets, with or without exercise and behavioral support (known as dietary programs) for patients with increased cardiovascular risk may be based on low-certainty evidence, such as non-randomized studies. Some systematic reviews of randomized trials reported the benefits of dietary programs, but have not used network meta-analysis to provide certainty of estimates for patients at intermediate and high risk. This network meta-analysis determined the relative efficacy of structured diet and health behavior programs (dietary programs) for preventing mortality and major cardiovascular events in patients at increased risk of cardiovascular diseases.

The Mediterranean diet is traditional for the countries bordering the Mediterranean Sea. The bulk of the diet consists of colorful fruits and vegetables, whole grains, legumes, nuts, seeds, fish, seafood, olive oil, and perhaps a glass of red wine. Nuts and seeds contain protein and healthy fats, and olive oil provides even more healthy fats. There is no butter, refined grains (like white bread, pasta, and rice), and very little red or processed meat (like bacon). In a Mediterranean-style diet, every meal should have vegetables and fruits as a base. Including fish and seafood is traditional. Any grains should be whole grains, like quinoa, brown rice, corn, farro, or whole wheat. Legumes are an excellent source of plant protein, such as lentils, garbanzo, cannellini, or black beans.

The Mediterranean diet, as a healthier dietary pattern was proposed to reduce the risk of dementia. A large population-based prospective cohort study showed that higher adherence to the Mediterranean diet is associated with a lower risk for all-cause dementia. https://discovermednews.com/the-mediterranean-diet-is-associated-with-a-lower-risk-of-dementia/

***About the Study and Results***

This network meta-analysis used GRADE (Grading of Recommendations Assessment, Development, and Evaluation) methods to compare the effects of different dietary programs on clinical outcomes, such as mortality and cardiovascular events. The authors searched five databases: Allied and Complementary Medicine Database (AMED), Cochrane Central Register of Controlled Trials (CENTRAL), EMBASE, Medline, Cumulative Index to Nursing and Allied Health Literature (CINAHL), as well as ClinicalTrials.gov for unpublished and ongoing trials.

The objective was to determine the relative efficacy of structured diet and health behavior programs (dietary programs) for preventing mortality and major cardiovascular events in patients at increased risk of cardiovascular diseases.

Eligible trials enrolled patients with two or more established risk factors for cardiovascular disease (eg, hypertension, dyslipidemia, obesity, diabetes mellitus), or established cardiovascular disease (history of coronary artery disease, myocardial infarction, stroke, or peripheral artery disease). In addition to the diet intervention, structured dietary programs included non-dietary interventions, such as exercise, and psychosocial or behavioral support. Smoking cessation interventions and drug treatments were also permitted but were considered co-interventions.

The authors divided the low-fat diet category into low-fat (20-30% calories from fat) and very low-fat (≤20% calories from fat) to distinguish standard low-fat dietary programs from

programs with a more intense fat reduction goal. They also added a modified fat category which does not refer to a total fat intake reduction, but an increase in polyunsaturated fats.

40 eligible trials were identified with 35 548 participants across seven dietary programs, including 18 low-fat studies, 12 Mediterranean studies, 6 very low-fat studies, 4 modified fat studies, 3 combined low-fat and low-sodium studies, 3 Ornish studies, and 1 Pritikin study. The results showed that the Mediterranean diet and low-fat diet reduced the risk of all-cause mortality and non-fatal myocardial infarction in patients at increased risk of cardiovascular diseases. A Mediterranean diet was not convincingly superior to a low-fat diet. The absolute effects of both dietary programs were more pronounced in high-risk patients.

In patients with increased cardiovascular risk, the Mediterranean dietary programs were superior to minimal intervention for the prevention of all-cause mortality, cardiovascular mortality, stroke, and non-fatal myocardial infarction. Low-fat dietary programs were also superior to minimal intervention, with low to moderate certainty for the prevention of all-cause mortality and non-fatal myocardial infarction. There were no convincing differences between Mediterranean and low-fat programs for non-fatal myocardial infarction or mortality.

The five remaining dietary programs generally had little or no benefit compared to a minimal intervention.

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