

## The Mediterranean Diet and Cardiovascular Health.

### Abstract

The Mediterranean diet (MedDiet), abundant in minimally processed plant-based foods, rich in monounsaturated fat from olive oil, but lower in saturated fat, meats, and dairy products, seems an ideal nutritional model for cardiovascular health. Methodological aspects of Mediterranean intervention trials, limitations in the quality of some meta-analyses, and other issues may have raised recent controversies.

It remains unclear whether such limitations are important enough as to attenuate the postulated cardiovascular benefits of the MedDiet. We aimed to critically review current evidence on the role of the MedDiet in cardiovascular health. We systematically searched observational prospective cohorts and randomized controlled trials which explicitly reported to assess the effect of the MedDiet on hard cardiovascular end points. We critically assessed all the original cohorts and randomized controlled trials included in the 5 most comprehensive meta-analyses published between 2014 and 2018 and additional prospective studies not included in these meta-analyses, totaling 45 reports of prospective studies (including 4 randomized controlled trials and 32 independent observational cohorts).

We addressed the existing controversies on methodology and other issues. Some departures from individual randomization in a subsample of the landmark Spanish trial (PREDIMED [Prevención con Dieta Mediterránea]) did not represent any clinically meaningful attenuation in the strength of its findings and the results of PREDIMED were robust in a wide range of sensitivity analyses. The criteria for causality were met and potential sources of controversies did not represent any reason to compromise the main findings of the available observational studies and randomized controlled trials.

The available evidence is large, strong, and consistent. Better conformity with the traditional MedDiet is associated with better cardiovascular health outcomes, including clinically meaningful reductions in rates of coronary heart disease, ischemic stroke, and total cardiovascular disease.