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ORIGINAL INVESTIGATION

Olive Oil Consumption and Cardiovascular Risk in U.S. Adults

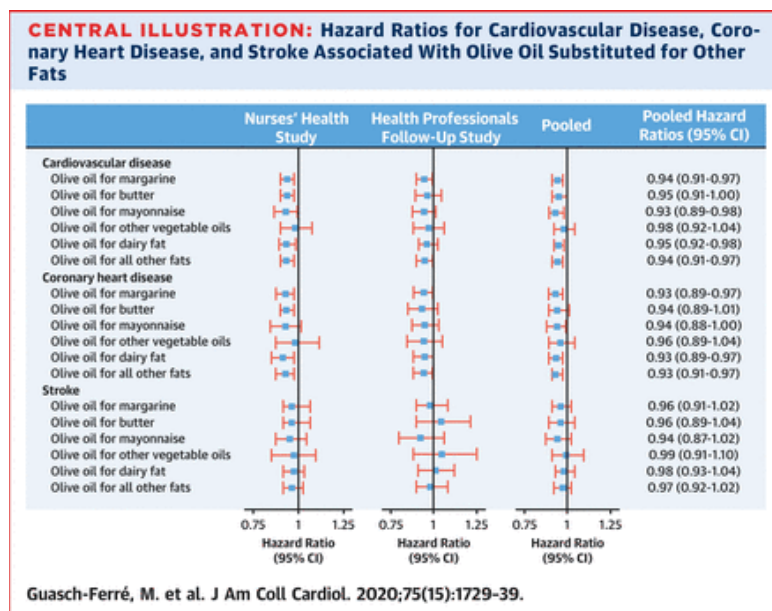
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Abstract

Background Olive oil intake has been associated with lower risk of cardiovascular disease (CVD) in Mediterranean populations, but little is known about these associations in the U.S population.

Objectives This study sought to examine whether olive oil intake is associated with total CVD, coronary heart disease (CHD), and stroke risk.

Methods This study included 61,181 women from the Nurses' Health Study (1990 to 2014) and 31,797 men from the Health Professionals Follow-up Study (1990 to 2014) who were free of cancer, heart disease, and stroke at baseline. Diet was assessed using food frequency questionnaires at baseline and then every 4 years. Cox proportional hazards regressions were used to estimate hazard ratios (HRs) and 95% confidence intervals (CIs).

Results During 24 years of follow-up, this study documented 9,797 incident cases of CVD, including 6,034 CHD cases and 3,802 stroke cases. After adjusting for major diet and lifestyle factors, compared with nonconsumers, those with higher olive oil intake (>0.5 tablespoon/day or >7 g/day) had 14% lower risk of CVD (pooled HR: 0.86; 95% CI: 0.79 to 0.94) and 18% lower risk of CHD (pooled HR: 0.82; 95% CI: 0.73 to 0.91). No significant associations were observed for total or ischemic stroke. Replacing 5 g/day of margarine, butter, mayonnaise, or dairy fat with the equivalent amount of olive oil was associated with 5% to 7% lower risk of total CVD and CHD. No significant associations were observed when olive oil was compared with other plant oils combined. In a subset of participants, higher olive oil intake was associated with lower levels of circulating inflammatory biomarkers and a better lipid profile.

Conclusions Higher olive oil intake was associated with lower risk of CHD and total CVD in 2 large prospective cohorts of U.S. men and women. The substitution of margarine, butter, mayonnaise, and dairy fat with olive oil could lead to lower risk of CHD and CVD.

Key words

cardiovascular disease coronary heart disease olive oil plant oils stroke

Footnotes

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