Higher olive oil intake associated with lower all-cause and cardiovascular mortality

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25 January, 2022

Higher olive oil intake is associated with a lower total and [cardiovascular](#) mortality compared to those who rarely or never consume it

A higher olive oil intake has been linked to a lower all-cause and cardiovascular mortality compared to those who either never or rarely consume it. This was the finding of a study by researchers from the Department of Nutrition, Harvard T.H. Chan School of Public Health, Massachusetts, USA.

Olive oil (OO) consumption has been associated with a myriad of [health benefits](#) due to the presence of monounsaturated fatty acids which possess anti-inflammatory and anti-oxidant properties. Moreover, evidence from epidemiological studies show that greater olive oil intake and in-particular, extra virgin olive oil, is associated with a [39% lower risk](#) of cardiovascular disease. Nevertheless, there is a paucity of data on the relationship between total olive oil intake on both all-cause and cause-specific mortality.

For the present study, the Harvard team used data from two ongoing prospective US cohort studies, the Nurses Health Study ([NHS](#)) which began in 1976 and the Health professionals Follow-up study ([HPFS)](#) which started in 1986. In both studies, participants are sent questionnaires, every two years to assess lifestyle factors and health status and for the present analysis, team used the baseline level of OO intake which was first captured in 1990. For the purposes of the analysis, one tablespoon was considered to be equivalent to 13.5 g of OO. Consumption of olive oil was then categorised by frequency as never or less than once/month (the reference point), $> 0 <$ 1 teaspoon, > 1 to < 2 teaspoons and greater than half a tablespoon (equivalent to > 7 gm/day.

The researchers identified both the total number of deaths during the period of follow-up and the cause from medical records. Multivariable regression analysis was used to estimate the risk of total and cause-specific mortality and models were adjusted for a number of covariates such as age, gender, smoking status, body mass index etc.

Findings

During a 28 year follow-up period, there were 36,856 deaths and the mean OO consumption increased from 1.6g/day in 1990 to 4g/day in 2010.

Among those with the highest intake of OO, compared to the reference category, there was 19% reduced risk of total mortality (Hazard ratio, HR = 0.81, 95% CI 0.78 – 0.87) and cardiovascular mortality (HR = 0.81, 95% CI 0.75 – 0.89). In addition, the researchers found that increased OO intake reduced the risk of cancer and neurodegenerative mortality by 29% and 18% respectively.

In a further analysis, the Harvard team considered the mortality benefits of substituting other sources of fat with olive oil. For example, they calculated that replacing 10 g/day of margarine with an equivalent amount of OO was associated with a 13% lower risk of mortality and similar reductions were seen for butter, mayonnaise and dairy fat. They also observed that these reduced risk were also consistent for other causes of death.

They concluded that greater consumption of olive oil lead to reductions in all-cause and cause-specific mortalities and such reductions in risk could also be achieved when other types of fat were replaced with olive oil.

Citation

Guash-Ferre M et al. Consumption of Olive Oil and Risk of Total and Cause-Specific Mortality Among U.S. Adults J Am Coll Cardiol 2022