

## Health effects of olive oil and the mediterranean diet

# CARDIOVASCULAR DISEASE

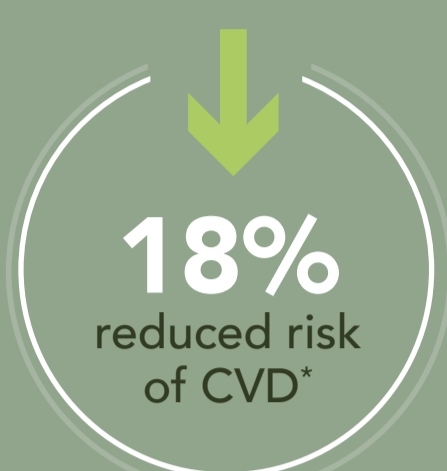
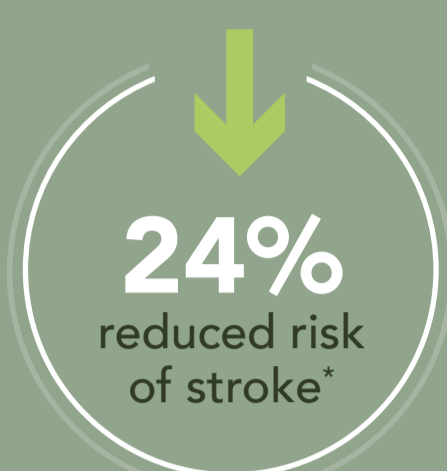
### EFFECT SIZE



**Olive oil consumption significantly reduced the risk of cardiovascular disease (CVD) risk and stroke, but not specifically for coronary heart disease (CHD) risk.**

Martinez-Gonzalez, M.A., L.J. Dominguez, and M. Delgado-Rodriguez, Olive oil consumption and risk of CHD and/or stroke: a meta-analysis of case-control, cohort and intervention studies. *Br J Nutr*, 2014. 112(2): p. 248-59.

### What is the effect?



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\*For an additional 25 grams of olive oil per day

### WHAT IS THE QUALITY OF THE EVIDENCE?

**No prior CVD diagnosis**



All studies were from Mediterranean countries

**9 studies**



3 case-controls, 5 cohorts and 1 clinical trial

### KEY RESULTS

**No significant association between olive oil consumption and the risk of CHD (7 studies).**



**A significant inverse association between olive oil and the risk of stroke (3 studies):**

**Significant inverse association between olive oil and risk of CVD (n = 9 studies):**

24% reduced risk of stroke for an additional 25 grams of olive oil per day (95 % CI 0.67, 0.86; P<0.001).

18% reduced risk of CVD for an additional 25 grams of olive oil per day (95 % CI 0.70, 0.96; P=0.01).

**CHD**

**STROKE**

**CVD (CHD OR STROKE AS ENDPOINT)**

### WHAT TO KEEP IN MIND?

#### Limitations

- Substantial heterogeneity was observed among the studies for CHD.
- There were a small number of studies available, and the different study designs were combined.
- The type of olive oil (e.g. virgin olive oil vs. ordinary refined variety) was not taken into account in most of the studies.
- All studies were conducted in Mediterranean countries and the applicability of these findings to other populations is unknown.
- There was evidence found for publication bias.

### WHAT'S THE BOTTOM LINE?

**There is evidence for an association between olive oil consumption and reduced risk of cardiovascular disease, and specifically for stroke.**

However, no significant protection was found for CHD overall, suggesting that the effect for stroke may be driving the relationship. Further studies that better distinguish between extra virgin olive oil vs. ordinary olive oil with respect the risk of CHD are needed, since the phenolic concentration in extra virgin olive oil is much higher.

### OTHER REVIEWS

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