

More Fat, Better Health!

The Good, The Bad, & The Ugly

This week an interesting paper shows the power of delicious, natural FAT (Yes, fat!) in the diet and also how an unwary public can be led astray by extrapolation.

The Good: Olive oil (a FAT!) from the highest group of consumers (>7g/ day or about 0.5 Tbs/ day) compared to those that consume little to no olive oil (it does not specify that they are consuming another form of fat) reduced:

- overall early mortality risk by 19%
- overall cardiovascular mortality risk by 19%
- overall cancer mortality risk by 17%
- overall neurodegenerative disease risk by 29%
- overall respiratory disease mortality risk by 18%

The Bad: The conclusion that olive oil will save lives compared to butter, margarine, etc. was not based on direct observation (as the above analysis was), but the comparison was based on a '*substitution analysis*'. Substitution analysis was originally used to examine differing macronutrients. Here, and increasingly elsewhere, assumptions are made and *whole foods or food groups* are substituted for one another and based on assumed calculations, conclusions are drawn. This study concluded: "In substitution analyses, replacing 10 g/d of margarine, butter, mayonnaise, and dairy fat with the equivalent amount of olive oil was associated with 8%-34% lower risk of total and cause-specific mortality."

"However, these applications [substitution analysis with whole foods] pose new challenges, because compared to macronutrients, foods are far more complicated in several aspects. First, most food groups encompass more than three types of foods. For example, besides tea and coffee, there are other beverages such as water, juice and soda that may be

potential sources for substitution. Second, the range of food intake are much more variable than that of macronutrients, which are typically consumed within certain constraints. Third, compared to macronutrients, both the type and amount of food consumed by an individual are more likely to be influenced by health behaviors that may confound the analysis in disease association studies. Because of these complexities, food-based substitution analysis is more difficult to conduct and the results are also more challenging to interpret.”

~ (Song, M.; Giovannucci, E. Substitution analysis in nutritional epidemiology: proceed with caution. *European Journal of Epidemiology* (2018) 33:137–140. <https://doi.org/10.1007/s10654-018-0371-2>)

The Ugly: The desire to conclude that olive oil is a superior health choice may have been influenced by the fact that the study was in part funded by the *Patrimonio Communal Olivalero and Hojiblanca SA* (Málaga, Spain); a foundation that promotes Spanish olive oil.

The study: Guasch-Ferré M, Li Y, Willett W, et al. Consumption of Olive Oil and Risk of Total and Cause-Specific Mortality Among U.S. Adults. *J Am Coll Cardiol*. 2022 Jan, 79 (2) 101–112. <https://doi.org/10.1016/j.jacc.2021.10.041>