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# Effect of Extra Virgin Olive Oil and Table Olives on the ImmuneInflammatory Responses: Potential Clinical Applications

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## Abstract

**Background and objective:** Extra virgin olive oil (EVOO) is the common element among the Mediterranean countries. It can be considered a nutraceutical and functional food, thanks to its bioactive compounds. It can act and modulate different processes linked to ageing and age-related diseases related to a common chronic low grade inflammation. Depending on the cultivar, the growth conditions, the period of harvesting, the productive process and time of product storage, EVOO could contain different amount of vegetal components. Of course, the same is for table olives.

**Methods:** The aim of our review is to summarize the effects of EVOO and table olives on the immunemediated inflammatory response, focusing our attention on human studies.

**Results:** Our report highlights the effect of specific molecules obtained from EVOO on the modulation of specific cytokines and anti-oxidants suggesting the importance of the daily consumption of both EVOO and table olives in the context of a Mediterranean dietary pattern. In addition, the different action on immune-inflammatory biomarkers, are depending on the olive tree cultivar.

**Conclusion:** Thanks to their bioactive compounds, EVOO and table olive can be considered as nutraceutical and functional foods. The beneficial effects analysed in this review will help to understand the potential application of specific olive components as therapeutic adjuvant, supplements or drugs.

**Keywords:** EVOO; mediterranean diet; neuroinflammation; nutraceuticals; polyphenols; table olives.

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