Hepatoprotective Evidence of Hydroxytyrosol Against Non-alcoholic Fatty Liver in Animal Models

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Non-alcoholic fatty liver (NAFLD) is a metabolic disorder characterized by an excessive accumulation of fat in hepatocytes. It is a condition directly related to being overweight and is considered as a manifestation of metabolic syndrome. The progressive increase in its incidence due to the global increase in obesity, together with the absence of effective pharmacological treatment, makes it necessary to find new strategies to reduce or reverse its development and progression. In this sense, natural compounds can be potential targets for their remarkable biological activity and low toxicity. Hydroxytyrosol (HT) is a phenolic compound mainly found in olive oil and olive leaves with antioxidant, anti-inflammatory and cardiovascular properties, among others.

This document analyses the available information on the potential beneficial effects of the administration of HT against NAFLD.

Studies with animal models have shown promising results by reducing the degree of steatosis, oxidative stress, inflammation, and improving liver function. The effects of HT derive from its direct antioxidant and anti-inflammatory activity, but also from regulating the activity of various signalling pathways.

The consumption of HT, preferably associated with virgin olive oil, combined with an adequate diet and a healthy lifestyle, may be a strategy to consider preventing or reversing liver steatosis. However, well-designed clinical trials are still necessary to determine their real effectiveness in human patients.

Keywords: phenolic compounds, obesity, olive oil, steatosis, liver, hydroxytyrosol.