

Olive Oil Rejuvenates Brain Cells, Study Reveals

Roberta Cutillo (February 18, 2020)



A study led by Felice Tirone in collaboration with Laura Micheli, Giorgio D'Andrea e Manuela Ceccarelli of the National Research Council's Biochemistry and Cellular Biology Institute (Cnr- Ibbc) reveals that olive oil counters the aging of brain cells, particularly in older subjects, confirming once again the benefits of the Mediterranean diet.

Not only is it good for the body, a team of researchers from the Italian [National Research Council \(Cnr\)](#) [2] published a study in the *Faseb Journal* revealing that the main staple of the Mediterranean diet is also good for the brain.

The team, led by Felice Tirone in collaboration with Laura Micheli, Giorgio D'Andrea e Manuela Ceccarelli proved that hydroxytyrosol, a component naturally found in olive oil counters the effect of aging of neurons.



Throughout our lives, we humans (as well as other mammals), constantly produce new neurons in a region of our brain called the hippocampus. This process is known as neurogenesis and is essential in forming our episodic memory. As we age, the number of stem cells in our bodies decreases, slowing down neurogenesis and leading to a drastic reduction of episodic memory. However, hydroxytyrosol stimulates neurogenesis in adults, countering this effect.

“The oral consumption of hydroxytyrosol for one month keeps the new neurons produced during that period alive both in adults and even more so in older people, in which it also stimulates the proliferation of stem cells from which the neurons are generated,” Tirone explains. “Additionally, hydroxytyrosol, thanks to its anti-oxidant proprieties, can also ‘cleanse’ nerve cells because it also reduces markers of aging such as the accumulation of detritus in neural cells.”

The newly produced neurons penetrate neural circuits, effectively resulting in increased hippocampus function.

Beyond confirming the benefits of the Mediterranean diet, these results could also have a positive environmental impact since the study revealed that high levels of hydroxytyrosol are also found in the waste that comes from the production of olive oil. This could lead to the development of new, less wasteful olive oil manufacturing methods in order to obtain higher quantities of the valuable substance.

Researchers Carla Caruso of Tuscia University’s Department of Environmental and Biological Sciences and a team from the Department of Agriculture and Forest Sciences composed of Roberta Bernini, Luca Santi and Mariangela Clemente also participated in the study by synthesizing hydroxytyrosol with a new patented procedure.

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[2] <https://www.cnr.it/en>