

# Study finds consuming nuts strengthens brainwave function

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Pistachios are among the nuts the improve brain function. Credit: Loma Linda University Health

A new study by researchers at Loma Linda University Health has found that eating nuts on a regular basis strengthens brainwave frequencies associated with cognition, healing, learning, memory and other key brain functions. An abstract of the study—which was presented in the nutrition section of the Experimental Biology 2017 meetings in San Diego, California, and published in the *FASEB Journal*.

In the study titled "Nuts and brain: Effects of eating nuts on changing electroencephalograph brainwaves," researchers found that some nuts stimulated some brain frequencies more than others. Pistachios, for instance, produced the greatest gamma wave response, which is critical for enhancing cognitive processing, information retention, learning, perception and [rapid eye movement](#) during sleep. Peanuts, which are actually legumes, but were still part of the study, produced the highest delta response, which is associated with healthy immunity, natural healing, and deep sleep.

The study's principal investigator, Lee Berk, DrPH, MPH, associate dean for research at the LLU School of Allied Health Professions, said that while researchers found variances between the six nut varieties tested, all of them were high in beneficial antioxidants, with walnuts containing the highest antioxidant concentrations of all.

Prior studies have demonstrated that nuts benefit the body in several significant ways: protecting the heart, fighting cancer, reducing inflammation and slowing the aging process. But Berk said he believes too little research has focused on how they affect the brain.

"This study provides significant beneficial findings by demonstrating that [nuts](#) are as good for your brain as they are for the rest of your body," Berk said, adding that he expects future studies will reveal that they make other contributions to the [brain](#) and nervous system as well.

Berk—who is best known for four decades of research into the health benefits of happiness and laughter, as well as a cluster of recent studies on the antioxidants in dark chocolate—assembled a team of 13 researchers to explore the effects of regular nut consumption on brainwave activity.

The team developed a pilot study using consenting subjects who consumed almonds, cashews, peanuts, pecans, pistachios and walnuts. Electroencephalograms (EEG) were taken to measure the strength of brainwave signals. EEG wave band activity was then recorded from nine regions of the scalp associated with cerebral cortical function.

**More information:** Nuts and Brain Health: Nuts Increase EEG Power Spectral Density ( $\mu\text{V}^2$ ) for Delta Frequency (1–3Hz) and Gamma Frequency (31–40 Hz) Associated with Deep Meditation, Empathy, Healing, as well as Neural Synchronization, Enhanced Cognitive Processing, Recall, and Memory All Beneficial For Brain Health, *FASEB Journal* (2017). [www.fasebj.org/content/31/1\\_Supplement/636.24](http://www.fasebj.org/content/31/1_Supplement/636.24)

Provided by Loma Linda University

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