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CoQ10 may enhance anti-inflammatory potential of Med diet

By Stephen Daniells, 24-Jan-2012

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Supplementing a Mediterranean-style diet with co-enzyme Q10 may reduce markers of inflammation and improve a range of health measures, including heart and joint health.

The anti-inflammatory effects of consuming a Mediterranean-style diet, rich in olive oil and fruit and vegetables, were enhanced by a daily 200 milligram supplement of CoQ10 (Kaneka), according to results published in *The Journals of Gerontology: Series A*.



Chronic inflammation is brought about by an over-expression or lack of control of the normal protective mechanisms.

Chronic inflammation has also been linked to a range of conditions linked to heart disease, osteoporosis, cognitive decline and Alzheimer's, type-2 diabetes, and arthritis.

"Our results show that the anti-inflammatory effect of Med diet rich in olive oil and that exogenous CoQ supplementation, in synergy with a Med diet, has an additive effect modulating the inflammatory response and [cellular] stress in elderly men and women and support that the consumption of a Med diet supplemented with CoQ is beneficial for healthy aging of individuals," wrote researchers from the University of Cordoba in Spain.

Study details

The Spanish researchers recruited 20 people over the age of 65 and randomly assigned them to one of three diet groups: The first group was fed a 'Western' diet rich in saturated fats; the second group received a Mediterranean diet; and the third group received the Med diet with additional CoQ10 (200 mg per day) for four weeks.

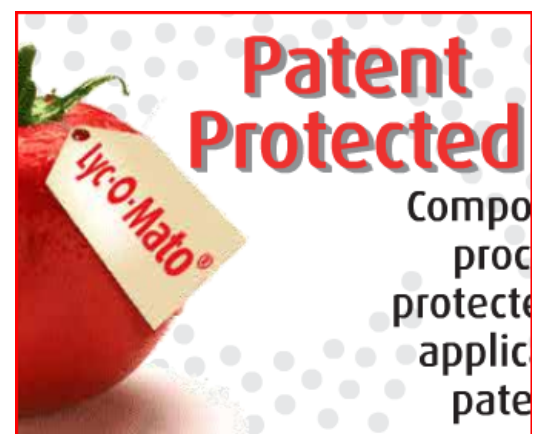
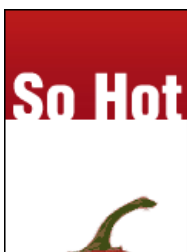
The Mediterranean diet is rich in cereals, fruits, vegetables, nuts, whole grains, fish and olive oil. Although is the traditional diet of the Mediterranean region, it has garnered interest all over the world in recent times as a scientific spotlight has been trained on the health benefits it can confer.

For instance, recent research has indicated that the diet may have benefits for arthritis, Alzheimer's disease, hearth health and blood pressure, diabetes, asthma, lung disease, and allergies.

The participants did cross over into the other groups, allowing the researchers to

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use each participant as his or her own control.

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At the end study, the researchers found that both groups consuming the Med diet had lower expression of genes associated with inflammation, while the CoQ10 "had an additive effect on the Med diet because the participants who consumed this diet showed a greater postprandial decrease in gene expression of [various inflammatory genes] with respect to the other diets", said the researchers.

"We can conclude that specific dietary intervention might be a new, interesting, and promising challenge in the treatment (and mainly prevention) of processes that lead to a rise in chronic inflammation and oxidative stress, such as cardiovascular, neurodegenerative diseases, and aging."

CoQ10 benefits

CoQ10 – or coenzyme Q10 plays a vital role in the production of chemical energy in mitochondria – the 'power plants' of the cell – by participating in the production of adenosine triphosphate (ATP), the body's co-called 'energy currency'.

It has been studied for its role in cognitive health, heart health, and anti-aging (in oral and topical formulations). It has also been shown to benefit those suffering from angina, heart attack and hypertension.

Its use in the US, particularly in supplements, has been boosted by the rise in popularity of statin drugs which deplete the body's natural stores of CoQ10.

Source: *The Journals of Gerontology: Series A*

Volume67A, Issue1, Pages 3-10, doi: 10.1093/gerona/67A.1.3

"Mediterranean Diet Supplemented With Coenzyme Q10 Modifies the Expression of Proinflammatory and Endoplasmic Reticulum Stress-Related Genes in Elderly Men and Women"

Authors: E.M. Yubero-Serrano, L. Gonzalez-Guardia, O. Rangel-Zuniga, et al.

Keywords: CoQ10, Med diet, inflammation

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