

Promoting brain health and anti-aging with

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Brain health is one of the keys to the quality of life of golden age groups and plays an important role in preserving their independence. As we age, oxidation, inflammation, and toxicity resulting from normal brain cells activities are all involved in the progression of cognitive impairment and dementia. Currently, there are no effective preventive strategies. Dietary supplements are one of the most common measures that people use to maintain cognitive health. Nutraceuticals such as vitamin E have gained increasing interest as a complementary supplement in the management of cognitive impairment and dementia.

Vitamin E Delays Cognitive Decline

Vitamin E supplementation has been found to delay disease progression in patients with mild to moderate Alzheimer's Disease¹. Using a composite end point of any one of the following outcomes: death, institutionalization, loss of two out of three basic activities of daily living and severe dementia, the investigators were able to demonstrate that vitamin E supplementation delayed the occurrence of the composite end point from a median of 440 days to 670 days.

Prevention Of Dementia With Vitamin E

A large population-based observational study found that healthy older adults who used antioxidants including vitamin E were 50% less likely to experience cognitive decline at 5 years follow-up compared with those who did not². Recently, a large cohort study with 5395 participants who were followed up for 9.6 years, found that those with the highest intake of vitamin E-rich foods were 25% less likely to develop dementia compared with the lowest vitamin E intake group³.

Vitamin E, A Distinctive Antioxidant

Vitamin E is a collective name for a family of eight related fat-soluble isomers, tocopherols and tocotrienols, each composed of α -, β -, γ - and δ - that have varying levels of health-promoting properties. They are found in vegetation and seeds with distinctive antioxidant and biological activities to prevent disease and to promote general health. Since oxidative stress is known to contribute to the development of cognitive impairment and dementia, tocotrienols have been used for prevention and possible treatment⁴⁻⁶. While tocopherols are important, they lack many of the synergistic benefits offered by their other half, the tocotrienols. Scientists are discovering that tocotrienols provide valuable therapeutic and preventive

options for aging-associated diseases that tocopherols may not provide. Tocotrienols alleviate inflammation due to oxidative stress by free radical scavenging activity as well as interacting with antioxidant enzymes such as superoxide dismutase and glutathione peroxidase.

Tocotrienols Are Beneficial In Alzheimer's Disease

Oxidative stress plays a major role in the development and progression of Alzheimer's Disease. Alzheimer's Disease affects millions of people in the world with symptoms of deteriorating memory and loss of bodily functions. Currently there is no cure for this disease and research studies focus on preventing the onset and slowing the progression of the disease. More than 90% of people with cognitive impairment and Alzheimer's Disease were found to have the lowest levels of tocotrienols, compared to people with normal cognitive function. Clinical studies have shown that high plasma levels of tocotrienols are associated with 64% reduced Alzheimer's Disease risk⁷. The plasma levels of tocotrienols could be used as a biomarker for diagnosis of Alzheimer's Disease when combined with MRI measures. Further analysis of the data showed that the highest protection was offered by α -tocotrienol, γ -tocotrienol, and δ -tocotrienol. This suggests that tocotrienols, not tocopherols afford the strongest protection to cognitive impairment⁸.

Tocotrienols Improve Cognitive Performance During Aging

Animal studies have demonstrated the remarkable neuroprotection effects by tocotrienols. A Tocotrienol-Rich Fraction (TRF) not only protected rats from free-radical-induced brain cell death, but also reduced DNA damage in brain cells, and improved the performance on various cognitive tests such as mazes and swimming challenges⁹.

DavosLife E3 Tocotrienols



Neuroprotective Properties Of Tocotrienols

Based on a clinical trial, daily supplementation of TRF may protect against the progression of white matter lesions (WMLs) in human brain. The study involved 121 people aged 35 and above with cardiovascular risk factors and WML, which are linked to development of neurodegenerative diseases and to an increased stroke risk. Volunteers were randomly assigned to receive either 200 mg of TRF or placebo twice daily for two years. Data indicated that the mean WML volume of the placebo group increased whereas those who received TRF supplementation remained unchanged¹⁰. This study clearly demonstrates neuroprotective effect of TRF supplementation in human. Brain WMLs are closely related to vascular events of the brain and is an independent prognostic measure of future stroke risk.

Tocotrienols Minimize Stroke-Related Brain Injuries

Oral tocotrienols have also been shown to protect against and minimize stroke-related brain damage in many studies^{11,12,13,14}. Tocotrienols work by (1) reducing the inflammation after an acute stroke^{14,15}, (2) reducing the effects of specific oxidant damage-inducing molecules in brain tissue¹¹ and (3) increasing the development of blood vessels to rapidly restore blood flow to areas injured by stroke¹⁶.

DavosLife E3, The Gift Of Mother Nature

DavosLife E3 contains complete spectrum of all natural tocotrienol isomers (α -, β -, γ - and δ -) and α -tocopherol, as

occurs naturally for overall health benefits, not limiting to promoting cognitive health. Davos Life Science has also successfully formulated a product with Self-Emulsifying Delivery System (SEDS) that improves absorption in human body. DavosLife E3 Bio-Enhanced 20 is a self-emulsifying mixed tocotrienols and tocopherol formula that gives 46% higher bioavailability than market products¹⁷. This patent-pending innovation is proven to overcome the large variability in absorption efficiency between individuals. With higher bioavailability, tocotrienols will be delivered to your body at the fullest potential for widest range of health protection.

Be Assured By DavosLife E3

DavosLife E3 range of tocotrienols products comply with all major international regulatory standards on PAHs, BaP, dioxins/furans, pesticides and other contaminants in food and health supplements. They are suitable for incorporation in dietary supplements, functional food and beverage to promote lipid balance, healthy blood vessels, heart and brain. Tocotrienols obtained US FDA GRAS status in 2010 and is safe for oral consumptions¹⁷.

Supply Side West 2017

Davos Life Science will be exhibiting under its parent KLK OLEO at Supply Side West 2017, Las Vegas, USA (September 27-28, 2017), Stand No. P170. Meet us to learn more about the health benefits of tocotrienols.

Tocotrienols

- ✓ Provide Neuroprotection
- ✓ Maintain Cognitive Health
- ✓ Minimize Stroke-Induced Injuries
- ✓ Slowdown Progression of Alzheimer's Disease
- ✓ Delay Cognitive Decline
- ✓ Reduce Risk of Dementia



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Enriching Lives in a Sustainable Manner Every Day

DavosLife E3 Tocotrienol-Rich Fraction Next Generation



- Nutraceuticals • Food Ingredients
- Derived from Nature, Driven by Science
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 - Comply with all international regulatory standards on Persistent Organic Pollutants
 - Potent antioxidant and strong anti-inflammatory properties

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 - Emollient for skin care (INCI: Caprylic/Capric Triglyceride)



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Softgel supplements available at www.naturale3.com

For more health benefits of Tocotrienol-Rich Fraction, please visit www.klkoleo.com/DavosLife



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Skin care

Liver health

Neuroprotection and cognitive health

Cellular wellness

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SUPPLYSIDE WEST 2017

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Nexira

Founded in 1895, Nexira is a global leader in natural ingredients and botanical extracts for the food, nutrition, and dietary supplements industries.

At **Supply Side West Nexira** will present **for the first time** its latest amazing results on **EnoSTIM™** the natural male enhancer!

EnoSTIM™ is a proprietary synergistic formulation of active ingredients - apple and grape polyphenols – enriched with saffron.

Discover our new results showing the improvement of erectile function. **EnoSTIM™** will be one of the selected ingredient included in the SURVIVAL KIT! Try it!

Nexira will present its expertise in women's health with **Exocyan™**, its 100% natural premium cranberry extracts, an exceptional range **standardized in fruits solids and in PACs.**

ID-aIG™ is one of our hot selling for the **weight management category.** **New clinical results**, supported with RMI, will be as well presented for the first time in Vegas!

If you are looking for a natural source of fiber to improve your digestive health, come at our booth and learn more about **Fibregum™** and its latest clinical studies. The **Fibregum™** range has already captured the attention of numerous companies for its technical and functional benefits. It is a 100% vegetable ingredient offering more than 90% dietary soluble fiber, great digestive tolerance, proven prebiotic properties, and associated intestinal health benefits backed by numerous clinical studies.

Based on the preliminary positive results of **Fibregum™**, Nexira has recently conducted a **new study to reinforce and demonstrate all the scientific background of Fibregum™ as a new natural alternative to protect the gut barrier.**

Discover our brand new video at our booth **GG153!**

