



... Brain



Mechanism By Which Low Vitamin E Can Damage the brain (and just to be clear we are not talking about d-alpha-tocopherol)

Summary: Researchers have discovered how vitamin E deficiency may cause neurological damage by interrupting a supply line of specific nutrients and robbing the brain of the 'building blocks' it needs to maintain neuronal health. They found that nutrients needed to build and maintain the brain can be cut by more than half, with possible implications for an elevated risk of Alzheimer's disease.

What Is A Vitamin?

I hear "I'm taking vitamin E" from patients all the time and what there is to notice is this:

Vitamin E ***IS NOT*** d-alpha-tocopherol.

It is important to note that there are eight (8) vitamers of Vitamin E. Four tocopherols and four tocotrienols.

If you take d-alpha-tocopherol you are missing 7/8ths of the Vitamin E Complex.

To learn more about what vitamins are visit the [Weston Price Foundation](#).

For this topic of brain health, the news is that Vitamin E acts like a chaparone molecule to help get DHA into the brain.

The picture at right shows sunflower seeds, and this plant is a great source of Vitamin E with 34 grams of



Researchers at Oregon State University have discovered how vitamin E deficiency may cause neurological damage by interrupting a supply line of specific nutrients and robbing the brain of the "building blocks" it needs to maintain neuronal health.

The findings -- in work done with zebrafish -- were just published in the Journal of Lipid Research. The work was supported by the National Institutes of Health.

The research showed that zebrafish fed a diet deficient in vitamin E throughout their life had about 30 percent lower levels of DHA-PC, which is a part of the cellular membrane in every brain cell, or neuron. Other recent studies have also concluded that low levels of DHA-PC in the blood plasma of humans is a biomarker than can predict a higher risk of Alzheimer's disease.

Just as important, the new research studied the level of compounds called "lyso PLs," which are nutrients needed for

vitamin E to every 100g of sunflower seeds.

The question is what kind of vitamin E?

If you look at Cataplex E from Standard Process one thing you'll notice is that there is no sunflower seed oil in there!

WHY?

The answer is that the best source of the vitamin E complex is animal liver, spleen and adrenal fat extract. And while this might sound gross, the fact is that organ meats (something totally missing from our modern diets) are the best source of the Vitamin E complex.

Why is this information important?

Brains don't just go bad one day! It is a process that takes between 20 and 30 years of bad diet, poor sleep, plus the oxidative stress that comes with chronic smoking and drinking.

The time to take action is NOW -- daily habits. What does that mean?

It means Tuna Omega 3 Oil, Cataplex E and eating the Mediterranean diet with only periodic diversions into the "low quality food arena" -- and we all know which foods those are: chips made with omega-6 oils like canola, cottonseed, soy and corn oil, soda, ice cream, and processed wheat products made with trans fats and high fructose corn syrup, etc.

The best advice I can offer is to eat the foods you know to eat and avoid. And take the supplements that have the nutrients because like it or not your brain will rot if you starve it by not eating the essential nutrients that are required for it

getting DHA into the brain, and serve as building blocks that aid in membrane repair. It showed the lyso PLs are an average of 60 percent lower in fish with a vitamin E deficient diet.

The year-old zebrafish used in this study, and the deficient levels of vitamin E they were given, are equivalent to humans eating a low vitamin E diet for a lifetime. In the United States, 96 percent of adult women and 90 percent of men do not receive adequate levels of vitamin E in their diet.

DHA is a polyunsaturated fatty acid, or PUFA, increasingly recognized as one of the most important nutrients found in omega-3 fatty acids, such as those provided by fish oils and some other foods.

"This research showed that vitamin E is needed to prevent a dramatic loss of a critically important molecule in the brain, and helps explain why vitamin E is needed for brain health," said Maret Traber, the Helen P. Rumbel Professor for Micronutrient Research in the College of Public Health and Human Sciences at OSU and lead author on this research.

"Human brains are very enriched in DHA but they can't make it, they get it from the liver," said Traber, who also is a principal investigator in the Linus Pauling Institute at OSU. "The particular molecules that help carry it there are these lyso PLs, and the amount of those compounds is being greatly reduced when vitamin E intake is insufficient. This sets the stage for cellular membrane damage and neuronal death."

DHA is the needed nutrient, Traber said, but it's lyso PLs which help get it into the brain. It's the building block.

"You can't build a house without the necessary materials," Traber said. "In a sense, if vitamin E is inadequate, we're cutting by more than half the amount of materials with which we can build and maintain the brain."

Some other research, Traber said, has shown that the progression of Alzheimer's disease can be slowed by increased intake of vitamin E, including one study published last year in the Journal of the American Medical Association. But that disease is probably a reflection of years of neurological damage that has already been done, she said. The zebrafish diet used in this study was deficient in vitamin E for the whole life of the fish -- as is vitamin E deficiency in some humans.

Vitamin E in human diets is most often provided by dietary oils, such as olive oil. But many of the highest levels are in foods not routinely considered dietary staples -- almonds, sunflower seeds or avocados.

"There's increasingly clear evidence that vitamin E is associated with brain protection, and now we're starting to better understand some of the underlying mechanisms," Traber said.

Source: <http://www.sciencedaily.com/releases/2015/04/150413184239.htm>

to function.

A brain is a terrible thing to waste.

Dr. Olejak



Like us on Facebook! Receive weekly updates on cutting edge health information.



Have a LinkedIn? Connect with or endorse Dr. Olejak.

Health Transformation Is At The Heart of What We Do



To Regain Your Health Call:

518-439-5077

drjoseph.olejak@gmail.com