



Vitamin E: A Fresh Look at an Old Friend

By Gary E. Foresman, MD

When I discuss those substances in nature with the complexity and diversity of “vitamin E activity”, I find that I often lose my audience. Too professorial and the reader snoozes. Too simple and nothing is learned and people might wander into the grocery store to buy a potentially dangerous supplement. Finding the middle path in all ventures remains my lifelong challenge. Please read on to rediscover a vitamin so dreadfully misunderstood, yet so beautiful in structure and function that we are only beginning to harvest its benefits!

Discovered in 1922 as part of green leafy vegetables, and later as part of wheat germ oil and other oils, vitamin E was initially found to support fertility. The first members of the E family became known as the tocopherols. The name comes from the Greek **tokos** meaning childbirth, **phero** meaning to bring forth, and **ol** to note its alcohol properties. Tocopherols are known as an essential component of the human diet that comes only from photosynthetic organisms. Only later substances with the same fat-soluble vitamin E activity with three extra double bonds in its hydrocarbon tail were found and called tocotrienols. To complete the story, both the tocopherols and the tocotrienols are distinguished by unique side chains and individually are known as alpha, beta, gamma, and delta tocopherols and tocotrienols, giving us 8 distinctive members of the vitamin E family.

Here’s where it starts to get a bit complex, but please hang with me or you won’t understand why nearly everyone misunderstands the scientific literature on the vitamin E family. Because the human body contains what became known as alpha tocopherol binding protein, the assumption was made that alpha tocopherol was the only important member of the E family. Indeed, higher concentrations of this tocopherol can be found in humans, but as it turns out we do absorb the family members and their unique activities occur at a fraction of the concentration of alpha tocopherol. Nearly 99% of the literature focuses not just on alpha tocopherol but primarily on the synthetic version. Here is the next terrible turn of our tale, as not only did we focus on one of eight family members but on the synthetic version of the one family member! Synthetic dl-alpha tocopherol has a substance (l-alpha tocopherol) that not only has **no vitamin E** activity but also utilizes binding sites on the alpha tocopherol binding proteins that **inhibit** the absorption of all the vitamin E we must get from our diet. That’s right; the synthetic E that many of you unwittingly buy in the grocery store literally functions as anti-E! Synthetic E directly leads to the depletion of all the other tocopherols and tocotrienols (by competing for their absorption) that we are finding to be so vital in complete vitamin E activity. So whenever you hear of any the supposedly negative research on vitamin E,

please see how important it is that you realize what has been used in the study is actually an antagonist to vitamin E activity (the vast majority of times).

To continue our tragic account of the world's most misunderstood vitamin, we also need to comprehend the diversity of roles that vitamin E plays in the body. Its fat soluble antioxidant function has been well documented. That mixed tocopherols work well with other antioxidants, such as vitamin C and alpha lipoic acid, in the body and help to recycle each other is well documented. But it is their individual unique properties that have nothing to do with their antioxidant nature that provides the basis for their untapped health-promoting future. Alpha tocopherol affects platelet activation and the prevention of blood clots while not leading to excess bleeding. The tocotrienols positively affect cholesterol and sugar metabolism while having anti-cancer properties and abilities to prevent neurodegeneration through mechanisms other than free-radical inhibition. The take-home message being that when I personally discuss vitamin E it must be in the context of a family of nutrients that work well together.

There is more, but I will save you any further science, for now. The next two articles on E will be separate research on the tocopherols and the tocotrienols and how to get the most from this vitamin family. While waiting for more, remember that if you have any synthetic E in your home (don't forget to check that multivitamin), please, please throw it away right now. That is because the scientific literature tells you that synthetic E increases mortality and directly harms you. If you are interested in the vitamin with lifesaving properties that was discovered 88 years ago I strongly encourage you to take Unique E (<http://acgrace.com/>) one capsule daily in the AM and Unique E tocotrienols one capsule daily in the PM. My next 2 articles will tell you why vitamin E is worth your attention!

Your Journey to Health and Healing,
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References:
Upon Request

Email: info@middlepathmedicine.com
Website: www.middlepathmedicine.com