

THE TRUTH ABOUT VITAMIN E

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A research paper which appeared in the November 10, 2004 online edition of The Annals of Internal Medicine gained national attention by concluding that the use of vitamin E, especially in higher doses, may increase the risk of death, contrary to previously held beliefs. A careful look at this study shows that its conclusions are very misleading. The research paper was a “meta-analysis”, which is a statistical review of several studies by different researchers. It did not present new data or research, but merely reviewed already existing studies. This analysis focused on a carefully selected group of earlier published clinical studies whose populations suffered from a number of grave diseases where there was a very high risk of mortality to begin with, including Alzheimer's, Parkinson's, cancer, cardiovascular disease and more. The **researchers did not review** long term studies of the general population which demonstrated vitamin E's positive health benefits, including the Nurses Study, the Finnish Study and the Iowa Women's Study. (1) (2) (3)

For example, a study of approximately 90,000 nurses suggested that the incidence of heart disease was 30 to 40 percent lower among nurses with the highest intake of vitamin E from diet and supplements. Researchers found that the apparent benefit was mainly associated with intake of vitamin E from **dietary supplements**. High vitamin E intake from food was not associated with significant cardiac risk reduction. In another study, published in the Annals of Neurology, Johns Hopkins researchers showing that 400 IUs of vitamin E, taken in concert with 500 mg of vitamin C, reduced the risk of Alzheimer's by 60 percent(4). Ample evidence also exists to support vitamin E for cancer prevention.

Careful review of the data in the recent study shows that only nine of the studies reviewed had people taking vitamin E alone, and that 18 of the 19 studies analyzed had no statistically significant increase in mortality. In fact nine of the studies showed a **decrease** in mortality. In short, evidence for the benefits of vitamin E are still far outweighed by evidence against it.

WHAT IS A FREE RADICAL?

A free radical is an atom that is missing one electron causing the atom to carry a negative (-) electrical charge. Where two electrons should be present to insure the atom's stability, only one exists creating instability and making this atom highly reactive with other atoms or molecules in its vicinity. These free radicals create an “inflammatory cascade” in the cells they react with. It is this inflammation that is thought to be the starting point for many diseases such as cancer, Alzheimer's, coronary artery disease and diabetes. Antioxidants such as vitamin E are thought to work by lowering the concentration of these free radicals.

The Type of Vitamin E Matters

Vitamin E is not really a single vitamin. It is a collection of eight substances including alpha-tocopherol, gamma-tocopherol and the tocotrienols. All eight work in conjunction to lower free-radical concentrations. It has long been established that consuming only alpha-tocopherol can lower blood levels of the more potent form of vitamin E called “gamma” tocopherol.

Scientists have shown that the average American's blood-stream is five times more rich in alpha-tocopherol than gamma-tocopherol and that difference jumps 20-fold among people who take only alpha-tocopherol supplements. Since the alpha form of vitamin E displaces the critically important gamma-tocopherol, it is understandable why people given high doses of only alpha-tocopherol would not show a reduction in levels of free radicals (5)(6).

In a study published in the Proceedings of the National Academy of Sciences (April 1997), researchers reported that it could be dangerous to take high levels of alpha-tocopherol without also consuming gamma-tocopherol(7). The reason for this is that too much alpha-tocopherol could deprive the cells of the gamma form of vitamin E that is needed to neutralize existing oxidizing agents such as the peroxynitrite radical, which can be especially damaging.

Doctor, What should I do?

First, you should discuss all vitamin and mineral supplements with your caregiver. Some can have wonderful benefits, but many may be unnecessary, depending on your individual circumstances.

If you are going to take vitamin E, you should take a product that contains all eight forms. *Do not take alpha-tocopherol by itself!*

Some reliably made products include: Isomer E by **GNC(General Nutrition Center)**, Vitamin E 400 with Tocotrienols by **Vitamin World** , High Gamma Tocopherol Softgels by **Vitamin World, Nature's Bounty** High Gamma Vitamin E Complete With Mixed Tocopherols Softgels, **Walgreen's** Finest Natural Vitamin E with D-Gamma 400 IU Complex USP Softgels

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