

NUTRITION UPDATE

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The Importance of Food Changes and Whole Food Supplements

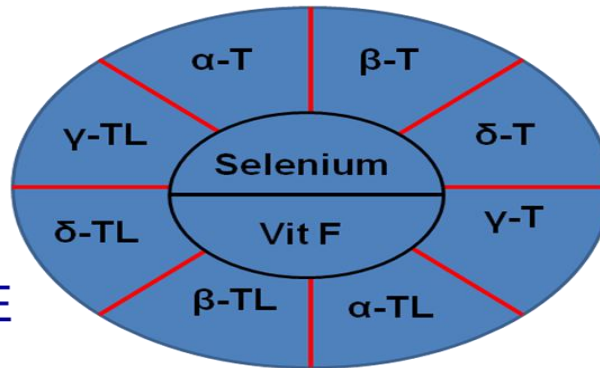
There has been a considerable amount of research reported recently which seems to reflect poorly on the ability of nutrition to prevent disease. The message of this research, however, is more one of the need for a nutritional program to involve diet changes and the use of "whole food" supplements rather than the common practice of simply taking isolated, synthetic nutrients. I will explain these terms shortly.

First, looking at the new research, recent studies have examined the rates of deaths from heart disease, prostate cancer and all causes in adults using vitamin E and selenium or a placebo. These studies showed no reduction in the death rates over 15 years in the supplement users versus those taking a placebo. Unfortunately, the message the media has picked up on from these studies is that supplementation has no benefit preventing these deaths. The real message, however, is that taking a single isolated synthetic "nutrient" has little benefit.

Most vitamin supplements currently sold are synthetic. For example, thiamine or vitamin B1 is made from chemical treatment of coal tar. It is estimated that 75% of all vitamin supplement material used in the US is made in bulk in China with 90% of all vitamin C made there. The quality control and regulation in this production is, in many ways, poor at best. Current US laws regarding vitamins do not require the country of origin of the ingredients to be listed. In other words, where they are made is not typically where the label lists the "manufacturer".

The second problem with synthetic nutrients is that they are "isolated". For example, vitamin E is a complex nutrient as it occurs in nature containing 4 tocopherols, 4 tocotrienols, Vitamin F (essential oils), and the mineral selenium. While alpha tocopherol is the most abundant component in whole food vitamin E, it is only one part of a complex of at least 9 factors that always occur together in nature.

- α-T - Alpha tocopherol
- β-T - Beta tocopherol
- δ-T - Delta tocopherol
- γ-T - Gamma tocopherol
- α-TL - Alpha tocotrienol
- β-TL - Beta tocotrienol
- δ-TL - Delta tocotrienol
- γ-TL - Gamma tocotrienol



The Vitamin E Complex

More than just alpha-tocopherol

The idea that alpha tocopherol alone should provide all of the function and benefit of the vitamin E complex is analogous to saying that because Michael Jordan was the most dominant player on the Chicago Bulls when they won multiple NBA championships, he could do that alone. The example is, of course, silly but so is the idea that an isolated synthetic part of the vitamin E complex could serve all of its functions in humans.

There is an additional factor in the isolated synthetic nutrient problem. The first is that taking a single portion of a natural vitamin complex appears to actually deplete the body reserves of the other nutrients that occur in the natural complex. For example, taking alpha tocopherol alone has been shown to deplete blood levels of gamma tocopherol. Gamma Tocopherol provides antioxidant protection against different types of injurious chemicals than does alpha tocopherol. Taking alpha tocopherol without gamma tocopherol may actually increase the risk of diseases related to

some types of oxidation such as heart disease and certain cancers.

An earlier study of prostate cancer prevention and vitamin E looked at the blood levels of alpha and gamma tocopherol. Higher blood levels of alpha tocopherol were associated with a 35% reduction in cancer risk. Higher levels of gamma tocopherol, however, were associated with a striking 81% risk reduction. The most interesting finding was that the risk reduction in the group with higher alpha tocopherol levels only occurred in those who also had higher levels of gamma tocopherol.

A recent study pointed out the idea of "synergy" which is one of the greatest values of whole food supplements compared to isolated synthetic nutrients. The study looked at the ability of selenium and alpha tocopherol to change the activation of different genes in prostate cancer cells in men receiving surgical treatment or biopsies. Both selenium and alpha tocopherol changed the activation of

several genes related to cell reproduction and growth when given alone. A third group received a combined supplement containing both selenium and alpha tocopherol. This combination which more closely resembles how either nutrient occurs in whole foods (only with each other) changed the activation of 329 of the 587 different genes in the tumor cells. One of the most important was an activation of the TP53 gene which causes the production of an important protein which acts as a tumor suppressor in normal cells.

The last factor in the isolate synthetic nutrient issue is that even when a single nutrient factor such as alpha tocopherol performs its penetrative function in the body, the whole process is not finished. Alpha tocopherol serves as an antioxidant, a process where it inactivates a harmful chemical produced in cells by oxidation of fats. The chemical product made when alpha tocopherol connects to an oxidized fat molecule is also potentially harmful to cells. This by-product must be broken down in a series of steps to a completely harmless product. These subsequent steps require vitamin C, vitamin A and CoQ10 to complete the full breakdown/antioxidant process. The synergy of all of these occurring together happens only in whole foods and whole food supplements.

Fortunately, several scientists have spoken out about the weakness of these recent studies suggesting that vitamins play no role in the prevention of heart disease and cancer deaths. Their greatest supporting argument is that several well done studies have shown important reductions in disease and death rates with superior diets and with whole food complexes.

The functional point to take from all of this is that the proper form and balance of nutrients needed to achieve optimum health and disease prevention already exists in whole foods. Any supplements that help this objective must be natural, whole food supplements. Nature really does it better than man does in a factory!

An Added Note

Our nutrition programs focus on dietary changes involving the use of whole foods and the use of whole food supplements from Standard Process Labs. The following is an explanation of whole food supplements from Standard Process Labs:

Whole food supplements are made by concentrating foods for use in supplements. When processed correctly, they supply a multitude of the plant's components. Foods provide nutrients that work synergistically. They work together to provide you with optimal nutrition for good health.

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