

## **TOCOTRIENOLS**

Tocotrienols (from palm), featuring, delta-tocotrienol, with the highest antioxidant activity and free radical scavenging capacity of the tocotrienol isomers.

Before we begin our detailed nutrient-by-nutrient account of the findings from the scientific literature supporting the benefits of these products, let's briefly mention some qualitative considerations. First, consider the tocotrienols. As you may be aware, tocotrienols are referred to in the promotional literature as part of the Vitamin E family or Vitamin E Complex. The tocotrienols are very definitely a first cousin to the tocopherols of the Vitamin E family. The molecular structure of tocotrienols and tocopherols is very similar, but different enough to give tocotrienols even more powerful and diverse antioxidant activity than the various forms of Vitamin E.

With OXY POWER you not only have one of the few products available anywhere to use palm tocotrienols, but you have those tocotrienols combined to yield the synergistic effects of tocotrienols accompanied by the other antioxidants.

Again,

### **THIS IS GUARANTEED TO BE THE MOST POWERFUL ANTIOXIDANT PRODUCT AVAILABLE ANYWHERE.**

Perhaps the most interesting component of your Oxy Power is the tocotrienol group. It is positively astounding that this group of nutrients has so much research supporting it as perhaps the single most important antioxidant available to us, yet no one uses it. Why is that? The highest antioxidant activity and free radical scavenging capacity of the tocotrienol isomers comes from delta tocotrienol. This most biologically active antioxidant of the tocotrienol family is available only from palm. The problem is that this nutrient is extremely expensive. So much so, that it is a hard sell to the poorly informed public. The few companies that dabble in selling tocotrienols supply a product derived from rice bran, which is very inexpensive, but which is almost totally lacking in the delta fraction of the tocotrienols. So --- think of the tocotrienols as ...

### **THE BEST KEPT SECRET IN CLINICAL NUTRITION.**

Just how powerful are the tocotrienols? A study published in Biochemical and Biophysical Research Communication, 2006 (339), 949-955 shows that tocotrienols may act as potent anti-cancer agents by inhibiting cancer in two ways. First, tocotrienols inhibit angio-genesis, with delta tocotrienol having the

greatest effect. Second, tocotrienols selectively inhibit the activity of mammalian DNA polymerase lambda, which is involved in cellular DNA synthesis during cell replication. The researchers note that ordinary tocopherols (vitamin E) do not influence the activities of mammalian polymerase and angiogenesis at all.

Another report (Life Sci, 2006 Mar 27; 78(18):2088-98) states that tocotrienols possess powerful neuro-protective, anti-cancer, and cholesterol-lowering properties that are not exhibited by tocopherols. It goes on to state that at nano-molar concentration, alpha tocotrienol, but not alpha tocopherol, prevents neuro-degeneration. On a concentration basis, this finding shows that tocotrienols represent the most potent of all biological functions exhibited by any molecule in the natural vitamin E family.

In a study published in Malays J Pathol, 2001 Jun;23(1):17-25, it is shown that tocotrienols inhibit experimentally induced atherosclerosis in the aorta of rabbits. I love this one because it is almost an exact duplication of the ridiculous experiment done decades ago "proving" that a high cholesterol diet causes atherosclerosis. Feeding high concentrations of cholesterol to rabbits, a species whose natural diet includes zero cholesterol, caused atherosclerotic plaques to form. That was the beginning of the low cholesterol diet myth. Now, the same experiment is repeated, but with tocotrienols administered along with the high cholesterol diet. Compared to those who are given cholesterol without the tocotrienol supplementation, the malondialdehyde (a measure of lipid peroxidation) is much lower, and the normal elastic lamina with no intimal thickening is preserved in the cholesterol fed rabbits who are also supplemented with tocotrienols.

Other studies of interest:

The protection of the heart against ischemia is demonstrated in a study published in Asia Pac J Clin Nutr 2005; 14(4):340-7.

Tocotrienol offers better protection than tocopherol from free radical-induced damage of rat bone. Clin Exp Pharmacol Physiol. 2005 Sep;32(9):761-70.

The therapeutic impacts of tocotrienols in Type II diabetic patients with hyperlipidemia. Atherosclerosis 2005 Oct;182(2):367-74. This study shows that tocotrienols are useful in both the prevention and treatment of hyperlipidemia and atherogenesis in Type II diabetics.

Tumor suppressive effects of tocotrienol in vivo and in vitro. Cancer Lett 2005 Nov 18;229(2):181-91.

Evidence for the preventive effect of the polyunsaturated phytolside-chain in tocotrienols on 17 beta-estradiol epoxidation. Cancer Detect Prev 2005;29(4):383-8. Oxidation of estrogen increases its capacity to induce breast cancer. This oxidized estrogen inhibits nuclear RNA synthesis as well. It is shown in this study that the anti-oxidative activity of tocotrienols prevents estrogen epoxide formation and therefore may reduce the incidence of breast cancer.

I could go on giving you dozens of studies showing the protective effect of tocotrienols against cancer, against brain degeneration, against cardiovascular disease, and against all forms of pathological aging. It is essential to realize that all the vitality-enhancing, youth-protecting benefits of tocotrienols derive from one and only one biochemical action:

**TOCOTRIENOLS PROTECT AGAINST THE OXIDATIVE  
DAMAGE OF FISH OIL AND VEGETABLE OILS.**

Doctor, the choice is yours:

**ACCELERATE TISSUE DESTRUCTION AND AGING  
WITH EPA, DHA, AND LINOLEIC ACID,**

or,

**MAXIMIZE AND PROLONG YOUTH BY  
GIVING YOUR PATIENTS OXY POWER.**