# Tocotrienols with Vitamin E

from rice bran oil

(Vitamin E derived from soy)



75 softgels

## The Possible Benefits of Tocotrienols with Vitamin E, a Nutritional Supplement

- Provides antioxidant protection of fats and lipid membranes
- Supports maintenance of healthy cholesterol within normal levels
- Potentially supports healthy function of the circulatory system

### **Description**

Tocotrienols are part of the vitamin E family, and they complement the properties of the other better-known forms of Vitamin E. the tocopherols. Tocotrienols and tocopherols are important oil-soluble antioxidants, crucial to the protection of fats, oils, and cell membranes against free radical damage. Free radicals are reactive oxygen compounds generated by our normal biological processes and by exposure to ultraviolet radiation, pollution, cigarette smoke and other environmental and biological stress factors. High levels of free radicals can break down cell membranes and damage cell DNA.

A small structural difference between tocopherols and tocotrienols results in distinct functional differences in their antioxidant activities, probably due to differences in how each is incorporated into cellular membranes Tocopherols, with a saturated side chain that interacts hydrophobically with acyl side chains of membrane phospholipids, may be relatively less able to access lipid radicals due to steric hindrance. Tocotrienols, with an unsaturated farnesyl side chain, have increased accessibility to lipid radicals and resulting greater antioxidant capacity.

Tocotrienols are important regulators of blood lipids within normal levels, including total cholesterol and LDL cholesterol. Tocotrienols

have an inhibitory effect on HMG-CoA reductase, the liver enzyme that is critical to the rate at which cholesterol is synthesised. Tocotrienols also show potential to protect blood vessels by preventing the oxidation of LDL cholesterol, and some studies suggest that tocotrienols may be more effective than vitamin E in guarding against the oxidation of cholesterol. Tocotrienols have been shown to strengthen arterial walls, and to support blood flow through arteries (coronary, carotid, and peripheral). Research also suggests that tocotrienols may offer some protection from ultraviolet radiation, the sun's working synergistically with tocopherols and helping preserve tocopherols in skin cells.

Tocotrienols occur in many of the same sources as tocopherols, such as the oils from rice bran, palm fruit, barley, and wheat germ, and both tocopherols and tocotrienols come in alpha, beta, gamma, and delta forms. Among the tocotrienols, gamma-tocotrienol is the most prevalent form in nature, and recent studies suggest that it has the strongest potential for health benefits. Allergy Research Group Tocotrienols with Vitamin E utilises tocotrienols from rice bran oil, because among all sources, rice bran oil yields the highest amount of the preferred gamma-tocotrienol. Traditionally, rice bran oil has been used in many Asian countries for frying food, due to its oxidative stability and its flavour. Rice bran oil

contains tocotrienols, tocopherols, gammaoryzanol, omega-3 and omega-6 fatty acids, phytosterols including beta-sitosterol, and triterpene alcohols. In this formula, tocotrienols, tocopherols and rice bran oil are combined in a superior synergistic formula, providing increased absorption and utilisation. Vitamin E and tocotrienols are well tolerated, with an extensive history of study and safe use. Human consumption of 240 mg/day of tocotrienols for up to two years caused no adverse effects, and animal toxicity studies suggest that they are safe at much higher levels.

Serving Size: 1 Softgel Servings Per Container: 75

#### **Amount Per Serving:**

Vitamin E (as D-alpha-tocopherol)	90	$\alpha TE$
Rice Bran Oil	250	Mg
Tocotrienols	50	Mg
gamma-tocotrienol	65%	
alpha-tocotrienol	34%	
delta-tocotrienol	1%	

Other ingredients: Gelatine, glycerine, water.

**Suggested Use:** As a dietary supplement, 1 softgel one to four times daily with meals, or as

directed by a healthcare practitioner.

#### References

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