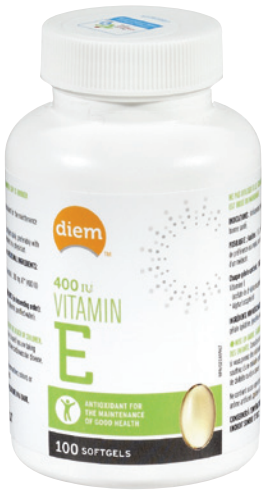
Vitamin E 400 IU Softgels



Product Summary:

Oxidative stress is a major factor in many diseases and leads to the production of free radicals in the body. Vitamin E is a powerful antioxidant that decreases oxidative stress and thereby reduces the formation of free radicals. This antioxidant is used in the treatment of cardiovascular disease, diabetes, age-related macular degeneration and other diseases and conditions.

Properties/Uses:

The claim as approved by the *Natural Health Products Directorate* (NHPD): An antioxidant for the maintenance of good health.

GENERAL HEALTH
& WELLNESS

Pharmacology:

Vitamin E is a very powerful lipid-soluble antioxidant. Antioxidants are necessary to prevent oxidative damage in the body and therefore diminish the formation of free radicals. Oxidative damage plays a major role in the development of Alzheimer's disease, cancer, as well as diabetes. Vitamin E can contribute to the reduction of these and other conditions.

The principal use of vitamin E is as a lipid-soluble antioxidant, acting at the level of cellular membranes and plasma lipid-carrier membranes to break free-radical initiated peroxidation chain reactions in phospholipid polyunsaturated fatty acids. It is considered to be the premiere membrane antioxidant.[1,2]

Vitamin E provides documented anti-atherogenesis effects including reduced oxidative damage of LDL cholesterol, improved plasma LDL breakdown, enhanced control over platelet aggregation, increased HDL levels, and increased fibrinolytic activity.[3] Damaged LDL cholesterol can lead to atherosclerosis.[4] In one large epidemiological study a low level of vitamin E was found to be a greater risk for heart attack and stroke than cholesterol. High cholesterol had a causal correlation with heart attack in 29 per cent of studied cases, while high blood pressure presented a causal correlation in 25 percent of cases. However, low vitamin E levels were predictive in 70 percent of cases.[5] Many large-scale studies have concluded that vitamin E supplementation reduces the risk of heart attacks and ischemic stroke.[4]

Diabetics have an increased need of vitamin E. Like vitamin C, it is critical to reducing or holding at bay the complications of diabetes Double-blind studies have shown that vitamin E not only increases insulin action, but also increases glucose metabolism.[4] Membrane integrity is central to reducing insulin resistance, which is at the heart of Type II pathology, but also impacts on long standing Type 1 diabetes.[3]

Observational and experimental data suggest that antioxidant supplements may delay progression of age-related macular degeneration (AMD) and vision loss. A randomized, placebo-controlled clinical trial was conducted to evaluate the effect of vitamins C and E, beta-carotene and zinc supplements on AMD progression and visual acuity. The Age-Related Eye Disease Study found that taking 400 IU vitamin E, 80 mg zinc, 500 mg vitamin C, and 15 mg beta-carotene decreased the risk of AMD by 25%.[6]

Vitamin E is used to enhance immune system performance. It is also used medically to treat a variety of problems associated with vitamin E deficiency, usually due to long-term compromised fat absorption, or in very large doses to treat degenerative conditions including muscle degeneration and rheumatic joint disease. Vitamin E is also being investigated for decreasing the occurrence of Parkinson's disease.[7] It has also been used to improve symptoms in patients with early Huntington's disease.[7]

Maximum vitamin E intake obtained from diet alone typically only reaches 60 IU per day. Supplementation of vitamin E can increase serum levels so as to contribute more antioxidant benefit.

Natural Versus Synthetic Vitamin E

Synthetic vitamin E (*dl-alpha tocopherol*), and its acetate ester, has been shown to have lower biological activity than naturally occurring d-alpha tocopherol and its acetate ester. Fewer milligrams of d-alpha tocopherol or d-alpha tocopheryl acetate are required to equal the biological activity of 400 IU dl-alpha tocopheryl acetate.

Manufactured product information:

Manufacturer:
WN Pharmaceuticals® Ltd.

Size/UPC:
100's 7 77747 10339 3

NPN:
02240967

Expiry Date:
42 months from date of manufacture

Active Ingredient:
Each softgel contains:

Vitamin E (*dl-alpha Tocopheryl Acetate*) . . . . . 180 mg AT* (400 IU)
*Alpha tocopherol

Non-Medicinal Ingredients (in descending order):
Softgel capsule (gelatin, glycerin, purified water), soybean oil.

Appearance:
Clear yellowish oil encapsulated in a clear soft gelatin shell.

Packaging:
175 cc white round bottle with safety seal under a 38 mm white induction sealed cap with vented interior seal and a label applied to the bottle. Lot number and expiry date are printed on the label applied to the exterior of the bottle.

Storage:
Store at moderate temperatures in tight, light-resistant containers.

Dose:

According to the NHPD, the daily dose is 0.6-100 mg for children 1-3 years; 0.6-150 mg for children 4-8 years; 0.6-300 mg for adolescents 9-13 years; 1-400 mg for adolescents 14-18 years; and 1-500 mg for adults.[8]

Fat is needed for vitamin E absorption, so it is best to take vitamin E with meals.

Directions:

(Adults): 1– 2 softgels daily preferably with meals or as recommended by a physician.

Caution:

The caution as approved by the *Natural Health Products Directorate* (NHPD): KEEP OUT OF THE REACH OF CHILDREN. Consult a physician prior to use if you are taking blood thinners, or if you have cardiovascular disease, diabetes or cancer. STORE AT ROOM TEMPERATURE IN A DARK, DRY PLACE. DO NOT USE IF SEAL UNDER CAP IS BROKEN OR MISSING.

Deficiency Symptoms:

Vitamin E deficiency is rare. It occurs most in people with malabsorption disorders. Symptoms of low serum vitamin E concentrations are muscle weakness, creatinria and ceroid deposition.[7] Defieciency can also cause hemolytic anemia and neurological problems.[4]

In premature infants, deficiency can cause irritability, edema, thrombosis, and hemolytic anemia.[7]

Drug Interactions/Contraindications:

Concomitant use of vitamin E and anticoagulant or antiplatelet agents might increase the risk of bleeding. Vitamin E seems to inhibit of platelet aggregation and antagonize the effects of vitamin K-dependent clotting factors.[7]

Use of more than 400 IU of vitamin E per day with warfarin might prolong prothrombin time (PT), INR, and increase the risk of bleeding, due to interference with production of vitamin K-dependent clotting factors

High intake levels of vitamin E reduce the intestinal absorption of vitamin K, and can confound the management of effective anticoagulant drug therapy based on vitamin K manipulation, as with Coumadin. Apart from anticoagulant drug therapy, vitamin E has not been found to produce coagulation abnormalities in those who are not vitamin K deficient.[9]

Ferrous iron destroys vitamin E. They should be taken at different times sufficiently separated to avoid interaction.

High simultaneous intake of vitamin A may interfere with vitamin E absorption. Some anticonvulsants including phenobarbital, phenytoin, and carbamazepine significantly lower plasma vitamin E levels by altering absorption, distribution and metabolism.[10]

Vitamin E and vitamin C interact beneficially, with C regenerating E, making it again active as a membrane radical chain-breaking antioxidant. However, there is evidence that vitamin C can act as a pro-oxidant, especially in the presence of iron, if adequate levels of vitamin E are not present.[11] The optimal dose range of vitamin C should be encouraged, but with equal attention to an optimal dose range of vitamin E, which many experts in natural medicine would say is 200 to 800 IUs per day.

Selenium interacts with vitamin E beneficially, enhancing its action. The daily recommended dosage of selenium is 200 micrograms. This interaction stems from its role in glutathione regeneration of vitamin E in conjunction with the enzyme glutathione peroxidase, which incorporates four atoms of selenium. Selenium is also involved in the production of thioredoxin, which regenerates vitamin C, which in turn regenerates vitamin E.[1]

The use of antioxidants like vitamin E during chemotherapy is controversial. Consult an oncologist.[7]

Toxicity/Adverse Reactions:

Human studies and experience show that adverse side effects from vitamin E is virtually nonexistent when used in a dosage range up to 720 mg per day.[2] At doses above 720 milligrams, and particularly doses of 1600 to 3000 mg/day, side effects can occur with prolonged use, and documented side effects include gastrointestinal complaints, creatinuria, and impaired blood coagulation, which subside rapidly with dose reduction.[2]

Vitamin E is generally considered safe, even at doses exceeding the recommended dietary allowance (RDA). In uncommon cases, vitamin E can cause nausea, diarrhea, intestinal cramps, fatigue, weakness, headache, blurred vision, rash, gonadal dysfunction, and creatinuria.[7]

Allergen Content/Ingredient Sensitivity:

NO	YES
Artificial Color	Soy Products
Artificial Flavor	Sulphites (<10 ppm)
Artificial Sweeteners	
Corn Products	
Egg Products	
Fish	
Gluten	
Hydrolyzed Plant Protein	
Lecithin	
Milk Products	
Peanuts	
Preservatives	
Sesame Products	
Shellfish	
Tartrazine	
Tree Nuts	
Wheat Products	
Yeast	

NOT ACCEPTABLE FOR THE FOLLOWING DIETARY RESTRICTIONS:

Free of animal products

Kosher

References:

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3. Murray MT. Encyclopedia of Nutritional Supplements, Prima Publishing, Rocklin, CA, 1996.
4. Murray, M. The Pill Book Guide to Natural Medicines, Bantam, Toronto, 2002.
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6. National Eye Institute, The AREDS Formulation and Age-Related Macular Degeneration, Accessed August 2, 2010. [Available from: http://www.nei.nih.gov/amd/summary.asp]
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9. Bendich A, Machlin LJ. Safety of oral intake of vitamin E. Amer J Clin Nutr. 1988; 48: 612-619.
10. Kataoka K *et al.* Vitamin E status in pediatric patients receiving antiepilepic drugs. Dev Pharm Ther. 1990;14: 96-101.
11. Wefers H, Sies H. The protection by ascorbate and glutathione against microsomal lipid peroxidation is dependent on vitamin E. Eur J Biochem. 1988; 174: 353-357.

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