

Wheat Germ Oil

One of the Richest Sources of the Complete Vitamin E Complex

Wheat germ oil comes from the heart of the wheat berry, the embryo of the new plant. This oil is unique among dietary supplements and foods in that it is unusually rich (65 percent by weight) in the most biologically active form of vitamin E. Vitamin E acts as an inhibitor of oxidation processes in body tissues. It protects unsaturated fats in the body from oxidation by peroxides and other free radicals. In fact, the tocopherols are used commercially as antioxidants to retard the spoiling of fats, especially other vegetable oils.[†]

Vitamin E is especially active in tissue cell walls, where it protects lipid membranes and strengthens this most basic cellular defensive line. It is also essential to the proper function of lysosomes, tiny organelles within the cell that transport potent chemicals to help maintain cellular security.[†]

How Wheat Germ Oil Keeps You Healthy

Supports the cell membranes of all tissues in the human body, especially those in the nervous system

Vitamin E is an antioxidant that protects and repairs cell membranes, especially those of nerve cells, from damage by the highly reactive oxygen compounds known as free radicals. The nerves need antioxidant support because free radicals are produced at an increased rate in nerve cells.[†]

Supports the proper functioning of the cardiovascular system

Vitamin E in wheat germ oil protects lipoproteins in the blood from damage by free radical oxygen and, in doing so, helps prevent the buildup of fatty deposits in the cell wall of the cardiovascular system.[†]

Maintains eye lens transparency

The eyes are continually bombarded with ultraviolet rays that cause the release of tissue-damaging free radicals. Vitamin E can help preserve the clarity of the eye lens.[†]

Protects material in the cell nucleus from damaging free radicals

Studies have shown that vitamin E protects guanosine amino acid, a component of DNA, from damage by hydroxyl and superoxide radicals. It destroys peroxynitrite, a substance similar to the nitrogen dioxide compounds present in cigarette smoke. It also detoxifies singlet oxygen and peroxy radicals, thus protecting cell membranes, including those adjacent to nucleic material.[†]



Introduced in 1939



Content:

60 perles

Suggested Use: One perle per meal, or as directed.

Supplement Facts:

Serving Size: 1 perle

Servings per Container: 60

	Amount per Serving	%DV
Calories	3	
Wheat (Germ) Oil	385 mg	

Ingredients: See Supplement Facts.

Other Ingredients: Gelatin, glycerin, water, and carob.

Sold through health care professionals.

Whole Food Philosophy

Our founder, Dr. Royal Lee, challenged common scientific beliefs by choosing a holistic approach of providing nutrients through whole foods. His goal was to provide nutrients as they are found in nature—in a whole food state where he believed their natural potency and efficacy would be realized. Dr. Lee believed that when nutrients remain intact and are not split from their natural associated synergists—known and unknown—bioactivity is markedly enhanced over isolated nutrients. Following this philosophy, even a small amount of a whole food concentrate will offer enhanced nutritional support, compared to an isolated or fractionated vitamin. Therefore, one should examine the source of nutrients rather than looking at the quantities of individual nutrients on product labels.

Please copy for your patients.



This product contains less than 10 parts per million of gluten per serving size or less than 20 parts per million per the suggested use listed on each product label.

[†]These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



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Wheat Germ Oil

What Makes Wheat Germ Oil Unique

Product Attributes

Cold processing maintains integrity of unrefined, nutritionally rich 100 percent pure wheat germ oil

- › Protects valuable nutrients such as vitamin E

Ingredients are derived from whole food sources

- › Each perle supplies 385 mg of wheat germ oil

Packaged in perles, not sold in bulk

- › Protects against oxidation and retains the integrity of the whole plant

Manufacturing and Quality-Control Processes

Degreed microbiologists and chemists in our on-site laboratories continually conduct bacterial and analytical tests on raw materials, product batches, and finished products

- › Ensures consistent quality and safety

Vitamin and mineral analyses validate product content and specifications

- › Assures high-quality essential nutrients are delivered

Studies on nutrients generally use large doses and these studies, some of which are cited below, are the basis for much of the information we provide you in this publication about whole food ingredients. See the *supplement facts* for *Wheat Germ Oil*.

- Borithon-Kopp C., Coudray C., Berr C., et al. 1997. Combined Effects of Lipid Peroxidation and Antioxidant Status on Carotid Atherosclerosis in a Population Aged 59-71. *Am J Clin Nutr* 65, 121-127.
- Bostick R., Potter J., McKenzie D., et al. 1993. Reduced Risk of Colon Cancer with High Intake of Vitamin E: The Iowa Women's Health Study. *Cancer Res* 53, 4230-4237.
- Christen S., Gee P., Ames B.N. 1996. Mutagenicity of Nitric Oxide in Base Pair-Specific *Salmonella* Tester Strains: TA7000 Series. *Methods Enzymol* 269, 267-278.
- Christen S., Woodall A., Shigenaga M., et al. 1997. Tocopherol Traps Mutagenic Electrophiles and Complements Tocopherol: Physiological Implications. *Proc Natl Acad Sci* 94, 3217-3222.
- Dimitrov N., Meyer-Leece C., McMillan J., et al. 1996. Plasma Alpha-tocopherol Concentrations After Supplementation with Water- and Fat-soluble Vitamin E. *Am J Clin Nutr* 64, 329-335.
- Eichholzer M., Stahelin H., Gey K., et al. 1995. Prediction of Male Cancer Mortality by Plasma Levels of Interacting Vitamins: 17-yr follow-up of the Prospective Basal Study. *Int J Cancer* 66, 145-150.
- Freudenheim J., Marshall J., Vena J., et al. 1996. Premenopausal Breast Cancer Risk and Intake of Vegetables, Fruits, and Related Nutrients. *J Natl Cancer Inst* 88, 340-348.
- Fuller C., Chandalla M., Garg A., et al. 1996. RRR-alpha-tocopheryl Acetate Supplementation at Pharmacologic Doses Decreases Low-density-Lipoprotein Oxidative Susceptibility but not Protein Glycation in Patients with Diabetes Mellitus. *Am J Clin Nutr* 63, 753-759.
- Heineke J.W. 1997. Pathways for Oxidation of Low Density Lipoprotein by Myeloperoxidase: Tyrosyl Radical, Reactive Aldehydes, Hypochlorous Acid and Molecular Chlorine. *Biofactors* 6, 145-155.
- Jialal I., Grundy S. 1992. Effect of Dietary Supplementation with Alpha-tocopherol on the Oxidative Modification of Low Density Lipoprotein. *J Lipid Res* 33, 899-906.
- Kamal-Eldin A., Appelqvist L.A. 1996. The Chemistry and Antioxidant Properties of Tocopherols and Tocotrienols. *Lipids* 31, 671-701.
- Kayden H., Traber M. 1993. Absorption, Lipoprotein Transport, and Regulation of Plasma Concentrations of Vitamin E in Humans. *J Lipid Res* 34, 358.
- Kritchevsky S., Shimakawa T., Tell G., et al. 1995. Dietary Antioxidants and Carotid Artery Wall Thickness. *Circulation* 92, 2142-2150.
- Kushi L., Fee R., Sellers T., et al. 1996. Intake of Vitamins A, C, and E and Postmenopausal Breast Cancer. *Am J Epidemiol* 144, 165-174.
- Lieber D.C., Burr J.A. 1992. Oxidation of Vitamin E During Iron-catalyzed Lipid Peroxidation: Evidence for Electron-Transfer Reactions of Tocopheroxyl Radical. *Biochemistry* 31, 8278-8284.
- Meneghini R. 1997. Iron homeostasis, oxidative stress, and DNA damage. *Free Radical Biol Med* 23, 783-792.
- Reaven P.D., Herold D., Barnett J., et al. 1995. Effects of Vitamin E on Susceptibility of Low-Density Lipoprotein and Low-density Lipoprotein Subfractions to Oxidation and on Protein Glycation in NIDDM. *Diabetes Care* 18, 807-816.
- Rimm E., Stampfer M., Ascherio A., et al. 1993. Vitamin E Consumption and the Risk of Coronary Heart Disease in Men. *New Engl J Med* 328, 1450-1456.
- Rouhianen P., Rouhianen H., Salonen J. 1996. Association Between Low Plasma Vitamin E Concentration and Progression of Early Cortical Lens Opacities. *Am J Epidemiol* 144, 496-500.
- Sies H., Stahl W. 1995. Vitamins E and C, Beta-Carotene, and Other Carotenoids as Antioxidants. *Am J Clin Nutr* 62, 1315-1321.
- Stampfer M., Hennekens C., Manson J., et al. 1993. Vitamin E Consumption and the Risk of Coronary Disease in Women. *New Engl J Med* 328, 1444-1449.
- Steinberg D. 1997. Oxidative modification of LDL and atherogenesis. *Circulation* 95, 1062-1071.
- Stephens N., Parsons, Schofield P., et al. 1996. Randomised Controlled Trial of Vitamin E in Patients with Coronary Disease: Cambridge Heart Antioxidant Study. *Lancet* 347, 781-785.
- The Alpha-Tocopherol, Beta-Carotene Cancer Prevention Study Group. 1994. The Effect of Vitamin E and Beta-Carotene on the Incidence of Lung Cancer and Other Cancers in Male Smokers. *New Engl J Med* 330, 1029-1035.
- Thomas S., Neuzil J., Mohr D., et al. 1995. Coantioxidants Make Alpha-tocopherol an Efficient Antioxidant for Low-density Lipoprotein. *Am J Clin Nutr* 62, 1357-1364.
- Traber M.G. 1997. *Adv Pharmacol* 38, 49-63.
- Willet W.C. 1997. Potential benefits of preventive nutrition strategies in *Preventive Nutrition*. Totowa, NJ: Humana Press.
- Yong L.C., Brown C.C., Schatzkin A., et al. 1997. Intake of Vitamins E, C, and A and Risk of Lung Cancer: The NHANES I Epidemiologic Follow-up Study. *Am J Epidemiology* 146, 231-243.
- Zhang D., Okada S., Yu Y., et al. 1997. Vitamin E Inhibits Apoptosis, DNA Modification, and Cancer Incidence Induced by Iron-Mediated Peroxidation in Wistar Rat Kidney. *Cancer Res* 57, 2410-2414.
- Zheng W., Sellers T., Doyle T., et al. 1995. Retinol, Antioxidant Vitamins, and Cancers of the Upper Digestive Tract in a Prospective Cohort Study of Postmenopausal Women. *Am J Epidemiology* 142, 955-960.

