



# FAST FACTS ABOUT VITAMIN E PLUS

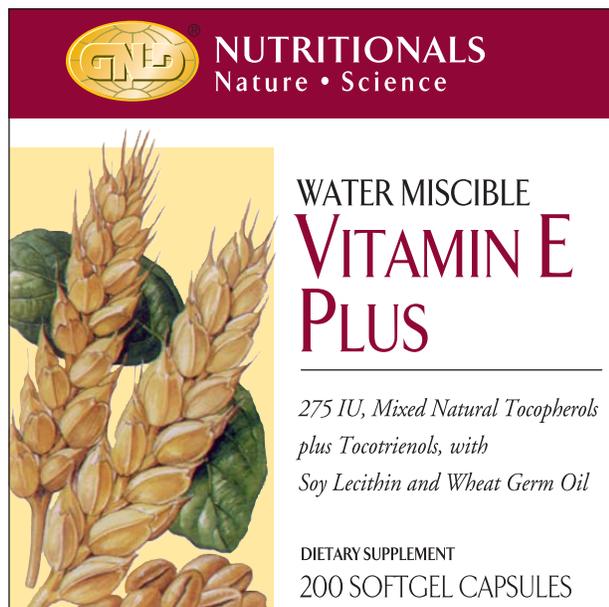
Nature's "master antioxidant" and an essential nutrient, vitamin E supports overall health and vitality. Research especially links higher vitamin E levels with strengthened immunity and cardiovascular health. GNLD's Vitamin E Plus is more than just alpha-tocopherol: It provides balanced ratios of the entire vitamin E family of tocopherols and tocotrienols as they exist in whole foods. Its water-miscible foundation is pure, cold-pressed wheat germ oil with lecithin, a natural emulsifier.

## WHY VITAMIN E?

- As an **antioxidant**, it protects cell membranes from free radical attack.
- As an **essential nutrient**, it is required to promote and maintain good health.
- Supplementation at 200-800 I.U. daily may **dramatically reduce your risk of heart disease**.
- Vitamin E may **help boost immunity**.

## WHY GNLD VITAMIN E PLUS?

- **Features the entire vitamin E family from whole-food sources.** Vitamin E Plus provides the entire vitamin E family of tocopherols and tocotrienols — not just alpha-tocopherol — in balanced ratios that occur in natural foods.
- **A foundation of pure wheat germ oil.** Cold-pressed, unrefined wheat germ oil is the product base.
- **High-potency.** Delivers 275 I.U. alpha-tocopherol plus 50 mg of non-alpha-tocopherol family members per capsule.
- **Water-miscible for improved absorption.** GNLD's water-miscible formulation quickly disperses into small particles that are easily absorbed.
- **Soft-gel capsules dissolve quickly.**
- **Only 10 calories per capsule.** Provides nutrient density without excessive calories.



## Supplement Facts

Serving Size 2 Capsules  
Servings Per Container 100

Amount Per Serving	% Daily Value	
Calories	20	
Calories from Fat	18	
Total Fat	2 g	3%*
Saturated Fat	0 g	†
Vitamin E (d-alpha-tocopherol)	550 IU	1833%
Wheat Germ Oil	550 mg	†
Mixed non-alpha tocopherols	100 mg	†

\* Percent Daily Values are based on a 2,000 calorie diet  
† Daily Value not established

Other ingredients: Gelatin, sorbitan monooleate, glycerin, soy lecithin, water, rice bran oil and apple pectin.



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## SUGGESTED USE: 1 or 2 capsules daily.

Vitamin E strengthens immune response and promotes cardiovascular health. Tocopherols and tocotrienols provide important antioxidant activity throughout the body.\*

\* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

100% food sourced components provide the complete vitamin E spectrum as found in nature. By combining cold pressed, unrefined wheat germ oil with high potency soy lipid extracts, Vitamin E Plus provides all four tocopherols and all four tocotrienols of the vitamin E family.

GNLD's breakthrough water miscible technology, derived from a unique blend of components, including apple pectin and lecithin, encourages faster, more efficient absorption of vitamin E.

Store in a cool, dry place, away from direct sunlight. Packaged with safety seal.

NOT SOLD IN RETAIL STORES  
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# THE VITAMIN E PLUS STORY

## VITAMIN E: NATURE'S MASTER ANTIOXIDANT

Vitamin E, a fat-soluble nutrient, has been referred to as “nature’s master antioxidant.” It protects cell membranes from damaging attack by highly reactive chemicals called free radicals. The vitamin E family includes d-alpha-tocopherol, its most common member, plus seven other substances which also have vitamin E activity. Vitamin E is found in vegetable oils, seeds, and cereal grains, but wheat germ oil is its richest natural source.

Research suggests that vitamin E may slow or prevent the onset of several major diseases linked to free-radical damage, including cancer, atherosclerosis, cataracts, and diabetes. Science also demonstrates possible roles for vitamin E in improving circulation, slowing the aging process, improving energy levels and physical endurance, enhancing the capacity to heal, and protecting the body against pollutants.

In 1996, vitamin E research exploded with the publication of several studies indicating that this nutrient may help prevent heart disease. The amounts of vitamin E shown in research studies to help prevent heart disease were far in excess of what anyone could get from diet alone. For instance, one study found that vitamin E at 400 I.U., but not at lower levels, reduced the oxidation of LDL cholesterol (so-called “bad” cholesterol). According to the American Heart Association, vitamin E — either in supplements or in food — appears to prevent coronary heart disease, which results when fatty plaque clogs the arteries feeding the heart. One study found that vitamin E supplements reduced heart attacks by 75%.

## “THE SEX VITAMIN” GAINS RESPECTABILITY

In 1922, Herbert Evans and Katherine Bishop of the University of California, Berkeley, discovered a substance in lettuce that prevented fetal resorption in rats, thus demonstrating that the substance was necessary for reproduction in these animals. The substance was isolated from wheat germ oil in 1936 and dubbed “tocopherol” from the Greek words *tokos* (childbirth) and *phero* (to bring forth). The suffix *-ol* denotes the chemical structure of the molecule. Its structure was determined in 1938, and it was synthesized shortly thereafter. Based on the reverse logic that if its deficiency caused sterility, vitamin E was initially suggested to be an aphrodisiac and a cure for impotence — claims which remain unsubstantiated but which earned the substance its reputation as “the sex vitamin.”

Early research focused on vitamin E deficiencies. A long-term study of the effects of vitamin E-deficient diets sponsored by the U.S. National Research Council led to official recognition of the nutrient as an essential vitamin in 1968. This type of study is the only way to “prove” a nutrient is indeed a vitamin — that is, an organic substance which the body cannot make itself but which is required in small

amounts for normal physiological functions. Deficiency of vitamin E does not produce disease as quickly as do the deficiencies leading to scurvy (vitamin C), beriberi (thiamin), pellagra (niacin), rickets (vitamin D), or xerophthalmia (vitamin A); the symptoms of vitamin E deficiency take years to develop and show up most prominently in the muscles, blood vessels, reproductive organs, liver, kidneys, eyes, and nervous system.

## HOW DOES VITAMIN E WORK?

Most vitamins are cofactors for enzymes, so how much you need depends on how much enzyme is present in your body. Unlike other vitamins, vitamin E is not a cofactor for enzymes; its main function is that of an antioxidant. How much you need depends on your *oxidative stress status*, which is determined by your metabolic rate, lifestyle, diet, and health.

Vitamin E is a versatile actor, performing several key roles:

- **Protects cell membranes.** Through its antioxidant action, vitamin E protects cells from free radical attack. Free radicals can damage cellular lipids, proteins, and DNA, altering responses to hormones and neurotransmitters, producing mutations that can lead to cancer, and inactivating enzymes and other proteins. The unsaturated fatty acids that are the major building blocks of all cell membranes are especially vulnerable to free radical attack. Antioxidants minimize damage by 1) mopping up free radicals before they can damage the body’s building blocks, and 2) interrupting chain reactions of free radical damage after they have begun.
- **Stimulates the immune response.** Studies have shown fewer infections when vitamin E levels are high. In addition, vitamin E enhances the immune response, which may aid the body’s ability to fight cancer. The exact mechanism by which vitamin E boosts the body’s defenses remains unknown.
- **Regulates prostaglandins.** Prostaglandins are natural biochemicals formed in the body that constrict smooth muscles in various organs and play a role in blood platelet clumping. Research has shown beneficial effects of vitamin E in inflammation, premenstrual syndrome, nocturnal leg cramps, and blood clotting.
- **Inhibits carcinogen formation.** Nitrites in smoked, pickled, and cured foods can react in the gastrointestinal tract to form cancer-causing nitrosamines. Vitamin E directly blocks this chemical conversion.
- **Regulates metabolism.** Vitamin E plays a role in the metabolism of nucleic acids (the building blocks of DNA) and proteins and in the production of cellular energy and hormones.
- **Interacts with other key nutrients in biologically important ways.** Vitamin E spares selenium and protects vitamin A and beta-carotene from destruction in the body.



Vitamin E and beta-carotene each enhance absorption of the other. Vitamin E is protected by vitamin C.

The fact that all the vitamin E family members exist in nature and in the human food chain suggests that collectively they play a role in our biochemistry. Each family member has distinct talents, protecting cells in different ways. While alpha-tocopherol is best at preventing sterility in rats, delta-tocopherol is best at protecting fats from oxidation. Tocotrienols, in turn, possess very strong antioxidant, anti-tumor, anti-inflammatory, and cholesterol-lowering properties. In the body, they also help recycle other antioxidants, such as alpha-tocopherol, vitamin C, and glutathione, and are especially good at protecting the brain and liver.

## DEFENDING YOUR CELLS FROM FREE RADICAL ATTACK

Just as vitamin C and flavonoids protect the watery regions of cells from oxidative damage, the vitamin E family and carotenoids similarly defend their fatty regions, particularly the membranes through which cells absorb nutrients and excrete wastes. Cells with compromised membranes become “sluggish.” Sluggish cells are unable to efficiently produce energy for life or perform their other specialized jobs.

Oxidation is the chemical reaction that provides energy for cells to perform their vital functions. But it can also cause destruction, examples of which can be seen in rusting iron or rancid butter. Free radicals are formed as byproducts of oxidation. They are also created by sunlight, radiation, cigarette smoke, smog, heavy metals, ozone, organic solvents, pesticides, herbicides, food additives, and many drugs. Antioxidants destroy free radicals but are themselves destroyed in the process, so they must constantly be replenished.

As long as the body has abundant antioxidants, free radicals are held in check. But when the antioxidant defense team becomes overwhelmed, free radicals can initiate chain reactions that harm and even destroy cells. Current research findings support a role for vitamin E in preventing or minimizing free radical damage associated with:

- cardiovascular disease
- circulatory disorders
- cancer (skin, breast, mouth, throat, esophagus, stomach, colon, rectum, cervix, lung)
- neurologic disorders
- immune system dysfunctions
- cataracts
- arthritis
- premature aging
- strenuous exercise
- air pollution

## HOW MUCH VITAMIN E DO I NEED?

How much vitamin E you need depends on if your primary goal is 1) to prevent deficiency symptoms or 2) to hinder oxidation of lipids, lessen free radical damage, and promote optimal health. While daily intake of 15-48 I.U. will keep vitamin E levels in the normal range, growing scientific evidence indicates that the U.S. Recommended Daily Allowance (RDA) of 30 I.U. is too low to defend the body from free radicals and oxidants or confer the maximum health benefit. Many scientists now believe the Optimal Daily Intake (ODI) for vitamin E is likely in the range of 100-400 I.U. per day for healthy people. In addition, illness, medications, exercise, and pollution can all increase the body's vitamin E requirements. Vitamin E intakes of up to 100 times the U.S. RDA have shown no toxic response. Vitamin E is especially important in tissues having high levels of polyunsaturated fatty acids (brain and nerves) and those in contact with oxygen (lungs).

## HOW MUCH VITAMIN E DO I ACTUALLY GET?

It's nearly impossible to get all the vitamin E you need from just the foods you eat. Even from the richest vitamin E sources, to get the RDA (30 I.U.) you'd have to eat:

FOOD	AMOUNT NEEDED	CALORIES
Wheat germ oil	1 tablespoon	124 calories
Sunflower seeds	1.5 ounces	240 calories
Spinach	2.5 pounds	297 calories
Sunflower oil	3 tablespoons	371 calories
Safflower oil	3.5 tablespoons	433 calories
Almonds	3 ounces	513 calories
Mayonnaise	11 tablespoons	600 calories
Wheat germ	6 ounces	670 calories
Peanut oil	8 tablespoons	990 calories
Broccoli	8.5 pounds	1,010 calories
Brown rice (boiled)	2.25 pounds	1,224 calories
Margarine (stick)	7 ounces	1,224 calories
Margarine (soft)	6 ounces	1,228 calories
Peanuts (dry roasted)	10 ounces	1,671 calories
Peanut butter	12 ounces	2,036 calories
Soybean oil	13 ounces	3,283 calories
Shrimp (baked)	7.5 pounds	3,394 calories
Peas	8 pounds	4,206 calories
Butter	2 pounds	6,546 calories
Whole wheat bread	124 slices	6,870 calories
Beef liver (broiled)	7 pounds	6,966 calories
Eggs	8 dozen	7,238 calories
Bacon	10 pounds	26,286 calories



A quick look at the calorie counts indicates that if you tried to get your vitamin E from foods alone, you'd take in far too many calories in general and fat calories in particular.

Supplements are an ideal solution, and GNLD's are the finest because they deliver the nutrient density and diversity of whole, natural foods.

## VITAMIN E PLUS: A BETTER VITAMIN E BY GNLD

GNLD's Scientific Advisory Board was instrumental in bringing you the finest vitamin E supplement on the market. Their expertise supports all GNLD products, including Vitamin E Plus, a truly superior product with several important advantages:

**The complete vitamin E family of mixed tocopherols and tocotrienols as they exist in natural foods.** GNLD is committed to providing nutrients in forms found in nature. In the human food chain, alpha-tocopherol never exists alone. Unfortunately, that's how it exists in most supplements. In nature, alpha-tocopherol is found with the other members of the vitamin E family — beta, gamma, and delta tocopherols and alpha, beta, gamma, and delta tocotrienols. And that's how you find it in our supplements, which are derived from whole foods. The result is a supplement that provides a diversity of nutrients in natural ratios and more complete protection than you could get with alpha-tocopherol alone.

**A foundation of pure wheat germ oil.** Whereas synthetic vitamin E is produced from petrochemicals, GNLD's natural vitamin E supplement is made with pure wheat germ oil as the foundation ingredient. Since wheat germ oil provides the nutrient diversity of all eight members of the vitamin E family and is an excellent source of alpha-tocopherol, it is the perfect starting material for a supplement. Unrefined wheat germ is cold-pressed to make a pure oil base into which is added a high-potency soybean extract of mixed tocopherols and tocotrienols and a pure, natural alpha-tocopherol concentrate. Cold processing and state-of-the-art lipid extraction techniques maximize freshness and potency.

**Potent, all-natural alpha-tocopherol concentrate optimizes delivery to cells.** Our 100% natural alpha-tocopherol concentrate provides 275 I.U. of quality vitamin E in every capsule. This high-purity, high-potency supplement gives your cells vitamin E in a form they can easily absorb and utilize.

**Soybean concentrates boost nutrient density.** To provide more of the non-alpha-tocopherol family members (mixed tocopherols and tocotrienols) than can be found in wheat germ oil alone, GNLD's vitamin E supplements also include soybean extracts. Boosting the amount of non-alpha-tocopherol family members (50 mg in each capsule) provides nutrient density as well as diversity.

**Water-miscible for improved absorption.** Formulated for water-miscibility, GNLD's pure wheat germ oil carrier breaks down into small particles that are easily absorbed. Lecithin, a natural emulsifier, is included for better dispersion.

## VITAMIN E PLUS FOR BIOCOMPATIBILITY

How can you tell if a vitamin E supplement is natural or synthetic? Look at the product label: If it says d-alpha-tocopherol, it's natural, but if it says dl-alpha tocopherol, it's synthetic (made in the laboratory from petrochemical-source materials).

Natural vitamin E is more biologically potent than synthetic forms. Chemical synthesis of vitamin E produces several substances, only one of which is d-alpha-tocopherol, the most well-known vitamin E family member. The other substances all have lower biological activities. In total, the biological activity of synthetic vitamin E is about *half* that of natural alpha-tocopherol. The bottom line? Synthetic supplements give your body substances it can't utilize fully.

Not only is natural vitamin E stronger — the body favors it! Studies show that **given a choice of natural or synthetic vitamin E, the lungs, red blood cells, blood plasma, and brain all preferentially take up natural-source vitamin E.** Nonetheless, as the synthetic form is a lot cheaper, many manufacturers use the petrochemical source material. With GNLD's premium Vitamin E Plus, on the other hand, rest assured that you're getting unequaled nutrient density and diversity in a form your body can use to its best advantage. Ours is the most complete natural vitamin E product available anywhere!