

# Nature's Wisdom Magazine

natural health, spirituality, & environmental awareness

## Archives

### **Vitamins C & E: Antioxidant Partners Two Letters You Want In Your Vitamin Cupboard**

Discourse by Herbalist Carol Gardner

*How do these two important vitamins work together synergistically, as powerful antioxidant immune boosters?*

*More importantly, what foods will give you your daily share of Vitamins C & E?*

Vitamin C and vitamin E work as antioxidant partners in the body and thus serve as two of the body's main defenders against oxidative damage. Vitamin C is a water-soluble vitamin, while vitamin E is a fat-soluble vitamin. In the blood, vitamin C protects sensitive blood components from oxidation and helps to protect and recycle vitamin E. Vitamin E, by being oxidized itself, protects the polyunsaturated fats and other vulnerable components of the cells and their membranes from destruction.

Both vitamins C and E are important to immune function. Vitamin E not only protects the thymus gland and circulating white blood cells from damage, but also is particularly important in protecting the immune system from damage during times of oxidative stress and chronic viral illnesses. Vitamin C affects various immune functions by enhancing white blood cell function and activity, and increasing interferon levels (the body's natural antiviral and anticancer compound), antibody responses, and antibody levels.

During times of chemical, emotional, psychological, or physiological stress, the urinary system excretes vitamin C at a significantly increased rate, thereby elevating the body's need for vitamin C during these times. Extra vitamin C, in the form of supplementation, or increased intake of vitamin C-rich foods, is often recommended to keep the immune system working properly during times of stress.

Vitamin E's antioxidant effect is crucial in the lungs, where the cells are exposed to high oxygen concentrations that can destroy molecules in their membranes. As the red blood cells carry oxygen from the lungs to other tissues, vitamin E protects their cell membranes, too. Normal nerve development depends on vitamin E. Vitamin E also protects the white blood cells that defend the body against disease. Supplementation in the elderly has been found to improve the immune response.

Numerous experimental, clinical, and population studies show that vitamin C intake benefits the body in many ways, including reducing cancer rates, boosting immunity, protecting against pollution and cigarette smoke, enhancing wound repair, increasing life expectancy, and reducing the risk for cataracts. Research indicates vitamin C is also useful in many health conditions as a result of its antioxidant and immune-enhancing properties. Some of the major conditions where vitamin C is of value are in asthma, auto-immune disorders, cancer, high blood pressure, wound healing, rheumatoid arthritis, as well as the common cold. The adult intake recommendation for vitamin C is 90 milligrams for men and 75 milligrams for women. Of course, those under stress or those who smoke should raise these recommendations to 125 milligrams for men and 110 milligrams for women.

The principle use of vitamin E is as an antioxidant in the protection against heart disease, cancer and strokes- the three leading killers of Americans. In addition, vitamin E supplementation is useful in a long list of other health conditions, particularly cardiovascular disease, diabetes, menopausal symptoms, acne, Parkinson's disease, auto-immune disorders, eczema, PMS and wound healing. Typical dosage for vitamin E for general and therapeutic purposes is 400 to 800 I.U. per day. However, dosages greater than 400 I.U. probably aren't necessary in most people who are already taking a high-potency multiple vitamin and extra vitamin C.

While most people think of citrus fruits as the best source of vitamin C, vegetables also contain high levels, especially broccoli, peppers, potatoes, and brussels sprouts. The best sources of vitamin E are polyunsaturated vegetable oils, seeds, nuts, wheat germ, and whole grains.

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