

Vitamin C (Item 5056)

Balanced Complex with Flavonoids

Vitamins are elements in food that are essential to health. Vitamin C is the most widely consumed nutritional supplement in the world, more than any other vitamin, mineral or herbal product. It is one of the most important water-soluble vitamins.

Universal Formulas' Vitamin C contains only pure, crystalline vitamin C, without added cornstarch, magnesium stearate, or other diluters or lubricants that are typically used by other companies. What is especially useful about our vitamin C is the 50:50 ratio of whole-food ingredients that are not only vitamin C sources, but also act as flavonoids. Flavonoids assist with absorption and enhance antioxidant benefits... Among others, the major flavonoid ingredients we include are Hesperidin, Rutin and Rose-hips.

Hesperidin is a flavonoid abundant in citrus fruits that may support the proper functioning of capillaries and the integrity of blood vessels. Hesperidin seems to work by improving venous tone, reducing stasis (stagnation of fluids in the body), restoring normal capillary permeability, and improving lymphatic drainage. Hesperidin appears to have anti-inflammation, antioxidant, and analgesic effects.

Rutin is a 'radical scavenger,' as well as an antioxidant and plays an important role in inhibiting some cancers. Rutin also strengthens the capillaries and reduces the risk of heart disease. In general, Rutin may help reduce inflammation, which is a common symptom of malnutrition and poor balance in the body.

Rose-hips are one of the richest plant sources of vitamin C, also containing vitamins A, D, and E, in addition to antioxidant flavonoids.

Also known as ascorbate or ascorbic acid, Vitamin C is often used for helping wounds heal and in skin health products. This is because vitamin C is required for synthesis of the most common protein and the main protein in mammalian bones, cartilage and skin, called collagen.

Ascorbic acid is one of the anti-oxidants essential to preventing cell damage and maintaining a stress-free environment inside the cell of any organism. Though vitamin C is an essential part of bodily functions, the human body and certain other animals do not produce this nutrient (whereas the rest of the animal kingdom does).

Most of us can get some vitamin C intake from our diets. For humans, in addition to fruit, some vegetables and cuts of meat and fish offer vitamin C. The muscle and fat that comprises meat sold in most modern Western markets are, however, poor sources of vitamin C. The heat from cooking meat degrades its vitamin C potency. Similarly, un-pasteurized milk contains vitamin C, while pasteurized milk does not. Vitamin C is a fairly "fragile" vitamin and can be easily destroyed by cooking or exposure to oxygen. Raw fruits and vegetables are a rich source of this essential vitamin.

Vitamin C is a water-soluble nutrient that resides and functions in the watery-compartments of the body's blood and cells. Parts of the body that have the highest percentages of vitamin C are: the adrenal glands, the pituitary gland, the brain, the thymus, the corpus luteum (an endocrine structure involved in pregnancy) and the retina (the 'seeing' part of the eye). No bodily organ stores ascorbate as a primary function, so the body soon depletes itself of it if fresh supplies are not continuously consumed. Vitamin C depletion can eventually lead to scurvy and, if unresolved, death. The term 'ascorbic acid' comes from *a-* and *scorbuticus* (Scurvy), which more or less translates into 'without-scurvy.' Some symptoms of scurvy are: the formation of liver spots on the skin (mostly on thighs and legs), spongy gums, bleeding from all mucous membranes, pale complexion, depression and partial immobilization.

Each person's demand for this essential vitamin is respective to his/her individual needs. People who smoke, for example, or, women in pregnancy have a slightly higher requirement. This is also the case for people who are under stress, whether it is a chemical, emotional, psychological or physiological stress. Trauma or injury has been demonstrated to use up large quantities of vitamin C.

¹ Other examples of such stresses are: estrogen and birth control pill use, diabetes and aspirin use. ²

Infection decreases concentrations of vitamin C in white blood cells (part of the immune system), especially in the lymphocytes, which play an important part in defending the body from infection. Vitamin C may affect various immune functions, in addition to having some antiviral and anti-cancer effects.³ Splitting up a days' dosage of vitamin C into several doses may be of the best benefit, since vitamin C moves so quickly through the body.

Vitamin C may help people who are exposed to brief periods of severe physical exercise and/or cold environments. It also shows a consistent benefit in reducing the duration and severity of colds, demonstrating that vitamin C plays a role in respiratory defense mechanisms.⁴ Vitamin C may strengthen cell membranes, thereby helping to prevent viral entry into the cell, which may help in fighting infections during their early stages.⁵ For example, studies have shown an 80% reduction in pneumonia occurrence amongst people who take vitamin C as opposed to those who don't.⁶

Vitamin C and vitamin E form a partnership in antioxidant activity. While vitamin E often acts as the primary antioxidant, vitamin C assists in the effective recycling of vitamin E. Vitamin C will help vitamin E to regenerate after its action as an antioxidant, allowing it to serve again in antioxidant activity.

It is said that, even though vitamin C and vitamin E work closely together in the body, taking them at different times might be most beneficial due to their respective compositions...Because vitamin C is a water-soluble acid, it may wash the fat-soluble vitamin E from the body before it has a chance to actuate (because lipid-soluble compositions take longer to absorb). If you are supplementing with both of these vitamins, you may want to experiment with taking them at the same time versus taking them at opposite times of the day, in order to observe any differences in effectiveness.

Ordering Information

Vitamin C (*Item #5056*) 100 Tablets

Conveniently Order On-line at: <http://UniversalFormulas.com>

NOTE: Thanks to Ralf Ostertag for his input into the authorship of this factoid and formula. Ralf is a founding member of Universal Formulas and remains active on its Advisory Board.

**Please DO NOT modify levels of any prescribed medication
without first consulting your physician.**

Required FDA Statement:

The FDA has not evaluated these statements. This product is not intended to diagnose or treat any disease nor is this information intended to prescribe or diagnose in any way. Those who are sick should see a doctor. Neither the authors nor the owner directly or indirectly dispense medical advice or prescribe the use of these products as a form of treatment.

-----SOURCES-----

1. *Ascorbic acid dynamics in the seriously ill and injured.* Journal of Surgical Research, Volume 109, Issue 2, Pages 144-148 C. Long. - "Our results show that plasma ascorbic acid levels following trauma and during infection are extremely low and are not normalized with 300 or even 1000 mg/day supplemented TPN." Accessed January 2007
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3. Bendich A, Vitamin C and immune responses. *Food Technology* **41**, 112-114, 1987
4. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15495002&query_hl=8&itool=pubmed_docsum
5. <http://www.supplementwatch.com/suplib/supplement.asp?DocId=1278&templateId=100>
6. [Supplementwatch.com](http://www.supplementwatch.com) Vitamin C - Scientific Support Section - "At least 3 controlled studies have shown an 80% reduction in the incidence of pneumonia among vitamin C users. In one large study (over 700 students), vitamin C (1000 mg per hour for the first 6 hours followed by 3000 mg per day), reduced cold and flu symptoms by 85%." Accessed February 2007.

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