

INTERESTING FACTS ABOUT VITAMIN C

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Vitamin C is arguably the most well known of all the vitamins. It is a nutrient required for at least 300 metabolic functions in the body. It plays a vital role in tissue growth and repair, and protecting the body from pollution and harmful substances called free radicals. Learn more about the significance vitamin C plays in the overall health of humans, along with some other important and interesting facts.

To understand vitamin C, we first need some information on vitamins in general. The word vitamin is derived from the combination of words: *vital amine*. Vitamins are organic (carbon containing) molecules that mainly function as catalysts for reactions within the body. A catalyst is a substance that allows a chemical reaction to occur using less energy and less time than it would take under normal conditions. If these catalysts are missing, as in a vitamin deficiency, normal body functions can break down and make a person susceptible to disease.



Vitamin C is also known as *ascorbic acid*, due to its acidic nature. A deficiency in vitamin C causes the disease Scurvy which results in bleeding and inflamed gums, loose teeth, poor wound healing, easy bruising, pain in the joints, muscle wasting, and many other problems. Scurvy is rarely seen today except in alcoholics and in those who are severely malnourished. In the late 1700's, the British Navy recognized that a diet of fresh fruits and vegetables helped to prevent Scurvy. The navy men were ever after nicknamed "Limeys" because they took limejuice on long sea voyages to ward off Scurvy.

Today, vitamin C is most commonly taken in supplemental form to fight and protect against the common cold. It has long been believed that it supports the body's response to infection. There is some scientific evidence that suggests vitamin C is associated with a reduced incidence of the common cold, and a shortened duration and decreased severity of cold symptoms in certain populations. It is thought that vitamin C suppresses virus growth and stimulates the activity of white blood cells involved in fighting infection. A scientifically known function of vitamin C is the important role it plays in collagen production and tissue repair. Collagen is the building foundation of all tissues. Different types of collagen are found everywhere in the human body. Without vitamin C, collagen formation is disrupted, which can lead to a wide variety of structural and functional problems. Vitamin C is therefore crucial for normal growth and development, healthy skin, healing, and the repairing of wounds.

Vitamin C is also classified as a nutrient with antioxidant properties. Antioxidants are natural compounds that help protect the body from harmful free radicals. Free radicals damage the DNA in the tissues of our body, which can cause accelerated aging, clotting, inflammation, cancer, weight gain, and decreased resistance to bacteria and viruses. Other valuable roles of vitamin C include optimal adrenal gland

function, regulation of cholesterol metabolism, bile production for proper digestion, and hormone production, especially during times of high stress and/or inflammation.

It is interesting to note that humans, along with primates, and guinea pigs do not have the ability to produce their own vitamin C. Therefore we have to rely on the dietary intake of this nutrient to meet our daily requirements. The recommended dietary allowance (RDA) for vitamin C is 60 to 90 milligrams (mg) per day. An abundance of vitamin C is found in apples, berries, and citrus fruits such as oranges, limes, lemons and grapefruit, and vegetables including, green peppers, broccoli, spinach, brussel sprouts, and cauliflower. Generally speaking, all vitamins appear to be more effective when the source is whole foods rather than supplement forms due to the synergistic natural nutrients found in whole foods. For maximum effectiveness and tolerance, supplemental vitamin C should be taken in divided doses in an ester or buffered form. Having the vitamin C combined with a necessary mineral such as calcium, magnesium, potassium, or zinc creates ester and buffered forms. This minimizes gastrointestinal irritation and enhances the absorption of vitamin C in the tissues of the body.

Vitamin C is a water-soluble vitamin, which means that excessive amounts are simply excreted in the urine and are not usually associated with toxicity. Each individual's tolerance to excessive vitamin C intake will be different, but it appears that the most serious consequence of megadosing may be minor gastrointestinal irritation and diarrhea. Daily intake above 2,000 mg is not recommended for pregnant and nursing females. Alcohol, analgesics, antidepressants, anticoagulants, and oral contraceptives, may reduce the levels of vitamin C in the body. Smoking causes a drastic reduction of vitamin C. With vitamin C supplementation, those taking prescription medications should exercise special caution, as vitamin C can interfere with the effectiveness of certain medications. Taking high doses of vitamin C may also interfere with the results of some blood tests.

Vitamin C is an essential nutrient that our bodies need for good health. Ongoing research is attempting to reveal new and exciting possibilities for the role of vitamin C in fighting diseases and illnesses such as cancer, asthma, and diabetes. In the meantime, stick to those fruits and vegetables to keep you healthy and strong!

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