COMPLETE C

Vitamin C, also known as ascorbic acid, is one of the water soluble vitamins. It is an essential nutrient and as such must be obtained from the diet. Some ascorbic acid is stored in the body, concentrated in organs with higher metabolic activity such as the adrenal glands, pituitary gland, brain, eyes, ovaries and testes. A dietary intake of vitamin C is needed to maintain these body stores as well as prevent deficiency and disruption to normal body functions.

Citrus fruits, papaya and strawberries contain the highest natural concentrations of vitamin C. Good vegetables sources include red and green peepers, broccoli, brussels sprouts, tomatoes, asparagus, cabbage and dark green leafy vegetables. Whole grains, seeds and beans do not contain much vitamin C. However, when these are sprouted, their vitamin C content increases.

Vitamin C has many functions. It is involved in the formation and maintenance of collagen, the basis of connective tissue, which is found in skin, ligaments, cartilage, vertebral discs, bones and teeth. Collagen gives support and shape to the body. Vitamin C aids wound healing and burns by facilitating the formation of connective tissue in scars.

An antioxidant nutrient, vitamin C helps protect the body from the harmful effects of free radicals. These are unstable compounds produced by our body that are capable of damaging tissues. It may also play a role in protecting vitamins A and E and some of the B vitamins from oxidation.

Vitamin C stimulates adrenal function and the release of the adrenal hormones adrenaline and noradrenaline, which help the body cope with stress.

Vitamin C may help prevent and treat infections and other diseases through its action as an antioxidant and its ability to stimulate the immune system. Ascorbic acid may activate specific white blood cells that aid antibody production and coordinate cellular immune functions.

Requirements for vitamin C are increased by stress, smoking, alcohol, allergies and antibiotics; in the elderly, diabetics and women using the oral contraceptive pill.

ASCORBIC ACID This is the form in which vitamin C is found in nature and the term is interchangeable with vitamin C. It is the most easily absorbed form of vitamin C.

<u>CALCIUM ASCORBATE</u> A non-acidic form of vitamin C that also contains absorbable calcium. Being non-acidic, this form is gentle on the stomach.

SODIUM ASCORBATE Another non-acidic form of vitamin C that is gentle on the stomach.

ROSEHIPS One of the best natural sources of vitamin C available.

BIOFLAVONOIDS Including rutin, hesperidin and quercetin, bioflavonoids are water soluble

Complete C Complex 1/2

Nutritional information contained here is based on research literature and published knowledge on nutrition. Any nutritional suggestions should not be taken as medical advice.

companions of ascorbic acid which are usually found in the same foods. Bioflavonoids increase the absorption of vitamin C as well as protect it from oxidation. They increase the strength of capillaries, helping to prevent bruising caused by the rupturing of these.

Quercetin has been shown to decrease allergic reactions and inhibit inflammatory substances. It has been used in the treatment of injuries, bursitis, asthma, arthritis and eye disorders.

Researchers have discovered that plant flavanoids are extremely powerful anti-oxidants, some up to 50 times as strong as Vitamin E.

GRAPE SEED EXTRACT contains flavanoids and other compounds believed to be responsible for the 'French Paradox' (the apparent compatibility of a high fat diet with a low incidence of coronary atherosclerosis) as well as other vascular health improvements.

Directions: Adults - Take a maximum of $\frac{1}{2}$ - $\frac{3}{4}$ teaspoon 2 or 3 times a day in a glass of water or fruit juice, or as professionally prescribed. Because vitamin C is used by the body in about two hours, it is suggested that it is taken in divided doses throughout the day.

Cautions:

Do not take if pregnant or lactating. People with glucose-6-phosphate dehydrogenase deficiency, iron overload, history of kidney stones or kidney failure should consult their doctors before supplementing.

References:

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Vinson J., Bose P. 1988 Comparative availability to humans of ascorbic acid alone or in a citrus extract. American Journal of Clinical Nutrition, 4: 601.

Complete C Complex 2/2