



Vitamin C as an antioxidant

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Ascorbic acid, commonly known as vitamin C, is one of the basic and best-known compounds necessary for the proper functioning of the human body. It was described and isolated for the first time in 1928 by the Hungarian biochemist Albert Szent-Györgyi, who was awarded the Nobel Prize in 1937. The name 'ascorbic acid' refers to scurvy (scurbutus), as the deficiency of this compound was initially associated solely with the development of this disease .

- Vitamin C is an essential vitamin, meaning your body can't produce it.
- It's water-soluble and found in many fruits and vegetables, including oranges, strawberries, kiwi fruit, broccoli, and spinach.
- The recommended daily intake for vitamin C is 75 mg for women and 90 mg for men .
- Vitamin C is a powerful antioxidant that can strengthen your body's natural defenses .

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- Ascorbic acid is an organic compound belonging to the group of unsaturated polyhydroxy alcohols. It is a water-soluble ketolactone, whose center is formed by a five-membered carbon ring . Ascorbic acid has strong reducing properties, resulting from the presence of double bonds at the C2 and C3 carbons, as well as four hydroxyl groups in positions C2, C3, C5, and C6. Moreover, due to the proximity of the hydroxyl and carbonyl groups, ascorbic acid is an ideal hydrogen or electron donor, which makes it the cofactor of many enzymatic reactions in living organism .

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- Ascorbic acid is one of the basic low-molecular antioxidants functioning in the human body. It takes part in the regulation of the levels of reactive oxygen species (ROS) and the effectiveness of other antioxidants. Ascorbic acid regulates the level of ROS as early as at the stage of their formation.
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- Studies show that consuming more vitamin C can increase your blood antioxidant levels by up to 30%. This helps the body's natural defenses fight inflammation

- Vitamin C is a strong antioxidant that can boost your blood antioxidant levels. This may help reduce the risk of chronic diseases

- Historically, vitamin C was used for preventing and treating scurvy. Today, people most commonly use vitamin C for preventing and treating the common cold. Taking 1-3 grams of vitamin C by mouth might shorten the course of a cold by 1 to 1.5 days. Possibly Effective for Low levels of red blood cells in people with a long-term illness (anemia of chronic disease). Taking vitamin C supplements by mouth might help manage anemia in people undergoing dialysis. It's also used for breast cancer, heart disease and many other conditions.

- Possibly Effective for Recovery from laser skin therapy. Applying a skin cream containing vitamin C might decrease skin redness after laser skin therapy for scar and wrinkle removal.
- Possibly Effective for Airway infections caused by exercise. Taking vitamin C by mouth before heavy physical exercise, such as a marathon or army training, might prevent upper airway infections that can occur after heavy exercise.

THANK YOU