

LYCOPENE - POWER HOUSE OF NUTRIENTS

- Twice the antioxidant power of beta-carotene
- Helps protect skin from sun damage
- Reduces the risk of prostate cancer
- Boosts immunity

'REDDY' MADE FOR HUMAN BODIES

Lycopene, a carotenoid in the same family as beta-carotene, is what gives tomatoes, pink grapefruit, apricots, red oranges, watermelon, rosehips, and guava their red color. Lycopene is not merely a pigment. It is a powerful antioxidant that has been shown to neutralize free radicals, especially those derived from oxygen, thereby conferring protection against prostate cancer, breast cancer, atherosclerosis, and associated coronary artery disease. It reduces LDL (low-density lipoprotein) oxidation and helps reduce cholesterol levels in the blood. In addition, preliminary research suggests lycopene may reduce the risk of macular degenerative disease, serum lipid oxidation, and cancers of the lung, bladder, cervix, and skin. The chemical properties of lycopene responsible for these protective actions are well-documented.

PICK OF THE ANTIOXIDANT CROP

Antioxidants scavenge or quench unstable molecules called free radicals which are involved in the destruction of healthy body cells and have been linked to every degenerative disease known to man including cancer, arthritis, heart disease, cataracts, skin wrinkling and even the ageing process itself. Some free radicals are formed through normal metabolic processes, but our modern day free radical overload is the result of exposure to pollutants, cigarette smoke, pesticides on food, stress, radiation and many other everyday elements of environmental pollution. It is this free radical bombardment that has made antioxidants so important to our health and avoidance of disease, and which has made the antioxidant category the fastest growing in the natural health products market.

The antioxidant capabilities of lycopene have been found to be double that of beta-carotene, which was regarded as an antioxidant without peer. Lycopene is also the best quencher of a particular type of destructive free radical called singlet-oxygen¹. Unlike beta-carotene, lycopene has no pro-vitamin A activity, relying on a different mechanism for its outstanding antioxidant power. It is an oil based nutrient which may be useful in the prevention of lipid peroxidation, an event that significantly contributes to the build-up of fats in the bloodstream.

CANCER, THE PROSTATE & IMMUNITY

Studies conducted in Italy (where tomatoes are the second most important source of vitamin C) have provided evidence indicating that consumption of tomatoes is linked to a lower incidence of mortality from cancers of the digestive tract². Other research, conducted in the United States, has outlined the importance of lycopene levels to the health of the prostate gland and reduced risk of prostate cancer³. This study revealed that those men who ate more products containing tomato had a lower risk of developing prostate cancer than those who ate lesser amounts, even if other carotenoids (such as beta-carotene), were consumed.

Like other carotenoids, lycopene enhances general immunity and may be particularly effective in improving the action of T-cells and inhibiting the growth of cancerous tumours⁴.

SKIN-DEEP SUNSCREEN

The tomato uses lycopene to protect itself from burning as it ripens in the sun and we humans can benefit from it in a similar way. Lycopene reduces the damaging effects UV light can have on the skin and can boost protection against both the short term (sunburn), and cumulative effects of sun exposure (skin cancers). Once again, studies have shown that while UV light leaves skin beta-carotene levels unaffected, it significantly depletes lycopene levels, demonstrating that lycopene may be working to reduce UV induced skin damage⁵. Lycopene can never replace an SPF 15+ sunscreen but it can enhance a sunscreen's effect by providing a sun protection factor of between two and four from the inside⁶. Lycopene also improves 'safe tanning' by increasing the levels of melanin (our skin pigment), with and without sun exposure, and can extend the life of a tan. In France, the use of lycopene as an internal sun protecting and wrinkle preventing cosmetic agent is a \$25 million dollar a year business.

EXTRACTING THE BEST OF LYCOPENE

Like many important 'accessory' nutrients, no official recommended daily intake has been set for lycopene. However, research has indicated that to maintain optimum levels you need between three to six milligrams per day. If you were to eat one medium sized tomato (85g) each and every day you would receive around 4.25 milligrams of Lycopene provided the tomato was sun ripened and not picked green then ripened in a store.



Approximate Lycopene Content in Tomato & Tomato based Products*	
PRODUCT	LYCOPENE CONTENT (mg/100g wet weight)
Tomatoes, Fresh	0.88-4.20
Tomatoes, Cooked	3.70
Tomato Sauce	6.20
Tomato Paste**	5.40-150.00
Tomato Soup, condensed	7.99
Tomato Juice	5.00-11.60

** P & R Tomato Paste: 50mg./100gms.

Research shows that lycopene can be absorbed more efficiently by the body after it has been processed into juice, sauce, paste, or ketchup. In fresh fruit, lycopene is enclosed in the fruit tissue. Therefore, only a portion of the lycopene that is present in fresh fruit is absorbed. Processing fruit makes the lycopene more bioavailable by increasing the surface area available for digestion. More significantly, the chemical form of lycopene is altered by the temperature changes involved in processing to make it more easily absorbed by the body. Also, because lycopene is fat-soluble (as are vitamins, A, D, E, and beta-carotene), absorption into tissues is improved when oil is added to the diet. Although lycopene is available in supplement form, it is likely there is a synergistic effect when it is obtained from the whole fruit instead, where other components of the fruit enhance lycopene's effectiveness. There are plenty of antioxidant nutrients offering varying degrees of free radical scavenging capability as well as other health benefits. Lycopene sets itself apart not only with its superior antioxidant protection, but also by providing a valuable internal shield against sun damage and giving men the opportunity to lower their risk of developing cancer of the prostate.

* Source: Clinton, -S.K.1998. Lycopene: Chemistry, Biology, and Implications for human health and disease, Nutrition Review,56(2)P35-51

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