

Vitamin C vs. Theraderm OPC

Vitamin C and OPC are totally separate entities, yet have some similar characteristics. The word vitamin refers to a “vital amino acid” in its earliest context. These included a group of biochemical molecules necessary for the metabolic pathways in the human body. The “vital” designation refers to the fact that they could not be manufactured by the human body and thus must be obtained from dietary sources. Let’s look first at Vitamin C.

Although vitamin C is by no means an amino acid, it is absolutely essential to be included in the diet. The human body cannot manufacture it. Scurvy is the disease that occurs when it is absent from the diet. Scurvy is manifested by symptoms resulting from the inability of the body to manufacture collagen, thus the skin and mucus membranes show early loss of thickness and strength. As collagen is the most prominent protein in nearly all of the body’s structural framework (tendons, bone, fascia, muscle) and the integument coverings (skin, mucosal linings of mouth, bowel, etc.), a deficiency of collagen results in early symptoms-bleeding of the mouth and gums with subsequent changes including misshapen and weakened bones and joints with eventual death of the individual.

The place of action for vitamin C is at the terminal end of a developing amino acid chain (where additional amino acids are being added) in the formation of the large collagen molecule. Vitamin C alone acts, paradoxically, as a beneficial free radical to prepare the end of the forming molecule of collagen to accept linking a new amino acid.

A separate and additional function of vitamin C is to move throughout the tissues and bloodstream acting as a free radical scavenger. Some harmful free radicals are formed via the process of cellular respiration, where cells utilize oxygen, and other normal metabolic processes. Smoking is a source of very massive harmful free radical production from within. Damage from smoking occurs systemically in the artery walls resulting in formation of cholesterol plaques, and loss of collagen and elastin in the skin. This loss of collagen or damaged collagen manifests as wrinkles and laxity in the skin.

Dietary intake of vitamin C is completely adequate for the formation and repair of skin collagen. Most experts favor increased oral intake of vitamin C via supplements (2000 mg./day) for its increased immune system benefits. Topical Vitamin C can be active and can be absorbed deeper into the skin to the dermal layer. However, this requires a high concentration (15%) of vitamin C with high acidity. This concentration is very irritating to the skin and elicits redness, flaking, and itching that is uncomfortable for most.

Theraderm OPC contains the natural ingredient from the French Maritime Pine Bark, Oligomeric ProanthoCyanidans. These complex, large molecules have many more active chemical receptor sites that are active free radical “trappers” than Vitamin C. I view the mechanism as similar to a policeman hugging a bandit to prevent his using of a gun for damage.

OPC is the most potent free radical scavenger known. It is, in fact, 20 times more effective as a free radical scavenger than vitamin C. This is true whether the comparison is from oral or topical application.

Applied topically to the skin, the water based OPC easily penetrates to the dermal layer of skin and functions as a potent free radical scavenger to protect skin tissues from harmful injury from UVA or UVB. It does NOT function to trap the UV rays, but merely acts to prevent free radicals formed from doing harm to collagen molecules and DNA from becoming fragmented or damaged.

A research study was done in Finland in which living skin cell cultures were subjected to UV rays in a dosage that killed EVERY skin cell. Then similar skin cell cultures were coated with a layer of OPC (in one half the concentration of Theraderm OPC) on the surface. Then the same UV dosage was given to the cell cultures. The protected cells had NO cells killed, and NO evidence of ANY DNA damage for four succeeding daughter cell populations.

OPC also acts at the site of new collagen formation to surround and protect the site of new amino acid addition to the chain. It enhances the action of vitamin C by protecting the linking site while the vitamin C is attaching the new amino acid.

In addition to the fantastic free radical scavenger benefits of OPC, are the added bonus of two additional ingredients, hyaluronic acid and Aloe Vera. Hyaluronic acid is a superb humectant used in many expensive cosmetic formulations. Humectants attract water to themselves. In this case, hyaluronic acid attracts 1000 times its *own weight* of water to its self. This is moisture! Aloe Vera has legendary history in its healing and soothing powers.

OPC with all the exceptional benefits above, combined with a non-irritating base that contains absolutely no oil, is unequalled for rejuvenating or repairing skin that has been subjected to sun damage.

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