



PRODUCT FACT SHEET

CLINICAL ANTIOXIDANT COMPLEX

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ITEM #: 0158-0060-01

Clinical Antioxidant Complex contains multiple nutrients that deliver antioxidant functions as part of their anti-inflammatory and tissue healing properties.



Two capsules provide 726 mg nutrients, including vitamin C, alpha-lipoic acid, green tea extract, quercetin, turmeric, grape seed extract, and lutein.

BACKGROUND

VITAMIN C

Vitamin C is a traditional antioxidant that supports body function by helping to limit free radical damage to lipids, proteins, and DNA. Research suggests that it does positively influence immune function (1). Vitamin C also plays a role in the function of endothelial nitric oxide synthase (eNOS) by recycling the eNOS cofactor, tetrahydrobiopterin, which is relevant to arterial elasticity and blood pressure regulation (2).

High vitamin C levels in plasma decreased the frequency of genomic translocations in groups exposed to ionizing radiation or polycyclic aromatic hydrocarbons in polluted air. The frequency of micronuclei was decreased by vitamin C supplementation in smokers challenged with gamma-irradiation, and higher vitamin C levels in plasma counteracted the damage induced by air pollution (3).

ALPHA-LIPOIC ACID

Alpha-Lipoic acid (ALA) is a unique nutrient as it is involved in glucose regulation and ATP synthesis, and provides multiple antioxidant functions. In fact, researchers maintain that ALA is one of the most potent naturally occurring antioxidants, which may be because it can neutralize free radicals without itself becoming one in the process and because both the oxidized and reduced forms of alpha-lipoic acid are capable of scavenging a variety of reactive oxygen species (4,5). ALA also has the ability to regenerate other antioxidants, including glutathione and vitamins E and C. Additionally ALA has a beneficial metal chelating effect that also leads to reduced free radical generation (4,5).

ALA has anti-inflammatory functions as well. Nuclear factor kappa-B (NF- B) is a cell signaling molecule that promotes the synthesis of multiple pro-inflammatory chemicals, and ALA is capable of repressing its activity (4).

GREEN TEA EXTRACT

Green tea contains catechins, which are flavanols, a type of bioflavonoid or polyphenol. Catechins have been the subject of study for many years because of the beneficial health effects that have been associated with drinking green tea. Increasing interest in its health benefits has led to the inclusion of green tea in the group of beverages with functional properties.

DESCRIPTION

Two capsules provide 726 mg nutrients, including vitamin C, alpha-lipoic acid, green tea extract, quercetin, turmeric, grape seed extract, and lutein.

HOW SUPPLIED

60 tablets per bottle.

DIRECTIONS

There are 60 vegetarian capsules in each bottle.

Supplement Facts

Amount Per Serving	% Daily Value
Vitamin C (as ascorbic acid)	120 mg 200%
Alpha lipoic acid	200 mg *
Green tea extract (guaranteed 135 mg (90%) total polyphenols including 105 mg (70%) total catechins and 75 mg (50%) epigallocatechin (EGCG))	150 mg *
Quercetin	100 mg *
Turmeric (standardized to 95% curcumin)	100 mg *
Activin® Grape seed extract (95% polyphenols, including oligomeric proanthocyanidins (OPC's))	50 mg *
LuteMax® Lutein (from <i>Tagetes erecta</i>)	6 mg *

* Daily Value not established.

Other Ingredients: Capsule (vegetarian), silica, and magnesium stearate (vegetable source).



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Recent human studies suggest that green tea may contribute to a reduction in the risk of negative health issues, as well as the promotion of oral health and other physiological functions such as promotion of an anti-hypertensive effect, assisting with body weight control, promoting antibacterial and antiviral activities, solar ultraviolet protection, bone health, anti-fibrotic properties, and neuroprotective power (6).

One serving of Clinical Antioxidant Complex provides a similar amount of catechins found in a cup of green tea (7).

QUERCETIN

The food with the highest concentration of quercetin is an onion. There are 35 mg of quercetin in 3.5 ounces of onion. The 100 mg of quercetin in Clinical Antioxidant Complex represents more than what is found in a full cup of chopped onions.

Quercetin is a flavonol and is thought to be one of the most potent scavengers of free radicals. Quercetin also modulates the activity of NF- κ B, which leads to the reduction of pro-inflammatory chemicals such as cytokines. In vitro studies have demonstrated that quercetin has anti-fibrotic, anti-coagulative, anti-bacterial, anti-atherogenic, anti-hypertensive, and anti-proliferative properties (8).

There is evidence to suggest that quercetin may be beneficial to connective tissue for several reasons, which include the limiting of inflammation and associated tissue degradation, the improvement of local circulation, as well as the promoting of a strong collagen matrix (9). Quercetin may also support proper gastrointestinal function by enhancing tight junction protein assembly (10).

TURMERIC

Curcumin is the active and most studied ingredient in turmeric. It possesses multiple antioxidant and anti-inflammatory functions. The data is so positive on curcumin that researchers have called it "cure-cumin," which is likely due to its ability to inhibit multiple pro-inflammatory molecular targets (11).

Curcumin has been shown to support the function of multiple body functions. Curcumin is supportive to the musculoskeletal, nervous, cardiovascular, immune, gastrointestinal, and genitourinary systems (11).

GRAPE SEED EXTRACT

Grape seed and skin contain several active components including flavonoids, polyphenols, anthocyanins, proanthocyanidins, procyanidines, and the stilbene derivative resveratrol. Grape seed extract, in particular, has been reported to possess a broad spectrum of pharmacological and therapeutic functions such as antioxidative, anti-inflammatory, and antimicrobial activities, as well as having cardioprotective, hepatoprotective, and neuroprotective effects (12). The antioxidant capacity of grape seed extract has been shown to be greater than traditional antioxidants such as vitamin C and E (13).

LUTEIN

Light shining into the eye generates highly reactive free radicals that readily react with lipid, protein and nucleic acids in the macula, thereby resulting in irreversible damage to various cell structures. It is generally believed that cumulative oxidative damage is in part responsible for the pathogenesis of age-related eye health issues. Lutein is one of the main carotenoids that accumulates in the macula and lens and is thought to play a unique role in the protection against light-initiated oxidative damage to these key ocular structures (14).

Lutein is a carotenoid that is found naturally in egg yolk and dark-green leafy vegetables, foods that are not consumed in large quantities. Less than 2.4 mg of lutein and zeaxanthin are consumed each day. Supplementation with lutein appears to improve visual health (14).



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