

A/O Maximizers®

Broad-Spectrum Antioxidant Supplement

DESCRIPTION

A/O Maximizers®, provided by Douglas Laboratories, is a convenient dietary supplement designed to support the body's antioxidant defense system with a unique combination of dietary antioxidants in nutritionally meaningful amounts.

FUNCTIONS

Body cells and tissues are continuously threatened by damage caused by toxic free radicals and reactive oxygen species, such as peroxides, produced during normal oxygen metabolism, and by toxic agents in the environment. Free radicals are capable of disrupting metabolic activity and cell structure. When this occurs, additional free radicals are produced which, in turn, can result in more extensive damage to cells and tissues. The uncontrolled production of free radicals is thought to be a major contributing factor to many degenerative diseases.

Antioxidants depend on each other for ongoing effectiveness. For example: beta-carotene supports vitamin E; vitamin E is regenerated by vitamin C; glutathione reactivates vitamin C; selenium and niacin are needed to keep glutathione effective; and alpha-lipoic acid regenerates glutathione.

A/O Maximizers is formulated to take advantage of the synergistic relationships between antioxidants and provides balanced amounts of key nutrients to bolster the body's antioxidant defense system. A/O Maximizers helps defend against all major free radicals, both intra- and extra-cellularly, as well as within the cell membrane.

Beta-Carotene efficiently quenches singlet oxygen and free radicals in the body, and can prevent oxidation of phospholipids in cell membranes and blood lipoproteins. In these functions, beta-carotene appears to work synergistically with vitamin E.

Vitamin E is recognized as the body's most valuable fat-soluble antioxidant. Vitamin E prevents oxidation of unsaturated fatty acids by trapping free radicals. This helps stabilize and protect cell membranes, especially

red blood cells and tissues sensitive to oxidation, such as the lungs, eyes, and arteries. Vitamin E has synergistic effects with vitamin C, glutathione, and other antioxidants.

Alpha-Lipoic Acid is a universal antioxidant, because it is soluble in both water and lipids. This allows it to neutralize many types of free radicals just about everywhere in the body, inside and outside cells and their membranes. Alpha-lipoic acid also chelates free-radical generating transition metals, such as iron and copper, extends the activity of vitamins C and E, and helps regenerate glutathione.

Vitamin C (ascorbic acid) is a potent water-soluble antioxidant nutrient, which protects cells from oxygen-induced free radical damage. It is essential for connective tissue regeneration, bone metabolism, capillary health, and immune function. When vitamin E is inactivated by neutralizing free radicals, vitamin C regenerates it back to full activity.

Vitamin C (ascorbyl palmitate) is a lipid-soluble form of vitamin C. Ascorbyl palmitate acts as an antioxidant in the lipid bilayer of cell membranes.

Riboflavin (vitamin B₂) acts in the body as a coenzyme, flavin adenine dinucleotide (FAD). FAD is part of the mitochondrial electron transport chain and is the coenzyme for glutathione reductase, an enzyme involved in the regeneration of glutathione.

Niacinamide is converted in the body to nicotine adenine dinucleotide phosphate (NADP and NADPH), which is the co-substrate for glutathione reductase. NADPH is converted to NADP while reducing oxidized glutathione dimer to biologically active glutathione monomer.

Magnesium (glycinate/lysinate) is highly bioavailable, and serves as a cofactor to over 300 enzymes involved in energy metabolism. It is also required for the synthesis of FAD from riboflavin and NADP from niacinamide.

Zinc (histidine), **Copper** (glycinate) and **Manganese** (glycinate) are trace element cofactors of the antioxidant enzyme superoxide dismutase (SOD). SOD occurs in virtually all cells and destroys harmful superoxide anion

radicals. To help ensure adequate SOD levels, A/O Maximizers supplies the cofactors zinc and copper for cytosolic SOD, and manganese for mitochondrial SOD. Copper is also a cofactor for ceruloplasmin which reduces the highly reactive ferrous iron (Fe²⁺) to the safer ferric form (Fe³⁺). Free ferrous iron can generate large amounts of potentially damaging hydroxyl radicals. Zinc, copper and manganese are often not easily bioavailable, therefore, A/O Maximizers provides these trace elements as amino acid chelates with well documented bioavailability and excellent tolerability. **Selenium** (selenomethionine) is the cofactor for glutathione peroxidase (GPX). GPX uses glutathione to neutralize potentially harmful hydrogen peroxide, and protects cells and plasma against free radical injury. GPX activity depends on an adequate supply of dietary selenium. Selenomethionine is well absorbed and serves as a readily available form of biologically active selenium.

L-Glutathione (reduced) is a naturally-occurring tripeptide and essential co-substrate for selenium-containing glutathione peroxidase. This enzyme not only converts hydrogen peroxide to water, but also helps repair peroxidized fatty acids and reverses the harmful oxidation of protein sulfhydryl groups. Glutathione can also reactivate oxidized vitamin C. In these processes, glutathione becomes oxidized and inactive. It is then regenerated by glutathione reductase.

Methylsulfonylmethane (MSM) is a valuable hydroxyl radical scavenger, and serves as a donor of metabolically active sulfur for the synthesis of numerous organosulfur compounds and proteins in the body.

Taurine is an amino acid that protects biological membranes against lipid peroxidation, and ensures normal electrolyte balance across the cell membrane. Taurine lends its protective ability to oxidant-sensitive tissues, such as the retina, where it helps protect visual cells from light-induced oxidative damage.

Quercetin is an antioxidant bioflavonoid that works in synergy with vitamin C. Quercetin also helps maintain low levels of endogenously produced free radicals in the cyclooxygenase and lipoxygenase enzyme systems.

INDICATIONS

A/O Maximizers may be taken as a dietary supplement for individuals who wish to increase their intake of a broad spectrum of nutritionally important antioxidants.

FORMULA (AOM)

Each tablet contains:

Beta-Carotene (vitamin A activity).....5,000 I.U.
 Vitamin C (ascorbic acid, corn-free) 100 mg
 Vitamin C (ascorbyl palmitate) 20 mg
 Vitamin E..... 100 I.U.
 (d-alpha-tocopheryl succinate)

Riboflavin 5 mg
 Niacinamide..... 40 mg
 Magnesium (glycinate/lysinate)..... 50 mg
 Copper (lysinate**) 1 mg
 Zinc (histidine**) 8 mg
 Manganese (glycinate**)..... 5 mg
 Selenium (selenomethionine) 50 mcg
 Alpha-Lipoic Acid..... 10 mg
 Methylsulfonylmethane (MSM®) 50 mg
 Taurine..... 25 mg
 L-Glutathione (reduced) 25 mg
 Quercetin 50 mg

**U.S. patent nos. 4,599,152 and 4,167,564, Albion Laboratories.

SUGGESTED USE

One to two tablets daily as a dietary supplement, or as directed by physician.

SIDE EFFECTS

No adverse side effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

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**These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.**

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