4SIGHT

Ortho Molecular Products®
Because Efficacy Matters®

CLINICAL APPLICATIONS

- *Provides Key Antioxidant Support for Eyes*
- *Supports Macular Health*
- *Protects Macula Against Light Damage*
- *Increases Ocular Circulation*

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EYE HEALTH

4Sight was formulated with a specific blend of botanicals, nutrients, antioxidants and minerals, shown in research to support healthy eye function. The formula provides potent antioxidant support as well as key nutrients to care for and maintain the long-term health of the eyes.

Overview

In the US, eye health is a major concern for those over 60 years of age. The eye is the most susceptible organ to oxidative damage caused by light, toxins (smoke), atmospheric oxygen and abrasion. As ultraviolet and blue light pass through the retina to the photoreceptors (rods and cones) and the pigmented epithelial (PE) cells, reactive oxygen species (free radicals) are generated. If there are insufficient antioxidants available to neutralize free radicals, the eye undergoes excessive oxidative damage.

Alpha Lipoic Acid†

Alpha lipoic acid (ALA) is a potent, versatile antioxidant that is both water- and fat-soluble. ALA has been shown to inhibit aldose reductase, which prevents sorbitol-induced leakage of important antioxidants from eye tissues and recharges ALA vitamin C, E and glutathione. Used clinically in Russia, animal studies have shown ALA has the potential to reach high concentrations in and be protective to the ocular lens of rats.[1,2] Recent studies have shown lipoic acid increases insulin-stimulated glucose disposal both in whole body and in skeletal muscle,[3] thus helping to promote healthy blood sugar levels. One study, using oral dosing, showed that ALA increases insulin sensitivity by 27%.[4] Other research has found that a dose of 600 mg/day of ALA over 3 months helped promote healthy blood fats by 36% and provided potent antioxidant support.[5] ALA has also been shown to increase the GLUT4 pathway, a primary passageway for glucose to enter the cell and be used for metabolic energy. In addition, ALA has been shown to increase nerve conductivity in related neuropathy.

Ginkgo Biloba†

Ginkgo Biloba extract is a well-studied botanical that increases cerebral blood flow and protects neurons from a variety of conditions and oxidant-induced damage.[6,7] It scavenges NOS (Nitric Oxide Species) and ROS (Reactive Oxygen Species), supports mitochondrial function, inhibits NMDA receptor activation, antagonizes PAF (Platelet Activating Factor), and stimulates the release of NOS to support cerebral blood flow.[8] It has been shown to protect retinal tissue from oxidative damage caused by xenobiotics (chloroquine)[9,10] and proteolytic enzymes.[11]

Carotenoids: Lutein, Zeaxanthin, Lycopene†

Lutein and zeaxanthin are carotenoid pigments whose role in eye health is well-established from epidemiological, clinical and interventional studies.[12] Epidemiologic research shows a connection between high levels of lutein and zeaxanthin in eye tissues and enhanced eye function and visual acuity. [13] Lutein and zeaxanthin supplementation has been shown to protect the lens protein, lipid and DNA from oxidative damage and improves intracellular redox status when under oxidative stress.[14] Increased dietary intake of carotenoids, especially lutein and zeaxanthin, protect the eye from oxidative stress.[15] A 12-month intervention including 145 patients divided into a placebo group, and 2 groups given capsules of lutein, zeaxanthin, DHA and EPA each day, found that over 12 months, the supplements significantly improved plasma antioxidant

capacity, circulating macular xanthophyll levels and the optical density of the macular pigment.[16]

Zinc†

A vital coenzyme for eye tissue, zinc is a necessary component in antioxidant enzymes including superoxide dismutase, glutathione peroxidase and catalase. Studies on monkeys with oxidative stressed retinas showed a 60% reduction in the activity of catalase and glutathione peroxidase as well as a 4-fold reduction in zinc concentration compared with controls.[17] The enzymes responsible for digesting rod outer segments and preventing the build-up of lipofuscin, a lipid-containing residue caused by normal "wear and tear" that can impair vision, are significantly less active in older individuals. These important enzymes can be stimulated by adding zinc.[18,19]

Bilberry†

Bilberry extract contains a high amount of the antioxidants known as anthocyanidins, similar to those found in grape seeds. Bilberry has a long history of use in eye health. Its activities include inhibition of aldose reductase and improving capillary permeability. Bilberry has been shown to protect against an oxidative stress-induced immune response in the mouse uvea [20] and to support night vision.[21] The extract has also been found to support renewal and homeostasis of corneal cells.[22]

Quercetin†

A flavonoid found in a variety of herbs, vegetables and fruits, quercetin is a potent antioxidant which modulates pro-inflammatory pathways by inhibiting inducible ICAM-1 expression.[23] It has been shown to enhance epithelial barrier function in the intestines,[24] to stabilize mast cells by releasing cytoprotective factors and to promote balanced pro-inflammatory mast cell mediators.[25]

Taurine†

Taurine concentration is high in the retina and is required for retinal tissue growth. It has been shown to protect rod outer segments from oxidative damage[26] and to protect lens tissue from radiation. Researchers have suggested possible functions for taurine in the retina include protection of the photoreceptor, regulation of Ca2+ transport and regulation of signal transduction.[27]

Directions

2 capsules per day or as recommended by your health care professional.

Does Not Contain

Gluten, yeast, artificial colors and flavors.

Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts V2

Serving Size 2 Capsules
Servings Per Container 30 & 60

2 capsules contain	Amount Per Serving	% Daily Value
Zinc (as TRAACS® Zinc Bisglycinate Chelate)	15 mg	100%
Taurine	400 mg	*
N-Acetyl-L-Cysteine USP	200 mg	*
Alpha Lipoic Acid	150 mg	*
Bilberry Fruit Extract (Standardized to contain 25% Anthocyanidins)	150 mg	*
Quercetin Dihydrate	100 mg	*
Ginkgo biloba Leaf Extract (Standardized to contain 24% Ginkgo Flavone Glycosides and 6% Terpene Lactones)	60 mg	*
Lutein	30 mg	*
Lycopene	6 mg	*
Zeaxanthin	1.5 mg	*

* Daily Value not established

ID# 557060 60 Capsules
ID# 557120 120 Capsules

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