

TOTAL EYEBRIGHT M

Ingredients: Vitamin C 20mg, Vitamin E (as succinate) 15i.u, Vitamin A (fish liver oil) 1000i.u, Vitamin B-2 10mg, Selenium (as chelate) 33mcg, Zinc (as chelate) 15mg, Lycopene 2mg, Lutein (with Zeaxanthin) 3mg, Lipoic Acid 5 mg, Grapeseed Extract 2mg, Beta Carotene 2000 i.u, Quercetin 2 mg, Bioflavonoids 30 mg, Rutin 25 mg, N-Acetyl Cysteine 15 mg, Betaine HCL 10 mg, Trypsin (chymotrypsin 4 mg) 20 mg, Amylase-Distase 10 mg, L-Taurine 33 mg, L-Glutathione 2 mg, Eyebright (herb) 75 mg, Ginkgo Biloba (leaf) Extract 5 mg, Milk Thistle (herb/leaf) 50 mg, Spinach (with Zeaxanthin)(leaf) conc. 100 mg, Green Pea (vine) 50 mg, Bilberry (25% Anthocyanosides) (fruit) Extract 3mg, Blueberry (leaf) 25 mg.

Supportive Function: Total Eyebright M is an eye care formula consisting of the eyebright herb, along with vitamins, minerals, enzymes and potent antioxidants intended to optimize homeostasis for the eyes. The eye is highly susceptible to free radical damage and is in need of optimal antioxidant protection. Total Eyebright-M is general eye support for macular degeneration.

When is eye support helpful? Eye infections, any eye diseases (glaucoma, macular degeneration, and cataracts) dry eyes and floaters.

Clinical Applications/Research: Macular degeneration was one of five retinal disorders studied in the massive Eye Disease Case-Control Study, which obtained data from 421 patients with macular degeneration and 615 controls. Serum levels of carotenoids, vitamins C and E, and selenium were evaluated, and subjects were classified by level of the micronutrient (low, medium, and high). Persons in the medium and high carotenoid groups had, “markedly reduced risks” of macular degeneration. Risk in the “high” group was reduced to one half, and risk in the “medium” group was reduced to one third, demonstrating a dose-dependent result. “An antioxidant index which combined all four micronutrient measurements showed statistically significant reductions of risk with increasing levels of the index... these results suggest that higher blood levels of micronutrients with antioxidant potential, in particular, carotenoids, may be associated with a decreased risk of the most visually disabling form of age-related macular degeneration” (Arch. Ophthalmol. 1993, 111:104-9).

Authors of “Antioxidant protection of the ageing macula” report epidemiological evidence that suggests patients with macular degeneration have a lower intake of carotenoids, and, “moreover, a preliminary therapeutic trial in patients with AMD (Age-related macular degeneration) or diabetic retinopathy showed that supplementation with beta-carotene, vitamin C, vitamin E and selenium halted the progression of degenerative changes and in some cases even brought improvement” (Age and ageing 1991, 20:60-69). The authors note that even though the retina contains higher concentrations of carotenoids, vitamin E and vitamin C than many other tissues, “the fact that the development of AMD still occurs indicates that in these cases the balance between lifelong exposure to light and antioxidant protection has been disturbed in favor of light damage. A higher intake of these antioxidant nutrients may thus be required to counteract the influence of light” (p. 66).

Antioxidants: Antioxidants include vitamin C, vitamin E, beta-carotene, selenium, zinc, quercetin, ginkgo biloba, bilberry, and bioflavonoids. All of these substances are potent antioxidant radical scavengers; beta carotene specifically scavenges radicals caused by UV light, vitamin E protects the high concentration of lipid membranes, ginkgo biloba works in the micro capillaries of the eye, and bilberry seems to be an eye-specific radical scavenger.

Eyebright: Eyebright is a medicinal herb containing vitamins A, B3 (Niacin), B5 (Pantothenic acid), B12, C, D, and E; its properties lend to the recommendation that it is, "good for all eye disorders" (Presc for Nutr Healing, 1990, Avery Publ., NY, p.52).

Bilberry: Bilberry contains potent proanthocyanidins to prevent capillary fragility and inhibit platelet aggregation, and is an excellent anti-inflammatory herb. "Many clinical tests have shown that bilberry anthocyanosides given orally to humans improve vision in healthy people and also help treat people with eye diseases such as pigmentary retinitis" (Weiner, M.A. Herbs that Heal. 1994. Quantum Books, Mill Valley, Ca. p. 84).

Ginkgo Biloba: Test results published in *Drugs Exp Clin Res* (1991, 17:571-4), "confirm that the antioxidant properties of Ginkgo biloba can protect the retina against lipoperoxidation". In a randomized, open clinical trial involving 42 patients with pathophysiological visco-elasticity values (the elasticity of their blood vessels had already been compromised), the effect of a single intravenous injection of 50, 100, 150, or 200 mg of Ginkgo biloba extract was investigated. A significant increase in microcirculation and visco-elasticity was noted. The response was dose dependent, with effects increasing as the dose increased. "The present study thus confirms the positive effect of Ginkgo biloba extract on the microcirculation and whole-blood visco-elasticity values, already found in earlier studies, and shows it to be dependent on the dose employed" (*Fortschr Med.* 1993, 111:170-2).

A German study was conducted on 24 patients with retinal insufficiency. Utilizing a randomized, double blind study, Ginkgo biloba was used as a treatment, with a significant increase in retinal sensitivity seen within four weeks. Results in the lower dose group (80 mg/day) were not seen until the dose was increased to 160 mg/day. "The results presented here show that damage to the visual field by chronic lack of blood flow are significantly reversible" (*Klin Monatsbl Augenheilkd.* 1991, 199:432-8).

Free radicals are responsible for much of the damage induced by ischemia (lack of adequate blood flow) and reperfusion (dilation of blood vessels and return of oxygen). This leads to damaging ion shifts in the eye, which were prevented by administration of 100 mg/kg/day Ginkgo biloba for 10 days in a rat model. It is interesting to note that the drug allopurinol, which was also tested, failed to correct the retinal shifts.

Other Plant Nutrients: Quercetin is a very powerful free radical scavenger. Lemon bioflavonoids and rutin are potent phytochemicals that prevent capillary fragility and reduce inflammation. They are particularly helpful in collagen formation of the vessels of the eye, which makes up the microcirculation. Lycopene, a carotenoid found in tomatoes has potent antioxidant properties and has also been shown to be helpful in eye problems. Lutein, a carotene found in dark green leafy vegetables (such as spinach and collard greens), is thought to protect the macula from light-induced damage.

Zinc: Zinc has antioxidant activity, stabilizes cell membranes, and provides the cofactor for many enzymes involved in visual function. Research demonstrates that high levels of a zinc antioxidant enzyme, "protect mitochondria from oxidative damage that probably occurs with aging in the retinal pigment epithelium" (*Invest. Ophthalmol. Vis. Sci.* 1992, 33:1909-

18). Zinc is also the important nutrient in the “zinc fingers” which is an integral part of gene expression. The Proceedings of the National Academy of Sciences reported that an eye-specific enzyme (containing these zinc fingers) is necessary to prevent rod degeneration (the eye is made up of rods and cones) (Proc. Nat. Acad. Sci. 1993, 90:11157-61).

Vitamins: Vitamin D aids in calcium absorption for healthy tissue maintenance. Sometimes eye conditions dictate avoidance from UV light, which is one of the main sources of vitamin D production by the body. Riboflavin is very easily destroyed by UV light, and is essential for cellular repair. Folic acid is also necessary, playing an important role in DNA/RNA synthesis.

Suggested Dosage: 1-2 tablets 3 times daily or as directed

Size: 90 tablets

Vegetarian: No

Contraindications: None known.