



Perfect Eyes

Stock #4075-0 (60 capsules)

Perfect Eyes contains important antioxidants and nutrients that have been shown to help prevent or slow the progression of the most common vision disorders, namely cataracts and macular degeneration. Perfect Eyes provides herbs and nutrients, such as carotenoids, that enhance circulation to the eyes and prevent free radical damage, a primary contributor to degenerative eye diseases.¹⁻⁴

Perfect Eyes contains:

Beta-carotene is readily converted into vitamin A in the body. Vitamin A is an integral nutrient for the functioning of the eyes and is necessary for maintaining healthy vision and protecting eye tissues from oxidative (free radical) and degenerative damage—beta-carotene acts as a special filter to protect the lens from excessive oxidation. Research has shown a negative correlation between intake of fruits and vegetables high in beta-carotene and the development of age-related macular degeneration (AMD). Cataract patients also tend to be

deficient in vitamin A. An 8-year study involving 50,823 women (ages 45-67) found that those in the highest quintile of vitamin A consumption had a 39% lower risk of developing cataracts compared to those in the lowest quintile. Furthermore, vitamin A supplementation may be helpful for some patients with retinitis pigmentosa, an ocular disease that can lead to blindness. A large, double-blind trial of 601 patients found that those receiving vitamin A demonstrated a slower rate of decline in retinal function, as measured by electroretinograms.⁴⁻⁸

Zinc is an important mineral found in relatively high concentrations in the retina, where it plays an integral role in maintaining normal eye function. In fact, the concentration of zinc in ocular (eye) tissues is unusually high in comparison to other tissues. Suboptimal zinc status in the United States may influence the development and progression of several chronic eye diseases. For example, low dietary zinc levels appear to be related to an increased risk for developing age-related macular degeneration (AMD). Evaluation of 1,968 participants in the Beaver Dam Eye Study found those in the highest quintile for dietary zinc intake had a lower risk for developing early macular degeneration versus those in the lowest quintile. Another study reported significantly less visual loss in patients with AMD who took 81mg of oral zinc daily over a 2-year period.^{4,6,7,9}

Selenium functions as an antioxidant to protect the lens and retina from oxidative damage. Evidence suggests that selenium may contribute to the prevention and possible treatment of macular degeneration. In addition, lower than normal levels of selenium have been found in the aqueous humor (the thin, watery fluid between the cornea and iris and between the iris and lens) in cataract patients. Furthermore, research has demonstrated a positive association between serum selenium levels and both serum glutathione and aqueous humor glutathione levels. Maintaining normal glutathione levels is especially important to ocular health, since deficient glutathione levels is one of the factors contributing to cataract formation.^{7,8,10,11}

Lutein is a carotenoid that is concentrated in the central retina of the eye (along with zeaxanthin). Lutein acts as a protective pigment and is essential for maintaining human vision. Blue-eyed individuals need more lutein and zeaxanthin because they have less of these retinal pigments. Fortunately, several studies have established that the concentration of macular pigment can be increased by supplementation with lutein and zeaxanthin. A study published in the *Journal of the American Medical Association* found that participants with the highest carotenoid intake (specifically lutein and zeaxanthin) had a 43% lower risk for age-related macular degeneration compared to those having the lowest intake of these carotenoids. In addition, a long-term randomized, double-blind, placebo-controlled study showed that the intake of 15mg of lutein 3 times a week for up to 2 years improved visual function (visual acuity and glare sensitivity) in patients with age-related cataracts. Lutein and zeaxanthin may also help prevent cataracts and glaucoma.^{2,12-14}

Eyebright tightens the mucous membranes of the eye and helps relieve inflammation. Aucubin, one of the primary constituents in eyebright, demonstrates anti-inflammatory and antibacterial activity, making eyebright especially useful for bacterial infections affecting the eye. Eyebright also contains numerous antioxidants such as beta-carotene (vitamin A), ascorbic acid (vitamin C), selenium, quercetin (a flavonoid) and zinc. Eyebright is helpful for acute and chronic eye problems such as redness and irritation, stinging, inflammation, infection, oversensitivity to light, and particularly blepharitis (inflammation of the eyelid) and conjunctivitis (inflammation of the conjunctiva, the transparent membrane that lines the eyeball and eyelid), commonly referred to as "pink eye." A study involving 65 patients with conjunctivitis treated with Euphrasia (eyebright) single-dose eye drops demonstrated a complete recovery in 81.5% (53 patients) and a clear improvement in 17% (11 patients). Efficacy and tolerability of the eyebright treatment were evaluated by the patients and doctors as "good" to "very good" in more than 85%.¹⁵⁻¹⁹

Bioflavonoids, a term referring to biologically active flavonoids, prevent cell damage from oxidation by free radicals. In particular, in vitro studies have shown that flavonoids are among the most potent naturally occurring inhibitors of aldose reductase, an enzyme involved in the formation of diabetic cataracts, also referred to as "sugar" cataracts. In vitro research has also shown that the flavonoid quercetin possesses the most potent aldose reductase-inhibiting (ARI) activity, followed by the flavonoids rutin and hesperidin respectively.^{7,8,20}

Quercetin, the most common bioflavonoid in the human diet, appears to have many beneficial effects on human health, including cataract prevention. A number of quercetin's effects appear to be due to its antioxidant and ARI activity.^{20,21}

Hesperidin possesses significant anti-inflammatory and analgesic (pain-relieving) effects, as well as marked ARI activity.^{8,22}

N-Acetyl-L-Cysteine (NAC), a precursor to glutathione, stimulates glutathione synthesis in the body and has been shown in both animal and human studies to raise glutathione levels—glutathione deficiency is a causative factor in cataract formation. In fact, one animal study found that NAC almost completely prevented cataract development in mice. In addition, NAC supplementation may help slow the oxidation of lens proteins resulting from elevated blood glucose levels in diabetic patients, and thus, may have potential benefit in the prevention of cataracts in diabetics. In vitro and animal studies have also shown that NAC can inhibit the development of the early stages of diabetic retinopathy. Furthermore, a 4-week, double-blind cross-over trial involving 26 patients with primary or secondary Sjogren's syndrome—an auto-immune disorder that attacks the body's moisture-producing glands, such as the tear glands, causing exceptional dryness in the eyes—showed that oral NAC improved ocular soreness and irritability. Researchers concluded that NAC may have a true therapeutic effect on the ocular symptoms of Sjogren's syndrome.²³⁻²⁸

Taurine, a conditionally-essential amino acid, is found in high concentrations in the retina and is necessary for normal vision. In vitro studies in various species have demonstrated that low levels of taurine are associated with retinal degeneration. Taurine has been used clinically with varying degrees of success in the treatment of numerous conditions, including macular degeneration. In addition, patients with retinitis pigmentosa (RP) appear to have a deficiency of cellular uptake of taurine. One study found one-third less platelet uptake of taurine in patients with RP compared to controls.^{7,29}

Carotenoids are naturally-occurring nutrients found in orange, yellow and red-orange foods. Carotenoids provide significant antioxidant activity. Carotenoids protect cells against ultra-violet (UV) radiation and destroy oxygen free radicals that would otherwise damage the structural integrity of cells and tissues. The antioxidant activity of carotenoids is especially important to healthy vision, as carotenoids appear to help reduce the risk of cataracts and macular degeneration—individuals with low plasma concentrations of carotenoids and antioxidant vitamins were found to have an increased risk for age-related macular degeneration (AMD), the leading cause of visual impairment and blindness in older Americans.^{2,7,30,31}

Lycopene has been found in high concentrations in eye tissues such as the ciliary body and retinal pigment epithelium. In a study of 372 men and women aged 66-75 years, individuals with the highest plasma concentrations of lycopene were found to have the lowest risk of cortical cataracts, suggesting that a diet rich in carotenoids may protect against cataract development. Furthermore, a study of individuals with late-stage AMD showed that those with serum levels of lycopene in the lowest quintile were twice as likely to have AMD as healthy control subjects.³²⁻³⁴

Alpha-carotene - A long-term study of 492 nondiabetic women (aged 53-73 years) demonstrated that the odds of developing posterior subcapsular cataract opacities were 71% lower in "never" smokers with the highest intakes of alpha-carotene compared to those with the lowest intakes.³⁵

Cryptoxanthin - In a study of 138 patients with senile cataracts, cryptoxanthin appeared to serve as a protective variable for risk of cataract, with lower concentrations of cryptoxanthin associated with cataracts in people under 61 years of age. Other studies indicate possible protective influences of cryptoxanthin against the development of nuclear cataracts. Furthermore, higher serum levels of cryptoxanthin, along with alpha-carotene and lutein, were found to be significantly related to lower odds for nuclear sclerosis (hardening of the central portion of the lens) in male smokers (aged 50-84 years).³⁶⁻³⁸

Zeaxanthin, which is concentrated in the central retina of the eye (along with lutein), acts as a protective pigment and is essential for maintaining human vision. Blue-eyed individuals need more zeaxanthin and lutein because they have less of these retinal pigments. Fortunately, several studies have established that the concentration of macular pigment can be increased by supplementation with zeaxanthin and lutein. In addition, a study published

in the *Journal of the American Medical Association* found that participants with the highest carotenoid intake (specifically zeaxanthin and lutein) had a 43% lower risk for age-related macular degeneration compared with those having the lowest intake of these carotenoids. Zeaxanthin and lutein may also help prevent cataracts and glaucoma.^{2,12,13}

Bilberry has a long history of use for various eye problems. To its credit, researchers have found that bilberry contains anthocyanoside flavonoids (anthocyanins)—potent antioxidants that exhibit a particular affinity for the eye and vascular tissues. Bilberry anthocyanosides have been found to enhance microcirculation to the eyes and strengthen the optical portion of the retina. Anthocyanosides exert strong antioxidant properties and collagen-stabilizing effects, which prevent oxidative damage and help strengthen capillaries in the retina. Clinical studies have credited anthocyanosides with improving visual acuity and eye disorders such as macular degeneration, poor night vision, diabetic retinopathy, glaucoma and cataracts. Studies have shown that supplementing with standardized bilberry extract can improve visual acuity and the ability to adapt to changes in ambient light, as well as enlarge visual field. Furthermore, bilberries are a good source of the antioxidant bioflavonoid quercetin.^{1,3,6,8,18,39-41}

Curcuma contains antioxidants known as curcuminoids, which have been shown to provide potent antioxidant, anti-inflammatory and anti-cancer properties. Curcumin, the primary curcuminoid, is more than 5 times as powerful of an antioxidant as vitamin E. Curcumin has been found to inhibit oxidative enzymes and quench singlet oxygen free-radicals. In addition, a 3-month study involving 32 patients suffering from chronic anterior uveitis—an inflammation of the middle layer of the eye, including the iris and adjacent tissue (the ciliary body)—found that all patients receiving curcumin improved. Curcumin's efficacy was determined to be comparable to corticosteroid therapy (the only available standard treatment for this disease at present). Plus, the lack of side-effects with curcumin was considered its greatest advantage over corticosteroids. Furthermore, curcuma has demonstrated aldose reductase-inhibiting activity in rat lenses in vitro—aldose reductase is an enzyme involved in the formation of diabetic cataracts, also referred to as "sugar" cataracts.^{8,42-45}

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