

Simplexa OptiPlus

Taurine: Everything we see must first enter our eyes as light and then strikes the retina in the back of the eye. This light is detected by highly specialized retinal cells. Taurine is critical to the proper function of the eye because it is needed for proper retinal cell function. Taurine deficiency can lead to degeneration of these cells and a loss of vision. While it is not known if taurine supplementation can increase visual acuity in healthy individuals, the supplement is being actively studied in people with certain visual disturbances, where it has been shown to be helpful.

Reduced glutathione: Reduced glutathione is an extremely potent antioxidant. Glutathione levels decrease during aging in various parts of the eye including the lens and the retina. This naturally produced molecule participates in DNA synthesis and repair, protein synthesis and the activity of certain enzymes. As glutathione levels decrease there is an increased risk of developing several diseases of the eye including cataracts. Supplementation with glutathione, particularly reduced glutathione, helps support these important eye functions and increases the level of this important antioxidant in the eye.

N-acetyl-L-cysteine: N-acetyl-L-cysteine is a precursor of glutathione, which means that the body naturally converts N-acetyl-L-cysteine into glutathione. While glutathione supplements are sometimes limited by their ability to be absorbed by the body and distributed to important issues, N-acetyl-L-cysteine is readily absorbed and acts as a more effective way to supplement glutathione.

Sodium R-lipoate: R-lipoate or R-lipoic acid is a potent antioxidant and also increases glutathione levels. Lipoic acid can block damage caused by oxidative molecules. In fact, lipoic acid exerts a number of beneficial effects on the eye including delaying the harmful effects of diabetic retinopathy, restoring tear production in dry eye and improving glaucoma.

Grapeseed, bilberry, blackcurrant and schisandra berry extracts: These extracts contain potent anti-oxidants and anti-inflammatory substances

that help protect structures within the eye from damage. Bilberry extract decreases oxidative stress in the lens of the eye that is brought about by ultraviolet radiation. Schisandra berry extract is an adaptogen, which means it increases the body's ability to fight stress and disease and/or improves functional performance. Schisandra also appears to protect against eye fatigue. In laboratory studies, grapeseed extract protected against oxidative stress-induced cell death in the retina and prevented the onset and progression of age-related cataracts. Powerful antioxidants derived from blackcurrant show remarkable ability to penetrate various parts of the eye including the aqueous humor, cornea, steroid, iris, retina and others, thereby bringing their disease fighting properties to all parts of the eye.

Retinol: Vitamin A, or retinol, is essential for seeing light and is, consequently, critical for vision. In fact, vitamin A deficiency leads to night blindness. Vitamin A deficiency can also lead to dry eye symptoms because the vitamin is needed to form tears. Vitamin A supplementation is also used as a treatment for retinitis pigmentosa, a disease of the retina.

Lutein and zeaxanthin: Lutein and zeaxanthin are plant extracts related to vitamin A. Like vitamin A they have antioxidant and free radical scavenging capacities. However, these carotenoids also help protect the eye from age-related macular degeneration and ultraviolet light damage. Ultraviolet light damage can induce and exacerbate the formation of cataracts. In fact, recent studies have shown that lutein and zeaxanthin can significantly decrease the risk of cataract in the nucleus (center) of the eye's lens.

Astaxanthin: Astaxanthin is also a carotenoid related to vitamin A and lutein. However, it has substantially higher antioxidant capacity. Specific to the eye, astaxanthin may help reduce eye strain and fatigue and perhaps increase visual acuity. Increases in visual acuity have been demonstrated in athletes who took this supplement. While most other eye health nutrients help protect against the ravages of aging and eye diseases, astaxanthin also confers benefits in people without apparent eye disease. Nevertheless, individuals with early-stage age-related macular degeneration had improved

macular function after six months of taking astaxanthin.

Quercetin dihydrate: Quercetin is a flavonoid important for eye health. While quercetin protects the eye from oxidative stress, it appears to be particularly potent at protecting the eyes from the ravaging effects of elevated blood sugar. Evidence from laboratory studies shows that Quercetin dihydrate prevents the onset and progression of diabetic retinopathy. Quercetin also appears to be able to protect against the principal aging disease of the eye, namely cataracts. Compared to other tissues of the body, the natural lens of the eye has few mechanisms by which to protect or regenerate itself. Quercetin supplementation protects the lens from chronic insults such as oxidative stress and ultraviolet light damage.

Zinc: Zinc levels are inversely related with certain diseases of the eye including retinitis pigmentosa and age-related macular degeneration. In other words, diseased patients show lower levels of zinc in blood and tissues while healthy patients show higher levels of zinc. Zinc supplementation is recommended for preserving the health of the eye during aging and is heavily studied as a treatment for age-related macular degeneration.

Calcium folinate: Calcium folinate, also known as leucovorin, is best known as a highly active form of folic acid that protects against certain forms of chemotherapy. However, it can be particularly useful in maintaining eye health because it exerts the beneficial effects of folic acid while resisting metabolism. Folic acid deficiencies are an important cause of certain diseases of the eye. On the other hand, folic acid supplementation may help alleviate certain conditions such as chronic dry eye by reducing homocysteine levels in the eye.

Synergistic effects: The human eye is extremely active. This activity consumes a number of the body's resources, such as vitamins and nutrients. Moreover, this high level of metabolic activity creates a substantial amount of reactive oxygen species that can cause damage to the eye. One of the most important ways to protect the eye from the effects of aging is to maintain a targeted antioxidant regimen. Every component

of Simplesea OptiPlus possesses antioxidant activity. Some, such as astaxanthin and calcium folinate, are particularly useful for eye health because of the way they can enter and accumulate within the eye. Quercetin protects against cataract formation and diabetic retinopathy in laboratory studies. These effects extend and amplify the antioxidant effects of other substances within Simplesea OptiPlus.

Taurine and retinol are essential substances for eye health. Retinol is a crucial component for the eye to be able to detect light, especially at low levels. Taurine is critical to both color and light vision. The eye needs a constant supply of these molecules throughout life and, as people age, even more taurine and retinol are needed to maintain visual acuity and protect the eye from the effects of aging.

N-acetyl-L-cysteine and reduced glutathione work together in maintaining eye health. Glutathione is critically important for detoxification and is one of the primary ways the body gets rid of waste. Supplementation with glutathione is good but limited, since only a certain amount can enter cells over a given period of time. The best way to overcome this barrier is to take N-acetyl-L-cysteine at the same time since it can supply cells with glutathione even after cells have absorbed a maximal amount of glutathione.