



# OcuTone

## DESCRIPTION

OcuTone, available from Medical Wellness Associates, is a dietary supplement providing a well-balanced spectrum of key nutrients that are important in maintaining normal eye function. OcuTone delivers generous amounts of lutein, beta-carotene, flavonoids, glutathione, sulfur-containing amino acids, trace elements and a comprehensive array of antioxidant vitamins E and C.

## FUNCTION

The ocular lens, macula and retina are continually exposed to oxygen and intense light radiation. Both light and oxygen can create free radicals that damage the membranes of visual cells. Oxidative stress, diet, aging, and smoking can lead to suboptimal eye function and contribute to age-related vision loss. Therefore, ocular tissues rely on a strong antioxidant defense system to protect them from free radical damage. Adequate antioxidant intake is essential in supporting the macula, and recent studies have shown the critical protective role that nutritional supplements play in maintaining healthy vision and eye protection. Therefore, ocular tissues rely on a strong antioxidant defense system to protect them from free radical damage. Lutein may be especially important in preserving and maintaining healthy eyes, especially as we age. Lutein is a nutritionally important carotenoid that occurs in selected, often brightly colored vegetables, such as spinach, kale, and corn. A typical US diet contains 1–3 mg/day of lutein, but research recommends at least 10 mg/day. Lutein is an efficient quencher of free radicals in the body, and research has shown that it's a predominant pigment found in the macula. Additionally, lutein is especially concentrated in the rods, which are those visual cells of the retina that are responsible for black and white vision in the dark. Scientific evidence clearly suggests that lutein's role in the retina is to protect the tissue from the damaging effects of high-energy blue spectrum light and oxygen to which the eyes are subjected more than any other tissue in the body. Both light and oxygen can create free radicals that can play havoc with the highly unsaturated lipids

present in the membranes of the visual cells. The uncontrolled generation of free radicals in the eyes is believed to ultimately lead to suboptimal eye function. Zinc is essential for normal visual signal transduction in the retina. Zinc is part of many of the enzymes involved in vitamin A-dependent light reactions in the rod cells. Moreover, zinc is an essential cofactor of superoxide dismutase, an antioxidant enzyme that removes potentially dangerous superoxide radicals in the visual cells, the lens, and other tissues. OcuTone provides 6 mg of zinc in the highly bioavailable monomethionine form. Selenium is the essential cofactor of the antioxidant enzyme glutathione peroxidase, which is abundant in healthy eyes. Glutathione peroxidase levels, however, decline during the normal aging process, and experts believe that adequate selenium nutrition can help maintain normal production of this important enzyme. OcuTone provides 50 mcg of Selenium, which is roughly equivalent to the required daily amount. Glutathione is the essential co-substrate for glutathione peroxidase. To carry out its antioxidant functions, this enzyme requires a steady supply of glutathione. In addition, glutathione by itself protects the proteins in the lens from becoming insoluble and cloudy. Although well absorbed, dietary glutathione cannot enter the cell, and exerts much of its beneficial antioxidant effects in the extracellular space. N-Acetyl-L Cysteine (NAC) easily enters the cell and is used to synthesize intracellular glutathione. NAC also appears to have antioxidant properties. Many studies have shown that ocular glutathione levels decline during the normal aging process. Dietary supplementation with both glutathione and NAC may help maintain normal extracellular and intracellular glutathione levels. Therefore, OcuTone combines a significant 50 mg of glutathione with 300 mg of NAC. Taurine, a conditionally-essential sulfur amino acid, is the most abundant free amino acid in ocular tissues, where it may function as a membrane stabilizer, antioxidant, osmotic regulator, and neurotransmitter. Taurine is important in maintaining normal extra- and intracellular distribution of

calcium. This, in turn, has implications for neuronal excitability and the regulation of osmotic pressure. OcuTone provides 300 mg of pure taurine. Bilberries (*Vaccinium myrtillus*), a northern European cousin of North American blueberries, are a rich source of anthocyanosides, a class of flavonoids recognized for their importance in eye health. Bilberry anthocyanosides are potent antioxidants in the visual cells of the retina, and help maintain normal blood flow in the fine capillary blood vessels that nourish the eyes and other tissues. Three capsules of OcuTone contain 60 mg of a standardized 25% anthocyanoside extract made from ripe Swedish bilberries. Grape seed extract is rich in proanthocyanidins, another group of important flavonoids. Proanthocyanidins are highly regarded for their strong antioxidant properties and their role in supporting the body's capillary blood vessel system. Three capsules of OcuTone provide 50 mg of high-quality European grape seed extract (from *Vitis vinifera*) with a minimum of 92 % proanthocyanidins.

## INDICATIONS

OcuTone may be taken as a dietary supplement to increase intake of selected nutrients that have special importance for normal eye function.

## FORMULA

Three Vegetarian Capsules of OcuTone contain:

Lutein.....	15 mg
Beta-Caroten.....	10,000 I.U.
Vitamin E (d-alpha-tocopheryl succinate) .....	400 I.U.
Vitamin C (L-ascorbic acid) .....	500 mg
Zinc (monomethionine; <b>OptiZinc™*</b> ).....	6 mg
Selenium (amino acid complex).....	50 mcg
N-Acetyl-L-Cysteine .....	300 mg
L-Glutathione.....	50 mg
Taurine .....	300 mg
Bilberry Extract (min. 25 % anthocyanidins) .....	60 mg

Grape Seed Extract (min. 92 % proanthocyanidins).....50 mg

\***OptiZinc** is a trademark of InterHealth Company.

## SUGGESTED USE

Adults take three capsules daily as a dietary supplement, or as directed by a healthcare professional.

## 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.

## REFERENCES

- Li M, Ma Y, Li X, et al. Chinese Medical Journal [serial online]. December 20, 2008;121(24):2544-2552.
- Jerome-Morais A, et al. Biochim Biophys Acta. 2013 Jun;1830(6):3399-406.
- Shen H, Li M, Wang B, Lai IK, Robertson LW, Ludewig G. Environ Sci Pollut Res Int. 2014 May;21(10):6384-99.
- Newsome DA. Curr Eye Res. 2008 Jul;33(7):591-8. doi: 10.1080/02713680802178437.
- Richer SP, et al. Optometry. 2011 Nov;82(11):667-680.e6.
- Dayang W, Jinsong Z. Cutan Ocul Toxicol. 2014 Sep 8:1-6.
- Shim S, Kim J, Choi C, Kim C, Park K. Journal Of Medicinal Food [serial online]. September 2012;15(9):818- 823.
- Richer S, et al. Optometry. 2004 Apr;75(4):216-30. months.
- Christen WG, Jr. Am J Med 1994;97 Suppl. 3A:14S-17S.
- Handelman GJ, Dratz EA, Reay CC, van Kuijk JG. Invest Ophthalmol Vis Sci 1988;29:850-855.
- Hankinson SE, Stampfer MJ, Seddon JM, et al. BMJ 1992;305:335-339.
- Heinamaki AA, Muhonen AS, Piha RS. Neurochem Res 1986;11:535-542.
- Kamei A. Biol Pharm Bull 1993;16:870-875.
- Kasuya M, Itoi M, Kobayashi S, Sunaga H, Suzuki KT. Exp Eye Res 1992;54:49-53.
- Knekt P, et al. BMJ 1992;305:1392-1394.
- Malone JI, Benford SA, Malone J, Jr. J Diabetes Complications 1993;7:44-48.
- Mares-Perlman JA, Brady WE, Klein BE, et al. Invest Ophthalmol Vis Sci 1995;36:276-288.
- Nakamori K, Koyama I, Nakamura T, et al. Chem Pharm Bull (Tokyo) 1993;41:335-338.
- Newsome DA, Swartz M, Leone NC, Elston RC, Miller E. Arch Ophthalmol 1988;106:192-198.
- Rathbun WB, Schmidt AJ, Holleschau AM. Invest Ophthalmol Vis Sci 1993;34:2049-2054.
- Schalch W. EXS 1995;62:280-298.
- Seddon JM, Ajani UA, Sperduto RD, et al. Eye Disease Case-Control Study Group. JAMA 1994;272:1413- 1420.
- Seddon JM, Christen WG, Manson JE, et al. Am J Public Health 1994;84:788-792.
- Sperduto RD, Hu TS, Milton RC, et al. Arch Ophthalmol 1993;111:1246-1253.
- Vitale S, West S, Hallfrisch J, et al. Epidemiology 1993;4:195-203.
- Xie PY, Kanai A, Nakajima A, Kitahara S, Ohtsu A, Fujii K. Ophthalmic Res 1995;23:133-140.
- Zhang WZ, Augusteyn RC. Exp Eye Res 1994;59:91-95.

**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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