



# The Gift of Sight

Your eyes are your window to the world. Outside of good health itself, nothing is more precious than the gift of sight. Everyone sees differently, in part due to differences in the acuity of our vision and the general state of our health, but we owe it to ourselves to do everything we can to maintain optimal vision.

As we age, there is a general decline in acuity of vision. One of the most important reasons for the loss of visual acuity over time is the damage caused by environmental factors. The eyes are not sequestered inside the body as the heart or kidneys are. Except when we are asleep, our eyes are constantly exposed to environmental factors such as air pollution, dryness, and oxidative damage from sunlight.

There are things that we can do to maintain eye health. Firstly, we can reduce the amount of damaging environmental effects we subject our eyes to each day. For example, we can minimise exposure to harsh sunlight with quality sunglasses, especially while driving, and if we work at a computer terminal for long periods, breaks of just a minute or two of looking at distant objects can reduce eye strain significantly.

Secondly, today's lifestyles and working conditions result in ever-increasing demand for defence from oxidative damage. We can help to maintain proper functioning of our eyes by providing nutritional supplementation, especially antioxidants to counter free-radical damage.

## Natural Maintenance

What we actually "see" with the eye are the patterns of light that strike the retina, a light-sensitive layer of cells at the back of the eye. In the centre of the retina is the macula, where the light rays are most highly focused and visual acuity is highest. This central portion of retina contains a yellow pigment

called the macular pigment. This pigment helps protect the sensitive receptors in the retina, particularly from the potentially harmful effects of blue light.

Plants must expose their leaves to the direct sun to conduct photosynthesis, and they protect themselves from the harmful effects of the sun's radiation with chemicals called carotenoids. Similarly, our eyes receive optimal health maintenance from the antioxidant carotenoids, lutein and zeaxanthin, which make up the macular pigment. The macula is especially vulnerable to oxidative damage because it has a high metabolic rate and because the energetic radiation (short wavelength light) focused on it enhances the production of free radicals.

#### Luteir

While the roles lutein and zeaxanthin play in the physiology of the eye are not completely known, the links between lutein and eye health are so strong that several national and regional health organisations have recommended the increase of dietary lutein. Lutein is believed to function in two ways: first as a filter of high-energy blue light, and second as an antioxidant that quenches light-induced free radicals and reactive oxygen species.<sup>1,2</sup>

#### Zeaxanthin

Zeaxanthin, a yellow carotenoid, is a modified form of lutein. In the eye, lutein is predominant in the periphery of the macula while the concentration of zeaxanthin is greatest in the very centre. This is where conditions most favour the formation of free radicals, and zeaxanthin is thought to be an even more powerful antioxidant than lutein.<sup>2</sup>

In addition to lutein and zeaxanthin, the Visionex  $^{\text{TM}}$  formulation contains these three important nutritional aids to eye health:

## Bilberry Extract

The bilberry fruit is rich in antioxidant anthocyanosides and has been shown to help maintain healthy capillaries, including those in the eye.<sup>3</sup>

#### Vitamin C

Vitamin C provides additional antioxidant protection, especially to the lens of the eye, where the concentration of vitamin C in the lens is 20 times that found in the blood.<sup>4</sup>

#### 7inc

Zinc appears to provide an additive effect to antioxidants in promoting good visual acuity.<sup>5</sup>

The comprehensive formulation of Visionex is designed to support long-term eye health, especially when combined with preventive measures against exposure of the eyes to harmful environmental influences.

**Visionex** is laboratory tested, quality guaranteed. Meets British Pharmacopoeia specifications for potency, uniformity, and disintegration where applicable.

# Using Visionex<sup>™</sup>

Adults take two (2) Visionex tablets daily, preferably with meals.

EACH TABLET CONTAINS: VITAMIN C (FROM CALCIUM ASCORBATE 156 mg; POTASSIUM ASCORBATE 106 mg; MAGNESIUM ASCORBATE MONOHYDRATE 47 mg;	250 mg
ZINC ASCORBATE 3.1 mg) ZINC CITRATE (EQUIV 5.0 mg ZINC) VACCINIUM MYRTILLUS (BILBERRY) EXTRACT EQUIV FRESH FRUIT LUTEIN ZEAXANTHIN	15.6 mg 25.0 mg 2.5 g 5.0 mg 1.0 mg

#### References

- Stahl W. Macular carotenoids: lutein and zeaxanthin. Dev Ophthalmol 38:70-88 (2005).
- Richer S, et al. Double-masked, placebo-controlled, randomized trial of lutein and antioxidant supplementation in the intervention of atrophic agerelated macular degeneration: the Veterans LAST study (Lutein Antioxidant Supplementation Trial). Optometry 75(4):216-30 (2004). human retinas. Meth. Enzymol. 299:457-67. 1999
- Colantuoni, A. et al. Effects of Vaccinium myrtillus anthocyanosides on arterial vasomotion. Arzneimittelforschung. 41:905-09. 1991
- Vanderhagen, A.M., et al. Free radicals and antioxidant supplementation: A review of their roles in age-related macular degeneration. J. Am. Optometry Assoc. 64:871-78 (1993).
- National Eye Institute (NEI) Clinical Advisory: Antioxidant vitamins and zinc reduce risk of vision loss from age-related macular degeneration. 15 October 2001 (www.nlm.nih.gov/databases/alerts/amd.html)

Vitamin supplements should not replace a balanced diet.

# USANA



# Optimisers Micronutrition

# Visionex™

- A unique and comprehensive formulation of ingredients to maintain eye health
- Guaranteed levels of lutein and zeaxanthin, important antioxidant components of the macula of the eye
- Includes vitamin C, bilberry extract, and zinc for additional support of healthy eyes

