



## Healthy eating, healthy eyes

By Carolyn LoBocchiaro O.D.

**D**id you know that the daily intake of certain nutrients has been linked to healthy eyes and may reduce the risk of some chronic eye conditions? Researchers have linked nutrients such as lutein, zeaxanthin, vitamin C, vitamin E, omega-3 fatty acids and zinc to reducing the risk of certain eye diseases, including macular degeneration and cataract formation.

### What is macular degeneration?

Macular degeneration is an ocular disorder which is a leading cause of legal blindness in persons over 60. As its name implies, it affects the macula, which is the central part of the retina. The macula is the part of the retina that is responsible for providing the clear, sharp vision needed for reading, writing, driving and other visually demanding activities.

### What are cataracts?

A cataract is a cloudy or opaque area in the lens of the eye. This can interfere with normal vision causing symptoms such as blurry vision, reduced intensity of colors, increased glare sensitivity especially while night driving and a change in the eye's refractive error (prescription).

**Lutein and zeaxanthin** are important nutrients that are naturally found together in dark green vegetables such as spinach, kale, broccoli, green beans, peas and romaine lettuce. They deposit in various tissues in the eye including the macula and lens. They act as an internal pair of sunglasses, thereby protecting the eye. They can increase the macular pigment, which decreases glare sensitivity, and increases the ability to see objects more clearly in lower light conditions such as driving at night. While there is no recommended daily intake for lutein and zeaxanthin, many studies show an ocular health benefit for lutein supplementation at 10mg/day and zeaxanthin at 2mg/day.

**Vitamin C (ascorbic acid)** is an antioxidant found in fruits and vegetables. Most cells of the body depend on it, including the eyes. Vitamin C supports the health of ocular blood vessels. Research suggests that Vitamin C lowers the risk of developing cataracts and when taken with other essential nutrients, it can slow the progression of macular degeneration and its associated vision loss. Vitamin C is found in orange juice and other citrus juices. The recommended daily intake for an ocular health benefit of Vitamin C is

500mg.

**Vitamin E** is an antioxidant found in nuts, peanut butter, fortified cereals, sweet potatoes, margarine and sunflower seeds. Vitamin E promotes the health of cell membranes and DNA repair and plays a role in our immune system. It, along with vitamin C, has been shown to significantly decrease the risk of cataracts and slow the progression of macular degeneration and its secondary vision loss. The suggested daily intake of Vitamin E for eye health is 400IU.

**Zinc** is an essential trace mineral found in oysters, beef, lobster and pork. It helps to bring Vitamin A from the liver to the retina in order to produce a pigment called melanin. Deficiencies of zinc have been linked to impaired vision, poor night vision and cloudy cataracts. The suggested daily intake of zinc for people diagnosed as being at high risk for macular degeneration or suffering from early macular degeneration is 40-80mg. Be advised that zinc supplementation has been known to interfere with copper absorption, so 2mg/day of copper is strongly recommended when taking zinc supplements.

**Omega-3 fatty acids** are found in fleshy fish such as salmon, tuna and mackerel. Among other health benefits, a diet rich in omega-3 fatty acids can significantly reduce the development and progression of macular degeneration. Science suggests a daily intake of omega-3 fatty acids of at least 500 mg/day.

Nutritional supplementation can be beneficial for general and ocular health but high doses of certain vitamins can cause negative side effects and can interfere with the effects of certain medications. Therefore, it is important to consult your eye care professional or physician before beginning any new nutritional regimen.

Don't neglect your eyes. It is recommended that infants have their first comprehensive eye exam at 6 months of age, followed by age 3 years and before kindergarten. After that, an eye exam is recommended every year. Comprehensive eye exams are necessary to monitor eye health, maintain good vision and keep patients abreast of new advances in eye care.

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