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Lutein and other antioxidants aid in protecting your eyes

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Potentially blinding eye diseases can be treated effectively if they are detected early on, as 11,634 elderly New York City residents found out through the National Eye Care Project.

As reported by the American Academy of Ophthalmology, in San Francisco, volunteer New York City ophthalmologists inspected the seniors and uncovered 1,719 cases of cataracts: 158 cases of glaucoma; 371 cases of macular degeneration; and 71 cases of diabetic retinopathy.

A serious eye problem to guard against is age-related macular degeneration (AMD). The macula, located in the central part of the retina, is responsible for the ability to read fine print, sew, recognize faces, etc. When the macula is damaged, this leads to partial or total loss of central vision.

The usual procedure for identifying patients at risk for AMD is to check their eyes for drusen, which are white spots that appear underneath the retina, and is often found in those over 60 years of age. However, it doesn't necessarily affect vision right away.

Writing in the Journal of the American Medical Association November 9, 1994 Johanna M. Seddon, M.D. et al., evaluated 356 cases of advanced stage AMD for a one-year period prior to enrollment in the study. Volunteers ranged in age from 55 to 80; there were 520 controls.

Lower risk for macular degeneration with a higher intake of carotenoids

The authors reported that a higher intake of carotenoids (i.e., beta carotene) was associated with a lower risk for AMD. After adjusting for variables, the highest quintile of carotenoid intake was associated with 43 percent lower risk for AMD compared to the lowest one-fifth. Lutein and zeaxanthin, both oxycarotenoids, which are found primarily in dark green, leafy vegetables, were most strongly associated with a reduced risk for AMD. A regular intake of spinach and collard greens was especially protective.

G.E. Bunce, Ph.D., of the Virginia Polytechnic Institute in Blacksburg, writing in the February 1994 issue of the Journal of Nutritional Biochemistry, says that antioxidants, such as vitamins E, C and the carotenoids, can directly intercept and reduce the oxidants and free radicals which can damage the eyes.

He adds that there is significant evidence that suggests that these substances are able to diminish, but not necessarily prevent, oxidant and photochemical damage to the lens and retina.

As protection for the eyes. Bunce recommends 200 to 400 IU/day of vitamin E; 100 to 250 mg/day of vitamin C and



25 mg/day of beta carotene supplements, which may help to reduce the oxidant burden. He adds that the oxycarotenoids -- lutein and zeaxanthin - are important antioxidants and serve as light-absorbing pigments in the retina.

Zeaxanthin & lutein are crucial to the eye's center Of the approximately 600 naturally-occurring carotenoids, zeaxanthin and lutein are crucial constituents of the macula lutea. the yellow spot in the macula. according to Wolfgang Schalch in Free Radicals and Aging.

These two carotenoids, he says, are concentrated in the yellow-spot area of the macula in order to prevent or reduce damage from oxygen free radicals. Because of their yellow color, lutein and zeaxanthin absorb blue light. It seems that the yellow pigment is there to serve as an optical blue filter, reducing chromatic aberration and thus improving visual acuity.

However, blue light is also thought to be damaging to the retina, so the concentration there of the carotenoids may be to protect the retina.

Schalch says that, in one study, 102 patients having acute macular degeneration for seven to 12 years were successfully treated with 500 mg/day of vitamin C, 400 mg/day of vitamin E; 9 mg, day of beta carotene, and 250 mcg/day of selenium. This therapy halted or improved the degenerative macular changes in 60 percent of the volunteers.

A proper diet and lifestyle, plus supplements, along with regular visits to your doctor, can help to prevent many damaging eye disorders.

Health food stores have a variety of nutritional supplements especially formulated for the eyes. One of the new formulas contains antioxidant vitamins and minerals as well as lutein.

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