

Nutrition and Your Eyes

by Raymond Francis

Cataracts and *macular degeneration* are the two major causes of visual impairment in the elderly. Neither of these should ever happen. So how do they happen and how can they be prevented? The cause of these conditions appears to be oxidative damage by free radicals. The solution appears to be an adequate supply of antioxidants through diet and supplementation.

The eye is actually very rich in lipids (fats) and the lens of the eye is very susceptible to what we chemists call *light-induced lipid peroxidation*. This happens when light entering the eye generates free radicals. The eye's fatty molecules will be damaged unless something is done to prevent it, such as quenching the free radicals with antioxidants. In other words, light will damage your eyes unless they are properly protected.

Excess UV radiation resulting from damage to the ozone layer, x-rays from TV sets and computer monitors, and depletion of our antioxidants caused by our oxidizing environment are combining to take an unprecedented toll on the health of our eyes. These factors are resulting in high levels of free radical oxidative damage because our diets are deficient in antioxidants. There are things we can do to protect ourselves through diet and supplementation. Let's look at some possibilities:

Cataracts

Cataracts are cloudiness in the lens of the eye, usually caused by free radical damage. This results in blurred vision. Cataract surgery is now the largest single item in the Medicare expenditure budget. Age is considered to be a major risk factor for cataracts, and right now about 80 percent of people over age 75 have some degree of cataract damage. That sounds bad, but remember there are 20 percent who do not have this damage. The question to be answered is: what do you have to do to be in the 20 percent group? Here are some insights: Results of animal studies have shown that vitamin E, a fat-soluble antioxidant, is able to arrest and to some extent reverse cataract development. A number of epidemiological studies have found a connection between lower-than-optimal levels of vitamin E and the incidence of cataracts. A 1999 study in the *American Journal of Clinical Nutrition* looked at 400 adults between the ages of 50 and 86 years of age and found that the people with the highest levels of vitamin E in their blood had the lowest rate of cataracts. Those with vitamin E levels in the highest third had a 60% decrease in cataract risk.

There is actually a compelling body of evidence pointing to the health benefits from taking vitamin E in higher than RDA doses. Vitamin E is known to be useful for slowing the aging process, enhancing immunity, and in decreasing the risk of heart disease, diabetes, cancer, and Alzheimer's. Modern living places an ever-increasing demand for antioxidant chemicals on all of us. In addition, as we age, our bodies experience age-related increases in free radicals—at the same time there is a decreased ability to utilize antioxidants like vitamin E.

The vitamin C concentration in the lens is one of the highest of any human tissue. Obviously, Mother Nature put it there for a reason so it should not be a surprise that people

with the highest amounts of vitamin C in their body experience the least amount of cataracts. Analysis of the famous Nurses' Health Study found that long-term vitamin C supplementation had a substantial effect on the incidence of cataracts. In fact, they were reduced by a whopping 83%. Another study in the *International Journal of Vitamin Nutrition Research* looked at people with cataracts in grades of severity. The researchers found that people with the lowest vitamin C concentrations had the highest cataract severity. The authors concluded that, "Vitamin C content appears to be a good indicator of cataract severity, which suggests that oxidation is part of cataract progression." So what do you do to prevent cataracts? Get optimal C and E.

Macular Degeneration

Macular degeneration is the leading cause of blindness in people over age 55. It is a deterioration of the central and most vital part of the retina. Like cataracts, macular degeneration also appears to result from cumulative free-radical oxidative damage. Conventional medicine has little to offer, but researchers have been documenting benefits from alternative approaches. They have been finding consistent correlations between macular degeneration and low levels of dietary antioxidants. A 1995 study in the *Achieves of Ophthalmology* found that low levels of the carotenoid lycopene were associated with increased risk of macular degeneration. Lycopene has a strong ability to quench oxygen free radicals (rich sources of lycopene include red grapefruit and tomatoes). Not surprisingly, another study in the *American Journal of Epidemiology* found that those who ate the most fresh fruits and vegetables had the least macular degeneration. Another study reported in the book *Nutrition, Health, and Disease* found that over 90 percent of the macular degeneration patients who were treated with vitamin E experienced vision improvement.

Nutrition

To prevent and treat both cataracts and macular degeneration, a diet filled with fresh, organic fruits and vegetables is a must. Beyond that, supplementation with high quality vitamins and minerals is essential. Specifically, vitamins A, C, and E plus a superior multivitamin like Beyond Health's Multi-Vitamin Formula, **Quercetin, CoQ10, carotenes, essential fatty acids, and some additional zinc**. **The problem with any supplement is to find one that is both safe and effective. The supplement industry is a virtual zoo with thousands of products and only a handful that is worth what you pay for them. For example, almost half of all multivitamins do not dissolve soon enough to be of any use to the body whatsoever. Most vitamin E products do not work well as antioxidants; they provide little protection from free radicals and may even generate them. People take them in good faith not knowing they are getting little benefit. Similarly, most CoQ10s do not have in them what is on the label, and many essential fatty acids are already rancid before you buy them. Beyond Health extensively researches all of these products and even has an Eye Support Kit consisting of essential eye nutrients. We make it our job to find the very best world-class products and to make them available to the public all in one place. Beyond Health can be reached at: 800-250-3063**

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