NUTRITION AND EYE HEALTH

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Medical, as well as nutritional, research is showing the increasing importance of nutrition in maintaining eye health. A number of eye diseases are also being shown to respond to nutritional therapy including age-related macular degeneration, glaucoma, cataracts, and dry eyes. Nutritional factors have also been shown to affect the risk of developing, as well as the rate of progression of, far-sightedness. Here in Colorado Springs, our altitude increases our exposure to oxidizing ultraviolet radiation thereby increasing the risk of cataracts, which are the result of oxidation in the lens of the eye. A number of nutrients have been shown to protect against this oxidative stress including vitamins E and C, riboflavin (vitamin B2), zinc, lipoic acid, the carotenoid pigments lutein and zeaxanthin found in dark green vegetables, and anthocyanidins found in blueberries. Indeed, studies have shown an increased rate of cataract formation in people with lower amounts of dietary antioxidants. Other compounds that are recommended by nutritionally oriented practitioners include quercetin and taurine.

Glaucoma is a condition where pressure inside the eye gradually increases, ultimately affecting blood flow to the retina. While usually requiring the use of prescription medication, several nutritional treatments may be helpful. The use of the flavonoid rutin has been reported to increase the effectiveness of the drugs used for glaucoma that dilate the pupil. This may result in the need for less medication. Glaucoma patients have also been shown to have low levels of thiamine (vitamin B1) and theoretically could benefit form additional supplementation. Vitamin C has been shown to help but the dose needed is as high as 10,000-20,000 mg. a day, which may cause diarrhea and increase the risk of kidney stones. A significant, but hidden, cause of glaucoma may be an underactive thyroid gland. Only recently have hormone specialists realized that the “normal” values given by laboratories when testing for thyroid hormone are overly broad. The new recommendations mean that many people who were told by their doctors that they were normal may, in fact, be hypothyroid and need medication. It has been shown that hypothyroid patients tend to have increased eye pressure, which corrects when they are given thyroid hormone.

Age-related macular degeneration (AMD) is the leading cause of blindness in the United States. It begins with deterioration of the pigment cells of the retina and spreads to the rods and cones responsible for light and color perception. While the cause is not completely known, and some authorities consider it just a normal part of aging, a number of authorities feel that nutrition may play at least some role in this process. There is some evidence that, once again, we may be dealing with the damaging effects of oxidation, this time in the retina. Therefore, here too, the antioxidant vitamins C and E, the carotenoids, and also the mineral selenium may play a role in prevention and treatment of this condition since they can inhibit the oxidative damage caused by free radicals and ultraviolet light on the retina. Other important nutrients for normal retinal metabolism include zinc, the amino acid taurine, and certain plant-derived flavonoids. If these are deficient in the diet, supplementation could theoretically help in prevention and treatment. In fact, Dr. Jonathan Wright has shown improvement of vision in patients with AMD using treatment with a combination of intravenous zinc and selenium. The herb gingko biloba has also been found to improve vision in some patients with AMD.

One last eye condition that has shown to respond to nutritional therapy is dry eyes, the so-called “sicca syndrome.” Research has suggested that supplementing with omega-3 fats,

such as those found in fish and flax oils, may be helpful in alleviating the symptoms and an ophthalmologist at Harvard is reportedly having success with this treatment. In addition, several studies have shown improvement with the use of topical vitamin A.