

## Nutrition and the eyes

The overwhelming body of evidence points to significant beneficial effects of nutritional supplementation for most degenerative eye conditions.

Important to remember is that many of the studies used blood levels and food intakes associated with a normal diet. Taking quality supplements with dosages significantly higher than available in a normal diet may have a much more protective effect than dietary levels alone. With so little risk, and the other potential health benefits from taking nutritional supplements, it would certainly seem prudent to try them, especially for macular degeneration and diabetic retinopathy where there are no other options other than costly and painful laser treatments and monthly injections into the eyeball, which are only temporary fixes.

With macular degeneration, diabetic retinopathy, and retinitis pigmentosa, it is important to realize that once the damage is done it cannot be reversed (except to a very small degree), so prevention and early intervention is essential, especially if we have a family history of the diseases. Of course, delayed intervention may still slow progression. It is also important to be followed closely by a nutritionally knowledgeable eye doctor when starting nutritional supplements and one should never discontinue prescribed medications without your regular doctor's approval.

Most of the nutrients mentioned can be purchased individually or in combination, but it can be very confusing for the lay person or even health professionals to separate the facts from the hype.

If you have not done so already, we highly recommend you read the remarkable nutrition research against **cancer, heart disease, stroke** and many other health conditions.

Other factors affect the progression of eye diseases, including too many saturated and 'trans' (hydrogenated) fats and not enough

Omega 3 fats. Also certain medications, toxins (including aspartame, aka 'NutraSweet' and MSG), smoking, excess (a little is actually good) sunlight exposure, poor drinking water and air quality, as well as lack of exercise and the resultant decreased blood flow to the ocular tissues can affect visual outcome.

More studies are certainly needed and being undertaken at centers all over the world. Since no one can patent natural medicines or vitamins, so it's an uphill battle to get any company to pay tens of millions of dollars for large studies. Pharmaceutical companies are in the business of making profits, not curing diseases. Their primary goal, sadly, is to keep you symptom-free until your next dose is due.

### **Top Foods for Sight**

What we breathe, drink and eat helps us maintain our biochemical composition and our body functions. Water, not strictly considered a food, should be the most important constituent in our diet and we should drink six glasses of filtered water a day while minimizing caffeinated and sugar-laden drinks. With the degradation of the soil, contaminated with pesticides and manufacturing chemicals, as well as processed food, we must be selective in terms of the foods we eat.

**Cold water fish** (sardines, cod, mackerel, tuna.) Cold water fish are an excellent source of DHA, which provides structural support to cell membranes, and is recommended for dry eyes, treatment for macular degeneration, and sight preservation.

**Spinach, kale and green leafy vegetables.** These plants are rich in carotenoids, especially lutein and zeaxanthin. Lutein, a yellow pigment, protects the macula from sun damage and from blue light.

**Eggs.** Eggs are rich in cysteine, sulfur, lecithin, amino acids and lutein. Sulfur-containing compounds protect the lens of the eye from cataract formation.

**Garlic, onions.** These items are also rich in sulfur, which is necessary for the production of glutathione, an important antioxidant for the lens of the eye, and the whole body.

**Soya.** Low in fat, rich in protein, soya has become a staple in vegetarian diets. Soya contains essential fatty acids, phytoestrogens, vitamin E and natural anti-inflammatory agents.

**Fruits and vegetables.** Fruits and vegetables contain vitamin A, C, and E and Beta-carotene. The yellow vegetables, such as carrots and squash, are important for daytime vision.

**Blueberries and grapes.** These foods contain anthocyanins, which improve night vision. A cup full of blueberries, huckleberry jam, or a 100 mg bilberry supplement should improve dark adaptation within 30 minutes.

**Wine.** Wine, known to have a cardio-protective effect, has many important nutrients, which protect vision, heart and blood flow. Needless to say, moderation is always important.

**Nuts and berries** These are nature's most concentrated food sources. Grains, such as flaxseed, are high in the beneficial Omega-3 fatty acids, which help lower cholesterol and stabilize cell membranes.

Nutrition cannot provide all the answers. We need to be able to add extra constituents to our dietary and life style program in order to catch up and restore what may have been lost. They include those elements that are antioxidants, nerve supporters, pigment protectors, cell membrane components, vasodilators and cofactors.

**Vitamin C** Vitamin C is an important structural component to strengthen capillaries and build collagen. It maintains the shape of the cornea, especially in cases of infection, and supports the fight against free radicals throughout the body. Vitamin C is the second most common antioxidant in the lens, and prevents cataracts from

developing, whether due to sunlight exposure or other oxidative stresses.

**B Complex vitamins** These vitamins are necessary for nerve function. The retinal receptor cells send all their messages through nerve fibers into the optic nerve, and into the brain. These vitamins maintain many nerve and general body activities. B-12 is especially important, as it is the most common deficiency in elderly individuals.

**Alpha Lipoic Acid.** This is a very important nerve stabilizer and is helpful in diabetics, and in patients with glaucoma, to protect their remaining optic nerve fibers.

**Lutein.** Lutein and other carotenoids are very important in the eye. We know that carrots are good for day vision and lutein and zeaxanthin are important in protecting the central retina (the macula) from blue and ultraviolet light. Studies have shown that oral administration of lutein, or eating spinach, can increase the level of lutein in the retina. This is especially important for people with age-related macular degeneration.

**DHA.** Docosahexaenoic acid, with six unsaturated double bonds, comprises 30 percent of the good fat that is in the retina, brain and adrenal gland. The primary source for this is algae and cold water fish such as tuna, mackerel, salmon and sardines. DHA has been used as a supplement to infant formulas to improve visual performance in the first year of life, as well as emotional and physical development. People have found that following objects at a distance, driving and hand/eye coordination have all been improved with the use of this important fat that stabilizes cell membranes throughout the body.

**N-Acetyl Cysteine** This is the primary component in the production of glutathione. Glutathione is produced and released by the liver, and is the major antioxidant in the lens of the eye. Cellular enzymes -- glutathione reductase, super oxide dismutase and Catalase, are the primary free radical-fighting potions inside our cells. Glutathione

helps fortify these and protect many structures throughout the body while removing toxins from the body.

**Magnesium.** Magnesium is important in nerve conduction and it dilates blood vessels. Magnesium at bedtime, 400-500 mg, is important for maintaining blood flow to the eye and brain in elderly individuals with macular degeneration or diabetes, at a time of decreased blood pressure because they are lying down. Magnesium and B-12 deficiencies are the two most common deficiencies in the elderly.

**Chromium** This is important in regulation of blood sugar. Selenium is a cofactor for vitamin E, as well as glutathione reductase. Zinc plays a role in many enzymes present in the retina. Supplementation of more than 30 mg zinc daily requires adding 2 mg of copper.

**Gingko biloba or Brahmi.** These herbs has been used for millennia for eye and central nervous system problems. It is known to be a selective cerebro-vascular dilator and seems to increase circulation to the back of the eye. It is becoming an adjunct in the treatment of macular degeneration and glaucoma. Although there are no critical studies that show a definite scientific value, there are many reports about its increasing blood flow to the eye.

**Triphala.** These have been recommended for patients with glaucoma to lower intra ocular pressure via parasympathetic relaxation of the body. Triphala has long been known in Ayurvedic medicine for the treatment of glaucoma. It is interesting that its mild laxative effect brings about a generalizing calming feeling, which is so important for glaucoma individuals, to reduce stress. Magnesium and B-12 are also important for these individuals with chronic glaucoma.

**Silymarin.** This is the primary component of milk thistle. Silymarin is a major liver support and is the only known treatment for chronic active hepatitis and for alcoholic cirrhosis. The liver is the key organ for the eye, since all the fat soluble vitamins and glutathione are stored there. The B vitamins are activated in the liver. The eye is

subjected to bright light throughout the day and the important ingredients for repair are stored in the liver. When the liver is overburdened, eyesight will be compromised.