



Your Monthly Update

Dear Colleague

Welcome to the May 2010 newsletter from Pure Bio Ltd.

Did you know:

The over-65s take one third of all pharmaceuticals prescribed by doctors every year, despite the fact that they represent only 13% of the total population.

The chosen topic for this month is:

Cataracts

Protocol Summary

Ranking	Nutritional Supplements	Botanical Medicine
Secondary	Lutein Vitamin B2 Vitamin C	-
Other	Beta-carotene Carotenoids Quercetin Vitamin B3 Vitamin E	Bilberry Pycnogenols Grape pip

Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Symptoms

Gradual loss of vision through the development of cataracts is most common in the elderly, but the process can also begin much earlier. The first signs of cataract onset are unclear vision and an increased sensitivity to light. An early symptom of a cataract in the elderly is the sudden ability to read without once-needed reading glasses. Over the years, one or both lenses cloud over and may lead to total blindness. The process is painless. When the condition becomes serious, the cataract is unmistakable to the onlooker as the darkened lens clouds over the pupil. With any changes in vision, a professional diagnosis should be sought.

Causes

Cataracts are the result of degenerative changes in the eye. It is an hereditary problem if it develops very early, but this is not common. Repeated exposure of the eyes to the sun's ultraviolet (UV) rays, radiation, or the infrared rays of an open fire without protective eyewear can cause cataracts. Welders and glass-blowers are at high risk if protective eyewear is not worn regularly. Not all sunglasses offer full protection from UV rays. If they do not, they contribute to cataract development later in life by dilating the pupils. The development of cataracts may be associated to a number of causes: diabetes, ultraviolet light or radiation exposure, injury or surgery, viral infections, toxic heavy-metal excess in the body (especially cadmium, bromine, cobalt, iridium and nickel), heredity, galactosaemia (milk sugar toxaemia) and advancing age.

Cataracts are caused by free-radical damage to the sulphur-containing proteins in the lens. Free radicals are highly reactive molecules which can react with and destroy body tissues. The lens protects itself from free-radical damage with antioxidants (free-radical scavengers) like superoxide dismutase (SOD), catalase, glutathione, methionine, vitamin A, beta-carotene, vitamins B2 (riboflavin), E and C, bioflavonoids, zinc and selenium.

Lifestyle Modification

Obese men are significantly more likely to develop a cataract than are men of normal body weight. To date, most, but not all, population studies have found an increased risk of cataracts as body mass increases.

Nutrition

Studies show that cataract formation may be retarded and visual disturbances improved by increasing the intake of antioxidants. This can partially be done by diet: avoiding sugar, white-flour products, milk, rancid or high-fat foods and processed foods, all of which are sources of free radicals; and eating more legumes, garlic (i.e. high sources of sulphur-containing amino acids) and onions which are rich in quercetin; yellow vegetables (for carotenes); and fresh fruits and raw vegetables for their vitamin C. Other foods which are high in many nutrients that help retard cataracts are spinach, cloves, tomatoes, water chestnuts, yams, black beans and endive. Fresh juices that are recommended are combinations of carrot, spinach, beet, cucumber, endive and parsley. The bioflavonoid-containing pigment and

vitamins of fresh blueberries help prevent cataracts. Eat several bowls of blueberries daily when they are in season.

Other therapies

In the beginning stages, magnifying lenses, stronger eyeglasses and brighter lighting may compensate for the vision problems caused by cataracts. Once the vision problems affect daily activities, surgery may be necessary to replace the clouded lens with a clear artificial lens. For many people, the lens capsule remaining in the eye after surgery eventually turns cloudy, causing additional loss of vision.

Nutritional Supplement Treatment Options

People with low blood levels of antioxidants and those who eat few antioxidant-rich fruits and vegetables have been reported to be at high risk for cataracts.

[Vitamin B2](#) and [vitamin B3](#) are needed to protect glutathione, an important antioxidant in the eye. Vitamin B2 deficiency has been linked to cataracts. Older people taking 3 mg of vitamin B2 and 40 mg of vitamin B3 per day were partly protected against cataracts in one trial.

The major antioxidants in the lens of the eye are [vitamin C](#) and [glutathione](#) (a complex amino acid composed of the three amino acids [glycine](#), [glutamic acid](#) and [cysteine](#)). Glutathione levels are low in all cases of cataracts and can be increased by supplementing these three amino acid precursors. A reduced [L-glutathione](#) supplement has been proven to increase glutathione levels enough to help cataract sufferers and those plagued by autoimmune disease (e.g., lupus, rheumatoid arthritis, thyroiditis.)

Vitamin C is needed to activate [vitamin E](#), which in turn activates glutathione. Both nutrients are important for healthy vision. People who take multivitamins or any supplements containing vitamins C or E for more than 10 years have been reported to have a 60% lower risk of forming a cataract.

[Vitamin C](#) levels in the eye decrease with age. However, supplementing with vitamin C prevents this decrease and has been linked to a lower risk of developing cataracts. It is concentrated in amounts thirty to fifty times greater in the aqueous humor of the eye than in the blood. Studies show that vitamin C levels are greatly reduced or absent in the lens with a cataract. Dietary vitamin C intake has not been consistently associated with protection from cataracts. Nonetheless, because people who supplement with vitamin C have developed far fewer cataracts in some research, practitioners will often recommend 500 to 1,000 mg of vitamin C supplementation as part of a cataract prevention program. The difference between successful and unsuccessful trials may be tied to the length of time people actually supplement with vitamin C. In one preliminary study, people taking vitamin C for at least ten years showed a dramatic reduction in cataract risk, but those taking vitamin C for less than ten years showed no evidence of protection at all.

Low blood levels of [vitamin E](#) have been linked to increased risk of forming cataracts. In one trial, people who took vitamin E supplements had less than half the risk of

developing cataracts, compared with others in the five-year study. Typical recommended dosage is 400 IU of vitamin E per day as prevention.

Some, but not all, studies have reported that people eating more foods rich in [beta-carotene](#) had a lower risk of developing cataracts. It remains unclear whether natural beta-carotene from food or supplements would protect the eye or whether beta-carotene in food is merely a marker for other protective factors in fruits and vegetables high in beta-carotene.

People who eat a lot of spinach and kale, which are high in [lutein](#) and [zeaxanthin](#), - carotenoids similar to beta-carotene - have been reported to be at low risk for cataracts. Lutein, zeaxanthin, and beta-carotene are all antioxidants. It would seem, however, that lutein is more important than beta-carotene, because lutein is found in the lens of the eye, while beta-carotene is not. In one study, people with the highest intake of lutein and zeaxanthin were half as likely to develop cataracts as those with the lowest intake. In another study, supplementation with 15 mg of lutein three times a week for one year significantly improved visual function in a small group of people with age-related cataracts.

The flavonoid [quercetin](#) may also help by blocking sorbitol accumulation in the eye. This may be especially helpful for people with diabetes, though no clinical trials have yet explored whether quercetin actually prevents diabetic cataracts. Other bioflavonoids, especially [bilberry](#), [pycnogenol](#) (from pine bark) or [grape pip](#) also provide strong antioxidant protection.

[Superoxide dismutase \(SOD\)](#) is an important antioxidant. One effective way to raise SOD blood levels is to supplement the diet with [zinc](#), [copper](#) and [manganese](#), its co-factor minerals. The amino acid [lysine](#), which helps form collagen, may repair the lens as well as inactivate viruses thought to cause damage to the lens.

Botanical Treatment Options

[Bilberry](#), a close relative of blueberry, is high in flavonoids called anthocyanosides. Anthocyanosides may protect both the lens and retina from oxidative damage. The potent antioxidant activity of anthocyanosides may make bilberry useful for reducing the risk of cataracts. Recommended dosage is 240 to 480 mg per day of bilberry extract, capsules or tablets standardized to contain 25% anthocyanosides.

Herbal eye rinses are effective ways to aid circulation, improve glands and nourish mucous membranes:

- Rinse the eyes once a day with goldenseal, bayberry or eyebright infusions.
- Chaparral leaves and stems are especially good for strengthening the eyes.
Mix 1 tbsp. herbs in 1 cup boiling water, strain and drink twice daily.

An ancient Chinese herbal formula called [hachimijiogan](#) helps raise the levels of glutathione, thereby preventing cataracts. Hachimijiogan contains alismatis rhizome, rehmanniae root, cornus fruit, dioscoreae rhizome, hoelen, mountain bark, cinnamon bark and aconite root. This herbal formula can be obtained from a Chinese herbalist.

Homeopathy

[Cineraria maritima](#) in a diluted mother tincture or in a low potency, such as a 3x, has been very successful in treating some cases of cataracts. Use an eye drop, or bathe the eye in a solution, using one part mother tincture to fifty parts water, repeating twice daily for three weeks to one month.

If Cineraria maritima is unavailable, use either [Calcarea carbonica](#), 6c (in the early stages) or [Silicea](#), 6c (in the later stages), taking 2 tablets under the tongue twice daily for not longer than one month.

Tissue Salts

Tissue salt remedies are not applicable for the treatment of this condition.

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