Cataracts

Cataracts develop when damage to the protein of the lens of the eye clouds the lens and impairs vision.

Most people who live long enough will develop cataracts. Cataracts are more likely to occur in those who smoke, have diabetes, or are exposed to excessive sunlight. All of these factors lead to oxidative damage. Oxidative damage to the lens of the eye appears to cause cataracts in animals and people.

It is unlikely that any nutritional supplements of herbs can reverse existing cataracts, although no research has explored this possibility.

**Nutritional supplements that may be helpful:** 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.

The major antioxidants in the lens of the eye are vitamin C and glutathione (an antioxidant enzyme). Vitamin C is needed to activate vitamin E, which in turn activates glutathione. Both nutrients are important for healthy vision.

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. Healthy people have been reported to be more likely to take vitamin C and vitamin E supplements than those with cataracts in some but not all studies. Nonetheless, because people who supplement with vitamin C have developed far fewer cataracts in some research, nutritionally oriented doctors often recommend 500–1,000 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 vitamin C. In one trial, 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 3.7 times the risk of forming cataracts compared with people in the highest 20% of blood vitamin E levels. Vitamin E supplements have been reported to protect against cataracts in animals and people though the evidence remains inconsistent. 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. Nutritionally oriented doctors typically recommend 400 IU of vitamin E per day as prevention. Smaller amounts (approximately 50 IU per day) have been proven in double blind research to provide no protection.

Some studies have reported that eating more foods rich in beta-carotene or supplementing with vitamin A lowers the risk of cataracts. Synthetic beta-carotene supplementation has not been found to reduce the risk of cataract formation. 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 fruit and vegetables high in beta-carotene.

People who eat a lot of spinach, which is high in lutein, a nutrient similar to beta-carotene, have been reported to be at low risk for cataracts.\textsuperscript{26} Both lutein and beta-carotene offer the promise of protection because they are antioxidants. It’s quite possible, however, that lutein is more important than beta-carotene because lutein is found in the lens of the eye while beta-carotene is not.\textsuperscript{27}

Vitamin B2 and vitamin B3 are needed to protect glutathione, an important antioxidant in the eye. Vitamin B2 deficiency has been linked to cataracts.\textsuperscript{28,29} Older people taking 3 mg of vitamin B2 and 40 mg of vitamin B3 per day were partly protected against cataracts in a Chinese trial.\textsuperscript{30} Most researchers in the field do not believe that higher amounts would be helpful, and it remains unclear whether these vitamins would help protect people in societies that eat higher levels of B vitamins than the Chinese, whose intake appears to be low.

The flavonoid quercetin may also help by blocking sorbitol accumulation in the eye.\textsuperscript{31} This may be especially helpful for people with diabetes, though no clinical trials have yet explored whether quercetin actually prevents diabetic cataracts.

\textbf{Are there any side effects or interactions?} Refer to the individual supplement for information about any side effects or interactions.

\textbf{Herbs that may be helpful:} Bilberry, a close relative of blueberry, is high in the bioflavonoid complex anthocyanosides.\textsuperscript{32} Anthocyanosides protect both the lens and the retina from oxidative damage. This bioflavonoid also helps with adaptation to bright light and improves night vision. The potent antioxidant activity of anthocyanosides appears to make bilberry useful for reducing the risk of cataracts.\textsuperscript{33,34}

Doctors well versed in the use of herbs sometimes recommend 240–480 mg per day of bilberry extract, capsules, or tablets standardized to contain 25% anthocyanosides.

\textbf{Are there any side effects or interactions?} Refer to the individual herb for information about any side effects or interactions.

\textbf{References:}


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