Astaxanthin is the latest natural supplement found to improve eye health and visual acuity while reducing eye fatigue, dryness, weakness and irritation.

The plant nutrient or phytochemical called astaxanthin is a member of the family of carotenoid xanthophylls. Astaxanthin is found naturally in the alga H. pluvialis, which is responsible for the reddish hue found in lobster, shrimp, salmon and other marine life.

Eye Fatigue

Eye fatigue is a common problem caused by an increasing dependence on computers. Even with proper ergonomics and lighting, time spent in front of a computer terminal takes its tolls on our eye muscles. In people with autoimmune eye conditions such as thyroid eye disease (TED), uveitis, and Cogan’s disease, astaxanthin has the potential to reduce inflammation and improve visual acuity.

Symptoms of eye fatigue include poor accommodation (in changes in focus from near to distant vision), poor depth perception, sensitivity to glare, eye dryness and eyestrain. Eye fatigue can exacerbate symptoms in patients with autoimmune eye disorders.

Astaxanthin to the Rescue

Several well-controlled clinical trials suggest that astaxanthin can help prevent eyestrain and reduce its effects. In a study of 26 computer workers receiving 5 mg astaxanthin daily for one month, subjects noted a 54 percent reduction of eye fatigue complaints and objective improvements in accommodation ability. Test subjects also showed a significant reduction in subjective symptoms.

Astaxanthin is shown to reduce inflammation in eye muscles and improve blood flow to the eyes, especially in the capillary vessels that supply blood to the retina. As an antioxidant, astaxanthin protects against free radical damage and oxidative stress. Because it is fat soluble, astaxanthin has a special affinity for cell membranes, particularly the double cell membrane found in eye muscle.

Astaxanthin and other xanthophylls are also known to reduce the risk of cataract formation and age-related macular degeneration. In patients with uveitis, animals studies showed that astaxanthin had the same anti-inflammatory actions as the steroid prednisolone. Effects include reduced inflammatory markers, including nitric oxide synthase, prostaglandin E2, and tumor necrosis factor alpha. Compared to beta-carotenoids, astaxanthin is twice as likely to be absorbed by retinal cells.

Athletic Performance

A similar study in athletes showed that depth perception and critical flicker fusion, an objective measure of visual acuity, improved by 46 percent in subjects taking 6 mg
astaxanthin daily for 4 weeks. In addition, athletic performance and endurance showed improvement as evidenced in a reduction in lactic acid levels.

Additional Benefits

Astaxanthin has also been shown in studies to improve cardiovascular health, including reducing blood pressure. It’s also shown to help in conditions of diabetes and in preventing the development of metabolic syndrome.

Dosage

Astaxanthin works well in combination with lutein, zeaxanthin, beta-carotene and other phytonutrients that promote eye health. In clinical trials a dose of 4-12 mg daily has been shown to reduce eyestrain with no apparent side effects.

Resources;

Laurie Barclay, Relieve Your Tired Eyes While Guarding Against Common Eye Diseases, Life Extension, January 2009: 37-43.