



Zeaxanthin as a Powerful Carotenoid for Eye Health

José Quiles*

Department of Physiology, University of Granada, Granada, Spain

ARTICLE HISTORY

Received: 02-Jun-2023, Manuscript No. EJMOAMS-23-101658;

Editor assigned: 06-Jun-2023, Pre-QC No. EJMOAMS-23-101658 (PQ);

Reviewed: 20-Jun-2023, QC No. EJMOAMS-23-101658;

Revised: 27-Jun-2023, Manuscript No. EJMOAMS-23-101658 (R);

Published: 04-Jul-2023

About the Study

Zeaxanthin is a naturally occurring carotenoid pigment that belongs to the xanthophylls group. It is widely known for its beneficial effects on eye health, particularly its role in promoting macular health and preventing Age-related Macular Degeneration (AMD) and its potential side effects.

Sources of zeaxanthin

Zeaxanthin is found abundantly in various fruits and vegetables. It is especially concentrated in green leafy vegetables like spinach, kale, and collard greens. Other sources include corn, peas, oranges, tangerines, and eggs. While the human body cannot produce zeaxanthin naturally, a healthy diet rich in these food sources can provide an adequate amount of this essential carotenoid.

Functions

Zeaxanthin plays a crucial role in maintaining optimal eye health. It is a major component of the macular pigment, which is located in the macula of the retina. The macula is responsible for central vision and plays a vital role in activities like reading, driving, and recognizing faces. Zeaxanthin, along with its closely related carotenoid lutein, acts as a natural filter, absorbing harmful blue light and protecting the delicate structures of the macula from oxidative damage.

Health benefits

Macular degeneration prevention: Age-Related Macular Degeneration (AMD) is a leading cause of vision loss and blindness in older adults. Zeaxanthin, with its antioxidant properties, helps protect the macula from oxidative stress and reduces the risk of AMD. Several studies have shown that a higher intake of zeaxanthin-rich foods or zeaxanthin supplements is associated

with a reduced risk of developing AMD.

Visual acuity enhancement: Zeaxanthin supplementation has been linked to improved visual acuity, especially in individuals with early-stage AMD or cataracts. By increasing the density of the macular pigment, zeaxanthin enhances contrast sensitivity, reduces glare, and improves overall visual performance.

Light filtering and blue light protection: Exposure to excessive blue light from electronic devices and sunlight can cause retinal damage and contribute to the development of various eye conditions. Zeaxanthin acts as a natural filter for blue light, absorbing it and minimizing its harmful effects on the retina.

Anti-inflammatory and antioxidant properties: Zeaxanthin exhibits anti-inflammatory and antioxidant properties, helping to neutralize harmful free radicals and reduce inflammation in the eyes. This can potentially slow down the progression of various eye diseases and protect against oxidative damage.

Recommended dosage

While there is no official Recommended Daily Allowance (RDA) for zeaxanthin, experts suggest a daily intake of 2-4 milligrams (mg) of zeaxanthin, along with 10-20 mg of lutein, for optimal eye health benefits. This can be achieved through a combination of a healthy diet rich in zeaxanthin-containing foods and supplementation if necessary.

Potential side effects and precautions

Zeaxanthin is generally considered safe for most people when taken in appropriate doses. However, high doses of zeaxanthin supplements may cause a harmless discoloration of the skin known as carotenoderma. It is important to consult a healthcare professional before starting any new supplement regimen, especially if a

person has any pre-existing medical conditions or are taking medications.

Zeaxanthin is a powerful carotenoid with numerous benefits for eye health. Its role in protecting the macula, preventing age-related macular degeneration, and enhancing visual acuity makes it a valuable nutrient. By including zeaxanthin-rich foods in the diet or considering

zeaxanthin supplements, it can support the eye health and potentially reduce the risk of vision-related issues in the long run. It is important to consult with a health-care professional for personalized advice regarding zeaxanthin supplementation and to ensure the best care for eyes.