

# Goji Berry Supplementation May Prevent Macular Degeneration

*Source: Optometry and Vision Science*

Macular degeneration is a major cause of gradual, painless, central vision loss in the elderly. The average age at onset of visual loss is about 75 years. After the age of 50 years, the incidence steadily increases; over one-third of people in their ninth decade of life are affected. Researchers have implied that certain conditions may contribute to the disorder. Some of these are arteriosclerosis, oxidative damage, photic damage, inflammation, diet, vitamin and rare element deficiencies, and genetics.

Goji berries, also known as wolfberries, grow on an evergreen shrub found in temperate and subtropical regions in China, Mongolia and in the Himalayas in Tibet. They are in the nightshade (Solonaceae) family. Goji berries are usually found dried. They are shriveled red berries that look like red raisins. Goji berries have been used for 6,000 years by herbalists in China, Tibet and India to:

- protect the liver
- help eyesight
- improve sexual function and fertility
- strengthen the legs
- boost immune function
- improve circulation
- promote longevity

Goji berries are rich in antioxidants, particularly carotenoids such as beta-carotene and zeaxanthin. One of zeaxanthin's key roles is to protect the retina of the eye by absorbing blue light and acting as an antioxidant. In fact, increased intake of foods containing zeaxanthin may decrease the risk of developing age-related macular degeneration (AMD), the leading cause of vision loss and blindness in people over the age of 65.

Although it is purported that goji berry is beneficial to vision due to its high concentration of the antioxidant, zeaxanthin, no previous, high quality studies have found this result. Researchers decided to conduct a double-blind, randomized, placebo-controlled trial in healthy elderly subjects to determine the effects of goji berry on macular characteristics and plasma zeaxanthin and antioxidant capacity levels. The study included a total of 150 elderly adults between the ages of 65 and 70 years who were randomized to receive either 13.7 grams per day of a milk-based goji berry formulation or placebo for 90 days. The participants underwent ophthalmic examinations to assess pigmentation and soft drusen count in the macula (accumulations in the eye that are associated with macular degeneration) and a blood draw to measure plasma zeaxanthin level and total antioxidant capacity. The results revealed that those in the placebo group were found to have hypopigmentation and soft drusen accumulation in the macula, whereas those in the goji berry group remained stable. It was also found that both plasma zeaxanthin level and antioxidant capacity increased significantly in the goji berry group by 26% and 57%, respectively, but did not change in the placebo group. No participants reported any adverse reactions to the goji berry formulation. These findings suggest that goji berry supplementation increases plasma zeaxanthin and antioxidant levels as well as protects from hypopigmentation and soft drusen accumulation in the macula of elderly subjects.<sup>1</sup>

**1 Bucheli P, Vidal K, Shen L, et al. Goji berry effects on macular characteristics and plasma antioxidant levels. *Optom Vis Sci.* 2011;88(2):257-62**