

# Lutein and zeaxanthin in eye and skin health

Roberts RL, Green J, Lewis B.

Kemin Health, LC, 600 E Court Avenue, Suite A, Des Moines, IA 50309-2058, USA. richard.roberts@kemin.com

Less than 20 of the hundreds of carotenoids found in nature are found in the human body. These carotenoids are present in the body from the foods or dietary supplements that humans consume. The body does not synthesize them. Among the carotenoids present in the body, only lutein and its coexistent isomer, zeaxanthin, are found in that portion of the eye where light is focused by the lens, namely, the macula lutea.

Numerous studies have shown that lutein and zeaxanthin may provide significant protection against the potential damage caused by light striking this portion of the retina. In the eye, lutein and zeaxanthin have been shown to filter high-energy wavelengths of visible light and act as antioxidants to protect against the formation of reactive oxygen species and subsequent free radicals. Human studies have demonstrated that lutein and zeaxanthin are present in the skin, and animal studies have provided evidence of significant efficacy against light-induced skin damage, especially the ultraviolet wavelengths. Little was known about the protective effects of these carotenoids in human skin until recently. This article reviews the scientific literature pertaining to the effects that lutein and zeaxanthin exhibit in the human eye and skin.

Clin Dermatol. 2009 Mar-Apr;27(2):195-201.