Astaxanthin
Selected Bibliography of Functional Health Benefit Studies

Compiled by
Solix Algredients, Inc.

Astaxanthin is a naturally occurring dark red carotenoid pigment found in aquatic animals such as salmon, trout, krill, shrimp, crayfish and crustaceans. It is a potent antioxidant and provides a broad range of health benefits.

Animals, such as salmon, lobster, shrimp and trout, acquire astaxanthin by consuming mainly algae directly or via other marine creatures. Since humans and other mammals cannot synthesize astaxanthin, they consume this valuable nutrient from seafood or a dietary supplement. (Source: Natural Algae Astaxanthin Association). The ubiquitous fresh water microalga, Haematococcus pluvialis, is the richest natural source of astaxanthin and is used in the production of Solasta® Astaxanthin.

Algal astaxanthin’s benefits are well-established through extensive research and clinical studies. For easy reference, Solix Algredients has compiled this third-party research bibliography.
Provides Antioxidant Protection

Benefit Summary
Aastaxanthin delivers more potent antioxidant activity than other antioxidants such as beta-carotene, lutein, alpha-tocopherol or vitamin E (Shimidzu, et al., 1996), and vitamin C.

What’s even more unique is the fact that astaxanthin, unlike other carotenoids such as beta-carotene, remains an effective antioxidant as it counteracts the effects of free-radicals, and rarely, if ever, becomes a harmful pro-oxidant (Martin et al., 1999).

Research


Supports Eye Health

Benefit Summary
Astaxanthin has been shown to support optimal eye health.

In clinical trials, astaxanthin alleviated eye fatigue and eyestrain (Kajita, et al., 2009), especially for those who are in front of a computer screen all day (Nagaki, et al., 2002). It also appeared to relieve the oxidative stress which could lead to inflammation and/or premature aging of eye tissue (Izumi-Nagai, et al., 2008).

Research - Aids with the alleviation of eye fatigue


Research – Helps alleviate damaging free radicals, inflammation and aging of the eye


Supports Skin Health and Improves Appearance

Benefit Summary
Astaxanthin promotes/supports skin health and may reduce the signs of aging.

A clinical study involving women (who supplemented their diet with 6 mg/day astaxanthin as well as applied 1 ml of 0.094% astaxanthin solution made from a 5% astaxanthin oleoresin topically twice daily for eight weeks) found improvements in overall skin appearance, including reduction in wrinkles, crow’s feet, age spots, under-eye swelling, flakes and acne blemishes (Tominaga, et al., 2012).

These cosmetic effects are in addition to astaxanthin’s protective benefits against photo-aging via inhibition of damaging oxidation and free-radical production caused by normal everyday outdoor exposure (Yoon, et al., 2014).

Research


Helps Maintain Cardiovascular Health

Benefit Summary
A astaxanthin helps maintain cardiovascular health.

Reduction of blood pressure, vascular inflammation, oxidative stress, and decrease of arterial stiffness are all important contributors to maintaining cardiovascular health.

Positive effects of astaxanthin supplementation were observed in studies of animal models for hypertension and stroke where research showed that arterial blood pressure was significantly reduced and neurological performance was maintained (Hussein, et al., 2005).

In a human clinical study, patients who supplemented their diet with 6 mg/day astaxanthin for 10 days were found to have improved blood flow (Miyawaki, et al., 2008), which may explain the anti-hypertension effects of astaxanthin.

All of these effects together reinforce the potential of dietary supplementation of astaxanthin supporting cardiovascular health in humans (Hussein, et al., 2006).

Research
Supports a Balanced Immune System

Benefit Summary
Astaxanthin supports/promotes a balanced immune system and may mitigate the effects of inflammation.

Many disease conditions are a result of improper functioning of our immune system.

Supplementing the diet with 8 mg/day astaxanthin for eight weeks was shown in a randomized double-blind, placebo-controlled study to significantly decrease oxidative stress, DNA damage, and inflammation while enhancing immune response in female subjects (Park, et al., 2010).

In in vitro (Lee, et al., 2003) and in vivo (Ohgami, et al., 2003) studies, astaxanthin was found to significantly reduce the production of various mediators that could lead to inflammation.

Research


Improves Exercise Endurance and Muscle Recovery

Benefit Summary
Asthaxanthin shows promise as a sports performance dietary supplement for athletes.

Improvement of exercise endurance and power output was demonstrated in cyclists who supplemented their diet with 4 mg/day astaxanthin for four weeks. Cycling trial times were significantly decreased indicating improved endurance. Additionally, power output was increased by an average of 15% (Earnest, et al., 2011).

Another study linking astaxanthin to improved athletic performance reported improved immune system response, reduced oxidative stress, and reduced muscle damage and inflammation in muscle tissues in a trial with young soccer players who had supplemented their diet with 4 mg/day astaxanthin for 90 days (Baralic, et al., 2015).

Research


