

A Powerful Carotenoid Called Astaxanthin Can Reduce Oxidative Stress And Boost Health

So, what is astaxanthin anyway? Astaxanthin is a potent and powerful carotenoid, like beta carotene, that helps the body boost its immune system and fight off damage done by free radicals and oxidative stress.

The highest known levels of astaxanthin in nature are found in the algae *Haematococcus pluvialis*, which is a microalgae found in tropical locations. While in fact *Haematococcus* is a green algae, when astaxanthin is extracted, this molecule is what lends the trademark pink-orange color to salmon and certain crustaceans.

Like many other carotenoids, astaxanthin is a powerful antioxidant. Antioxidants assist our bodies to fight off free radicals and thwart the damage that is the result of oxidative stress. Oxidation in and of itself is a normal cellular process, and when our bodies are in balance and our immune systems are fully charged, it's not a problem.

However, when our bodies cannot keep up with the number of free radicals we encounter oxidative stress occurs. Certain conditions of the body and numerous outside factors contribute to this level of susceptibility. Conditions such as diabetes increases a person's vulnerability and lead to a condition of almost constantly being under oxidative stress. The presence of ozone, other pollutants, excessive sunlight, food additives, poor nutrition and smoking all contribute highly to this kind of stress. What this means is that in today's climate, we are all at risk of experiencing oxidative stress on a daily basis.

Because of the nature of this kind of stress, all of our cells are involved. Therefore the risk of cell deterioration and the erosion of our immunity are high at all cellular levels. This can lead damage among many cell systems of the body. Oxidative stress leads to premature aging, macular degeneration in the eye, damage to the brain and nervous systems, and even cancer. It leads to the breakdown the cell's ability to maintain; degrading the cell's integrity.

The good news is that carotenoids and astaxanthin in particular, neutralize the effects of this process. Oxidizing agents are chemicals that display a proclivity for stealing electrons from other molecules. When they do this, the molecule they have stolen from also becomes an oxidizing agent. As you can imagine, this creates a chain reaction leading to oxidative stress. Antioxidants, however, help to stop this process.

Astaxanthin has some unique characteristics as well. Studies show that astaxanthin has an especially high aptitude for the absorption of the impact of singlet oxygen. It does not itself become a free radical when it binds the oxidized molecule to itself. This means the problem is taken care of faster.

Astaxanthin has also demonstrated strength of 100 to 500 times higher in antioxidant ability than vitamin E. It trumps vitamin C by that same amount, and has ten times the potency of several other carotenoids, including beta-carotene.

By protecting against and battling the damage caused by free radicals, astaxanthin helps boost immune system function. Its presence in the body increases the production of antibodies and helps balance other functions in the immune system. Studies have shown carotenoid intake is linked to an increased resistance to infections caused by viral, fungal, bacterial and parasitic origins. It is also linked to a higher ability to fight certain cancers.

Additionally, studies have shown that the robust potency of astaxanthin's antioxidant powers reduce the amount of LDL (low-density lipoprotein) cholesterol, or "bad" cholesterol, in the body. LDL cholesterol is oxidized, and therefore a free radical, which causes damage to the heart and body at high levels. Lower levels of LDL cholesterol and higher levels of HDL cholesterol have been connected with a decreased risk for heart disease. Astaxanthin has also been shown to reduce not only present levels, but decreases its production.

The many powerful health benefits offered by astaxanthin are a good reason to consider adding a supplement of this powerful carotenoid to any health regimen. As we continue to fight more oxidative stress in our everyday lives, we should give ourselves a fighting chance at good health with astaxanthin.

About the Author

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