

# Astaxanthin

## Little-Known Marine Carotenoid Can Increase Your Longevity

Research shows that a little-known carotenoid called astaxanthin (pronounced asta-ZAN-thin) could add *decades to your life*. It is responsible for activating a “*longevity gene*”.

Carotenoids such as *zeaxanthin*, *lutein* and *lycopene* are found in fruits and vegetables. They have important roles in human nutrition and metabolism, lycopene supports *prostate health*. Lutein and zeaxanthin support *brain and eye health*.

## Marine Carotenoid Linked to Longevity

University of Hawaii researchers have found that the marine carotenoid astaxanthin may be a key to longevity in a recent lab study.

The researchers looked at astaxanthin's effects on a gene called FOXO3. All humans have this gene but only one in three people have a variant associated with longevity.

They found that the animals receiving the highest amount of astaxanthin showed a *90 percent increase* in activation of the FOXO3 “longevity gene” in their heart cells.

Astaxanthin has many health benefits. Astaxanthin acts as an antioxidant. It can neutralize free radicals with *6,000 times the potency of vitamin C*. It has *550 times the potency of vitamin E*.

Research shows astaxanthin has direct effects on many common conditions, including:

**Pain:** Studies show astaxanthin helps relieve *rheumatoid arthritis pain*. Patients taking just 4 mg of astaxanthin reported an 85 percent *improvement in pain* and a 60 percent *improvement in mobility*.

Numerous studies show astaxanthin helps with all types of *joint pain*—including repetitive strain syndrome such as *carpal tunnel*.

**Colon cancer:** Astaxanthin induces cell death of *colon cancer* cells and inhibits inflammation associated with *colitis*. Astaxanthin may help prevent *colitis* and *chronic inflammation* associated with colon cancer.

**Dementia:** Researchers supplementing with 6 to 12 mg daily of astaxanthin for 12 weeks reduced the levels of a blood marker associated with *brain cell damage* by 50 percent.

**Eye health:** Astaxanthin helps delay the formation of *cataracts*, *glaucoma* and *macular degeneration*.

**Heart health:** Astaxanthin prevents *chronic inflammation* and oxidative stress associated with *heart disease*. Researchers found that it *reduced levels of C-reactive protein* (CRP), one of the four high risk factors for *heart disease*.

**Blood lipids:** Researchers gave men and women with “high” cholesterol daily supplements of astaxanthin. After 12 weeks, they experienced no change in total cholesterol but they *increased HDL “good” cholesterol*—which means that LDL “bad” cholesterol decreased. They also *decreased triglycerides* (blood fats).

**Skin health:** Participants who supplemented with 6 mg of astaxanthin daily for eight weeks and applied a topical cream containing 5 percent astaxanthin *eliminated wrinkles* around the eyes. It also decreased the size of pigmented "*age spots*" and improved skin elasticity. Other studies show astaxanthin boosts *fat loss*, helps *skin wounds* heal, *increases exercise endurance*, *increases muscle strength*, and *improves male fertility*.

The latest research has revealed what was once a closely guarded secret among professional athletes and marathon runners who have credited larger doses of astaxanthin with helping them reach previously unthought-of feats of endurance and stamina. 12 mg daily is the ideal daily dosage of astaxanthin because it has been shown to:

- Neutralize free radicals to protect cells, reduce DNA damage and fight aging
- Promote a normal inflammatory response body-wide
- Improve muscle endurance and exercise performance
- Reduce joint pain and support healthy, flexible joints
- Support healthy circulation and overall cardiovascular health
- Help your brain and nervous system function optimally
- Relieve eye strain and fatigue, and support near and far vision
- Protect skin against UV damage, dryness, wrinkles and premature aging

Astaxanthin is what makes salmon's flesh pink? Astaxanthin is also what gives salmon their ability to achieve marathon swimming feats, leaping up waterfalls and traveling against the current for days.

## Amazing Results

Numerous clinical studies have demonstrated how astaxanthin can help you stay active, exercise longer, feel less sore afterwards, and even burn fat more effectively.

Here's just a small sampling of the incredible results:

- Astaxanthin has been shown to help deliver oxygen and energy to the muscle cells that need it during exercise.
- Astaxanthin reduced levels of lactic acid (the metabolite that really causes you to "feel the burn") during exercise by 28.6%
- Astaxanthin increased muscle endurance in men, enabling them to perform 62% more knee bends while carrying a 90-pound weight!
- Astaxanthin improved the cycling performance of competitive male endurance cyclists, shaving two minutes off their time in a 20-kilometer trial!
- Astaxanthin even helped increase fat burn during exercise. Daily doses of 12 mg of astaxanthin resulted in a significant reduction in body fat percentage.

So whether you are an elite athlete, a weekend golfer or just want to increase your ability to do work around the house, astaxanthin can help!

## It Gets Even Better! Astaxanthin Also Helps Your Joints Stay Pain-Free

One study found that astaxanthin helped ease joint discomfort even after strenuous exercise. Another eight-week double-blind, placebo-controlled clinical study evaluated the effect of a 12 mg daily dose of astaxanthin on joint discomfort. While the placebo group's scores essentially remained unaffected by the end of the eight weeks, pain scores decreased by 35%!

Astaxanthin also acts to lower important inflammatory markers. In one study, volunteers taking astaxanthin for two months saw their levels of C-reactive protein (CRP) plummet. CRP is an important marker of inflammation in the body—and high CRP levels also affect heart health.

## **A Boost for Your Mood, Mental Performance, Focus and Memory**

When it comes to brain health, astaxanthin is at the top of the list. It is one of the world's only antioxidants that can cross the blood-brain barrier and fight oxidative stress in the brain.

Because of this unique ability, astaxanthin—especially when taken at higher doses—can provide incredibly powerful support for your mood, cognitive health and mental performance.

In a double-blind, placebo-controlled study, men and women age 20-64 took 12 mg of astaxanthin for eight weeks. Astaxanthin helped significantly reduce symptoms of mental and physical fatigue, with improvements in cognitive acuity, motivation, concentration and mood.

In another eight-week trial involving postmenopausal women who took 12 mg of astaxanthin daily, astaxanthin helped provide dramatic improvements in mental outlook and reduced signs of stress including tension, eye fatigue, stiff shoulders, constipation, cold skin and difficulty falling asleep.

Other research has shown that taking 12 mg of astaxanthin per day improves accuracy and reaction time in working memory in healthy older adults with complaints of forgetfulness.

Astaxanthin also has the ability to cross the blood-retina barrier, which makes it extraordinarily effective at reducing eye strain and supporting clear, healthy vision as you age. Another benefit of reducing oxidation and inflammation is that your skin will look and feel incredible. In addition to protecting your skin against ultraviolet damage and free radicals, studies have shown that astaxanthin helps elevate collagen levels for a firmer, smoother complexion and boosts cell repair!

Here's what you need to know:

- The only natural source of astaxanthin is the marine algae species *Haematococcus pluvialis*. Make sure the bottle says "natural astaxanthin" and that it is derived from *H. pluvialis*.

Here are a few of the remarkable success stories:

### **12 mg of astaxanthin is a more effective dose**

- "During my annual well-woman exam this spring, in reviewing all of the supplements I am taking, my doctor noted that 12 mg of astaxanthin is a more effective dose." -- **Jeanne T, TX**

#### **This has helped reduce my eye strain**

- "Astaxanthin at 12 mg has helped reduce my eye strain, as I am on the computer 4-6 hours each day. My daughter also takes it and has noticed clearer skin after just a couple of weeks." — **Kirk R., LA**

#### **We won't ever stop taking astaxanthin**

- "My wife and I both began using Astaxanthin for its antioxidant properties plus all the other miraculous things it does. I also noticed that the dark skin spots on my face were disappearing. We won't ever stop taking astaxanthin!" — **David M., IA**

#### **I will be including this gem in my vitamin regimen**

- "I am a 54-year-old heavy equipment operator whose job has taken its toll on my body. Taking Astaxanthin daily has made a world of difference in my joints as well as in my mental clarity! I will be including this gem of a supplement in my vitamin regimen for the rest of my life!" — **Bill H., NY**