

September 2016

Vol. V Issue 9

The World's Most Powerful Antioxidant

Patients often ask me: “Dr. Sears, what’s the best antioxidant for anti-aging?”

For more than 20 years, my answer has been the same. I tell them: “Your diet should contain as many antioxidants as possible. But only one antioxidant can be the world’s strongest...”

Then I teach them about *astaxanthin* (pronounced asta-ZAN-thin) — nature’s most potent antioxidant and a powerhouse anti-inflammatory. It comes from a special type of algae called *haematococcus pluvialis*, and it’s been part of the Earth’s marine ecosystems for at least a billion years.

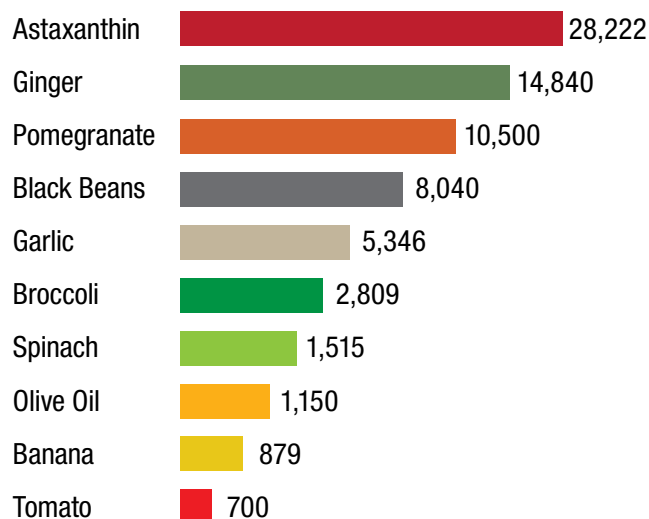
But only in the last decade has science truly begun to understand just how powerful astaxanthin really is. Most mainstream doctors still haven’t heard of it, even though studies show it’s:

- **6,500% more potent than vitamin C!**
- **5,400% more powerful than beta-carotene**
- **1,430% more powerful than vitamin E and green tea**

In fact, astaxanthin has more antioxidant power than the most antioxidant-loaded foods. Check out the chart on this page to see how it stacks up against other powerful antioxidants.

Astaxanthin is a natural red pigment that’s classified by the FDA as a food dye. But it’s actually a carotenoid — the red and yellow pigments in plants and certain animal tissues with natural healing and health benefits.

ASTAXANTHIN VS. OTHER POWERFUL ANTIOXIDANTS (measured in ORAC units per 100 grams)



ORAC units measure the antioxidant capacity of foods, herbs and spices. As you can see, astaxanthin scores much higher than some of the healthiest superfoods.

Scientists have already dubbed it the “King of the Carotenoids.”

When these microalgae are exposed to sunlight, they produce astaxanthin to protect themselves from the damaging effects of UV radiation.

Also in This Issue...

- The 10 Most Ignored Superfoods.....9
- Cure For the Deadliest Pollution.....18

This protective shield is then transferred to the algae's predators, and then to the predators of those predators.

If you've ever seen wild salmon swimming upstream against raging rivers — performing what is certainly the greatest athletic feat in nature — you've witnessed the power of astaxanthin with your own eyes. It's also what gives salmon — as well as shrimp, crayfish, lobster and even the feathers of flamingos — their pink color.

When I first started recommending astaxanthin in my clinic in the 1990s, patients told me how it took care of their arthritis pain, cholesterol issues, gave them newfound strength and stamina, prevented colds and flu and a host of other amazing results.

Since then, dozens of human trials have confirmed its healing and anti-aging impact — like bolstering your eyes, heart, liver, kidneys, brain and immune system.²

I can't recommend it enough. But there's a problem...

The market has been flooded with *synthetic astaxanthin made from petrochemicals*. In a minute, I'm going to show you how to make sure you're getting **natural astaxanthin** — more than 20 times stronger than the artificial version.

But even if you buy natural astaxanthin, you're probably getting the wrong dosage — and that means you're not getting the full benefits.

*In this **Confidential Cures**, I'm going to show you how to get and use natural astaxanthin — the only astaxanthin I ever recommend — as well as the right dosage. But first, let's take a look at how powerful it really is and WHY I recommend it so strongly.*

Upping the Antioxidant Ante

Astaxanthin has the unique ability to launch multiple targeted attacks on damaging *free radicals* inside and outside your cells.

It goes directly to the business of preserving the structure of your cells and preventing damage to your DNA.

You may remember from science class that free radicals are “rogue” oxygen molecules produced by your cells as a natural byproduct of metabolism. They're highly toxic and incredibly damaging.

When these free radicals are allowed to run amok, they start destructive chain reactions that cause widening circles of damage, disease and accelerated aging in your body.³

Most of today's chronic diseases have their root in inflammatory free-radical reactions, including:

- Arthritis
- Asthma
- Cancer
- Diabetes
- Dementia
- Heart disease
- Degenerative macular eye disease

Normal body processes like digestion, breathing and the functioning of your immune system produce small quantities of free radicals, and your body's own antioxidants can handle them easily.

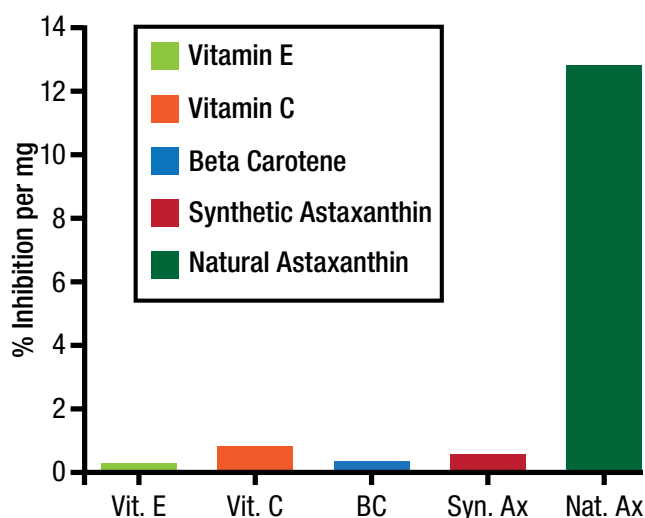
The real problem is our modern environment:

- **Pollution:** Huge quantities of toxins in our everyday environment have overwhelmed your natural antioxidant defenses.
- **Stress:** Unprecedented levels of free radicals — unknown to even your grandparents' generation — are produced by the stress hormone, cortisol.
- **Diet:** Processed foods, which contain all sorts of chemically engineered compounds in unnatural forms, are another major source of free radicals.

Scientists have not found any other substance that's strong enough to handle these modern free radical attacks.

Most antioxidants can only attack one kind of free radical at a time. But turbo-charged astaxanthin wipes out multiple free radical types at the same time, dwarfing the effects of all other antioxidants.⁴ You can see its power for yourself in the chart on the following page.

OXYGEN FREE RADICAL SCAVENGING



Natural astaxanthin is the most powerful antioxidant in the world. It's more than 20 times more potent than the synthetic version.

But astaxanthin isn't just powerful — it's also penetrating. Unlike other antioxidants, astaxanthin is both fat- and water-soluble — which means it gets into every cell.

It can even permeate the blood-brain barrier and the blood-retinal barrier, bringing especially protective powers to your **brain** and **eyes**. Other antioxidant carotenoids, like lycopene and beta-carotene, can't do this.

Its effect on all parts of the body is simply incredible. I use astaxanthin at the *Sears Institute for Anti-Aging Medicine* to treat all manner of modern diseases and conditions — including your heart, eyes, skin, brain and much more.

A Powerhouse for Your Heart

My patients have had astounding success using astaxanthin to treat heart disease, and minimize their risk of heart attack or stroke.

Apart from its protective antioxidant effect on your heart cells, astaxanthin puts out the fire of inflammation that causes chronic diseases in your cardiovascular system, like:

- **Myocarditis:** Inflammation of your heart muscle
- **Pericarditis:** Inflammation of the sac-like tissue around your heart
- **Endocarditis:** Inflammation inside the lining of your heart chambers and valves
- **Atherosclerosis:** The result of ongoing inflammation in your arteries

And science backs up my observations. The best measure of heart inflammation is the test for C-reactive protein (CRP), which increases as inflammation worsens. The latest research reveals that astaxanthin reduces CRP by directly suppressing the inflammatory enzymes, like interleukin-6, COX-1 and COX-2.^{5,6,7}

Astaxanthin also has incredible powers to boost your cholesterol health and get your blood lipid profiles back to where they're supposed to be.

My own clinical observations as well as recent studies show astaxanthin raises your HDL levels. Your doctor probably hasn't told you, but as long as your HDL is high enough, you're at little to no risk of heart disease, no matter how high your LDL or total cholesterol are.^{8,9}

Other studies have shown that astaxanthin has even more heart-health benefits. It can:

- Lower triglyceride fat levels by 25%¹⁰
- Lower blood pressure¹¹
- Lower blood sugar levels¹²

This low-cost, natural dietary supplement is a far superior — and far safer — alternative to Big Pharma's cholesterol-busting statins and blood pressure-lowering pills that often do more harm than good.

The Eyes Have It

Astaxanthin's unique power to cross the blood-retinal barrier increases antioxidant protection throughout your eyes.¹³ It even soups up two other eye-healthy carotenoid antioxidants — lutein and zeaxanthin — which already are present in your eyes.

Studies show astaxanthin to be a potent weapon against the three most common age-related causes of visual impairment and blindness in America — cataracts, glaucoma and macular degeneration.¹⁴

It's difficult to maintain healthy circulation in your eyes as you age. It becomes more difficult to focus, things aren't as sharp, and you can get eye fatigue and headaches.

Poor circulation means less oxygen and nutrients get to your retina. And that leads to more oxidation and free-radical attacks on the cells in your eyes.

Research now shows that astaxanthin not only protects retinal cells against free radicals, it also shrinks the area of destructive new blood-vessel growth on retinas, a hallmark of advanced *macular degeneration*.^{15,16}

And when astaxanthin increases blood flow to your eyes, it also helps to reverse the effects of glaucoma, a condition in which the pressure of the fluid inside your eyeball rises and causes retinal cell death from oxidant damage and loss of blood flow.¹⁷

So at the same time it's destroying free radicals, astaxanthin helps you maintain the flow of nutrients and oxygen to your inner eye, relieving double and blurred vision, and keeping your focus sharp and clear.¹⁸

Studies also reveals astaxanthin is a powerhouse for treating diabetic retinopathy.¹⁹

Food for Your Brain

As you age, and your internal antioxidant defenses become less efficient, it's essential to protect your most vital organ — and scientists have just begun to realize that astaxanthin is powerful brain food.²⁰

Astaxanthin saturates deep into brain tissue and protects all parts of your brain with its antioxidant and anti-inflammatory powers — preventing oxidative damage that injures and eventually kills brain cells.^{21,22}

Animal and human studies show that high doses of astaxanthin taken daily for just four weeks can

significantly slow brain aging. Human studies show astaxanthin can:^{23,24}

- Improve memory recall — at any age
- Improve thinking and learning skills — at any age
- Block inflammation that accelerates chronic neurodegenerative conditions, like *Alzheimer's* and *Parkinson's* disease
- Improve dementia symptoms of *Alzheimer's* and *Parkinson's* disease

Interestingly, animal studies also suggest astaxanthin could have an *anti-anxiety effect* — but this has yet to be tested on humans.²⁵

And studies show astaxanthin is a powerful weapon against stroke. It can:^{26,27}

- Reduce the risk of stroke
- Shrink the size of stroke-damaged areas in the brain after a stroke
- Improve motor function after a stroke

One study shows that taking astaxanthin before a stroke completely prevented *ischemic brain injury* — even after a two-hour blockage in one of the brain's largest arteries.²⁸

The Anti-Cancer Crusader

Astaxanthin cuts your risk of cancer by attacking its source — oxidative stress and inflammation — and it can also stop cancer from spreading.²⁹

Studies show astaxanthin has beneficial effects in preventing and treating:^{30,31,32,33}

- Colon cancer
- Breast cancer
- Bone cancers
- Bladder cancer
- Oral cancers
- Leukemia

Nature's Skin Protector

Have you ever seen salmon roe? It's red. High levels of astaxanthin, which has powerful UV-blocking properties, protect the fish eggs from sun damage.

Astaxanthin has the same effect on human skin — whether the threat is from overexposure to the ultraviolet radiation or pollution. Astaxanthin accumulates in your skin and embeds itself into every layer.

You see, when skin cells are exposed to UV light and toxic pollution, they produce bursts of free radicals that trigger multiple aging effects, like sagging skin, wrinkles, crow's feet and age spots.

Astaxanthin has shown unparalleled ability to neutralize skin-damaging free radicals.

I've observed at the *Sears Institute for Anti Aging Medicine* how astaxanthin can drastically reduce age-related skin damage and studies back me up.^{37, 38}

Because it's water- *and* fat-soluble, astaxanthin can increase moisture in skin cells — and it stimulates the production of collagen, the protein that forms your skin's "scaffolding." Healthy collagen is responsible for the skin's elasticity and your youthful appearance.

And it's also a powerful protector against sunburn.³⁹

Taking astaxanthin means you can stay in the sun longer and you're protected from the aging effects of UV light. At the same time, your skin cells get repaired and rejuvenated.

You see, astaxanthin not only prevents the DNA damage that initiates many forms of cancer — it also mobilizes your body's own anti-cancer defense systems.

Research reveals that astaxanthin boosts your body's production of *natural killer (NK) cells* that search out and destroy early cancer cells before they grow into tumors.³⁴ And they can also infiltrate and neutralize tumors that already exist.^{35,36}

Scientific evidence of astaxanthin's cancer-fighting abilities continues to mount. A study from India's National Institute of Pharmaceutical Education and Research found that astaxanthin can also prevent DNA damage that can lead to liver cancer.

Dozens of other studies into astaxanthin's cancer-crusading powers are ongoing.

The Anti-Aging Power of Astaxanthin

Astaxanthin also provides incredible anti-aging protection. Its anti-inflammatory and antioxidant properties have been shown to reduce:^{40, 41,42}

- Fatigue
- Joint pain
- Muscle ache

But astaxanthin also works at sub-cell levels — protecting your DNA, the blueprint which determines whether you stay healthy or get sick.

Let me explain...

Astaxanthin preserves and protects your telomeres, the protective caps at the ends of each strand of your DNA.

Advances in anti-aging medicine over the past decade have revealed that the longer your telomeres are, the younger your cells act. The shorter your telomeres, the more prone you are to the "diseases of aging" — like cancer, heart disease, arthritis, Alzheimer's, Parkinson's and diabetes.

You see, inflammation caused by oxidative damage essentially grinds down your telomeres.⁴³

Astaxanthin's powerful antioxidant and anti-inflammatory effects stop the cellular damage that causes your telomeres to shorten in the first place.⁴⁴

But when your telomeres are long:

- Your memory is sharp
- Your body and mind are energized
- You stay healthy and lean
- Your heart is strong
- Your eyes are sharp

Tantalizing research now also reveals that astaxanthin may have the power to extend human life. Preliminary studies have already used it to lengthen the lifespan of primitive organisms, like nematode worms called *C. elegans*.⁴⁵

More Benefits Being Discovered All The Time

Dozens of scientific studies are currently being conducted around the world on the health and wellness effects of astaxanthin — most are still in very early stages, but all of them positive.

Here are just a few of the conditions that researchers are learning astaxanthin can help:

- Metabolic syndrome
- Insulin resistance
- Obesity
- High blood pressure
- The control and prevention of non-alcoholic fatty liver disease (NAFLD)
- Promotes all round gastric health
- Protects against ulcers
- Injuries like tennis elbow and carpal tunnel syndrome
- Physical stamina enhancement

I also recommend astaxanthin as the most efficient way to take omega-3s. One of my products actually combines omega-3-rich krill oil with

astaxanthin so the benefits go directly to your brain and other vital organs.

Where to Get It and How to Take It

The best natural source of astaxanthin is **wild-caught Pacific salmon** — although you can also find it in other pink-colored seafood, like lobster, crab and shrimp.

Wild salmon contains far more natural astaxanthin than farm-raised salmon. Four ounces of farm-raised Atlantic salmon has 0.5 to 1.1 mg of astaxanthin. But wild-caught Alaskan sockeye contains 4.5 mg.⁴⁶

A 6-ounce serving of wild salmon provides around 1,000 mg of omega-3s and 1 mg of astaxanthin. And astaxanthin's fat- and water-soluble powers carry the omega-3s deep into the brain and other vital organs and tissues.

Farmed salmon can't forage the oceans for colorful crustaceans, plankton and algae. That's why their flesh is an insipid gray color few consumers would want. So to turn them pink, fish farmers feed them *synthetic astaxanthin*, products derived from petrochemicals that haven't been approved for human consumption in any country. This makes them pinker than normal. You can see the difference in color in the photo on the following page.

But there's a bigger problem...

Synthetic astaxanthin has now flooded the supplement market — and, in most cases, there's no label to tell you you're about to consume something made from petroleum.

Studies conducted at Creighton University and Brunswick Laboratories (see chart on page 3) showed that *synthetic astaxanthin is more than 20 times weaker than natural astaxanthin*.⁴⁷

The artificial stuff won't give you the benefits you need and expect. It's worth paying the extra money to avoid taking a worthless petrochemical pill.

For your health's sake, look for natural forms of

Wild Salmon vs. Farm-Raised



The bright red flesh of wild-caught Pacific salmon (left) is due to its high levels of natural astaxanthin. Farm-raised salmon (right) are fed with synthetic astaxanthin, made from petroleum, to make their flesh appear pinker.

astaxanthin. The bottle will state: “*Haematococcus pluvialis algae extract*.”

Meanwhile, you’re also probably not getting the right advice about how much to take...

Most astaxanthin supplement manufacturers recommend taking between 4 and 6 mg a day. But based on scientific trials and my own research at the **Sears Institute for Anti-Aging Medicine**, you need MUCH more to get the benefits.⁴⁸

I recommend at least 10-12 mg per day — in divided doses — to support overall health and more if you are treating a specific condition. For cardiac problems or adjunctive cancer treatments, I recommend at least 18 mg per day in divided doses.

I’ve added as much as **50 mg of astaxanthin** to one of my product formulas, and it’s making a HUGE difference in people’s lives.

But remember, you can’t just swallow a bunch of astaxanthin capsules and wash them down with a smoothie. To get the full benefits, take it with food, or with a tablespoon of sacha inchi or another oil.

References

- 1 Capelli B with Cysewski G. “Natural Astaxanthin: King of the Carotenoids.” ISBN-13: 978-0-9792353-0-6.
- 2 Hussein G, Sankawa U, et al Astaxanthin, a carotenoid with potential in human health and nutrition. *J Nat Prod*. 2006 Mar;69(3):443-9.
- 3 Florence TM. “The role of free radicals in disease.” *Aust N Z J Ophthalmol*. 1995 Feb;23(1):3-7.
- 4 Zhongrui Li, Xin Dong. “Astaxanthin protects ARPE-19 cells from oxidative stress via upregulation of Nrf2-regulated phase II enzymes through activation of PI3K/Akt.” *Mol Vis*. 2013; 19: 1656–1666.
- 5 Park et al. “Astaxanthin decreased oxidative stress and inflammation and enhanced immune response in humans.” *Nutrition & Metabolism* 2010, 7:18
- 6 Fassett RG, Coombes JS “Astaxanthin: A Potential Therapeutic Agent in Cardiovascular Disease.” *Mar Drugs*. 2011; 9(3): 447–465. doi: 10.3390/md9030447
- 7 D’Orazio N, Gammone MA, et al. “Marine Bioactives: Pharmacological Properties and Potential Applications against Inflammatory Diseases.” *Mar Drugs*. 2012 Apr; 10(4): 812–833.
- 8 Castiglioni A, Neuman WR. “HDL Cholesterol: What Is Its True Clinical signi cance?” *Emergency Medicine*, January 2003:pp 30-42.
- 9 Yoshida H, et al. “Administration of natural astaxanthin increases serum HDL-cholesterol and adiponectin in subjects with mild hyperlipidemia.” *Atherosclerosis*. 209(2):520-3. (2010)
- 10 Ibid
- 12 Ibid.
- 13 Hashimoto H, Arai K, et al. “Effects of astaxanthin on antioxidation in human aqueous humor.” *J Clin Biochem Nutr*. 2013;53(1):1-7.
- 14 Ishikawa S, Hashizume K, et al. “Effect of astaxanthin on cataract formation induced by glucocorticoids in the chick embryo.” *Curr Eye Res*. 2015 May;40(5):535-40. doi: 10.3109/02713683.2014.935445.
- 15 Nakajima Y, Inokuchi Y, et al. “Astaxanthin, a dietary carotenoid, protects retinal cells against oxidative stress in-vitro and in mice in-vivo.” *J Pharm Pharmacol*. 2008 Oct;60(10):1365-74.
- 16 Parisi V, Tedeschi M, et al. “Carotenoids and antioxidants in age-related maculopathy Italian study: multifocal electroretinogram modifications after one year.” *Ophthalmology*. 2008 Feb;115(2):324-33 e2.
- 17 Tsukahara H, Ishida S, et al. “Astaxanthin increases choroidal blood flow velocity.” *Graefes Arch Clin Exp Ophthalmol*. 2012;250(2):239-45.
- 18 Cort A, Ozturk N, Akpinar D, et al. Suppressive effect of astaxanthin on retinal injury induced by elevated intraocular pressure. *Regul Toxicol Pharmacol*. 2010 Oct;58(1):121-30.
- 19 Dong LY, Jin J, et al. “Astaxanthin Attenuates the Apoptosis of Retinal Ganglion Cells in db/db Mice by Inhibition of Oxidative Stress.” *Mar. Drugs* 2013, 11(3), 960-974.
- 20 Liu X, Osawa T. “Astaxanthin protects neuronal cells against oxidative damage and is a potent candidate for brain food.” *Forum Nutr*. 2009;61:129-35.
- 21 Ikeda Y, Tsuji S, et al. “Protective effects of astaxanthin on 6-hydroxydopamine-induced apoptosis in human neuroblastoma SH-SY5Y cells.” *J Neurochem*. 2008 Dec;107(6):1730-40.
- 22 Ikeda Y, Tsuji S, et al. Protective effects of astaxanthin on 6-hydroxydopamine-induced apoptosis in human neuroblastoma SH-SY5Y cells.” *J Neurochem*. 2008 Dec;107(6):1730-40.
- 23 Katagiri M, Satoh A, et al. “Effects of astaxanthin-rich Haematococcus pluvialis extract on cognitive function: a randomized, double-blind, placebo-controlled study.” *J Clin Biochem Nutr*. 2012 Sep;51(2):102-7.
- 24 Capelli B with Cysewski G. “Natural Astaxanthin: King of the

Carotenoids." ISBN-13: 978-0-9792353-0-6.

25 Shen H, Kuo CC, et al. "Astaxanthin reduces ischemic brain injury in adult rats." *FASEB J*. 2009 Jun;23(6):1958-68.

26 Ibid.

27 Lee DH, Lee YJ, et al. "Neuroprotective effects of astaxanthin in oxygen-glucose deprivation in SH-SY5Y cells and global cerebral ischemia in rat." *J Clin Biochem Nutr*. 2010 Sep;47(2):121-9.

28 Lu YP, Liu SY, et al. "Neuroprotective effect of astaxanthin on H(2)O(2)-induced neurotoxicity in vitro and on focal cerebral ischemia in vivo." *Brain Res*. 2010 Nov 11;1360:40-8.

29 Nagendraprabhu P, Sudhandiran G. "Astaxanthin inhibits tumor invasion by decreasing extracellular matrix production and induces apoptosis in experimental rat colon carcinogenesis by modulating the expressions of ERK-2, NFkB and COX-2." *Invest New Drugs*. 2011 Apr;29(2):207-24.

30 Prabhu PN, Ashokkumar P, et al. "Antioxidative and antiproliferative effects of astaxanthin during the initiation stages of 1,2-dimethyl hydrazine-induced experimental colon carcinogenesis." *Fundam Clin Pharmacol*. 2009 Apr;23(2):225-34.

31 Nakao R, Nelson OL. "Effect of dietary astaxanthin at different stages of mammary tumor initiation in BALB/c mice." *Anticancer Res*. 2010 Jun;30(6):2171-5.

32 Wakshlag JJ, Balkman CA, et al. "Evaluation of the protective effects of all-trans-astaxanthin on canine osteosarcoma cell lines." *Am J Vet Res*. 2010 Jan;71(1):89-96.

33 Zhang L and Handong WH. "Multiple Mechanisms of Anti-Cancer Effects Exerted by Astaxanthin." *Mar Drugs*. 2015 Jul; 13(7): 4310-4330.

34 Park JS, Chyun JH, et al. "Astaxanthin decreased oxidative stress and inflammation and enhanced immune response in humans." *Nutr Metab (Lond)*. 2010;7:18.

35 Park JS, Mathison BD, et al. "Astaxanthin stimulates cell-mediated and humoral immune responses in cats." *Vet Immunol Immunopathol*. 2011 Dec 15;144(3-4):455-61.

36 Song X, Wang M, Zhang L, et al. "Changes in cell ultrastructure and inhibition of JAK1/STAT3 signaling pathway in CBRH-7919 cells with astaxanthin." *Toxicol Mech Methods*. 2012 Nov;22(9): 679-86.

37 Lyons NM, O'Brien NM. "Modulatory effects of an algal extract containing astaxanthin on UVA-irradiated cells in culture." *J Dermatol Sci*. 2002 Oct;30(1):73-84.

38 Camera E, Mastrofrancesco A, et al. Astaxanthin, canthaxanthin and beta-carotene differently affect UVA-induced oxidative damage and expression of oxidative stress-responsive enzymes. *Exp Dermatol*. 2009 Mar;18(3):222-31

39 Lyons N, Nora M. "Modulatory effects of an algal extract containing astaxanthin on UVA-irradiated cells in culture." *Journal of Dermatological Science* 30 (2002) 73 /84.

40 Ikeuchi M, Koyama T, et al. "Effects of astaxanthin supplementation on exercise-induced fatigue in mice." *Biol Pharm Bull*. 2006 Oct;29(10):2106-10.

41 Malmsten CL and Lignel AI. "Dietary Supplementation with Astaxanthin-Rich Algal Meal Improves Strength Endurance. A Double Blind Placebo Controlled Study on Male Students." *Carotenoid Science*, Vol.13, 2008 ISSN 1880-5671.

42 Aoi W, Naito Y, et al. "Astaxanthin improves muscle lipid metabolism in exercise via inhibitory effect of oxidative CPT I modification." *Biochem Biophys Res Commun*. 2008 Feb 22;366(4):892-7.

43 Richards J, et al. "Homocysteine levels and leukocyte telomere length." *Atherosclerosis*. 2008;200(2):271-7.

44 Makpol, N Yaacob, et al. "Chlorella vulgaris modulates hydrogen peroxide-induced DNA damage and telomere shortening of human fibroblasts derived from different aged individuals." *African Journal of Traditional, Complementary and Alternative Medicines*. ISSN: 0189-6016.

45 Yazaki K, Yoshikoshi C, et al. "Supplemental cellular protection by a carotenoid extends lifespan via Ins/IGF-1 signaling in *Caenorhabditis elegans*." *Oxid Med Cell Longev*. 2011;2011:596240.

46 Turujman, SA, Wamer, et al. "Rapid liquid chromatographic method to distinguish wild salmon from aquacultured salmon fed synthetic astaxanthin." *J. AOAC Int.*, 80(3):622-632. (1997)

47 Capelli, B, Bagchi, D, et al. "Synthetic astaxanthin is significantly inferior to algal-based astaxanthin as an antioxidant and may not be suitable as a human nutraceutical supplement." *Nutrafoods* (2013) 12: 145.

48 "Astaxanthin: A Review of the Literature. The scientific evidence on the uses, contraindications, and interactions of this carotenoid." *Natural Medicine Journal*. February 2012 Vol. 4 Issue 2.

The 10 Most Ignored Superfoods

The problem with “superfoods” is that most of them are not super enough.

In today’s world, you need superfoods that don’t just replace missing nutrients. You need foods that are potent enough to protect you from chronic disease, make you stronger, more energetic and more alert.

Let me explain...

The source of chronic disease is not within your body — it’s in our modern world.

Your body evolved over millions of years to live in a world that no longer exists. Modern foods don’t provide even the basic nutrients you need, and you can’t flush out the toxins and pollutants fast enough.

As you age, toxins build up in your body. They bring on fatigue, nausea and brain fog, and can lead to many serious diseases.

Mainstream medicine will tell you arthritis... heart disease... cancer... Alzheimer’s... obesity... and diabetes are the result of your “defective” genes.

But these diseases were rare a century ago. Modern diseases are triggered by your body’s inability to cope with an alien environment it wasn’t designed for. It’s wrecked our metabolism and is making our bodies act in ways nature never intended.

You see, our bodies haven’t evolved quickly enough for today’s world.

The good news is, because you still have the inborn blueprint to be strong, smart and mobile, you can rebuild your nutrient levels and give your body the extra protection it needs.

Most superfoods aren’t up to the challenge. But nature has provided the answer — you just need to know where to look.

Each year, I travel over 20,000 miles to study natural remedies lost to Western medicine. I’ve visited remote populations — from the Ashanikas in Peru to the herbal healers of Bali.

And I’ve made some incredible discoveries ...

Among those discoveries are what I call my top 10 “real” superfoods. You may not have heard of some of them, but they do much more than prevent disease. They give your body the nutritional realignment, repair and rejuvenation it needs to thrive.

Superfood #1: Cupuaçu — Food of the Gods



South Americans have known about cupuaçu’s healing powers for centuries.

The first time I tried **cupuaçu** was in the Amazon rainforest. This incredible, watermelon-sized fruit tastes like a creamy blend of chocolate and vanilla — but nature also gave it remarkable medicinal powers.

Brazilians call it “pharmacy in a fruit.” It’s heavy with vitamins B1, B2, B3, fatty and amino acids, and at least nine antioxidants, including vitamins A and C.

South Americans have used it as a soothing medicine and energy-booster for centuries.

It's also the only fruit in the world that contains *theobromine*, a stimulant similar to caffeine, but without the jitters.

Cupuaçu also contains the flavonoid *quercetin*, a proven energy-booster that helps grow new mitochondria, the little power generators in your cells. Quercetin also protects against toxic stress — just what you need in today's environment *and* it's a potent immune-system strengthener.^{1,2,3}

Two other recently discovered cupuaçu flavonoids, *theograndins I and II*, are effective against *colon cancer* cells.⁴

Its fatty acids and antioxidants:

- bind to toxins that your liver traps, and helps flush them from your system — making it a potent *detoxifier*
- lower your blood sugar, making it a protector and treatment for diabetes
- make hormone-like substances that *regulate blood pressure, clotting, cholesterol, immunity and your response to injury and infection*

You can also get *cupuaçu butter* — the Amazon's secret to radiant, *youthful-looking skin*. Its quercetin content keeps your skin elastic and fades scars.

Look for cupuaçu at grocery stores that specialize in Brazilian foods. If they don't have any of the fresh fruit, look in the freezer section. It's great in smoothies and milkshakes.

Superfood #2: Sacha Inchi — Ancient Inca Power

For centuries, this South American nut oil nourished the Incas — turning them into one of the most powerful civilizations on Earth. They made it by pressing the seeds and fleshy fruit of the local *pracaxi* tree.

Sacha Inchi has the most complete plant source of amino acids. These are the building blocks of the proteins that make your body function. It also has *17 times more omega-3s* than salmon.



Sacha inchi is one of the richest sources of plant-based omega-3s in the world.

It contains high levels in *alpha linolenic acid (ALA)*, the parent molecule so your body can make its own omega-3s. But your body can't make ALA. You have to get it from food.

And it's a powerhouse when it comes to:

- **Heart Health:** Studies show that people who eat diets rich in ALA have lower risk of *heart disease, high blood pressure, cardiac death and stroke*.^{5,6,7}
- **Joint Health:** A meta-analysis of 17 controlled trials confirmed its powers as an anti-inflammatory and powerful arthritis pain reliever. It also eases morning stiffness and improves mobility and grip strength.⁸
- **Bone Health:** High levels of ALA boost calcium absorption and supercharge *osteoblasts* — cells that make new bone — reducing osteoporosis risk.^{9,10}
- **Mental Health:** Sacha inchi is loaded with the amino acid tryptophan, which increases the production of feel-good hormone serotonin. It also reduces brain inflammation, which can cause headaches, “the blues” and mood shifts.^{11,12}
- **Cancer:** ALA can be effective against breast, colon and prostate cancers.^{13,14}

Peruvian herbal healers use sacha inchi to help restore urinary flow in men with *prostate problems*.

Every 100 grams of sacha inchi seed has more than 75 mg of *beta-sitosterol* — a natural prostate treatment.¹⁵

Use it as a salad dressing... a dipping sauce... add it to any meat or fish entrée... put it on top of vegetables. Always use it raw, because heat causes the omega-3s to lose potency.

Superfood #3: Camu-Camu — Immune System Champion



The berries of the camu-camu are the world's best source of vitamin C.

I saw the camu-camu bush growing in the rain forests of Peru and Brazil. Its berries have more vitamin C than any other source on the planet — 30 times the amount in oranges.

And it contains the complete vitamin C complex — one of your body's most powerful antioxidants and anti-inflammatories — beating back the free radicals that cause oxidative stress and the inflammation at the root of all modern chronic diseases.¹⁶

It's an especially powerful heart protector. Vitamin C increases the production of collagen, elastin and other "reinforcement molecules" that support your blood vessels. That means more stability for your system of arteries, veins and capillaries.

Camu also contains *gallic acid*, which is known for its anti-fungal and anti-viral properties, and can treat cold sores, herpes, shingles, and the common cold.

It boosts the health of your:

- **Gums** - boosted by the high vitamin C content
- **Eyes** - vitamin C is a powerhouse for your eyes
- **Digestion** - boosted by the amino acid *serine*
- **Brain** - the high vitamin C content boosts neurotransmitters
- **Muscle tone** - boosted by the amino acids *valine* and *leucine*
- **Heart and kidneys** - boosted by the vitamin C and potassium content

A 2010 study revealed that camu also contains *ellagic acid*, which has anti-diabetic effects.¹⁷

Camu is mostly sold in powdered form. It's tart to taste - but you can mix it into a smoothie with something sweet, like bananas or strawberries. It's delicious sprinkled in yogurt.

Superfood #4: Cacao — Food for Geniuses



Cacao beans contain more flavonoids and antioxidants than even green tea.

The ancient Mayans were first to discover the power of *cacao* beans — the source of chocolate. Cacao beans were considered so nutritious that Mayan kings drank up to 30 cups a day to maintain their vigor and virility.

Healers used cacao to alleviate fever, anemia, poor appetite, metal fatigue, poor breast milk production, gout, kidney stones, low virility, as well as nervous system and digestive disorders.

Each cacao bean contains around 700 compounds — the most of any food on the planet — and it has more flavonoids and antioxidants than green tea.

Its best-known flavonoid is *theobromine*, which relaxes the muscles in your blood vessels, boosting cardiovascular health. Cacao is also packed with potassium, phosphorus, copper, iron and zinc, and has high levels of magnesium.

Studies show cacao can lower blood pressure and increase circulation, and — ^{18, 19}

- Boost mood
- Reduce diabetes risk
- Help prevent obesity
- Neutralize free radicals
- Improve digestion
- Protect against cancer

Chocolate also has a powerful effect on your brain. It's loaded with tryptophan, the serotonin booster. Cacao increases blood flow to the brain, reducing anxiety, reversing mental fatigue and even improving math skills.^{20, 21, 22}

But not all chocolate is created equally. Always choose dark chocolate with the highest cocoa content for more heart-healthy flavonoids.

Organic, raw cacao is best, because it retains much of its nutritional value. It's great for adding to smoothies and yogurt.

Superfood #5: Aloe Vera — Plant of Immortality

Aloe vera is the Rolls-Royce of healing foods. Called the “Plant of Immortality” by ancient Egyptians, it's one of the oldest medicinal plants in the world.



Aloe is not only great for skin, it's a super immune booster.

You probably know aloe as the skin-soothing gel available at drugstores.

Traditional healers around the world have used it to cure infections, arthritis, diabetes, hepatitis, constipation, hemorrhoids, ulcers, skin diseases, burns, wounds and liver complaints.

But it holds other secrets unknown to Western medicine...

Aloe contains 23 *polypeptides* that **super-charge your immune system** and 20 *polysaccharides* that increase the action of your white blood cells against **viruses** and **cancer**.

And it boosts two of your body's strongest antioxidants, *superoxide dismutase (SOD)* and *glutathione* — protecting you from free radical attacks from your environment.

If you live in a sunny climate, you can grow aloe in your backyard. Just cut open the ripe leaves, squeeze into a container and drink. Fresh aloe will keep for a week in the fridge, or indefinitely in the freezer.

If you purchase aloe, the best products should be cold processed using the whole leaf with the aloin removed. Aloin is an irritating chemical in the rind that can cause diarrhea or cramping.

About 95% of the aloe products on the market are either diluted or improperly processed. So you want to be careful when choosing an aloe product for internal use.

Superfood #6: Spirulina — Algae Power



Spirulina just may be the most-nutrient-dense food known to man.

Spirulina, a blue-green algae, is the original superfood and probably the most nutritious food source known to humans.

Aztecs and Mayans ate spirulina. Scientists at NASA consider it the perfect food for astronauts in space. It's so nutrient-dense, you could survive on it and water alone.

Spirulina is brimming with proteins, essential fatty acids, flavonoids, vitamins A, B1, B2, B3, B6, B9, C, D and E, as well as the vital minerals potassium, copper, calcium, chromium, iron, magnesium, manganese, phosphorous, selenium, sodium and zinc.

One of its fatty acids is *gamma-linolenic acid (GLA)*, which is found in breast milk and is essential for a healthy brain.²³

Spirulina has also been shown to:

- Boost your immune system and help prevent cancer
- Lower blood pressure and improve circulation
- Reduce your risk of stroke
- Relieve PMS symptoms
- Suppress your appetite and help with weight loss.^{24, 25, 26}

I often recommend spirulina as a natural detoxifier. Eating it is like having your own internal cleanup crew to isolate and clear out toxins and heavy metals accumulating in your body.

Spirulina is usually sold as a powder. Stir a teaspoonful into a glass of water or juice, or add it to a smoothie. It's also available in capsules or as 500 mg tablets. I recommend 4-6 tablets spread throughout the day.

Superfood #7: Seaweed — Secret of Centenarians



Seaweed is loaded with fiber and minerals.

The people of Okinawa, Japan, live longer than any other people on Earth. They rarely die from chronic diseases and when they age — they do it slowly.^{27, 28}

An ongoing study, which began in the 1970s to determine why Okinawans are so healthy, found all the centenarians shared a common staple — seaweed.

All edible seaweed contains *complete proteins* with all nine of the essential amino acids humans need to survive. It's also loaded with fiber and minerals, like iodine, which you need for your thyroid.

Here're just a few of its other life-giving powers:

- High levels of antioxidants, like vitamins A, B1, C and E, boost your **immune system** and protect against premature aging
- Essential fatty acids to stop the **hardening of your arteries** (atherosclerosis)

- Magnesium and the antioxidant fucodan to prevent **inflammation** and cut your risk of **chronic diseases**
- Calcium for **strong bones**
- Fucoxanthin to **reduce belly fat**
- Lignans to block pollutants and prevent hormone-dependent cancers, like **breast and prostate cancer**²⁹

You should avoid seaweed from Japan. There's still a contamination risk from the Fukushima nuclear accident. Instead, I recommend:

- **Alaria:** This Maine-grown edible brown seaweed is a great alternative to Japanese *wakame*. And like *wakame*, it has high levels of omega 3s, calcium, iodine, thiamine and niacin. Its mild flavor is delicious in soups and salads.
- **Dulse:** This red, slightly spicy seaweed has more protein, minerals and vitamins than almost all land vegetables. Use it in soups and salads. Or buy dulse flakes and eat them straight from the packet. Make sure it's from northeastern U.S., Canada or Ireland.
- **Kombu:** A Japanese cuisine favorite and one of Japan's five basic tastes – in addition to sweet, sour, salty and bitter. It's used in miso soup, or added to rice. It's a potent source of iodine and protein-building *glutamic acid*. I recommend kombu from Iceland.

Superfood #8: Chia Seeds — Tiny but Powerful

Aztecs and Mayans worshipped these tiny, nut-flavored seeds from the same family as mint. They were once a staple crop in central Mexico, but were banned after the Spanish conquest because **chia** was the food of Aztec warriors. A spoonful was said to sustain a warrior for an entire day with energy, strength and endurance.

A tablespoon of chia packs fiber, calcium, iron, iodine, manganese, phosphorus, as well as omega-3s



Chia seeds are all-around health boosters.

like ALA, vitamins A, B, E, and D and antioxidants for digestive and heart health.

A one-ounce serving provides almost **5 grams of ALA**, the parent molecule of *EPA and DHA*, the two most powerful omega-3s. One study found that women with high levels of ALA cut their risk of heart disease by more than 50%.³⁰

These tiny nutrient powerhouses are such all-round health boosters, a major European study recommended they be put into bread to enhance the nutritional intake of entire populations.³¹

The Aztecs also used chia to treat colds and sore throats. Aztec women were fed chia to help with pregnancy and childbirth.

Studies also show they can:^{32,33,34}

- Reduce diabetes risk
- Reduce inflammation
- Boost metabolism
- Improve bone health
- Repair skin aging and make skin smoother
- Help lose weight
- Build muscle

Chia seeds are easy to use. You don't have to grind them — which means you can snack on them. You can store them, because their high antioxidant content stops them from going rancid.

Chia seeds can absorb many times their own weight in liquid. Soak them in water or milk overnight for a tapioca-like pudding. Add fruit and you get a healthy breakfast.

Superfood #9: Maca — Inca Aphrodisiac



Maca is a powerful energy and libido booster.

I first saw **maca** eaten as a roasted or baked dish among the tribes of the Peruvian Andes — and it was considered a real treat.

Maca is the fleshy root of the *mashua* plant, which only grows high in the mountains of South America. It's been used for thousands of years as an *energy booster*, *aphrodisiac*, and a promoter of *mental clarity and overall wellbeing*.

It's packed with B and C vitamins, fatty acids, amino acids and sterols that support your hormonal balance and help protect against estrogen-dependent cancers.

Its oxygen efficiency at high altitudes is passed on to whoever eats it — more oxygen means more energy.

Inca healers and modern Peruvian doctors alike have also used it to treat:^{35, 36}

- Anemia
- Menstrual disorders

- Menopausal symptoms
- Tuberculosis
- Stomach and prostate cancer
- Mental health issues, like brain fog, memory loss and depression
- Migraines
- Infertility
- And to improve immune function

Maca has been consumed for thousands of years for its *libido-boosting properties* for men and women. In 2009, German researchers found a herbal product containing maca was more powerful in increasing libido than Viagra.³⁷

Ironically, eating the leaves of the plant has the opposite effect. They have highly anti-aphrodisiac properties and the Inca army is said to have fed mashua leaves to their soldiers to make them forget their wives when they marched to war.

You can get raw, organic maca root at specialty stores and on the Internet. Be sure to get Peruvian maca, grown in the Andes, or it will not have the oxygen-facilitating properties. You can also buy maca powder extract.

My favorite way to use maca is in a smoothie. Frozen bananas, strawberries, ice, a little orange juice and some maca powder makes an incredible morning drink.

Maca supplements are also available as liquid extracts.

Superfood #10: Hempseed — The Perfect Balance

Hempseed (*cannabis sativa L*) is from the same family as marijuana, but contains little *tetrahydrocannabinol* (THC), the active “high” ingredient in the drug.

What is “super” about hempseed is its perfect balance of omega-3 and -6 fatty acids. Today, most



Hempseed has the perfect ratio of omega-3 to omega-6 fatty acids.

people eat too few omega-3s and too many omega-6s — thanks to the mass use of manufactured, unsaturated fats in vegetable oils.

Today's omega-6/omega-3 ratio is about 20:1, which can trigger inflammation and lead to premature aging, heart disease, arthritis, diabetes, Alzheimer's and a multitude of autoimmune diseases.³⁸

But if you reduce the omega-6/omega-3 ratio to 4:1 — *the exact balance found in hempseed* — you see a 70% decrease in mortality rates.³⁹

Hempseed also contains high levels of the amino acid *arginine*, a building block for the nitric oxide molecule that ensures healthy blood flow and oxygen delivery throughout your body. It's extremely heart healthy.⁴⁰

Another hempseed omega-6 is *gamma linolenic acid (GLA)* — a powerful brain protector and anti-inflammatory that's been proven to naturally balance hormones. Studies show GLA also stabilizes the omega-3/omega-6 balance in your body.⁴¹

Here are just a few of its superpowers:

- Relief from joint pain and rheumatoid arthritis
- Helps with weight loss
- A potent anti-cancer intervention
- Strengthens hair, nails and skin

- Promotes good gut bacteria and good digestion
- Reduces allergic reactions

Find shelled hempseed in the refrigerated section of health markets. Add to foods after cooking, because heat breaks down the nutritional value of fatty acids. Raw hempseed oil makes a good base for salad dressings or marinades.

References

- 1 "Arnold School Studies Benefits of Quercetin," University of South Carolina's Arnold School of Public Health.
- 2 Davis, JM., et al. "Quercetin increases brain and muscle mitochondrial biogenesis and exercise tolerance." *Am J Physiol Regul Integr Comp Physiol*. 2009 Apr;296(4):R1071-7.
- 3 Fiorani, M., Guidarelli A, et al. "Mitochondria accumulate large amounts of quercetin: Prevention of mitochondrial damage and release upon oxidation of the extramitochondrial fraction of the flavanoid." *J Nutr Biochem*. 2010 May;21(5):397-404. doi: 10.1016/j.jnutbio.2009.01.014.
- 4 Yang, H., Protiva, P., Cui, B., et al, "New bioactive polyphenols from *Theobroma grandiflorum*." *J Nat Prod*. 2003. Nov;66(11):1501-4.
- 5 Wang X, Xu R, et al. "Transcriptome analysis of *Sacha Inchi (Plukenetia volubilis L.)* seeds at two developmental stages." *BMC Genomics*. 2012; 13: 716. doi: 10.1186/1471-2164-13-716
- 6 de Lorgeril M, Salen P, et al. Alpha-linolenic acid and coronary heart disease. *Nutr Metab Cardiovasc Dis*. 2004 Jun;14(3):162-9.
- 7 CureZone. Fats that Heal Fats that Kill.
- 8 Goldberg RJ, Katz J, et al. "A meta-analysis of the analgesic effects of omega-3 polyunsaturated fatty acid supplementation for inflammatory joint pain." *Pain*. Volume 129, Issues 1–2, May 2007, Pages 210–223
- 9 Griel AE, Kris-Etherton PM, et al. "An increase in dietary n-3 fatty acids decreases a marker of bone reabsorption in humans." *Nutrition Journal*. 2007 6:2 DOI: 10.1186/1475-2891-6-2
- 10 Kim Y, Ilich JZ. "Implications of dietary α -linolenic acid in bone health." *Nutrition*. 2011 Nov-Dec;27(11-12):1101-7. doi: 10.1016/j.nut.2011.05.012.
- 11 Sathe SK, Hamaker BR, et al. "Isolation, purification, and biochemical characterization of a novel water soluble protein from Inca peanut (*Plukenetia volubilis L.*)." *J Agric Food Chem*. 2002 Aug 14;50(17):4906-8
- 12 Peet, M, et al, "Omega-3s in treatment of psychiatric disorders" *Drugs* 2005;65(8):1051-9
- 13 Vanden Heuvel J, Belda B, Hannon D, Kris-Etherton P, Grieger J, Zhang J, Thompson J. "Mechanistic examination of walnuts in prevention of breast cancer." *Nutr Cancer*. 2012;64(7):1078-86.
- 14 Tsoukas MA, Ko BJ, et al "Dietary walnut suppression of colorectal cancer in mice: Mediation by miRNA patterns and fatty acid incorporation." *J Nutr Biochem*. 2015 Apr 1.
- 15 Berges R, et. al. "Treatment ... with b-sitosterol: an 18-month follow-up." *BJU International* 2000;85, 842±84.
- 16 Inoue T, Komoda H, et al. "Tropical fruit camu-camu (*Myrciaria dubia*) has anti-oxidative and anti-inflammatory properties." *J Cardiol*. 2008 Oct;52(2):127-32. doi: 10.1016/j.jjcc.2008.06.004.
- 17 Gonçalves E, Lajolo F, et al. "Chemical Composition and Antioxidant/Antidiabetic Potential of Brazilian Native Fruits and Commercial Frozen Pulps." *J. Agric. Food Chem.*, 2010, 58 (8), pp 4666–4674

- 18 Grassi D, Giovambattista D, et al. Blood Pressure Is Reduced and Insulin Sensitivity Increased in Glucose-Intolerant, Hypertensive Subjects after 15 Days of Consuming High-Polyphenol Dark Chocolate. *American Society for Nutrition*. 2008
- 19 Maskarinec G. "Cancer protective properties of cocoa: a review of the epidemiologic evidence." *Nutr Cancer*. 2009;61(5):573-9.
- 20 Ghosh D, Scheepens A. "Vascular action of polyphenols." *Mol Nutr Food Res*. 2009 Mar;53(3):322-31.
- 21 Scholey A, French S. "Consumption of cocoa flavanols results in acute improvements in mood and cognitive performance during sustained mental effort." *J Psychopharmacol*. 2010 Oct;24(10):1505-14.
- 22 Jenny M, Santer E, et al. "Cacao extracts suppress tryptophan degradation of mitogen-stimulated peripheral blood mononuclear cells." *J Ethnopharmacol*. 2009 Mar 18;122(2):261-7.
- 23 Sevulla I, and Aguires N. "Study On The Effects Of Super Blue Green Algae," Universidad Centro Americana, Nicaragua, 1995
- 24 Belay A, Ota Y, et al. "Current knowledge on potential health benefits of Spirulina." *Journal of Allied Phycology*. April 1993, Volume 5, Issue 2.
- 25 Lin YC, Tayag CM, et al. "White shrimp *Litopenaeus vannamei* that had received the hot-water extract of *Spirulina platensis* showed earlier recovery in immunity and up-regulation of gene expressions after pH stress." *Fish Shellfish Immunol*. 2010 Dec;29(6):1092-8. doi: 10.1016/j.fsi.2010.09.002.
- 26 Torres-Duran PV, Ferreira-Hermosillo A, et al. "Antihyperlipemic and antihypertensive effects of *Spirulina maxima* in an open sample of Mexican population: a preliminary report." *Lipids Health Dis*. 2007 Nov 26;6:33.
- 27 Fries JF. "Aging, natural death, and the compression of morbidity." *New Engl J Med*. 1980 Jul 17;303(3):130-5.
- 28 Okinawa Centenarian Study: <http://okicent.org/>
- 29 Skibola CF, Curry JD, et al. "Brown kelp modulates endocrine hormones in female sprague-dawley rats and in human luteinized granulosa cells." *J Nutr*. 2005 Feb;135(2):296-300.
- 30 Djoussé, Luc, et al, "Relation between dietary linolenic acid and coronary artery disease..." *American Journal of Clinical Nutrition* Nov 2001;74(5): 612-619
- 31 Iglesias-puig E and Haros M. "Evaluation of performance of dough and bread incorporating chia (*Salvia hispanica* L.)." *European Food Research and Technology - Zeitschrift für Lebensmittel-Untersuchung und -Forschung*. A237.6 (Dec 2013): 865-874.
- 32 Martínez-Cruz O, Paredes-López O. "Phytochemical profile and nutraceutical potential of chia seeds (*Salvia hispanica* L.) by ultra high performance liquid chromatography." *J Chromatogr A*. 2014 Jun 13;1346:43-8. doi: 10.1016/j.chroma.2014.04.007.
- 33 Vazquez-Manjarrez N, Martha Guevara M, et al. "Effect of a dietary portfolio (nopal, soy, oat, chia seed and inulin) on lipoprotein subclasses and LDL-cholesterol in Mexican subjects with hypercholesterolemia (1035.8)." *The FASEB Journal*. 2015.
- 34 Guevara-Cruz M, Tovar AR, et al. "A dietary pattern including nopal, chia seed, soy protein, and oat reduces serum triglycerides and glucose intolerance in patients with metabolic syndrome." *J Nutr*. 2012 Jan;142(1):64-9. doi: 10.3945/jn.111.147447.
- 35 Gonzales GF, Miranda S, et al. "Red maca (*Lepidium meyenii*) reduced prostate size in rats." *Reproductive Biology and Endocrinology*. 2005 3:5. DOI: 10.1186/1477-7827-3-5
- 36 Dang RJ, et al. "Aqueous and hydroalcoholic extracts of Black Maca (*Lepidium meyenii*) improve scopolamine-induced memory impairment in mice." *Food and Chemical Toxicology*. Volume 45, Issue 10, October 2007.
- 37 Conville N. "Maca the magical herb." *My Body and Soul*. <http://www.bodyandsoul.com.au/health/womens-health/maca-the-magical-herb/news-story/d0dda3f66d3a0fcee6e3fb0227576680>.
- 38 Patterson E, Wall R, et al. Health implications of High Dietary Omega-6 Polyunsaturated Fatty Acids. *Journal of Nutrition and Metabolism*. Vol. 2012, Article ID 539429, 16 pages.
- 39 Ibid.
- 40 Rodriguez-Leyva D and Pierce GN "The cardiac and haemostatic effects of dietary hempseed." *Nutr Metab (Lond)*. 2010; 7: 32.
- 41 Fan Y, Chapkin RS. "Importance of dietary gamma-linolenic acid in human health and nutrition." *J Nutr*. 1998 Sep;128(9):1411-4.

Cure For the Deadliest Pollution

If you don't know Marcy Borders by name, you probably remember her picture...

Caked from head to foot in poisonous ash and pulverized concrete, and staring aghast at the camera, she provided one of the most haunting images of 9/11.

Inevitably, she became known as the “dust lady.”

Her tragic death last summer from stomach cancer at the age of 42 is a stark reminder of the life-threatening risks you face from environmental air pollution every day — both outside and inside your home.

You see, the cloud that engulfed Marcy as she staggered into the street from the shattered structure of the World Trade Center contained more than 2,500 “wildly toxic” contaminants — including asbestos, lead, formaldehyde, mercury, barium, cadmium and dioxins.¹ It triggered cancer in her body a decade later.

These are the same chemicals that go into the noxious cocktail of airborne pollutants you and I are exposed to every day.

The problem is, your organs and tissues weren't designed to stand up to the crushing onslaught of these toxins, heavy metals and other compounds that flow through your blood every moment of your life.

Many of the chemicals you breathe today are completely new to this planet. They simply aren't natural, and your body has no way of dealing with them.

In my own practice, I've seen how environmental air pollution can take its toll on your health — causing not just cancer, but heart disease, stroke, liver and kidney damage, asthma, diabetes, pneumonia and chronic bronchitis, to name just a few.

In a panic over potential lawsuits, medical authorities still refuse to recognize the direct link between the plague of modern chronic disease and the airborne toxins you breathe.

Yet the most recent studies reveal that air pollution — both indoor and outdoor — is much more dangerous than the government and mainstream medicine tell you.

It's up to you to protect yourself and your family — and even your pets — from this modern hazard.

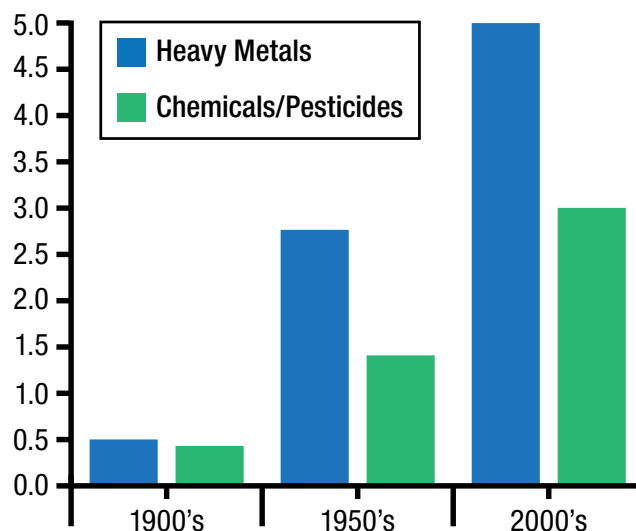
*In this article, you'll learn about the real toxic dangers these latest studies reveal about the air you breathe. I'm also going to show some simple ways to cleanse your body — as well as a little-known **NASA detox trick** that can purify every room in your home with a quick trip to Target or Home Depot.*

The Toxic Cloud Above You

Air pollution isn't just a crisis in China. A recent study by MIT's Laboratory for Aviation and Environment calculated that outdoor air pollution causes more than 200,000 premature deaths in America every year — along with millions made ill and infirm.²

Factories, mines, power plants and chemical farming release tons of toxins and heavy metals into the air you breathe every day.

THE RISE OF ENVIRONMENTAL TOXINS



The unprecedented release of heavy metals and toxins has created an alien environment for your body.

The biggest culprit of all is coal-burning emissions — and the smaller these toxic particles are, the more deadly they are.

A new study from NYU's Langone Medical Center provides alarming evidence that, in terms of public

health, the coal power industry is the **most toxic industry in America**.

The researchers studied data from 45,000 people in 100 American cities to establish the health impact of various types of air pollution from sources such as: coal burning, traffic emissions, oil burning and wood burning.³

Not only did they discover that more toxins were released from coal-powered energy plants than other sources — they are also small and more dangerous, because they can penetrate much deeper into your lungs and bloodstream.

The study noted that coal-burning particles are **five times more damaging** than other particle types of the same size.

That means the toxins spewed out by the power industry — like sulfur dioxide, nitrogen oxide, arsenic, mercury, cadmium and formaldehyde, lodge deep in your body.

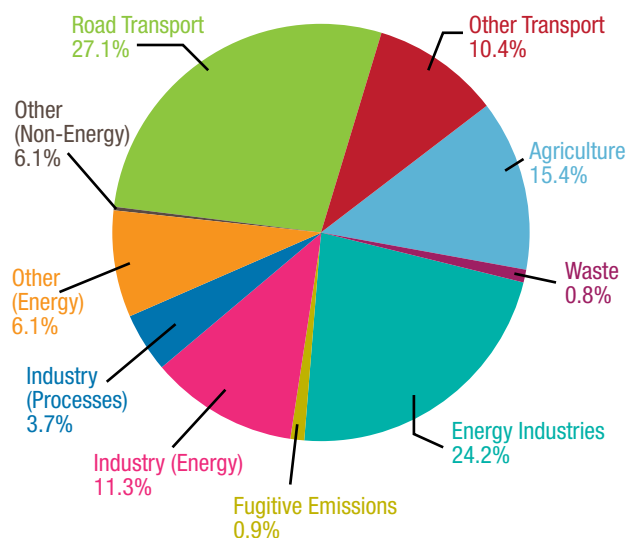
A study in the journal *Circulation* also found that breathing these small particles over just a few weeks can substantially up your risk of cardiovascular death.⁴ They've also been linked to:

- Heart attacks
- Lung disease
- Skin cancer
- Aggravated asthma
- Irregular heartbeat
- General respiratory problems^{5,6}

Coal-burning emissions also produce extremely toxic **particulate matter** — along with traffic emissions, locomotives, ships, planes and refineries. These molecules are unnatural. They're formed when particles of different toxins join together in tiny droplets of liquid to produce one of the most lethal forms of air pollution.

Big Agra also produces huge volumes of particulate matter. Fertilizers used in agriculture release ammonia and nitrous oxide into the atmosphere to create particulate matter. The pie chart on the right below shows the sources of particulate matter in the environment.

SOURCES OF PARTICULATE MATTER



Exposure to particulate matter has been linked to an increased risk of heart disease and certain types of cancer.

There is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur. The World Health Organization now officially lists airborne particulates as carcinogenic to humans.

A recent study published in the journal *Environmental Health Perspectives* found that chronic exposure to particulate matter increases the chance of early death by 3%. And your risk of dying from heart disease increases by a shocking 10%.⁷

Particulate matter has also been linked to lung cancer and other forms of lung disease.⁸

Are You Storing Poison in Your Fat?

The problem your body faces is that many of the toxins and heavy metals you breathe in the air every day are *fat soluble*. That means your body can't remove them through its natural detoxification pathways. Instead, you end up storing them in your fat cells, where they accumulate for years — until you get sick.

There's a good chance that pesticides like DDT, which were banned nearly 40 years ago, are running through your veins as you read this article.

Most doctors don't recognize the signs of ***toxic fat storage***:

- Digestive issues
- Weight gain, especially around the belly area
- Bloating
- Skin issues
- Swollen hands or feet
- Hypersensitivity
- Headaches
- Joint stiffness

As the toxins and heavy metals continue to accumulate over the course of your life, the oxidation and free radical damage that they cause can lead to multiple health problems.

But it's not just outside pollution you have to worry about. There's another kind of pollution that's even more lethal than coal plant emissions.

I'm talking about the pollution inside your home...

The Enemy Within

It may be hard to believe, but your ultra-clean, insulated, airtight home is one of the most toxic environments you can be in. According to a report by the Environmental Protection Agency, ***your home is between two and five times more toxic than outside.***

It's not surprising that one in three Americans suffers from allergies, asthma, sinusitis or bronchitis. The World Health Organization calculates that worldwide, 4.3 million people a year die from exposure to household air pollution.

With our homes now better insulated than ever, we've compounded the problem — because our airtight homes keep inside air inside. This is one area where old, drafty houses are better for you — a good airflow means fewer toxic chemicals.

Cleaning products are major source of toxic air pollution. The bottles under your sink probably

contain the “sudsing” agents ***diethanolamine*** and ***triethanolamine***, which react to form carcinogens that become airborne and penetrate your skin.

And don't be fooled when products are advertised as “green,” “natural,” or “organic.” They emit just as many hazardous chemicals as standard ones.⁹

Diethyl phthalate, which is also common in commercial cleaning products, as well as shampoos, is a known hormone disruptor that's linked to prostate and testicular cancer in men, and breast and gynecologic cancers in women.¹⁰

And ***Toluene***, a chemical used in stain removers, has been classified by the EPA as a carcinogen. Studies have also linked toluene to brain damage and birth defects.¹¹

But the danger doesn't just come from cleaning products...

Your kitchen range, fireplace, heater, rugs, walls, furniture, clothing, even the sheets you sleep on, can all be sources of indoor air pollutants — like nitrogen dioxide, carbon monoxide, hydrocarbons, formaldehyde, radon, sulfur dioxide and asbestos.

Then there are the chemicals in hairsprays, deodorants, oven cleaners, paints, pesticides, laundry aids, floor and furniture polishes, glue and even, ironically, air fresheners.

That characteristic “lemon-fresh” or pine scent in bleaches and dishwashing liquids comes from “fragrancing” chemicals — ***limonene*** and ***alpha pinene***. The chemicals themselves are not known to be harmful. But the danger is what they turn into once they're released into the air.

One of the known secondary products of all fragrance chemicals once they react in the air is ***formaldehyde*** — a highly toxic chemical that belongs to the family of volatile organic compounds (VOCs) that are extremely hazardous if you're exposed for a long time. It causes eye and throat irritation, wheezing, and has been linked to nasal and lung cancers, as well as heart and lung disease.

Whether you’re using air fresheners, plug-ins, wipes, washing machine detergents or everyday cleaning products, you’re releasing sizable quantities of formaldehyde into the atmosphere of your home.

Lab studies at the University of York in the UK show that for every two molecules of limonene released indoors, one molecule of formaldehyde is formed.¹²

Formaldehyde fumes can also be released from the glue that holds your pressed-wood or particleboard furniture and cabinets together. And it’s emitted by natural gas stoves, carpet glues, flooring glues, sealants, paints, furniture finishes, and the water- and stain-repellent finishes that are put on upholstery and clothing.

Most doctors wouldn’t even suspect your “perpetual cold” may be caused by the air you breathe in your own home. Here are some of the symptoms of indoor toxic poisoning:

- Headaches
- Breathing problems
- Frequent colds and sore throats
- Chronic cough
- Skin rashes
- Eye and throat irritation
- Lethargy
- Dizziness
- Memory lapses

Some of my patients were plagued for years, visiting doctor after doctor in a vain attempt to discover the cause of their problem.

In a minute, I’ll show you how to get rid of the toxins that have been accumulating in your body for years. But first I want to tell you about how NASA scientists discovered a simple and extremely effective way to detox your home naturally.

Give Your Home the NASA Detox

Back in the 1980s, NASA published a paper that revealed an astonishingly easy way to reduce toxic

chemical levels in enclosed space stations. And their great scientific breakthrough... the humble houseplant.

NASA’s study showed that certain common houseplants can very quickly and efficiently remove toxic particles from the air.

For one of its science programs, the BBC recently conducted an experiment to see what happens in three earthbound homes with high levels of *limonene* (emitted largely from scented candles) and formaldehyde after a few houseplants are introduced.

Four houseplants were placed in the homes of three volunteers for four weeks. The plants chosen were based on previous research — *spider plant* (*chlorophytum*), *dragon tree* (*dracaena*), *golden pothos* (*scindapsus*) and *English ivy* (*Hedera helix*).

Air samples were taken at the beginning and end of the experiment. And the results were astonishing. The levels of formaldehyde rose when limonene levels rose. But when these houseplants were introduced, formaldehyde levels plunged in all three homes.

And they’re not just effective against formaldehyde — these common houseplants filter out other VOCs, like the toxins from tobacco smoke.

Eight Plants That Will Scrub Your Air	
	Boston fern
	Palm tree
	Rubber plant
	“Janet Craig” dracaena
	English ivy
	Peace lily
	Golden pothos
	Mums and daisies

You can also lower toxin levels in your home by cutting out fragranced products, like air fresheners and scented candles, and choosing fragrance-free cleaning products.

*As an alternative, I recommend **baking soda** with a damp sponge — and for the scent, add a little **lemon juice**. For tougher jobs, you can use **vinegar** and **baking soda** — all natural and non-toxic.*

But now that you've purified your house, it's time to reverse the effects of your toxic build up — and that means detox...

My Favorite Natural Ways to Detox

I help my patients cleanse and detox naturally. It not only helps your body eliminate toxic waste that's stored in your tissues, you also get:

- More energy
- Stronger immunity
- Faster fat burning
- Fewer allergies
- Fewer aches and pains
- Healthier skin, hair and nails

Here are three different ways to detox that are proven to work wonders:

1. Intravenous Chelation: I offer safe intravenous (IV) chelation to just about every patient I see here at the **Sears Institute for Anti-Aging Medicine**.

“Chelate” comes from the Greek word for “claw.” Chelation grabs toxins from your body and drags them out — painlessly.

For IV chelation, I inject calcium disodium EDTA directly into your bloodstream. And in no time, EDTA will grab heavy metals and toxins and pull them out. It works fast, too. After a 10-minute session, you're done and on your way. Patients tell me they feel better almost immediately.

2. Oral Chelation: You can do oral chelation right in your own home with an agent called DMSA. It comes in pill form.

First, you'll be tested to see what heavy metals are in your system. Then you'll be given a prescription for DMSA. Your exact dosage will be based on your weight, and will usually be administered over the course of several months.

*If you are interested in doing oral chelation at home, please contact the **Sears Institute for Anti-Aging Medicine** at 561-784-7852. Please note, you will first need to schedule a visit in person before a prescription can be written.*

3. Natural Detoxifiers: Mother Nature has an answer for everything. Here are some of the best natural detoxifiers I know of:

- **Activated Charcoal:** Hospitals have been using this form of charcoal for many years as an antidote for drugs, poisons and medicinal overdoses. It's a great general cleanser and is especially powerful against heavy metals.

Like EDTA, activated charcoal grabs heavy metal molecules and escorts them from your body. Taken orally it has the ability to extract and neutralize many more times its own weight in gases, heavy metals, toxins, poisons and other chemicals.

Just a tiny amount can absorb and wash away years of toxin and heavy metal buildup.

Look for activated charcoal as a very fine, black powder in your local health food store or online. I like activated charcoal that's made from coconut shells. Take 20 grams to 30 grams of powdered activated charcoal mixed with water once a day for one to two weeks.

- **Modified Citrus Pectin:** The inner peel of citrus fruits contains one of the most potent detox substances I've found. In one USDA study, people taking modified citrus pectin for six days excreted 150% more mercury... 230% more cadmium and... 560% more lead.¹³

What's great about modified citrus pectin is that while it eliminates toxic metals and pesticides, it doesn't deplete your body of zinc, calcium or magnesium.

But make sure you get the right kind. Most pectin is made of large long-chain carbohydrate molecules. These are too big to digest and will just pass through your body. The citrus pectin used in clinical studies is specially formulated for absorption, so it can easily find and bind to toxins. Look for "modified" citrus pectin.

- **Milk thistle (*Silybum marianum*):** This medicinal plant is one of the best herbs I've found for clearing toxins from your blood. It's been used by traditional healers for more than 2,000 years. But most modern doctors know nothing about it.

Milk thistle has a potent antioxidant called silymarin that helps detoxify the liver and restore healthy liver function. And it's a great iron chelator.¹⁴

Look for dried milk thistle extract in your health food store or online. But make sure it has a minimum of 80% silymarin, the active ingredient for liver cleansing. Take one 200 mg capsule twice a day.

3. Clearing Endocrine Disruptors: Your body can't keep up with all the fake estrogens in the environment. I recommend you use a few simple supplements to help metabolize excess estrogen and eliminate it from your body.

SAM-e: It promotes the excretion of estrogen while negating the effects of estrogen toxicity. Take 200 mg a day to start. But you can take up to 800 mg twice a day if a blood test reveals that you have high levels of estrogen.

Alpha-lipoic acid: It stops estrogen damage in cells and protects reproductive organs from excess estrogen. Start with 250 mg a day. But you can take up to 600 mg a day.

DIM: You can get this natural estrogen cleanser from cruciferous vegetables, like kale and broccoli.

But you can't eat enough to cleanse your body well enough. So start with a 100 mg capsule a day. Two capsules provide as much DIM as a pound of vegetables.

References

- 1 Anita Gates, "Buildings Rise from Rubble while Health Crumbles", *The New York Times*, September 11, 2006, reporting on the documentary by Heidi Dehncke-Fisher, "Dust to Dust: The Health Effects of 9/11"
- 2 Jennifer Chu. "Study: Air pollution causes 200,000 early deaths each year in the U.S."
- 3 New MIT study finds vehicle emissions are the biggest contributor to these premature deaths." *MIT News*. Aug 29, 2013
- 4 Newman, T. (2015, December 2). "Coal burning emissions 'five times worse' for health." *Medical News Today*.
- 5 Brook RD, Rajagopalan S, et al. "Particulate Matter Air Pollution and Cardiovascular Disease: An Update to the Scientific Statement From the American Heart Association." *Circulation* 2010;121:2331-2378.
- 6 Pesch B, Ranft U, et al. "Environmental Arsenic Exposure from a Coal-burning Power Plant as a Potential Risk Factor for Nonmelanoma Skin Carcinoma: Results from a Case-Control Study in the District of Prievidza, Slovakia." *American Jnl of Epidemiology*. Volume 155, Issue 9, Pp. 798-809.
- 7 EPA Particulate Matter Retrieved December 14, 2015.
- 8 Thurston GD, Ahn J, et al. "Ambient Particulate Matter Air Pollution Exposure and Mortality in the NIH-AARP Diet and Health Cohort." *Environ Health Perspect*; DOI:10.1289/ehp.1509676. 5 Jan 2015.
- 9 "Health effects of particulate matter. Policy implications for countries in eastern Europe, Caucasus and central Asia." World Health Organization 2013
- 10 Potera C. "Indoor Air Quality: Scented Products Emit a Bouquet of VOCs. *Environ Health Perspect*. 2011 Jan; 119(1): A16. doi: [10.1289/ehp.119-a16](https://doi.org/10.1289/ehp.119-a16)
- 11 Barse AV, Chakrabarti T, et al. "Endocrine disruption and metabolic changes following exposure of *Cyprinus carpio* to diethyl phthalate." *Pesticide Biochemistry and Physiology*. Volume 88, Issue 1, May 2007, Pages 36-42
- 12 Filley CM, Halliday W, et al. "The effects of toluene on the central nervous system." *J Neuropathol Exp Neurol*. 2004 Jan;63(1):1-12.
- Ahsan S. "Is there a danger from scented products?" *BBC Magazine*. 15 Jan 2016
- 13 *Alternative Therapies*, Jul/Aug 2008, Vol. 14m, No. 4
- 14 Hutchinson C, Bomford A, Geissler C. "The iron-chelating potential of silybin in patients with hereditary haemochromatosis." *Eur J Clin Nutr*. 2010; 64(10): 1239-1241.

The information provided in this letter is for educational purposes only and any recommendations are not intended to replace the advice of your physician. You are encouraged to seek advice from a medical professional before acting on any recommendations in this publication.



AL SEARS, MD

Al Sears, MD, CNS, is a medical doctor and one of the nation's first board-certified anti-aging physicians.

As a board-certified clinical nutritionist, strength coach, ACE-certified fitness trainer and author, Dr. Sears enjoys a worldwide readership and has appeared on more than 50 national radio programs, ABC News, CNN and ESPN.

In 2010, Dr. Sears unveiled his proven anti-aging strategies in *Reset Your Biological Clock*. As the first U.S. doctor licensed to administer a groundbreaking DNA therapy that activates the gene that regulates telomerase, Dr. Sears made history by bringing telomere biology to the general public.

Dr. Sears shocked the fitness world by revealing the dangers of aerobics, "cardio" and long-distance running in his book, *PACE: The 12-Minute Fitness Revolution*.

In 2004, Dr. Sears was one of the first doctors to document the true cause of heart disease and expose the misguided and often fatal drugs-and-surgery approach to heart health.

In *The Ageless Heart Manual: Advanced Strategies to Reverse Heart Disease and Restore Your Heart's Pumping Power*, Dr. Sears outlines the easy-to-follow solution that effectively eliminates your risk of heart disease, high blood pressure and stroke.

An avid lecturer, Dr. Sears regularly speaks at conferences sponsored by the American Academy of Anti-Aging Medicine (A4M), the American College for the Advancement of Medicine (ACAM) and the Age Management Medicine Group (AMMG).