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Top Supplements for Longevity by Popular Physician

Analysis by Dr. Joseph Mercola | November 10, 2023

STORY AT-A-GLANCE

- Dr. Peter Attia recently reviewed some of the supplements he takes to improve his health and longevity. These include fish oil, vitamin D, magnesium, folate, B6 and B12, aspirin, ashwagandha, glycine, phosphatidyl serine and probiotics
- Higher omega-3 levels have been consistently linked to better health and longer life spans. However, while most reach for fish oil to increase their omega-3, this isn't the best choice, as most fish oils are synthetic ethyl esters. Your best source of omega-3 is cold-water fatty fish like wild-caught salmon, sardines, herring and mackerel
- Your vitamin D level is a biomarker for sun exposure. Ideally, get your vitamin D level tested twice a year. Based on the evaluation of healthy populations that get plenty of natural sun exposure, the optimal range for general health appears to be somewhere between 60 and 80 ng/mL (150 to 200 nmol/L)
- Magnesium is the fourth most abundant element in your body and one of the seven essential minerals we cannot live without. According to one scientific review that included studies dating as far back as 1937, low magnesium may be the greatest predictor of heart disease
- When it comes to B vitamins, I also recommend taking niacinamide, as it plays a vital role in producing energy in your mitochondria. It's also a precursor to NAD+, which is tightly correlated with total ATP production and acts as fuel for longevity proteins called sirtuins

In the video below, Dr. Peter Attia reviews some of the supplements he takes to improve his longevity. Attia's medical background is distinguished by both top-tier training and

hands-on experience.

After earning his MD at Stanford and completing surgical residency at the eminent Johns Hopkins Hospital, he pursued two focused years at the esteemed National Institutes of Health, concentrating on applied physiology related to longevity and metabolic health.

Attia complemented his clinical immersion with business insights gained through consulting for the globally-respected firm McKinsey & Company, advising organizations on achieving critical goals. This dual expertise fuels his nuanced approach to preventative care.

As a physician, he has become highly influential for championing an evidence-based methodology to nutrition, preventative medicine and lifespan extension. His academic rigor and communication acumen have made him one of the most respected voices on applying scientific principles to optimize health span. Media outlets praise his pioneering work in preventative care and metabolic health.

I have enormous respect for his academic achievements and his unwavering commitment to learn, but despite his exceptional abilities, he does not appear to recognize the profound influence of industry on scientific and medical research. This influence often makes it exceedingly challenging to address the foundational questions he seeks to address.

Similarly, while I respect a significant portion of Attia's beliefs and teachings, there are an equal number of his positions where I hold a radically different viewpoint.

Some examples would be his embrace of regular weekly fasts, even though it resulted in him losing 40 pounds of muscle mass. He also strongly endorsed the diabetic drug Metformin to lower glucose levels and increase longevity and wasn’t aware that it’s a potent mitochondrial poison that impairs Complex 1 and lowers your metabolic rate, which decreases longevity.

He recently, although reluctantly, for reasons you can see in the video below, shared the supplements he uses to improve his own longevity. I thought this would be a perfect opportunity to weigh in on some of his positions.

Fish Oil

The first longevity supplement Attia lists is fish oil (Carlson's brand EPA and DHA). In an interview I recently did with William Harris, Ph.D. — an internationally recognized expert on omega-3 fatty acids and the inventor of the **Omega-3 Index test** — he stressed that higher omega-3 levels have been consistently linked to better health and longer life spans. You can order the test without any doctor's order for **$49.95 at their site**. EPA and DHA protects health and promotes longevity by:

Thinning your blood, which discourages inappropriate clotting that can lead to a stroke or heart attack

Lowering serum triglyceride levels

Helping to lower blood pressure, in part by improving the health of the lining of your blood vessels so that they can relax better

Anti-inflammatory effects — For example, provided you have enough EPA and DHA in your membranes, when an inflammatory insult occurs, metabolites of the EPA and DHA — resolvins and protectins — will be synthesized. As their names imply, these metabolites help protect against and resolve inflammation. If you do not have sufficient omega-3, the inflammatory response persists longer and can become chronic

Helping the mitochondrial membrane process energy — Improving the fluidity and flexibility of the mitochondrial membrane allows enzymes and the other proteins embedded in the membrane to operate more smoothly

Adding structural stability to mitochondrial membranes — When loaded with omega-3, the membrane allows these agents to move freely, allowing everything to work as it should

Why Fish Oil Is Not an Ideal Omega-3 Source

While most reach for fish oil to increase their omega-3 level, this isn't the best choice. In fact, most fish oils are synthetic ethyl esters, and ethyl esters are very different from the triglyceride and phospholipid forms omega-3 found in sea food. Based on the EPA content he cites, I suspect Attia is taking the Elite EPA product from Carlson, which is an ethyl ester form.

Seafood contains roughly 50/50 triglycerides and phospholipids. **Krill oil** also delivers omega-3 primarily in the phospholipid form, which makes it a superior choice to fish oil. There's also evidence suggesting that the naturally occurring phosphatidyl-choline in krill oil has important health benefits. Krill oil also has the benefit of naturally occurring astaxanthin, a potent antioxidant that helps keep the oil fresh longer.

Ethyl ester, meanwhile, is a completely synthetic product. It starts out as a raw fish oil which is then processed to separate the fatty acids from the triglycerides. An ethyl group (ethanol) is then added to the fatty acids, which allows for the further chemical separation of non-omega-3s and the omega-3s, so that you end up with a concentrated form of omega-3.

One problem with ethyl esters is that they're poorly absorbed, so unless you take it with a fatty meal, most of it will go right through you. It's also prone to rancidity, which doesn't do your health any favors.

Ideally, you'd want to get most of your omega-3 from cold-water fatty fish like wild-caught Alaskan salmon, sardines, herring and mackerel, for example. So, while I agree that omega-3 is an important nutrient for optimal health and longevity, I disagree with the recommendation to get it from synthetic fish oil.

Omega-3 Dosing

I also believe Attia is taking too much fish oil. He estimates he takes about 2 grams of EPA and 1.5 grams of DHA per day to reach his goal of a red blood cell (RBC) membrane concentration of 12%. Research[1] has shown that an index greater than 8% is associated with the lowest risk of death from heart disease while an index below 4% places you at the highest risk of heart disease-related mortality.

Even Harris, who invented the Omega-3 Index test that measures your RBC concentration of omega-3, only recommends 1 gram of fish oil, and prefers to get it from seafood.

I believe anything over 1 gram could be risky, because EPA and DHA are both polyunsaturated fats (PUFAs) and, like **linoleic acid** (LA), are susceptible to oxidation and the production of dangerous aldehyde metabolites.

Vitamin D

Vitamin D is next. Attia takes 5,000 IUs a day, which I suspect is far too low unless he also gets loads of sun exposure. He doesn't mention sun exposure at all, though, so it's probably not part of his daily routine.

The ideal dose for most adults of normal weight is 6,000 IUs a day, 7,000 IUs if you're overweight, and 8,000 IUs a day if you're obese. At those dosages, most people can reach a minimum blood level of 40 ng/mL (100 nmol/L),[2] which is the lower cutoff for sufficiency. Other research suggests you may need as much as 9,122 IUs per day to reach 40 ng/mL.[3]

Most definitely, the conventional claim that you only need a few hundred IUs per day — which is still touted by medical professionals in media[4] — is completely inaccurate and is based on a statistical error[5] that for some reason has never been officially corrected.

> **“An incredible body of research shows the benefits of having optimal vitamin D levels from sun exposure — not a supplement. Your vitamin D level is really a biomarker for sun exposure. Based on the evaluation of healthy populations that get plenty of natural sun exposure, the optimal range for general health appears to be somewhere between 60 and 80 ng/mL (150 to 200 nmol/L).”**

Interestingly, Attia takes the vitamin D reluctantly, as he's believes most vitamin D studies "have been poorly done." As a result, he's not convinced that vitamin D supplementation is all that important. The reason he takes it is because while he's unsure of the benefits, he's sure the risks of taking vitamin D are minuscule.

What he seems to be missing is the incredible body of research showing the benefits of having optimal vitamin D levels from sun exposure — not a supplement. Your vitamin D level is really a biomarker for sun exposure. Yet Attia fails to acknowledge the **benefits of sun exposure** altogether.

Your best bet is to get your **vitamin D level tested** twice a year. Based on the evaluation of healthy populations that get plenty of natural sun exposure, the optimal range for general health appears to be somewhere between 60 and 80 ng/mL (150 to 200 nmol/L). You can order a vitamin D test without any doctor visit at the **omega 3 test site for only $49.95**.

Magnesium

When it comes to Attia's magnesium recommendation, we're entirely aligned. **Magnesium** is the fourth most abundant element in your body[6] and one of the seven essential minerals we cannot live without.[7]

It's involved in hundreds of biochemical reactions in the body,[8] and deficiency can contribute to significant health problems.[9] It is necessary for the healthy functioning of most cells, and especially your heart and muscles.[10] Low levels can impede both cellular metabolic function and mitochondrial function.

According to one scientific review[11,12] that included studies dating as far back as 1937, low magnesium may actually be the greatest predictor of heart disease. Research published in 2017[13] shows even subclinical magnesium deficiency can compromise cardiovascular health.

Attia takes about 1 gram of elemental magnesium per day from three different sources: SlowMag (a slow release brand), magnesium L-threonate and magnesium oxide. Of these, my favorite is L-threonate, as it appears to make its way into your brain the best.

B Vitamins

B vitamins are also vitally important. Attia takes methylfolate and methylcobalamin (methylated vitamin B12) daily, and 50 milligrams of B6 three times a week.

Personally, I believe a B complex is a good option for most people, as you really need all the B vitamins, not just one or two. That said, Attia does mention that the reason he takes the folate and B12 to keep his homocysteine level below 9. Elevated homocysteine is a risk factor for heart disease.

I also recommend taking 50 mg of **niacinamide** (aka nicotinamide, a form of niacin or vitamin B3) two to three times a day, as it plays a vital role in producing energy in your mitochondria.

Without it, your mitochondria simply cannot make energy efficiently. Niacinamide is also a precursor to NAD+, which is also tightly correlated with total ATP production. NAD+ also acts as fuel for longevity proteins called sirtuins.

Because of its effects on energy production and NAD+, niacinamide can be useful in the prevention and/or treatment of a long list of chronic conditions, including obesity,[14,15]

insulin resistance and diabetes,[16,17] neurodegeneration[18] and neurological conditions such as Alzheimer's and ischemic stroke,[19,20] heart failure,[21,22] leaky gut,[23,24] glaucoma,[25,26] declining testosterone levels,[27,28] cancer,[29,30] kidney disease,[31] alcoholic- and nonalcoholic liver disease,[32,33] and even COVID-19.[34]

Your NAD levels dramatically decline with age. It's also used up by DNA repair enzymes and enzymes involved in inflammation and immunity, such that chronic inflammation, or acute illness in old age, can rapidly result in depletion.

Attia doesn't mention niacinamide in his short discussion about B vitamins, and it's possible he might not be aware that niacinamide is one of the best, not to mention most cost-effective, ways to boost NAD+. It's far superior to both nicotinamide riboside (NR) and nicotinamide mononucleotide (NMN).

Aspirin

I also agree with his recommendation to take a baby **aspirin** every day. He takes it for cardiovascular protection, although he admits the evidence base for this is light. He also stresses that the potential CV benefits must be weighed against the risk of bleeding.

According to a 2009 paper,[35] long-term low-dose aspirin therapy nearly doubles your risk for gastrointestinal bleeding.

Using aspirin in combination with SSRI antidepressants has been shown to increase your risk of abnormal bleeding by 42%, compared to those taking aspirin alone,[36] and taking aspirin (325 mg/day) with Plavix has been shown to nearly double your risk of major hemorrhage and significantly increase your risk of death, while not affecting your risk of recurrent stroke to any significant degree.[37]

That said, aspirin may have other benefits as well. Importantly, it helps increase the oxidation of glucose as fuel for your body while inhibiting the oxidation of fatty acids, specifically linoleic acid.

As I've mentioned many times before, one of the most foundational strategies to improve your health is to lower your linoleic acid intake, but since you're always going to get some from your food, and linoleic acid remains in your cellular membranes for up to seven years, a daily low-dose aspirin regimen may help prevent some of the damage in the meantime by limiting its release from your fat cells.

This is because aspirin has an anti-lipolytic effect, so it helps lower both the supply of fat to the cell and the excessive oxidation of fats. It will also lower your baseline cortisol, indirectly by lowering inflammation, and directly by inhibiting the enzyme 11-beta-hydroxysteroid dehydrogenase Type 1. This enzyme synthesizes active cortisol from the inactive precursor cortisone. Cortisol promotes inflammation, so you do not want elevated levels.

Purchasing Guidelines

While picking out aspirin might seem like an easy thing to do, there are, in fact, some important considerations to keep in mind. First, avoid coated extended-release aspirin. It's not recommended due to the additives they put in it.

Immediate-release aspirin made with cornstarch is the preferred version, but it can now be hard to find. Look carefully at the list of inactive ingredients. I personally use a USP grade aspirin which is the highest grade and use one scoop twice a day which is about two-thirds of one aspirin a day.

Ashwagandha

Ashwagandha is another good recommendation. It's an apoptogenic herb, meaning it helps your body adapt to stress by balancing your immune system, metabolism and hormonal systems. The root contains the highest concentration of active ingredients that modulate hormones, including thyroid hormone, estrogen, progesterone and testosterone.

Naturally occurring steroids called withanolides in ashwagandha also suppress pathways responsible for several inflammation-based illnesses such as arthritis, asthma, hypertension, osteoporosis and cancer.

Ashwagandha also supports sexual and reproductive health in both men and women. In men, it helps boost testosterone levels, and has been shown to improve semen quality in infertile men.

In women, ashwagandha's ability to rebalance hormones (including thyroid hormone, estrogen and progesterone) has been shown to improve polycystic ovary syndrome and relieve menopausal symptoms.

Ashwagandha also has natural pain reliever (analgesic) and rejuvenating properties, and can promote general health when used regularly. While some adaptogens are stimulants in disguise, this is not the case with ashwagandha. It can give your morning exercise routine a boost, and when taken prior to bed it can help you get a good night's sleep as well.

Glycine

Attia also takes glycine at night, which is an excellent recommendation. However, at just 2 grams, he's seriously underdosing unless he's also taking large amounts of collagen or gelatin, which I doubt as he never mentions it. A therapeutic dose is closer to 10 to 15 grams.

Collagen accounts for about 30% of the total protein in your body, and nearly one-third of the amino acids in collagen is glycine. One of the primary purposes of collagen is to provide structural support and strength to your tissues, such as your hair, skin, nails, bones, tendons, ligaments and cartilage.[38,39,40] Sufficient collagen intake allows these tissues to stretch while still maintaining tissue integrity.

Glycine also helps reduce inflammation and oxidative damage, as it inhibits the consumption of nicotinamide adenine dinucleotide phosphate (NADPH). NADPH is used

as a reductive reservoir of electrons to recharge antioxidants once they become oxidized.

Glycine also has cell-protective, and anti-stress effects,[41] and has been shown to extend lifespan in animal studies and mitigate chronic disease and disability, thereby increasing healthspan. You need at least 12 grams of glycine daily for optimal collagen turnover, plus another 3 grams per day to form glutathione.

Phosphatidyl Serine and Probiotics

I also agree with the recommendation for the phosphatidyl serine. This is something I also take. Phosphatidyl serine is a component of the cell membrane, and is involved in cell cycle signaling and apoptosis (programmed cell death).

It's particularly important for brain health and is commonly used to prevent age-related declines in memory and cognition. Some also use it to boost athletic performance, and to ameliorate symptoms of ADHD.

Lastly, he's experimenting with a brand probiotic specifically for glucose control. I believe there are far better reasons to take a probiotic, the main one being to optimize your microbiome and limit endotoxin production, which is a major contributor to many diseases.

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