

Are These the 20 Most Important Supplements to Take?

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

March 24, 2023

STORY AT-A-GLANCE

- > Molecular hydrogen is a selective antioxidant, meaning it doesn't indiscriminately suppress free radicals but, rather, helps your body make the antioxidants it needs
- > Glycine and NAC are glutathione precursors; your body uses glutathione to increase the effectiveness of antioxidants such as vitamin C, which is why it's known as the "master antioxidant"
- > Magnesium is involved in the functioning of more than 300 enzymes, and many people are deficient
- > The best supplements for you depend on your age, health status, diet and health goals
- > I mention a bonus supplement at the end of the article

While dietary supplements cannot take the place of a healthy lifestyle, they can be used strategically to boost your health, especially in cases of deficiency. In the U.S., 57.6% of adults aged 20 and over use supplements, with multivitamins, vitamin D and omega-3 fats representing the top three.¹ Another survey put the percentage of Americans using supplements at 86%.²

So, it's safe to say that many people are interested in taking control of their health with the support of supplemental vitamins, minerals and other compounds. But, when it comes to supplements, more isn't always better.

To ensure you're using only supplements you need — avoiding wasting your money while maintaining your body's balance — I recommend using dietary interventions first. Next, work with a holistic health care practitioner who can guide you on which supplements your body truly needs.

19 Supplements I Consider Essential

The best supplements for you depend on your age, health status and health goals. If having a practitioner guide you isn't possible, essential supplements may be next on your list — and I've compiled the list in rank order of what I believe to be the most important ones.

Some of the most important individual variables you need to consider would be if you are plant-based or choose to eat animal products. While many plant-based diets are fundamentally healthy, they do lack some vital nutrients, like vitamin B12, retinol, vitamin K2, carnosine, carnitine, collagen and choline. If you are plant-based, you will certainly want to consider adding these to your regimen.

1. Molecular Hydrogen (H₂)

Molecular hydrogen acts as a selective antioxidant, meaning it doesn't indiscriminately suppress free radicals. Rather, it's unique in that it helps your body make its own endogenous antioxidants. This is important because excessive use of antioxidants can be counterproductive, while molecular hydrogen serves as a redox regulator.

The H₂ molecule is the smallest in the universe, which allows it to diffuse through all cell membranes, including the blood-brain barrier and subcellular compartments, and into the mitochondria. According to Tyler LeBaron, Ph.D., it's been shown to have therapeutic benefits in more than 170 different animal disease models.³ While there's no risk of overdosing on molecular hydrogen, intermittent exposure produces the best

results.

2. Vitamin D

Vitamin D has multiple actions on the immune system, including enhancing the production of antimicrobial peptides by immune cells, reducing damaging pro-inflammatory cytokines, and promoting the expression of anti-inflammatory cytokines.⁴

A recent study found giving vitamin D to people with COVID-19 cut risk of death from SARS-CoV-2 by 51% and reduced risk of admission to the intensive care unit (ICU) by 72%.^{5,6} Vitamin D also plays a role in heart disease, as it improves circulation and may be beneficial for high blood pressure. In addition, due to its effects on endothelial function, vitamin D may also help improve or prevent heart failure, heart attack, vasculopathy, stroke and diabetes.⁷

Ideally, optimize your vitamin D levels via sensible sun exposure, as there are many benefits to sun exposure even aside from vitamin D, such as increasing mitochondrial melatonin by near infrared (IR) exposure.

My vitamin D level is typically between 80 and 100 and I haven't taken any vitamin D supplements so you can get your levels high if you are disciplined about your sun exposure. Just be sure to make sure you are eating a very low linoleic acid (LA) diet as it is excessive omega-6 fats that virtually everyone consumes, that cause sun-induced skin cancers.

However, if getting healthy sun exposure simply isn't an option for you due to your location or lifestyle, daily vitamin D3 supplementation of 8,000 to 10,000 units is likely needed to reach a vitamin D level of 60 to 80 ng/mL.

Data from GrassrootsHealth's D*Action studies suggest the optimal level for health and disease prevention is between 60 ng/mL and 80 ng/mL, while the cutoff for

sufficiency appears to be around 40 ng/mL. In Europe, the measurements you're looking for are 150 to 200 nmol/L and 100 nmol/L respectively.

The only way to gauge whether you might need to supplement, and how much to take, however, is to get your level tested, ideally twice a year – in the early spring and early fall – when your level is at its low point and peak, respectively. Make sure that your supplemental vitamin D intake is balanced with other nutrients, including vitamin K2 (to avoid complications associated with excessive calcification in your arteries) and magnesium.

3. Niacinamide

NAD⁺ (nicotinamide adenine dinucleotide) is one of the most important biomolecules in your body. It's involved in the conversion of food to energy, maintaining DNA integrity and ensuring proper cell function. Together, these functions help protect against or delay aging and virtually all chronic disease.

NAD⁺ also acts as fuel for longevity proteins called sirtuins. Sadly, NAD levels dramatically decline with age, contributing to aging and chronic disease states. NAD is 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.

To restore NAD₊, you need to fix the root cause for NAD⁺ depletion, which primarily involves addressing the decline in the NAD salvage pathway. By increasing enzymes in that pathway, which decline with age, your body can recycle NAD₊ like it did naturally when it was younger. For more information, please review my [fantastic interview with molecular biologist Nichola Conlon, Ph.D.](#)

In addition to optimizing NAD⁺ levels, it also blocks lipolysis which is important if you are the more than 99% of the population that have elevated linoleic acid (LA) levels. Reducing the release of LA from your tissues will lower the amount of oxidative

stress in in your body.

Niacinamide, like progesterone, inhibits the production of nitric oxide, and also like progesterone, it improves recovery from brain injury and also:

Helps lowers stress	Lowers harmful free fatty acids	Protects against scar formation
Helps brain injuries	Supports immune function	Improves mitochondrial function
Reduces serotonin formation and/or accelerates it's elimination	Reduces lipolysis	Protects against pathogenic prostaglandins
Supports glucose oxidation	Inhibits excess nitric oxide formation	

Niacinamide can also lower your triglycerides, which are a potent cardiovascular disease risk factor. It also has a direct anti-adrenaline effect and increases the oxidation of glucose which is your primary metabolic fuel.

The best way to supplement niacinamide is by taking a very low dose of 50 mg three times a day. This is an order of magnitude less expensive than taking NAD precursors like nicotinamide riboside or nicotinamide mononucleotide to increase NAD+ levels.

Please do NOT take high doses like 500 mg or even 1,000 mg, because taking more is not better and will be highly counterproductive as higher doses will impair your sirtuin longevity proteins.

You can purchase a niacinamide powder and take one-sixty-fourth of a teaspoon

three times a day or take a 50 mg niacinamide tablet three times a day. Because a 50 mg niacinamide tablet currently is not being made commercially, we will be launching one very soon.

4. B Complex

Vitamin B complex is important for your health because it's involved in a wide range of bodily functions and processes including cell health and the growth of red blood cells, energy levels, eyesight, brain function, digestion and appetite, proper nerve function, hormones and cholesterol production, and cardiovascular health.

B vitamins have a direct impact on your energy levels, brain function and cell metabolism. Vitamin B complex help support or promote cell health, growth of red blood cells, energy levels, eyesight, brain function, digestion, appetite, proper nerve function, and cardiovascular health and may help prevent infections.

Vitamin B complex is also important for pregnant women as it helps to form the neural tube, which is the precursor to the baby's brain and spinal cord. It also helps to prevent birth defects of the baby's brain and spine. It is important to note that vitamin B complex is water-soluble, which means it is not stored in the body and needs to be taken more than once a day.

5. Magnesium

Magnesium is necessary for the healthy functioning of most cells, especially your heart, kidneys and muscles. It's involved in the functioning of more than 300 enzymes,⁸ and low levels of magnesium impede cellular metabolic function and deteriorate mitochondrial function.

Magnesium is also required for the activation of vitamin D, and deficiency may hamper your ability to convert vitamin D from sun exposure and/or oral

supplementation. Unfortunately, deficiency is common and rarely diagnosed.⁹

When it comes to oral supplementation, my personal preference is magnesium threonate, as it appears to be the most efficient at penetrating cell membranes, including your mitochondria and blood-brain barrier. Magnesium is also absorbed through your skin, so you can use a topical solution or take Epsom salt (magnesium sulfate) baths to increase your levels.

6. Vitamin E

Vitamin E is a fat-soluble antioxidant that I believe is important for nearly everyone to take. Why? Because it limits the production of very dangerous free radicals from the metabolism of the omega-6 fat, linoleic acid (LA), which virtually everyone reading this has too much of. It does this by inhibiting lipolysis, or the release of the stored LA in your tissues.

While exercise and fasting are wonderful tools to improve your health, the downside is that virtually everyone has too much LA in their tissues and both of these strategies will increase lipolysis of LA stored in your tissue and produce loads of free radicals and oxidative stress.

Vitamin E not only can prevent oxidative stress from too much LA, but it may also help your body convert this dangerous fat to a non-dangerous saturated fat. Bacteria in your intestine can use vitamin E to saturate the LA. So, vitamin E can actually transform the polyunsaturated fat rather than just protect against it after effects.

Vitamin E is an aromatase inhibitor, which means it blocks the enzyme that converts androgens like testosterone to estrogen, which is useful in reducing the risk for many cancers, especially breast and prostate cancers. Not only does it prevent the production of estrogen, but it also detoxifies xenoestrogens from synthetic chemicals.

Vitamin E is an iron chelator and can also remove age spots or liver spots and scars on your skin if applied topically. It does this because it is an iron chelator. Another term for liver spots is lipofuscin, which is an accumulation of oxidized fats like LA and iron.

While cosmetically unattractive, removing lipofuscin spots is key because what you see on your skin is the tip of the iceberg. They are also in your tissues and organs and will contribute to premature aging. Thankfully, taking vitamin E orally seems to help lower lipofuscin levels. Vitamin E also lowers prolactin, which helps counteract high estrogen levels which tends to increase fertility. Finally, it also blocks adrenaline and reduces cortisol and inflammation.

All of these are major reasons why I am huge fan of vitamin E and believe most people would benefit by taking it. However, you just need to be very careful in selecting your vitamin E supplements as most on the market are counterproductive. Natural vitamin E is a family of eight different compounds: four tocopherols and four tocotrienols. If you eat certain wholesome foods, all eight of the different vitamin E compounds are naturally available.

So, please be careful and make sure to avoid all synthetic vitamin E supplements. You also want to make sure that it has no soy oil in it as soy is typically a GMO, loaded with glyphosate and high in LA.

Your vitamin supplement should have all tocopherols (alpha, beta, gamma and delta) with the majority of tocopherol as alpha. Similarly, it should have balance tocotrienols (alpha, beta, gamma and delta). The most common vitamin E supplement on the market is made from GMO soy, is synthetic and only has alpha tocopherol with no other isomers and has no tocotrienols. You definitely don't want to use supplements like that.

7. Vitamin C (Not Ascorbic Acid)

Vitamin C is a powerful antioxidant that can strengthen your body's natural defenses. It may reduce your risk of chronic disease, including protection against immune system deficiencies, cardiovascular disease, prenatal health problems, eye disease and even skin wrinkling.

Vitamin C plays an essential role in your body, particularly for skin and immune health. It also boosts collagen production and helps protect your skin from UV damage. Some research has found that supplementing with vitamin C can shorten the duration of a cold and may help prevent and treat other infections, such as tetanus and pneumonia.

There are basically two types of vitamin C: that derived from whole foods with all the vital and important micronutrients and synthetic ascorbic acid. They both are important and serve crucial biological roles.

The best of the synthetic ascorbic acid would be liposomal forms as they can more easily penetrate cell membranes, especially when needed in large doses as when treating an acute infection, sepsis or cancer. However, it is best to avoid taking synthetic ascorbic acid daily as this can impair copper utilization by your mitochondria.

It is better to take whole food vitamin C daily as this will support the integration of copper into the electron transport chain in your mitochondria and allow you to generate cellular energy more efficiently. Ideally this can be in the form of fruits that are high in vitamin C, like oranges, tangerines, amla (also known as gooseberry) and, my favorite, acerola cherries. It is best to take it a few times a day as vitamin C is water soluble.

8. Probiotics

If you don't eat fermented foods on a regular basis, a probiotic supplement can be useful for maintaining your gut health and microbial diversity. Your gut microbiome

affects nearly all your physiological systems, but gut microbial diversity decreases with age.¹⁰

For each gram-per-day increase in the average national consumption of fermented vegetables, the mortality risk for COVID-19 decreased by 35.4% in one study.¹¹ Beneficial bacteria found in fermented foods may even be effective for suppressing colon cancer,¹² while your mental health is also affected.

One randomized controlled trial demonstrated that high-dose probiotic supplementation is beneficial for people with depression,¹³ while *Lactobacillus* has been found to produce gamma aminobutyric acid (GABA), a neurotransmitter that inhibits excessive neuronal firing, helping to induce a natural state of calm,¹⁴ in animal studies.¹⁵

9. Omega-3 Fat as DHA and EPA

Omega-3 fats are important for brain health, warding off autoimmune disease¹⁶ and decreasing mortality from cardiovascular disease, while also reducing heart attacks and coronary heart disease events.¹⁷ An omega-3 index test is one of the most important annual health screens that everyone needs, and it's a more important predictor of your heart disease risk than your cholesterol levels.

Even research supported by the National Institutes of Health suggests an omega-3 test is a good predictor of overall health and all-cause mortality.^{18,19} The ideal sources for EPA and DHA omega-3s include cold-water fatty fish, like wild-caught Alaskan salmon, sardines, herring and anchovies. If you do not eat these fish on a regular basis, consider taking a krill oil supplement.

Fish oil is among the most popular supplements in the U.S. Globally, the fish oil market was valued at \$1.9 billion in 2019, with estimates suggesting this will rise to \$2.8 billion by 2027.²⁰ Many of these dollars may be wasted, however, due to a chemical process that leaves many fish oil supplements lacking in actual EPA and

DHA.

The issue with most fish oil supplements is the chemical process used – trans-esterification – which transforms the oil into a synthetic product that's far removed from the oil you'd get when eating fish or a high-quality cod liver oil.

When you eat fish or a high-quality cod liver oil, the omega-3 is in a triglyceride form. However, the omega-3s in most all fish oil supplements are in an ethyl ester which is essentially a synthetic substrate, created through the micro distillation process of crude fish oil, in which ethanol and/or industrial alcohol is added. This mix is heat distilled in a vacuum chamber, resulting in a concentrated omega-3 ethyl ester condensate.

The problem with ethyl esters is they're the least bioavailable form of omega-3. Manufacturers could convert them back into the triglyceride form by detaching the ethyl alcohol molecule and reattaching a glycerol molecule in a process known as re-esterification,²¹ but most don't because it's so costly.

Additionally, not only does this molecular distillation process remove vital resolvins and protectins that are important in reducing inflammation, but it also concentrates the EPA and DHA. You can tell the concentration of these two fats in any given supplement by looking at the label. In fish, the oil consists of 20% to 30% EPA and DHA, whereas purified fish oil concentrate typically contains between 60% and 85% EPA and DHA.²²

In my view it is best to avoid most omega-3 supplements as there are many dangers with them. Krill or a high-quality cod liver oil are some of the best choices I know of, but you must be careful here also, as most are very low quality and add synthetic vitamin A and D into the oil.

Krill oil stands out in this regard, however. It's more bioavailable because the EPA and DHA are bound in a phospholipid form, allowing you to take lower doses while still

reaping similar results. Research also suggests krill oil alleviates oxidative stress and iron accumulation, such that it could be used as a treatment for toxicity caused by iron overload.²³

10. L-Glycine

I personally take teaspoon (about 5 grams) of glycine twice a day, in the morning and before bed. Glycine is an amino acid and is an important methyl-group donor. Methyl groups are found in DNA, where they play a role in cellular reactions. Glycine helps protect against intracellular calcium overload and hypoxia and has anti-inflammatory effects.

In addition to supporting brain function,²⁴ supplemental glycine may be useful for the "prevention and control of atherosclerosis, heart failure, angiogenesis associated with cancer or retinal disorders and a range of inflammation-driven syndromes, including metabolic syndrome."²⁵ Importantly, glycine is also a glutathione precursor, discussed below. Ray Peat has shown that glycine is:

Anti-excitatory	Anti-stress	Anti-inflammatory
Anti-Serotonin	Anti-estrogenic	Improves learning & memory
Promotes recovery from strokes & seizures	Cell protective	Promotes wound healing
Inhibits tumor formation	Inhibits lipolysis	

11. N-acetylcysteine (NAC)

NAC, a form of the amino acid cysteine. It's most well-known to help increase glutathione and reduce the acetaldehyde toxicity²⁶ that causes many hangover symptoms. Anyone who overdoses on acetaminophen (Tylenol) also receives large doses of NAC in the emergency room, as it helps prevent liver damage by increasing glutathione.

NAC can be combined with glycine (known as GlyNAC) for even more benefits. In a pilot trial of older adults, GlyNAC supplementation for 24 weeks corrected glutathione deficiency and improved multiple measures of health, including:²⁷

Mitochondrial dysfunction	Oxidative stress	Inflammation
Endothelial dysfunction	Insulin resistance	Genomic damage
Cognition	Strength	Gait speed
Exercise capacity	Body fat levels	Waist circumference

12. Quercetin

Quercetin, an antioxidant flavonol found in foods such as onions, apples, plums and green tea, is a natural antiviral²⁸ which helps drive zinc into the cells to stop viral replications. It also combats inflammation and works as a natural antihistamine. A number of studies have also shown quercetin, when used early, also lowers your risk of hospitalization and death from COVID-19,²⁹ and improves clinical outcomes.

Quercetin is one of the supplements I recommend keeping in your medicine chest for times when you feel you're "coming down" with something, be it the common cold or influenza. This is because it helps drive zinc ions into your cells, which then serves to halt replication of the virus that you are infected with.

Like vitamin E, quercetin also chelates iron. Like niacinamide, it also increases NAD⁺ levels but through a different mechanism. Rather than serving as a substrate to make NAD⁺, it helps to activate the rate limiting enzyme in the NAD⁺ salvage pathway, NAMPT, thus increasing NAD⁺ levels. Finally, it can also help with nonalcoholic fatty liver disease (NAFLD).

Plant-Based Diets Essential Supplements

If you are eating a plant-based diet or you do eat animal foods but are avoiding any organ meats, which are some of the most nutrient dense foods that we know of, then please seriously consider adding these supplements to your regimen.

13. Vitamin B12

Vitamin B12 is likely the most important nutrient that is missing from a plant-based diet and it is absolutely essential that you take it if you choose not to eat animal foods. Left undetected and unaddressed, a vitamin B12 deficiency can lead to fatigue, muscle weakness, intestinal issues, limited nerve development, mood disturbances and much more.

But it is not only vegetarians that can be deficient in this important B vitamin. There are three factors are involved in the widespread B12 deficiency we're seeing today:

- Many people don't have enough stomach acidity due to lower levels of pepsin secretion to release the vitamin B12 from dietary proteins.
- Factory-farmed meat and poultry (the most common types consumed today) contain lower levels of vitamin B12.
- Insufficient production of intrinsic factor, a special protein, required for B12 to be absorbed in your small intestine may be the result of aging or an autoimmune condition.

Your body needs vitamin B12 to make red blood cells, maintain nerves, produce DNA and to carry out essential functions for your heart, arteries and veins, nervous system, brain and cognitive function. There's no way you can enjoy optimal health without adequate B12 levels.

When you supplement with vitamin B12 be sure to choose the more biologically active, methylcobalamin, or "methyl B12," is the most bioavailable and most absorbable form of vitamin B12. Avoid using the most common form of B12, cyanocobalamin.

14. Retinol (Vitamin A)

Retinol, also known as Vitamin A, is a fat-soluble vitamin that is essential for many bodily functions, including vision, growth, cell division, reproduction and immunity. It is not to be confused with beta-carotene. Even though many nutritional labels conflate the two, they are completely different. Since many are unable to easily convert beta-carotene to vitamin A, it is important to make sure you are getting retinol not beta-carotene.

Vitamin A is **necessary for producing hemoglobin**, the protein in your red blood cells that transports oxygen. It is necessary to properly recycle and make copper available in your mitochondrial electron transport chain for energy production. It is also necessary for your body to **produce two vitally important hormones, progesterone and pregnenolone** and has ant-estrogenic properties. It is **also helpful for male fertility**.

One of the most important benefits of retinol would be to help your body's immune system and natural defense against illness and infection to work optimally. It also works synergistically with vitamin D with many similar benefits. Also, like vitamin E, retinol has anti-estrogenic properties.

Retinol is responsible for making the pigments in your eye's retina, improves your

vision and promotes good night vision. It also can help protect against cancer. It likely also improves skin health and helps keep your skin moist, and may help reduce the risk of skin and other cancers. Doses are typically from 5,000 to 10,000 I.U.s.

15. Copper

Copper is an essential mineral that plays a vital role in many bodily functions, including the production of red blood cells, the absorption of iron and the maintenance of nerve cells. Most importantly, it is vital to the proper functioning of your mitochondria so you can generate enough ATP.

Copper and its master protein, ceruloplasmin, are instrumental for mitochondrial function. Ceruloplasmin is what drives the copper into the mitochondria, and each mitochondrion needs about 50,000 atoms of copper to do its work.

There are five cytochrome complexes embedded in your inner mitochondrial membranes. Their purpose is to shuttle electrons created from the food you eat that is ultimately converted to acetyl-CoA to produce ATP. If these complexes are deficient in copper, you will not be able to generate enough cellular energy.

Despite its bad rap, most people are deficient in copper. To raise your copper level, you could use a copper bisglycinate supplement (about 4 to 8 mg), or foods like grass fed beef liver, and whole food vitamin C that has the enzyme tyrosinase which is loaded with copper. For additional information please review [my podcast with Morley Robbins](#).

16. Zinc

Zinc plays many roles in your body. It is required for the healthy functioning of all your cells, tissues, organs and bones. Zinc is the second most abundant trace mineral in your body, coming in just after iron. It's found in foods like beef, poultry, shellfish and

mushrooms.

Zinc deficiency is not just an issue with vegetarians, but for those with GI and digestive disorders who can experience decreased zinc absorption. Those who eat seeds, grains, nuts and legumes that are loaded with phytates which can bind zinc and also prevent absorption, may also be deficient. Pregnant and nursing women require higher levels of zinc and those with excessive alcohol consumption also need extra zinc to metabolize the alcohol.

Researchers have discovered hundreds of ways zinc supports health in your body, and every year, they continue to discover more. In the last decade alone, there have been tens of thousands of studies investigating the roles zinc plays in promoting good health.

Zinc provides support for immune function, healthy cell growth, respiratory health and healthy metabolism. It also helps support brain health and healthy function of your taste, smell and vision.

One of the biggest challenges with zinc for people of any age is that zinc isn't stored in your body, so you must consume the amount your body needs each and every day which is about 15 mg. If you are eating sufficient animal protein or organs, you should not need to supplement unless you are sick, as supplemental zinc can be quite useful to limit viral replication especially if taken with quercetin.

17. Vitamin K2

Vitamin K2 is needed to activate the protein osteocalcin, which is found in your bones. Without vitamin K2, this and other vitamin K2-dependent proteins remain inactivated, and cannot perform their biological functions.³⁰ Vitamin K2 also facilitates the transfer process of calcium from your arteries to your bone. Without it, your risk of arterial calcification increases. It does this by increasing the production of an important hormone for bone health, osteocalcin.

In one study, those who consumed foods with the highest amount of vitamin K2 were less likely to experience severe calcification in their arteries or less likely to die from heart disease over a seven- to 10-year period.³¹ Vitamin K2 also works in tandem with vitamin D and magnesium. As a rule, if you have osteoporosis, heart disease or diabetes, you're likely deficient in vitamin K2.

If you are eating fermented foods such as natto, or vegetables fermented using a starter culture of vitamin K2-producing bacteria, then you may not need to take a supplement. Certain cheeses such as Brie, Munster and gouda, are also particularly high in K2, as are grass fed organic animal products such as egg yolks, liver, butter and dairy.

18. Collagen

Collagen, in addition to being rich in glycine, is well-known for its role in skin health, including helping mitigate age-related wrinkles.³² It may also reduce joint pain and stiffness³³ while improving glucose tolerance³⁴ and high blood pressure.³⁵

My personal preference is to use a less denatured (unhydrolyzed) organic collagen supplement, as it has a more balanced amino acid profile or, better yet, simply boost your collagen intake by making homemade bone broth using bones and connective tissue from grass fed, organically raised animals.

19. L-Carnosine

Carnosine is a dipeptide composed of two amino acids: beta-alanine and histidine. It's a potent antioxidant as it binds to advanced lipoxidation endproducts (ALEs) that are the result of oxidized seed oils in your diet. The highest concentrations of carnosine are found in your muscles and brain.

If you're a vegetarian or vegan, you will have lower levels of carnosine in your

muscles. This is one reason why many strict vegans who do not properly compensate for this and other nutritional deficiencies tend to have trouble building muscle. Eating beef is known to efficiently raise carnosine levels in your muscle,³⁶ which is why if you're a vegetarian or vegan this supplement may be particularly important.

Bonus Methylene Blue

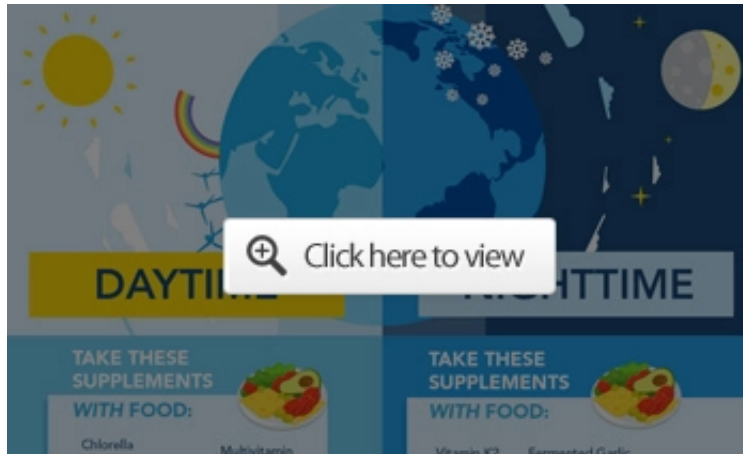
While methylene blue is clearly not a vitamin or mineral and is, in fact, the oldest known modern drug, I consider it an important and, in many cases, essential supplement for most because it is the best product out there to increase mitochondrial electron transport efficiency and your production of cellular energy currency or ATP. In simpler terms, most anyone who is fatigued or tired will benefit from using methylene blue.

Additionally, it is very inexpensive if you avoid buying it in foolish ways. If you purchase 1 ounce (25 grams) of the bulk powder it will last you over three years if you take 20 mg/day, which is a solid maintenance dose, but if you are tired you can easily double or triple that.

Twenty mg is a very small amount and is about half of one-sixty-fourth teaspoon. That would be a one-one hundred twenty-eighth teaspoon, but those are not available. Just be really careful, though, as methylene blue is a dye and will stain your countertop. It's best to measure over a stainless-steel sink. A dose of 50 mg is best taken by putting one-sixty-fourth teaspoon into an empty gel cap, as it can irritate your mouth at higher concentrations.

The best time to take it is prior to near infrared (IR) exposure from a near IR sauna, a photobiomodulation panel or sun exposure. For more details about methylene blue be sure to view my [interview with the leading researcher in the field, Francisco Lima-Gonzalez, Ph.D.](#)

The Timing of Your Supplements Matters



When and how you take supplements — such as with or without food and in the morning or evening — can make a difference in their safety and effectiveness. For instance, fat-soluble vitamin K2 is best taken with your largest meal that contains fat, while magnesium, which helps your body relax, is best taken in the evening. In the infographic above, you can see a simple breakdown of some of the most common supplements and when it's best to take them.

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otis101

I take 13 of the 20. My bank account is losing weight. Recent Vitamin D result was 96 ng/ml.

Posted On 03/24/2023

Poyeema

Local grocery store has a buy 1/get 1 free sale about every 6 weeks for the 2ndary brand I buy, Mercola is the main brand. Rarely do I eat out, and thankfully 120 pounds. Amusing growing up in USA 'thinking' food supply and eating right was enough, poof no more. Last week at grocery check out my clerk got a pen and circled something on the receipt, leaned in and said, "You saved \$69." It was all vitamins ! As time passes, girlfriends are getting off the fence, and buying Mercola multi for women. They see my energy, hair, and health.....most importantly, they keep getting sinus infections, fever/meds/full monty. And they remember me mentioning, Sinus infections went away when I started taking Mercola multi for women, plus other recommended vitamins too. Go Otis, your Vit D !

Posted On 03/24/2023

juststeve

Otis, maybe your bank account is losing fiat money, a trade tool - not real wealth for Actual Real Wealth! Best of health to you!

Posted On 03/24/2023

forbiddenhealing

Otis...The ducat is now only about 10% silver.

Posted On 03/24/2023

Cheers Otis!! Given the usefulness and benefit supplements, BigPharma in coexistence with "health" institutions, they want to regulate their market at their convenience. Everything has an end: to discredit Natural Medicine at the same time that chronic patients are created with Allopathic Medicine and mRNA biological weapons are injected. The deep state is not satisfied with attacking and dismissing the doctors and scientists who fight for a true health medicine, they are not satisfied with discrediting preventive and early treatments, they are not satisfied with turning humanity into a factory of biological weapons He now wants people to turn more strongly to Rockefeller's Allopathic medicine, setting limitations on supplements after taking over the supplement companies, and establishing governance of the WHO and FDA. It is the Great Reset of the New Medicine based on chronic diseases. VIDEO: ON DESTROYING OUR HEALTH SYSTEM AND BIG PHARMA CAPTURE

www.globalresearch.ca/video-on-destroying-our-health-system-big-pharma.. (12/12/2022)

Posted On 03/24/2023

Guillermou

The large agri-food and pharmaceutical corporations create a breeding ground for the disease and the FDA and CDC are easy prey for Big Capital. The endless chain of Big Pharma lawsuits revealing fraud, deception and cover-ups. Big Pharma spreads fear and increases people's insecurity of pandemics, to feed the thirst for profit, it has bought doctors, academics, magazines, professional and patient organizations, university departments, journalists, regulators and politicians. These are the methods of the mafia. To truly understand the power of Big Pharma, we can understand how the American Legislative Exchange Council (ALEC) works. ALEC, which was founded in 1973 by conservative activists working on Ronald Reagan's campaign, is a top-secret pay-for-share operation in which corporate lobbyists, including the pharmaceutical industry, hold confidential meetings on "model" bills.

A large portion of these bills eventually pass and become law. Over the years, ALEC has promoted many other pro-pharmaceutical bills that would weaken FDA oversight of new drugs and therapies, limit FDA authority over drug advertising, and oppose regulations on financial incentives for doctors to prescribe specific drugs.

childrenshealthdefense.org/defender/system-rigged-big-pharma-political.. (04/12/2022)

Posted On 03/24/2023

Segstar

Otis you may have to find the fulcrum between the bank account and your good health. For me health is the greatest source of wealth..When we have good health we can always create the necessary wealth we need to live happily.. But the way things are heading, who knows what weight, if any, our bank accounts would be at.. After the snow thaws you may have to take Patty on a road trip with the Trek to celebrate...And a lil something to play along the way..Cheers!!

<https://youtu.be/VPLIw2TNLao>

Posted On 03/24/2023

grulla

Distinctions need to be made between remedial VS preventative lifestyle dosages in vitamin and mineral supplementation. ALSO: I have recently learned of the importance of the elemental mineral boron (#5 element) for bone and prostate health, (thank you Maritt), which is badly missing in agricultural soils, except certain parts of Texas and African Ghana, where prostate cancer appears minimal. www.lifeextension.com/magazine/2018/4/boron-an-overlooked-micronutrien.. ~~~
nurturedbones.com/beyond-bones-7-benefits-of-boron-for-healthy-aging/ ~~~
www.modernghana.com/news/958970/boron-and-prostate-health-the-mounting..

Posted On 03/24/2023

jef9075

Enjoyed your comment otis! Your Vitamin D level looks very good.

Posted On 03/24/2023

otis101

And now "the rest of the story" - almost. For decades I have shopped at our local organic market, <https://www.mariposamarket.com> It helps my bank account weight loss program. Utility bills take the rest of any weight left. I have had serious health issues over the years. Most from self induced bad habits. Such as: heart attack, by-pass surgery, stroke (TIA), central retina vein occlusion (CRVO), claudication-both lower extremities, abdominal aortic aneurysm (AAA), chronic headache since military, psoriasis, and 24/7 pain in left big toe (not gout), and beginning memory loss. Currently eating a healthy organic diet, 13 supplements, 4 prescription meds, daily exercise, social life, constant sleep interruption with swollen prostate and big toe pain. But with all this, today, I feel I am happy, healthy and looking forward to seeing 82 in October. Thanks to all for your comments. epi-cure, thanks for tuning in and getting us back on topic with your link. But it's "not a drag getting old" cause it's a privilege denied to many.

Posted On 03/24/2023

den7788

You can't take it with you so you might as well spend it on yourself!

Posted On 03/24/2023

Luckymumma

I work as a kitchen assistant part time in a nursing home and get the opportunity to pop in briefly to say hello to my favourite elderly ladies and gents. It breaks my heart to see the weakness in most of them. Having been on Dr Mercola's site for over 20 years I , like the rest of you Mercolians ,have learned a lot. All I see is the medicine trolley on the units and drugs being metered out. So sad when most of them would benefit hugely from the appropriate supplements flagged up in this article. Slightly off topic .. I visited a sweet lady there yesterday and put my arm around her asking how she was - I realised that she was trying to tell me something urgent just as a nurse passed the room and said "she has covid you know!!

" (Panic) I turned to her and said oh has she - as I hugged lady more closely - well I am fine as I have had it' and now have natural immunity. She stalked off and no doubt I am considered even more weird and rebellious by most of the staff - heyho!! I have never followed the mask rule there and they have given up trying to bully me into doing so. I am 74 years young and am the only one who hasn't taken time off sick over the past year I have worked at the home.

Posted On 03/24/2023

Guillermou

A great truth, and excellent fulfillment of your dedication, Luckymumma. Many elders of residences would have been saved with good food and receiving antiviral supplements such as quercetin, zinc, vitamin C and D, green tea extract and other supplements, in addition to the application of early treatments informed by Dr. Mercola in replacement in replacement of Biological weapons against C-19. Death groups have been informed after vaccination worldwide, which include: - 29 elders died in Norway shortly after receiving the Pfizer vaccine. - 13 deaths among 40 residents after vaccination in an elderly home in Germany were discharged as "tragic coincidence." - 10 deaths in German palliative care patients within hours four days after Vaccination COVID-19 were considered a "coincidence".

- 22 of 72 residents of an elderly home in Basingstoke, England, have died after vaccination. - It was reported that 24 older people in an elderly home in Syracuse, NY, died from COVID-19 from January 9 despite having been vaccinated as of December 22. - On January 28, 10 cases of COVID-19 were reported among older people who had received both doses of the Pfizer vaccine in an elderly residence in Stockholm, Sweden. Residents were vaccinated on December 27 and again on January 19. More information in the link

childrenshealthdefense.org/defender/nursing-home-residents-spain-die-p..

Posted On 03/24/2023

juststeve

People like you are so valued by the people in your care. Nurses should be involved in the process of accessing and determining patient treatments. While a Leadership role directing the different areas in the process is fine, Life itself and the hardships we face seldom are linear so the Rockefeller Top Down Dictator no discussion, limited underling inputs is incomplete. A leader, guide is fine but It's not either or, it's a dance between both.

Posted On 03/24/2023

W Joan

Had a friend praise your expertise Sunday at church. I mentioned Dr Mercola and she said “Dr Mercola? When my son was young (adult now with children) he got sick and no one knew why and Dr Mercola was practicing then and we took him and he correctly diagnosed him with asthma. I said, “ I have been a fan of his for years, I’m glad you got help from him too, I order things and benefited from his articles, all the time that have done wonders for me.

Posted On 03/24/2023

Guillermou

Aging is a highly malleable process that can be modulated in a number of ways, including caloric restriction, intermittent fasting, exercise, and a plant-based diet rich in phytochemicals. Flavonoids directly modulate underlying aging or cellular senescence processes or interact with molecular targets that regulate aging-related pathways. Two very important senolytics are quercetin and fisetin, which act as anti-inflammatory, chemopreventive, chemotherapeutic and senotherapeutic agents. Quercetin and fisetin have applications in metabolic diseases, cancer, neurological, cardiovascular, respiratory and viral diseases, sarcopenia, bone, joint and degenerative diseases in general, even acting on stem cells.

dergipark.org.tr/.../899925 (2020) .----- link.springer.com/.../978-3-319-41334-1_10 (2016) .----
www.ncbi.nlm.nih.gov/.../PMC8009086 (2021) .----- dergipark.org.tr/.../899925 (2020) .-----
www.apjtb.org/article.asp?issn=2221-1691;year=2021;volume=11;issue=1;s.. (2021) .-----
onlinelibrary.wiley.com/.../efd2.3 (2022) .-----
www.sciencedirect.com/science/article/abs/pii/S1471489222000406 (2022) .----
www.apjtb.org/article.asp?issn=2221-1691;year=2021;volume=11;issue=1;s.. (2021) .----
www.researchgate.net/profile/R-Kumar-5/publication/317485559_Health_Be.. (2017)
link.springer.com/.../s40290-022-00444-w (2022) .---- www.mdpi.com/.../2498 (2022).---
www.ingentaconnect.com/content/ben/cmm/2022/00000022/00000004/art00005 (2022).--
www.sciencedirect.com/science/article/abs/pii/S014628062200247X (2022).----
www.mdpi.com/.../1019 (2022).---

Posted On 03/24/2023

juststeve

Morning (here,) Gui, of all those listed above if I don't keep up with zinc, zinc is the one I see almost immediate affects, big plus for me. Way less colds and just overall feeling better. Using nearly all those listed today, but need to restock the A & E. Awhile back I had confused the Methylene Blue with Methyl Folate. My apologies, I expressed I like Doc's Methylene Blue, but he doesn't have that in his inventory. The Methyl Folate is a horse of a different color, but it does seem to work well for me, and the Methyl folate is in Doc's inventory. I love the H2, use it one or two days than what until the next week, I believe it has mag in it too. Just make me feel good all over.

Posted On 03/24/2023

Good Health Strategies, Just, Methylene Blue (MB) inhibits excessive production of reactive species and cytokines is the blue that has antiseptic properties that is used effectively to treat malaria, urinary tract infections, and septic shock. The article proposes testing methylene blue to contrast Covid-related acute respiratory distress syndrome, but we suggest in particular testing it early in Covid infections to prevent the hyperinflammatory reaction responsible for serious complications of the disease. www.sciencedirect.com/.../S0306987720333466 (2021),...

In this review, the applicability of MB in COVID-19 and its mechanistic aspects have been explored and compiled. Clinical studies have been explained in great detail. Therefore, the potential of MB in the management of COVID-19 has been examined. MB can be termed as a "magic rescue bullet" for the treatment of COVID-19. However, for the administration of MB, careful consideration of the dosage is necessary to avoid any adverse effects. MB can be administered three times orally at a dose of 2 to 3 mg/kg per day for 7 to 10 days in patients newly infected with COVID-19.

However, this needs to be studied further, and finding the optimal dosage should be the goal of the clinical study. Methylene blue inhibits the entry and replication of SARS-CoV-2, including several of its mutant variants, and has potential as a potential cost-effective solution. , broad-spectrum oral bioactive small molecule antiviral for the prevention and treatment of COVID-19.

www.sciencedirect.com/.../S0753332221008064 (2022) www.mdpi.com/.../621 (2022)

Posted On 03/24/2023

AndymAndym

It seems that excess Vitamin C supplementation can cause the body to produce oxalates. According to a recent Paul Saladino interview with Sally Norton, more than 400mg a day can do this.

Posted On 03/24/2023

Guillermou

It is not advisable to take high doses of vitamin C except for pathologies such as Covid-19 and cancer. Liposomal vitamin C is absorbed by a different mechanism in the intestine. Vitamin C-containing liposomes can bind directly to intestinal cells to release their vitamin C content and therefore do not require active transport. Taking 1 gr of liposomal vitamin daily is enough. Therefore, the maximum level achievable with oral doses of liposomal vitamin C is higher than for regular vitamin C. However, since the absorption mechanism for liposomal vitamin C differs from the active transport of regular vitamin C, both forms can be taken together to increase the level in the bloodstream (up to 400-600 M), greater than either form oral alone. When vitamin C is taken, it is broken down into dehydroascorbic acid (DHAA). It is further metabolized to diketogulonic acid. It is finally broken down and metabolized into lixonic, xylose, threonic, or oxalic (oxalate) acid.

www.researchgate.net/profile/John_Adeyanju/publication/350055198_Ratio..

Posted On 03/24/2023

mammywitch

I would like to take this opportunity to thank Dr. Mercola--and those who came before him--who are proponents of GOOD health. These thanks includes all of you bloggers who contribute to Dr. Mercola's site as well...I have learned (and continue to learn) so much from EACH of you! Thanks to ALL! I started my journey of learning with some of Robert Rodale's works...way back in the late 60's/early 70's...he was a pioneer in REAL health. And many others followed...James Duke, David Williams, and many others whom I have had the privilege of reading their works (hard earned works!)...I feel very blessed to have lived in an era when knowledge of everything (including that which you did not agree with) was available for mental digestion...Blessings to all...

Posted On 03/24/2023

Guillermou

Great sources of knowledge for the health of people and the planet. Soil health is intrinsically linked to the overall health of our food system. Soil health affects everything from plant health to human well-being and the future of our planet. Watch this video of Bob Rodale describing the difference between sustainable and regenerative (start at 1:23) in an interview with the USDA in 1989: rodaleinstitute.org/why-organic/organic-basics/regenerative-organic-ag.. .--- Regenerative prioritizes soil health while embracing high standards for animal welfare and equity for workers.

The idea is to create agricultural systems that work in harmony with nature to improve the quality of life for all the creatures involved. By abstaining from most toxic synthetic inputs, organic farmers protect the environment and prioritize healthy soil, wildlife habitat, clean water and air, and nutrient-rich foods. Typically, their emphasis is less on maximizing crop yields and more on creating healthy, resilient ecosystems. Organic outperforms conventional in adverse weather conditions such as drought by up to 40%.

After 30 years of side-by-side research in our Farming Systems Trial (FST), Rodale Institute has shown that organic agriculture is better equipped to feed us now and in an ever-changing future. ORGANIC AND SUSTAINABLE FARMERS CAN FEED THE WORLD.-- organicconsumers.org .-----
www.rodaleinstitute.org/wp-content/uploads/fst-30-year-report.pdf .-----
rodaleinstitute.org/why-organic/organic-basics/regenerative-organic-ag.. .---
organicconsumers.org/rodale-institute-30-year-trial-demonstrates-super.. .-----

Posted On 03/24/2023

Segstar

I am going to start with the obvious..I do periodically take many of these supplements, but the main reason why we have to supplement is because our foods no longer have the "nutrients" needed to support our good health..This goes back to the health of the Ecosystem, our Environment, Nature if you will.. If our "soils" do not contain the necessary nutrients then plants cannot absorb them and we cannot get them..And to add insult to injury we have managed to bastardised our foods by GMOS, Hybrids etc..They are Genetically altering our foods to make them LOOK great under those special Supermarket lights and to WEIGH heavier at the scales....When you analyze the nutrient content they are seriously lacking, just filled with larger Piths and tons of water weight - bleeding our wallets dry..

Just grow a bell pepper or tomato at home and feel the weight between both.. If we are not just to survive but thrive, we have to, must to, bound to get back to "healing" the Environment and adhere to Natural, Organic farming and sustainable agriculture principles..I am not worried about the Earth, it will heal itself , as it's being doing from day one..

We are a product of our environment so It's the same with our bodies; notice the similarities between the Earth and the human body..But we have devolved and have moved so far away from our Native Environment...Any wonder there are so many health challenges, right across the board..Restore what was lost, support the Ecosystems and watch the health of not just humans, but everything that occupies this great Earth soars..And to prevent occurrences, we would have to get rid of the evil scum that has brought this destruction on us in the first place..Here's to everyone's good health..

Posted On 03/24/2023

juststeve

Yes, strip the soil of Life, strip the food of Life and remove key nutrients, soak soil, food and us with toxins to making us struggle to get through the day, sick, interfere with our basic Life Functions including but not limited to our ability to develop our own reproductive identities and/or functions, then sell us Med's to dampen symptoms at best or speed the process up at its worst.

Posted On 03/24/2023

katndognco

I have over 100 containers planted with heirloom seed. Some will enter my garden, some I'll sell. Have 3 hens free ranging daily blessing me with 2-3 eggs that I sell and consume. Most of us here know the quality between store bought and homegrown tomatoes/other veg/fruit. It's shockingly different; flavor, texture, overall delight of the senses. I've always loved the sun and soil, animals, nature, the ocean. We live on a glorious planet!

Posted On 03/24/2023

Guillermou

Organic farmer, author and speaker Joel Salatin commented, "We spend about 10% of our income on food and about 16% on health care, and it used to be the other way around." In other words, we get what we pay for. 7 WAYS ORGANIC FARMS OUTPERFORM CONVENTIONAL FARMS 1. Benefits. Rodale's study showed that the median net yield for organic systems was \$558/acre/yr compared to just \$190/acre/yr for industrial systems. 2. Yield: The Organic Consumers Association states: "In a review of 286 projects in 57 countries, it was found that farmers had increased agricultural productivity by an average of 79 percent, by adopting organic or 'resource conservation' farming.

". 3. Employment: labor efficiency has increased from 27.5 acres/worker to 740 acres/worker with organic farming. 4. Energy efficiency. Organic systems consume 45% less energy overall than industrial systems, and production efficiency is 28% higher. 5. Resilience. Organic crops are more resilient during times of drought or climate change. 6. Soil health. The Rodale study says that the use of chemical fertilizers, which over time destroy microbial life and weaken soil integrity, organic systems improve soil quality.

7. Toxic chemicals. With over 17,000 pesticides in use today, many of which have not undergone any safety testing, hazardous pesticide residues are a given when it comes to industrial agricultural systems. [learn.eartheasy.com/articles/7-ways-organic-farms-outperform-conventio..](https://www.eartheasy.com/articles/7-ways-organic-farms-outperform-conventio..)

ORGANIC AND SUSTAINABLE FARMERS CAN FEED THE WORLD.

www.organicconsumers.org/news/organic-and-sustainable-farmers-can-feed.. RODALE INSTITUTE. www.rodaleinstitute.org/wp-content/uploads/fst-30-year-report.pdf

Posted On 03/24/2023

Guillermou

In organic agriculture, soil enrichment practices are fundamental, such as crop rotation, mixed crops, symbiotic associations, cover crops, organic fertilizers and minimum tillage, which benefit the fauna and flora of the soil, improve its formation and its structure, favoring more stable systems. Soil biodiversity is increased and nutrient losses are reduced, which helps to maintain and improve soil productivity. Buying organic food is one action people can take to stem the global decline in insects, according to leading scientists. Urging political action to reduce pesticide use on conventional farms is another, according to environmentalists. Insects are essential for pollination and promotion of biodiversity.

www.organicconsumers.org/news/buy-organic-food-help-curb-global-insect.. .----- In a six-year study in the Journal of Agricultural and Food Chemistry, researchers found that organic onions had a 20% higher antioxidant flavonol content than conventionally grown onions.

www.organicconsumers.org/news/latest-organic-vs-conventional-debate-or.. .----- Buying organic food is one action people can take to stem the global decline in insects, according to leading scientists. Urging political action to reduce pesticide use on conventional farms is another, say environmentalists www.organicconsumers.org/news/buy-organic-food-help-curb-global-insect.. .-----

Posted On 03/24/2023

jhy7142

Yes Seg Senate Document #264 written in 1936 congressional investigation of soil depletion and U S farming practices by Rex Beach . This is where our malnutrition started and why so much sickness has spread but this was known and done on purpose .

Posted On 03/24/2023

epi-cure

Seg nice summary ! We truly are the sovereign stewarts of our bodies and planet the way our creator intended. juststeve champions of soil study like Sir Albert Howard and William Albrecht work was summarily expressed by Charles Walter's (ACRES USA) remark that as goes the soil , so goes the civilization. katndognco a glorious planet indeed. Guillermou such a poignant Salatin observation and a good first objective to flip that 10% / 16% ratio. jhy7142 I'll look that up, thanks.

Posted On 03/24/2023

Segstar

Thanks for all the great addition folks.. Steve, true the general consensus is to keep us in that starved state so they can then peddle their witchcraft "medicines"..kat, you're on the ball with your garden and chickens, absolutely beautiful..One simply cannot go wrong with clean , Organic and natural foods. Gui, as always you're on the ball and particularly like the Joel Salatin addition, 7 ways Organic farms outperformS Conventional garbage crap. I can't tell you how many times i have had those discussions with people... jhy yes depleting the soils is a surefire way to keep people sick and this plays right into the conventional "health" paradigm..and Epi yes hands down, we need to try to stay the course of what the creator intended for us.. Today time is NOT on my side, but here's to a great weekend good people..Cheers, Listening to Charlie here <https://youtu.be/1O8lcVqbzVA>

Posted On 03/24/2023

W Joan

I'm doing 14 of the 19 I do eat mostly vegetables eggs raw milk occasionally free range chicken from family farm. These I do not take, E, A, Copper, L-Caroline, Bonus Methylene Blue I'm 80 years old and no meds no health issues working 2 or 3 afternoons a week. It does sound like I should take those. But I do take EmpowerPlus vitamins

Posted On 03/24/2023

sharonmeridianpsych

Wow! Amazing! I, also take no prescription meds, work full time and I'm 81 years old...

Posted On 03/24/2023

TommyTwoGloves50

Do you consider yourself above those who do not follow your regimen? You will be the healthiest corpse on the autopsy table. Why not donate your body to science? They can run a double blind study on superior supplemental advocates and common sense advocates.

Posted On 03/24/2023

epi-cure

TommyTwoGloves50 me with a fully stocked supplement pantry is in full appreciation of your laconic retort.

Posted On 03/24/2023

Malanka

Good for you W Joan ! I am almost 83, and like you, take no medication and do take all the supplements listed as well as others. I care for my disabled son who has MS and also my very ill husband who will soon be 85. Your body needs copper (I understand the body can absorb copper from wearing a copper bracelet) and if you take zinc it needs copper to be absorbed properly. I practice yoga 3x week at a studio and have for the past 23 years, also do Pilates 4x week. Keep up the good practices, you are fortunate to have a family farm--keeps you healthy.

Posted On 03/24/2023

ono4884

I'm 66 yo and think beef liver is one of the best sources of vitamins. Also trying methylene blue and I feel it really boost my endurance.

Posted On 03/24/2023

Guillermou

The 9 Beef Liver Benefits carnivorearelius.com/beef-liver-benefits

Posted On 03/24/2023

TheBearRuns

I've been taking methylene blue daily for about a year now and eat liver a couple times a month. If its been a while since eating liver my body starts to crave it!

Posted On 03/24/2023

lottaviano

Where did you purchase your methylene blue? Thanks!

Posted On 03/25/2023

sharonmeridianpsych

Would get sufficient L-Glycine in Magnesium Biisglycinate - or do we need more than that as we age?
Thanks

Posted On 03/24/2023

Dr. Mercola

Great question. If you are taking 8 mg of the mag biglycinate that is only about 8 mg of glycine. You need far higher doses of glycine, about 1000 times higher so best to take simple inexpensive glycine.

Posted On 03/24/2023

Guillermou

According to an article by Dr. Mercola, glyphosate in particular is reported to be working synergistically with most other factors to increase toxic effects. Furthermore, it is proposed that glyphosate causes insidious damage through its action as an amino acid analogue of glycine, and that this interferes with natural protective mechanisms against other exposures. Glycine also plays an important role in fighting inflammation, such "Glycine suppresses oxidative damage by inhibiting superoxide NOX production and increasing NADPH levels," and is used in the detoxification process.

As a result of glyphosate toxicity, many people do not have sufficient glycine levels for efficient detoxification. To prevent many chronic diseases, we need to find a way to inhibit or modulate NOX. Such strategies include avoiding fructose, practicing nutritional ketosis, and taking spirulina, niacin, glycine, and collagen supplements. Consuming glycine may be beneficial in preventing or treating metabolic syndrome, complications of diabetes, and cardiac hypertrophy, as well as alcoholic and non-alcoholic fatty liver disorders www.ncbi.nlm.nih.gov/.../PMC6695815 (2019).----- Importantly, glyphosate removes glucose-6-phosphate dehydrogenase (G6PD), a very important enzyme in red blood cells that maintains NADPH in its reduced form.

If you have low NADPH levels, you are at increased risk of chronic disease, as your ability to recharge antioxidants is impaired. This is another mechanism by which glyphosate contributes to many disease states.

renewablefarming.com/images/2016Images/2016PDF/Samsel-glyphosate-5.pdf .--
thinktwice.com/Vaccines-glyphosate.pdf..----

Posted On 03/24/2023

Guillermou

Glycine plays a role in the transmission of nerve signals and the removal of toxins from the body. Glycine stimulates the production of serotonin, the "feel good" hormone that helps elevate mood, improve sleep, and improve memory and thinking. Glycine is anti-inflammatory and antioxidant (meaning it prevents or delays cell damage), both of which are properties that reduce the risk of heart disease. Therefore, some researchers have looked at the connection between glycine and heart disease. TOP 9 BENEFITS AND USES OF GLYCINE www.healthline.com/.../glycine .-----
Glycine and N-acetylcysteine supplementation may increase life expectancy and improve multiple age-associated defects by improving GSH deficiency, OxS and mitochondrial dysfunction, www.mdpi.com/.../1114 (2022)

Posted On 03/24/2023

tra7551

wow, cool you're launching a 50 mg niacinamide tablet

Posted On 03/24/2023

drovedatti

Thank you Dr. Mercola! Very informative and well written article!

Posted On 03/24/2023

gardengirl1.

Hi all. First time I have ever commented. I just turned 72 and I think I'm in pretty good health. I never get sick and I've never had Covid. No vax. I walk 2 1/2 miles 3-5 times/week. My problem is I have so much pain. From my neck to my toes my shoulders to my fingers. I've had fibromyalgia for 35+ years and some arthritis. And lately pain has been off the chart. There are days when I go to bed and just cry. I'm taking collegian 5 types, magnesium glycinate 500/nite, liver health, red yeast rice with 30mg coq10 to lower cholesterol that has gone way up since I went off statin, thyroid support with iodine, Kappa Nutrition immune C+ that has a bunch of stuff in it, black currant oil 1000 mg with 140 mg GLA, nac 1200 mg with selenium 50 MCG and 50 MCG molybdenum, omega-3 fish or flax seed oil, 10mg liquid melatonin to sleep, qunol coq10 100mg with E 68mg, lutein 40 MG with zeaxanthin 2 MG, D 5000+ and choline 600mg.

Nature's way liquid joint movement. I had half my thyroid removed years ago, so take a low-dose thyroid med. I have terrible hot flashes every night. This is a lot. Practically no gluten. I eat lots of fruits and vegetables & salad. Mostly organic chicken and a little red meat. For a while I stopped all OTC pain meds because my liver enzymes got high. But I got them back under control by stopping pain meds and taking liver detox. But now the pain is so bad I've started taking them mostly at night so I can sleep, but sometimes during the day. I've lost all hope of ever being out of this deep throbbing constant pain. I'm not sure how to go about checking if anyone replies to my post. I guess I'll just save this website and check every day to see. Love everyone's comments. You guys are so smart and helpful.

Posted On 03/25/2023

MF4Mark

I would have parsed out the trace minerals as such. We aren't likely to get selenium, chromium, molybdenum or boron from food either. Also for those who can't afford wild caught seafood every day, I'd put Iodine on the list. I can only afford wild caught salmon now and then, but Lugols fits within most budgets. And I ditched IODIZED salt years ago, not that it really provides much Iodine anyway.

Posted On 03/25/2023

sophie124

Great article. Hope someone, or Dr. Mercola, can answer what is "intermittent exposure" of molecular hydrogen? I've been taking Dr. Mercola's daily & am now concerned this is too much.

Posted On 03/25/2023

Dr. Mercola

not used continuously as in hydrogen gas. i personally take it twice a day

Posted On 03/25/2023

smi7896

I love your articles but I secretly, until now, expect you to live to about 120 to 130 or else you might have messed up.

Posted On 03/25/2023

020202

Welllll, I would like to add Dr Mercola's Hair Skin & Nails, because it has made my hair thicker, my nails will not break, & I don't know about my skin, but this stuff is great.

Posted On 03/24/2023

020202

Reinor Fuillmich has started his case

greerjournal.com/it-has-begun-criminal-charges-of-violating-nuremberg-.. They entered the case at the International Criminal Court on December 6, 2023

Posted On 03/24/2023

GoldCoaster

Melatonin is an excellent precursor to glutathione, plus its many other benefits. Russel Reiter at 87 takes 80 mg. Being 66, I take 30 mg. Levels drop at age 40, so that's a good time to start considering supplementing he says.

Posted On 03/24/2023

wariormom

Thanks Maritt. Appreciate the resource for my Dad. When I looked up the kidney rescue it described his symptoms exactly. Going to give it a try.

Posted On 03/24/2023

swabiengmail.com

I love molecular hydrogen so much. I am so happy to take it with your new glutathione supplement. I love drinking the hydrogen in sunlight. Or if taking it at night toasting jupiter.

Posted On 03/24/2023

epi-cure

Oh boy, what a piece work is this congresswoman from Florida. It's uncanny at times the way they reveal themselves. Thanks to Jimmy Dore for putting the spotlight where it belongs.

www.youtube.com/watch

Posted On 03/24/2023

jhy7142

Epi I hate always going back to the same topic but check who she is or claims to be and you will understand . This group has a lot on the line if this info comes out against them . Whether you call them Zionist ,Fabians ,Jesuits, bankers , politicians , they encompass a large group .

Posted On 03/24/2023

epi-cure

jhy7142 uh huh, that tool's pedigree is not lost on me, nudge, nudge, wink, wink.

Posted On 03/24/2023

Heimdall1

None and I am feeling better than ever. Let food be thy medicine. Vitamin D: Raw milk, raw egg yolks, resp. raw eggs, there is no bad avidine/biotine bond. Vitamin C: raw eggs with fresh raw orange juice Probiotics: raw milk in a glass bottle, two days in a dark cupboard highest shelf - Kefir B12: raw meat, raw liver organic only Collagen: cucumber as a precursor.

Posted On 03/24/2023

Palazzolo

"While dietary supplements cannot take the place of a healthy lifestyle," that is impossible to ascertain in the year 2023. Pathologically healthier, yes. Naturally healthy, no.

Posted On 03/24/2023

aaCharley

How much Methylene Blue can be taken daily without having blue urine?

Posted On 03/24/2023

Dr. Mercola

20-30 mg

Posted On 03/24/2023

Malanka

Really appreciated this article. Checked all my supplements and they are all good. Yea! I will be more careful in future to ensure all products contain what they are supposed to contain. Glad to see the molecular Hydrogren is listed first. Have recently put my husband and brother on it so hoping to see some results in time.

Posted On 03/24/2023

RFlocal

Good stuff, thank you-

Posted On 03/24/2023

chiffonoh

Copper is also a part of our bone matrix. Without copper, our bones would literally fall apart. Dr. Robert O. Becker discovered this in his research. He wrote about it in The Body Electric. It also helps conduct electricity in bones.

Posted On 03/24/2023

BrianDossDMD

I've tried taking CoQ10 twice and both times it gave me terrible pain in my hands, bee pollen made me have terrible cramps and a 100 more supplements that did nothing for me oyster plus does help my digestion, though if I take too much I get constipated .

Posted On 03/24/2023

epi-cure

I nearly panicked when it finally happened (not really). This is the week when I ran out of videos to watch :-) And then I realized I haven't stopped by Nick Veniamin's website in a while. Of the few I listened, these two were my favorites. Here's a college/university level teacher who exited his position in 2018. By then it had become clear that Obama's Army propaganda campaign was well under way in taking over the beliefs and management pertaining to the globalist "health care" system.

www.bitchute.com/.../jJiEnZfWxO6x And this interview with the likeable David Mahoney (and affible host Nick V. too) is already a few days outdated in places but it's strength is the perspective that the globalist agenda continues to unravel. So don't stop punching but appreciate that the opponent's strategies are starting to crumble. www.bitchute.com/.../mFChRxebdPVU

Posted On 03/24/2023

lilitu_adamah

There is only one law: that of your own DNA, yourself, your own darkness, your own light, your own body. The Memory

Posted On 03/24/2023

srg03462

Although you gave examples in many of the paragraphs, I would love to see a chart of your favorite and best foods that contain these important nutrients. :-)

Posted On 03/24/2023

MF4Mark

In the USA, there would be a blank sheet of paper. Magnesium is almost non-existent. Animals don't make K2 because they're fed corn. Good luck with Iodine and trace minerals. The soil is desolate, hence the NEED for chemical fertilizer. Not that I'm against it, it's just that our soil is nowhere near as rich as Ukraine's for example. Unless you grow your own, you're SOL.

Posted On 03/25/2023

tomjimjan

I'm surprised Astaxanthin isn't near the top of the favorite supplements list. I have been taking Dr. Mercola's 4mg Astaxanthin for more years than I can remember. I'm not sure, but I suspect it is the reason my hair still has a lot of natural (auburn) color at almost 75 years old! My four siblings - all younger than me (my youngest sister eighteen years my junior) - have gray hair!

Posted On 03/24/2023

jef9075

Hello tomjimjan. There is also 4 mg. of Astaxanthin (naturally occuring I believe) in one serving of Dr. Mercola's double-strength Krill Oil supplement. That is one of the main reasons I use this product. I supplement with this a couple of days a week and eat alaskan salmon a couple of days a week. I'm jealous of your hair color by the way!

Posted On 03/24/2023

den7788

12 MGs is optimal for Astaxanthin.

Posted On 03/24/2023

dfghjk

Has anyone found a reasonably priced pharmaceutical methylene blue powder to buy? I found this one but it is expensive! <https://czt1.bz/> I'm guessing most people buy the drops. With a 1% solution it looks like 40 drops are needed (0.5 mg per drop) for this one and it does not provide the servings per bottle compasslaboratory.com/products/methylene-blue-1-usp-grade-methylthioni..

Posted On 03/24/2023

den7788

Haven't heard of it being in powder form. I get mine either from compass or endalldisease - www.endalldisease.com/store/.

Posted On 03/24/2023

sueblue100

I am not getting it on the vitamin K2. I thought there was a specific type, the MK4, that helps with the bones, but I am always seeing MK7 being pushed. I take a supplement that has both, but many don't. Also, I take several of those recommended supplements, but often not the special varieties mentioned, like organic, non synthetic and grass fed. Am I wasting my money then? I recently added the methylene blue and am thinking of trying the hydrogen. Have a bad fatigue problem and arthritis pain slows me down. Oh, and I take trimethyl glycine, does that count? Thanks for any help, you all are so brilliant. Grateful for this site.

Posted On 03/24/2023

forbiddenhealing

A highly varied real whole food diet comes first, all else is supplemental. Ascorbic acid plus baking soda yields sodium ascorbate, my goto therapeutic in large and frequent doses...along with sulfur compounds like NAC/magnesium/seasalt/clean H2O/O2!.. A hair metal mineral analysis is essential to pinpointing toxic burdens and mineral imbalances and prevents one from flying-blind. The mental better-half avoids neurotic hypochondria in favor of a fearless parasympathetic lifestyle....not easy in a world narrative so blatantly F-nuts!

Posted On 03/24/2023

TheBearRuns

Probably take 50% of that list on a daily basis, which includes multi, zinc, D3/K2, Mg, Methylene Blue, Lugols I (since I don't take iodized salt) and dirt (Humic/Fulvic Acid). Ever since reading Forbidden Healing I now take my daily Vitamin C via 1 spoon full baking soda + 1 heaping spoon ascorbic acid. Its a great combo. Yesterday for the first time this year I was hit with sudden fatigue - felt like my body was under a viral attack. As soon as I came to that realization it was another heaping spoon of Vit C/baking soda plus NAC, Zinc, multi-B, Olive Leaf, Quercetin, Elderberry, and sleep. Woke up this morning feeling great!

Posted On 03/24/2023

Consider also that the state of health, age, sex and the risk of a certain disease determine the diet and supplements. The risk of prostate cancer, like many other forms of cancer, increases with age. Men in their 40s have a 2.3% chance of being diagnosed with prostate cancer at age 60. For men age 70, the 20-year risk of prostate cancer is 9.5%. Obesity was associated with increased risk of prostate cancer in non-Hispanic white men and African-American men. Most prostate adenocarcinomas are hormone dependent, but not all, hormone therapy is the main therapeutic option for patients with this disease. The purpose pursued by hormone therapy is to suppress the conversion of testosterone to prevent it from reaching neoplastic cells, since cancer cells need male hormones for their growth, for this reason it is the basic treatment to combat metastatic carcinomas due to the fact that androgens (male sex hormones) stimulate the growth of some prostate cancers, various types of hormone therapies are used to interfere with their actions .

Some hormone therapies stop the body from making androgens, mainly testosterone, while others block the effect of testosterone on cancer cells. In this link there are several sections with studies dedicated to prostate cancer and silymarin A REVIEW OF THERAPEUTIC POTENTIALS OF MILK THISTLE (SILYBUM MARIANUM L.) AND ITS MAIN CONSTITUENT, SILYMARIN, ON CANCER, AND THEIR RELATED PATENTS www.ncbi.nlm.nih.gov/.../PMC9588316 (2022) In one study, men in the highest 25% of intake of cruciferous vegetables, such as broccoli, cabbage and cauliflower, had a 60% lower risk of prostate cancer progression compared to men whose intake was in the bottom 25% of the distribution.

Vitamin D, green tea, curcumin, allium, apigenin, quercetin, zinc, saw palmetto, fisetin, cranberry, lycopene, pomegranate, and fish oil are also effective.

jhy7142

Randall have you ever seen the group of people that live on the coast and drink a glass of sea water a day . Do not remember if it was Africa or South America . We constantly hear the dangers of drinking sea water but this group seems to thrive off of this custom . I believe sea water has the same mineral content of our blood and was even used as transfusions in the past . Diluted to one third strength looking for the name of the guy that did these transfusion . He said the body would make the hemoglobin as needed .

Posted On 03/24/2023

jef9075

I always enjoy your comments forbidden. Reminds me of a couple of sayings. 1.) Test.. don't guess. 2.) You can't supplement your way out of a poor diet.

Posted On 03/24/2023

forbiddenhealing

Jhy...Heard years ago from a guy with cancer, drank a glass of seawater daily; cured....just go for more fresh water on top. Yes Gui, though I don't like statistics....As I said in following article comments....Hormone disruption is widespread, trans-medicine should consider this first instead of trying to normalize sexual mutants...and establishing an LGBTQ state of victimhood with heteros to blame...My guess is that gender dysphoria along with infertility have skyrocketed, so many purple/green/orange haired "couples" and those seeking in-vitro and fertility drugs? BTW..This all helps solve the depopulation agenda..not just Gates and the Fauch.

Posted On 03/24/2023

jhy7142

Read some of Dr. Klenners work with Vit -c 1948 treated 60 people for polio and cured all . Even if polio was most likely a DDT or other pesticide poisoning . Hepatitis cured in 7 to 10 days with 100 grams of C, carbon monoxide poisoning, poisonous mushrooms , west Nile virus all with high doses of Vitamin C . How often are you doing the baking soda ascorbic acid mix ?

Posted On 03/24/2023

forbiddenhealing

Jhy, I use about 8grams C/5grams baking soda (baking soda important too!) most days, but can raise that to 4/5X/day....C also helps mobilize metals/toxins to be chelated and removed w chlorella, clay or charcoal...Any oxidized biochemical can be reduced by C's donated electrons...system charge is maintained, acidity controlled, oxygen protected.

Posted On 03/24/2023

sueblue100

Have heard of someone using diluted sea water on crops and it made them grow better. Someone in Florida with an orange grove. I need to get to the beach and take home a bottle and try it.

Posted On 03/25/2023

forbiddenhealing

sue...Works, just dilute about 4-6Xs...Look up "Seasolids".

Posted On 03/25/2023

johnsilvers2009gmail.com

Could you list how to obtain these 19 vitamins, minerals and supplements from food?

Posted On 03/24/2023

forbiddenhealing

john, Nutrient contents of honest organic foods are known...The trick is sourcing ingredients..the magic happens in the kitchen...many skills sadly gone.

Posted On 03/24/2023

katndognco

Fermentation can assist. Start with simple *** or kimchi recipes. Ferments are easy, fun, nutritious and delicious :)

Posted On 03/24/2023

wariormom

Great article! This will really help me. I am now taking care of my 88 year old father, after losing my mom last November to Covid. They were isolated/lockdown in independent living apartment for over three years in Ohio. Prior to this horrible experience my Dad was very active and physically fit. First trip out to the doctor's office and they got Covid. They each received one dose of J&J vaccine March 2021 under coercion of facility administration. Didn't help my mom who was hit hard, hospitalized, never fully recovered and within a month was gone. They said massive heart attack. My Dad had only mild cold like symptoms. He is now in Florida and I have spent the last four months helping him get healthy after those years of poor nutrition, isolation, inactivity, and trauma of losing his wife of 70 years.

Genetically he won the lottery. Normal weight, BMI 22. He has BP of 118/68, low cholesterol, low triglycerides, normal liver function and no heart disease. His Vit D level is 90-100. Fasting blood sugar 65-80. Eyesight almost 20/20, no hearing deficits. So interesting to watch doctors try to figure out something wrong in order to medicate. His only medical concern right now is some loss of kidney function which is causing slight edema in his legs. We are massaging, and I added 1/4 baking soda once a day to his routine.

He also has some arthritis in his hands but is in zero pain and doesn't even take an aspirin! You should see their faces when they ask for medication list and I say none. Right now he is on Vit C, Zinc w/ selenium, probiotics, ubiquinol, super beta prostate which controls any frequent urination at night, Vit D. He balks at too many "pills" so I am limited right now. He is exhibiting some short-term memory loss, depression symptoms and anxiety. This has been improving however, and I credit my good cooking. Any suggestions about other things I can do for him to lessen depression?

Posted On 03/24/2023

ros11356

wariormom, Your dad is so lucky to have you. You are such a good daughter. God bless you and your Dad.

Posted On 03/24/2023

Segstar

Great work warrior mom, taking care of the elders is absolutely essential..They have given it their all to ensure life goes on, so the very least we can do is to support and make them feel as comfortable and happy as possible as they depart from this great Earth.. Just to add, if you can ensure he gets adequate sunlight and particularly get him to walk a little on the beach , would help him tremendously...Sunlight and grounding in saltwater, especially walking on the beach is a great duo..And i can hear him saying "too many supplements." Older folks like my dad never had that luxury, they got whatever they needed from REAL foods..Sad to say even back then foods were seriously lacking

Posted On 03/24/2023

Maritt

Fix kidney function with Kidney Rescue

goodhealthusa.com/.../622-kidney-rescue-837654639122.html

Posted On 03/24/2023

david48

Do you know if **raw egg yolks** (from naturally pastured chicken hen eggs) might be, or definitely is, a good source of copper? In one's diet, that is, from consuming it as a food. Any other good food sources to suggest? Such as: beef (which is not overcooked), including muscle meat, and possibly also organ meat, ... for obtaining sufficient copper in the diet? Important that such beef be grass-fed, or some other particular type? Thanks!

Posted On 03/24/2023

Guillermou

Top 10 Foods Highest in Copper. www.myfooddata.com/.../high-copper-foods.php .----- This report is very comprehensive.: FATTY ACID AND ANTIOXIDANT PROFILE OF EGGS FROM PASTURE-RAISED HENS FED A CORN- AND SOY-FREE DIET AND SUPPLEMENTED WITH GRASS-FED BEEF SUET AND LIVER www.mdpi.com/.../3404 (2022)

Posted On 03/24/2023

sharonmeridianpsych

David48 if you are taking Dr. Mercola's Zinc, it contains copper - as well as Selenium.

Posted On 03/24/2023

david48

I wonder if anyone here can direct me to good reading material about (or summaries of) the following: Key vitamins, and other healthful substances, that can be found in raw egg yolks of pasture-raised (truly wholesome) chicken hens? I'd like to get a better "whole picture" of which of the key Vitamins and other crucial nutrients can be gotten, in significant quantities, in consuming raw egg yolks? Also, another question I have is the following: to what extent do the *whites* of an egg (whether raw, or cooked) actually work as an "anti-nutrient", effectively, when it comes to the optimal utilization of the Vitamins and other beneficial nutritional substances found in the egg yolk?

One idea I had in this: if eating sufficient quantities of raw egg yolk (or perhaps even partially cooked egg yolk), can a person get meaningful amounts of Vit. K2 (MK4 variety), Vit. E, choline, zinc, copper, and other beneficial compounds, such that it becomes less necessary to supplement with those beneficial compounds? Thus, saving a little money in the process and maybe getting those beneficial compounds (Vitamins, etc.) in a better natural form. Anybody here know, or have ideas, of which particular vitamins, etc. ... can be found in abundance in *egg yolks*? Thanks! side note: Personally, I'm avoiding the egg whites presently, as I seem to have digestive difficulties with them.

Posted On 03/24/2023

Guillermou

This report is very comprehensive.: FATTY ACID AND ANTIOXIDANT PROFILE OF EGGS FROM PASTURE-RAISED HENS FED A CORN- AND SOY-FREE DIET AND SUPPLEMENTED WITH GRASS-FED BEEF SUET AND LIVER. this is the first study to report the nutrient profile of egg yolks from hens fed GFB suet and liver in a local, pasture-raised setting. In this study, both groups with unlimited access to fresh pasture had a higher egg yolk n-3 PUFA and carotenoid content and a lower n-6:n-3 ratio than commercially obtained eggs. Likely due to the corn- and soy-free diet, PBB eggs contained significantly less n-6 PUFAs than eggs from the other groups in this study. Moreover, feeding GFB suet and liver to the PBB group increased CLA, OCFA, and BCFA content without an increase in total SFA content but had a limited impact on the vitamin and mineral profile.

These results demonstrate that providing GFB by-products and exploring alternative layer hen feeds have beneficial impacts on the egg nutrient profile that favor human health and reduce agricultural waste. Future studies should investigate differences in sources of beef tallow or suet and liver and the optimal quantity to achieve desired effects on the egg nutrient profile. Further investigation is needed to determine the efficacy of using alternatives to corn and soy in layer hen diets, particularly in pasture-raised systems. www.mdpi.com/.../3404 (2022)

Posted On 03/24/2023

epi-cure

I've only had time to scan today's essay so maybe the answer is already revealed. Does L-Glycine preempt glyphosate at receptor sites?

Posted On 03/24/2023

Guillermou

Effectively epi-cure, according to Dr. Mercola, two substances that pose the greatest danger to your brain are glyphosate and aluminum. Glyphosate is similar to the amino acid known as glycine.¹ It sticks in places where your body needs glycine. Importantly, glycine is depleted in the detoxification process, so many of us don't have enough glycine for efficient detoxification. To flush out glyphosate, you need to saturate your body with glycine. Klinghardt recommends taking 1 teaspoon (4 grams) of glycine powder twice a day for a few weeks, then lowering the dose to 1/2 teaspoon (1 gram) twice a day. This forces the glyphosate out of your system, allowing it to be eliminated through your urine.

Posted On 03/24/2023

epi-cure

Guillermou, thank you much for the reply and memory jog. I now recall that I first heard it from Dr. Klinghardt and will bear in mind the dosage he/you indicate (Fuzzy memory says Stephanie Seneff may have mentioned the glycine/glyphosate surrogate relationship too). If my carcass wasn't so riddled with glyphosate I might have better recall :- D

Posted On 03/24/2023

nwblacksmith

Been wondering about Molecular Hydrogen... If we take it as a gas dissolved in water, what does our body do with all of the carbon dioxide we take in when we drink a soda or a mineral water?

Posted On 03/24/2023

ellivoc

Is that 8-10,000 IUs a day. That seems very high. I work it out on 35 X your body weight in pounds. So for a 140 pound person that would be 4900 IUs a day (approx). I am using England measurements. I agree on the 150-200 nmols in blood as correct. Have to supplement over here, sun not strong enough between about September and April even if it is out. Modern sunbeds do produce vitamin D but not very much I don't think.

Posted On 03/25/2023

MF4Mark

Question about the ethylene blue. I did a Google search and serotonin syndrome is one of the potential side effects. If someone is taking a tricyclic med, is this safe? SWIM would probably take them 12 hours apart.

Posted On 03/25/2023

MF4Mark

@ Dr Mercola Speaking of Vitamin K2 and fermented foods, what's the deal with Kinetic Culture? I used to buy that stuff all the time. It was the only culture I knew of to optimize K2 production. I had to take a break from fermenting for a while. I'm an essential employee in an essential industry, so break for me during the zombie apocalypse. And when I went looking for it, you stopped selling it. I bought the whole Kinetic Culture kit, so I'm invested, man. Plus, I could ferment a half gallon of Sauerkraut in 3 weeks! And I never got around to checking the pH but it was quite tangy. Can you please bring it back?

Posted On 03/25/2023

cammac

Should the recommended dosage for niacinamide (50mg three times a day) be reduced, if you are also taking 2 capsules of Dr. Mercola's B-complex each day?

Posted On 03/24/2023

Fuzzy.wuzzy

If I just take Dr. Mercola's MULTI, do I still need to take all the extra supplements mentioned above? I currently only take vitamin D3 (2500mg) with COQ10 (200mg) at breakfast and Magnesium bisglycinate (200mg. at lunch and one at bed time). I was doing MUCH better while on Magnesium L-Threonate, but I stopped when a close friend told me that it damages kidneys if taken for a long time. Does anyone know about this? Also, what does one take for random bursting of blood vessels in fingers..toes..Before it happens, I usually feel pressure in the area, then bam, I am left with an awful purple bruise at the site. This has been happening on/off for 25 years. My doc can't figure it out. Strange.

Posted On 03/24/2023

wariormom

The only thing I have ever used are bioflavonoids to strengthen the blood vessels. My mom and younger sister suffered with varicose veins so I was motivated at an early age to add Vit C with bioflavonoids to my regimen. I also try to eat the white part of citrus fruits (with the fruit!) several times a week. Not sure this can stop blood vessels from breaking but I have never gotten varicose veins.

Posted On 03/24/2023

sueblue100

I have that in some of my fingers. Not often. Seems to happen if I've had aspirin or strained my hand on something.

Posted On 03/25/2023

Eevee

I think Q10 and L Carnitine should be noted but then that would take the list over 20.

Posted On 03/24/2023

sharonmeridianpsych

My Magnesium is 2000mg. Not enough Glycine? Thank you!

Posted On 03/24/2023

sharonmeridianpsych

FYI, "Glycine is the main amino acid in collagen, the main structural protein of connective tissue, such as bone, skin, ligaments, tendons and cartilage. Accordingly, you can boost your glycine intake by taking collagen protein supplements. The abundant amount of glycine present in collagen suggests it's not necessary to ingest both supplements."

Posted On 03/24/2023

creekrat

Niacinamide increased my appetite a lot. I researched and see it causes this. Also if it blocks lipolysis does that mean it blocks fat loss ?

Posted On 03/24/2023

Guillermou

Yes, Physiological and Anti-obesity Effects of Melatonin and Niacin Supplements

dergipark.org.tr/.../1756386.----- Niacin & Weight Loss.

www.livestrong.com/.../256547-niacin-weight-loss

Posted On 03/24/2023

Lee1959

This is off topic. I am getting ready to hatch my own pure breed chickens. One thing I recently discovered is fermenting old bread, cookies, bagels (anything my husband gets from the restaurant he works for) with yogurt and milk, placing it in a zip lock bag, and letting it sit in the sink for a few days until it starts releasing gas. You can tell it is ready to eat when the bag swells like a balloon. This is a treat my chickens JUMP on.

Posted On 03/24/2023

Lee1959

Once again, off topic. I was reading up on Marek's disease (fowl paralysis), which I always vaccinated for when I purchased them from a hatchery. I won't be able to vaccinate my incubator chicks at home, so I decided to do my own research. Same thing as the Covid vax . . . leaky vaccine, vax causing the virus to become more virulent (and deadly), chicks are pretty much immune to it by 5 months old, etc. And still some young chickens get it even if they are vaccinated!!!! Sounds like Dr. Mercola could write a book on "The Truth about Marek's disease:):)"

Posted On 03/24/2023

Segstar

Lee careful with fermenting those old breads as they are almost guaranteed to be loaded with Monsatan Glyphosate..

Posted On 03/24/2023

TommyTwoGloves50

Big Pharma has competition. Big Supplemental. Some product lines are laudable, but a large amount of quackery has invaded the Holistic ranks and most of the products are not covered by insurance. This has become an "elitists alternative" for those with swollen bank accounts. Could you please post alternatives for those who choose a more austere pathway in the supplemental ranks? Thank you. You do good work.

Posted On 03/24/2023

bfr27915

TommyTwoGloves50 - I like your insight and understanding. I'm not a medical professional - but my list. Avoid crap food and crap beverages. De-tox yourself and your environment, especially from toxic people. Eat real food with a good variety and hydrate. Cook your own food. To the extent feasible, grow your own food (everyone can grow sprouts). Get some good sleep. Turn off all the "noise". De-stress. Move. Move more. Be outdoors with fresh air & sunshine. Lift weights (preferred are bodyweight exercises). Feed your gut biome with fermented foods. Work on your faith. Work on your relationships. Be kind to yourself. Read good books. Study brilliant. Learn more. Seek awareness & truthfulness. Create and build something. Listen to great music. Find beauty. Be generous and kind. De-clutter (what you own - may own you). Have fun. Get a dog. Laugh. And consider "The Optimist Creed." www.optimist.org/.../creed_poster.pdf

Posted On 03/24/2023

bfr27915

TommyTwoGloves50 - Being age 67 - I thought growing old would take longer. Use your time wisely with endeavors and people that will matter. Getting ready to enjoy this sunny morning with my wife as we walk our two dogs - LuLu and Wilson.

Posted On 03/24/2023

bfr27915

TommyTwoGloves50 - I value transparency and full disclosure. I take the FLCCC Alliance Covid-19 prevention protocol (no jab - no Covid). I do take supplements. I purchase many from Bulk Supplements. I make my own capsules, Size 00 being the most common. I also have a digital scale.

Posted On 03/24/2023

PathNotes

CoQ10 supplementation is more relevant than Quercetin for most people over 40. Otherwise, a good list for many to consider!

Posted On 03/24/2023

CocoaCin

I presently take all of those listed daily except Methylene Blue. I have a concern about Methylene Blue affecting the kidneys. (I stock 60mL just in case)

Posted On 03/24/2023

2shaws

How do you measure One sixty fourth of a teaspoon of methylene blue powder?

Posted On 03/24/2023

katndognco

You can order specialty sizes off Amazon or other sites. I did, they're \$5-\$6 for several options.

Posted On 03/24/2023

Jake..

The only way that probiotics can be useful is if they are in an enteric coated capsule/tablet. Reason being that there have never been successful cultures of the probiotic organisms made from anywhere in the gut, they are destroyed by stomach acid. [source :consultant clinical microbiologist friend] Why is it so difficult to get an enteric coated probiotic?

Posted On 03/24/2023

roark183

I WANT the flush normally produced by Niacin. Niacinamide does not produce the flush caused by Niacin. The skin flush produced by Niacin is the action of radiation being expelled from the body. Few doctors in the medical community understand this, so they suggest Niacinamide in place of Niacin to avoid the flush. I'll take Niacin every time over Niacinamide. With all the radiation being put into our environment from the Sun, 5G, "smart" electronics, computer screens, etc, it's becoming increasingly critical to expel radiation from the body. That's done with Niacin, not Niacinamide.

Posted On 03/24/2023

DanoS1

Niacin flush has absolutely nothing to do with your body expelling radiation. I don't know where you heard that as I have never even come across such a claim before. It has to do with capillaries expanding with an increased blood supply to them. Radiation, ionizing and non-ionizing doesn't work like that.

Posted On 03/24/2023

grulla

"Dano", I believe UVB radiation sickness is what "roark" may be thinking of.
www.ncbi.nlm.nih.gov/.../PMC3577345 ~~~ jamanetwork.com/.../291912

Posted On 03/24/2023

Segstar

Flushing occurs from dilating blood vessels, which increases blood flow and causes the skin to redden or darken. The dilation of blood vessels may occur due to Trusted Source how niacin reacts with certain proteins within the skin, causing an increase in prostaglandins and the blood vessels to dilate.

Posted On 03/24/2023

davevarga

About this in the article: "methylcobalamin, or "methyl B12," is the most bioavailable and most absorbable form of vitamin B12. Avoid using the most common form of B12, cyanocobalamin" I have tried the methylcobalamin B12, actually tried the dctors product and as soon as I took it as directed, my energy level dropped, not a good feeling. I instead take cyanocobalamin under the tongue and immediately feel a boost.

Posted On 03/24/2023

DoraRay

Grant Genereux did a thorough research and experimentation on "vitamin A". His findings go against everything we know about this vitamin. My own experimentation at removing it from my supplements and diet resulted in miraculous health improvements with life long insomnia no more. Vitamin D is actually a secosteroid hormone. Very few people are deficient in the active, 1,25 dihydroxyvitamin D while only the storage form, 25 OH vit.D is measured. Jim Stephenson Jr. has researched this topic in some details. Unfortunately neither of these gentlemen are doctors, so their research is only known to a small group of people. Taking so many supplements seems unnatural and unnecessary. This is coming from a supplement junkie who improved her health in step with eliminating the supplement and buying clean, organic, local, pastured, seasonal foods.

Posted On 03/24/2023

MF4Mark

I beg to differ regarding vitamin D. Look at any Briton with snaggle teeth and you'll see a deficiency-practically the whole damn island! I live in New England and work indoors. I have heat intolerance so I stay inside during the summer. I also eat dairy only sporadically. If I don't supplement D, my energy is crap and my joints ache like hell. At one point the pain in my back was so bad, I was unable to stand at the sink to wash dishes for more then FIVE minutes at a time. Supplementing 15K IU (along with A and K2) per week dropped my pain from a 9 to a 4. I think if you asked the doc, he'd probably say D deficiency is as rampant as Mg deficiency.

Posted On 03/25/2023
