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Dr. Mercola's 2022 Summerfest Presentation

Analysis by Dr. Joseph Mercola ✓ Fact Checked

August 28, 2022

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STORY AT-A-GLANCE

- Three factors that severely damage your mitochondrial function are excess iron levels, lack of sun exposure, resulting in low mitochondrial melatonin and excess omega-6 linoleic acid (LA) in your diet
- Most men and postmenopausal women have high iron levels. The average person accumulates about 1 milligram of iron a day, and the only way to get rid of it is through blood loss. If your iron is elevated, you can remedy the situation by donating blood on a regular basis
- One of the most important benefits of sun exposure, besides vitamin D, is melatonin production. The near-infrared wavelengths in sunlight catalyze the production of melatonin — a powerful endogenous antioxidant — in your mitochondria. This is important, as that's where the melatonin is needed the most. So, ideally, get one hour of sun exposure every day around solar noon while wearing as little clothing as possible and no sunscreen
- Excess omega-6 fat, linoleic acid (LA) creates oxidative stress that basically acts as a metabolic poison. Eliminating it from your diet can go a long way toward improving your mitochondrial function. Guidance on high-LA foods to avoid are included
- Three key remedies to keep on hand in your emergency kit are high-dose melatonin, methylene blue and nebulized hydrogen peroxide (a jet nebulizer and 3% food grade hydrogen peroxide)

The video above features a lecture I gave during the 2022 Mid-Cape Summer Fest to celebrate our 25th anniversary. In it, I review strategies to help maintain your health during what I believe may become very distressing and difficult times.

The Great Reset is bringing with it supply chain disruptions, food and energy shortages, economic collapse and global totalitarianism. Additional bioweapon releases are also possible, as are cyberwarfare attacks.

A sensible person will look at current signs and take precautions, and one of the best things you can do right now is to focus on your health, to give yourself a fighting chance to make it through these dark and potentially dangerous times.

Your Mitochondrial Health Is Paramount

One of the key areas of focus in this lecture is mitochondrial health. Mitochondria are tiny organelles inside most of your cells that produce ATP, the energy currency of your cells. Inside your body, you have about 100 quadrillion mitochondria. A given cell can have anywhere from 100 to 1 million mitochondria inside it.

During this energy production, the mitochondria produce a small amount of reactive oxygen species (ROS), which cause oxidative damage. If the oxidative stress is severe, mitochondrial dysfunction and energy failure can occur, which in turn can lead to fatigue and chronic diseases. Three of the most damaging factors, in terms of mitochondrial function are:

- Excess iron
- Lack of sun exposure, resulting in low mitochondrial melatonin
- Excess omega-6 linoleic acid (LA)

By addressing these three factors, you can significantly reduce oxidative stress and improve your mitochondrial function.

Most Adults Have High Iron Levels

Contrary to popular belief, most men and postmenopausal women have high iron levels. One reason for this is that many processed foods are fortified with iron (most actually contain dangerous forms of iron, like iron fillings). Another reason is the fact that your body has no pathway to eliminate iron other than blood loss.

Stored iron in your tissues is incredibly damaging to your health as it promotes oxidative stress that can damage your mitochondrial DNA, cell membranes and electron transport proteins. If left untreated, it can damage your organs and contribute to cancer, heart disease, diabetes, neurodegenerative diseases and many other disorders.

It's also one of the most common causes of fatigue because of how it impairs your mitochondrial production of energy. Iron has a terminal destination in the mitochondria from where it must be recycled. However, for that to occur, you must have enough copper and retinol, and most people simply don't. As a result, the iron gets "stuck" and cannot be recycled.

So, a low ferritin level is not necessarily a sign that you need iron. You more than likely already have too much stored in your tissues that are simply unavailable due to low availability of copper, which in turn is typically the result of retinol deficiency.

The average person accumulates about 1 milligram of iron a day, and if it's not being recycled due to a copper deficiency, you end up in a vicious cycle. You may be told you low iron and need iron supplementation, but the problem is really a copper deficiency. So, you keep loading in iron, and your health suffers as a result.

As I explain in the lecture, your mitochondria do require iron to function, but the problem most people have is that their stored iron is far too high, which basically short-circuits the mitochondria. Additionally, iron combines with hydrogen peroxide in a process called Fenton's Reaction, which creates very potent oxidizing agents that damage to your stem cells, cell membranes, DNA, proteins and mitochondria.

Studies have linked excess iron to inflammatory conditions such as atherosclerosis, and people who donate blood on a regular basis tend to live longer, as they have lower oxidative stress.

Bill Sardi has confused some people into believing that phytic acid, or IP6, can be useful for lowering iron levels. Let me caution you that this is actually a worse than worthless intervention. I tried his recommendation over 30 years ago for my father who had hemochromatosis and it did absolutely nothing. The ONLY intervention that lowers iron is removal of blood. Additionally, IP6 is a nonspecific mineral chelator and will remove beneficial minerals and cause you harm.

How to Address High Iron Levels

There are several tests that can help you determine your stored iron level:

- The serum ferritin test — This test measures stored iron that has seeped out into your blood (but it doesn't indicate tissue iron stores). I recommend all adults to get this test done on an annual basis.

  Ideally, your serum ferritin should be between 20 and 35 ng/mL. If your ferritin level is above 80 ng/mL, the solution is to donate your blood. If it's over 200 ng/mL, a more aggressive phlebotomy schedule is recommended.

  Beware, however, that serum ferritin can register as falsely elevated if you have an active infection or high amounts of inflammation. You can use a C-reactive protein (CRP) test to determine if this is the case. If your CRP is normal, inflammation is not the cause of your elevated serum ferritin
- Total iron binding capacity (TIBC)
- Serum transferrin
- Complete blood count (CBC)

The answer, if you have high iron, is to donate blood on a regular basis. If donating a full pint (half a liter, 500 ml or about 16 ounces) of blood three to four times a year is problematic, you can remove blood in smaller amounts once a month on the schedule listed below. If you have congestive heart failure or severe COPD, you should discuss this with your doctor, but otherwise this is a fairly appropriate recommendation for most.

Men	150 ml / month
Postmenopausal Women	100 ml / month
Premenopausal Women	50 ml / month

I personally remove 60 cc or two ounces of blood once a week, which is about 7 pints per year. This is a large amount but because it is done slowly it is far better tolerated.

Why Opt for Sun Exposure Rather Than Supplements?

Sun exposure triggers vitamin D production in your skin, but that's not all it does. The fact that sun exposure has many other health benefits is perhaps one of the top reasons for not relying on supplements, because in addition to vitamin D, you'd also have to take several others just to obtain what you can get for free from the sun.

One of the most important benefits of sun exposure besides vitamin D is melatonin production. The near-infrared wavelengths in sunlight actually catalyze the production of melatonin — a powerful endogenous antioxidant — in your mitochondria. This is important, as that's where the melatonin is needed the most.

> **"Pineal melatonin helps regulate your sleep-wake cycle, while mitochondrial melatonin counteracts oxidative stress. It's basically the 'fire extinguisher' for the oxidative stress produced inside your mitochondria."**

There are two sources of melatonin in your body: The melatonin produced in your pineal gland (5% of your body's total), and that produced in your mitochondria (95% of the total). Pineal melatonin helps regulate your sleep-wake cycle, while mitochondrial melatonin counteracts oxidative stress. It's basically the "fire extinguisher" for the oxidative stress produced inside your mitochondria.

Sun exposure also produces nitric oxide, which helps lower your blood pressure, and structures the water in your body. It also activates vitamin A (retinol), forming active metabolites called retinoids, and optimizes serotonin production for improved mental health. It basically acts as an antidepressant, which is why it is so important to treat SAD in the winter months.

Ideally, get one hour of sun exposure every day around solar noon (between 11.30 a.m. and 2.30 p.m. if you are in daylight saving time), while wearing as little clothing as possible and no sunscreen. It is important to build up to one hour slowly if you haven't had much sun exposure.

You should never get burned. However, excess LA in your diet is actually the largest contributor to sunburn and skin cancer — not sun exposure itself. So, you can radically reduce your risk of sunburn by drastically reducing your LA intake.

Since I moved to Florida more than a decade ago, I've not needed to take oral vitamin D, as I take an hour-long daily walk, around solar noon, wearing nothing but shorts and a baseball cap.

Three Key Remedies to Keep in Your Emergency Kit

I recently published an interview with Dr. Russel Reiter, who has published an astonishing 1,600 scientific papers on melatonin. That discussion made me realize just how valuable melatonin can be during an acute heart attack or stroke.

As explained by Reiter in that interview, during cardiac arrest or stroke, the blood supply is temporarily interrupted to your heart or brain. This deprives the tissues of oxygen, and without oxygen, they rapidly deteriorate. When the blood vessel reopens, which is called reperfusion, and oxygen flows back into those oxygen-deprived cells, severe damage can occur, as loads of free radicals are generated once the blood starts flowing again.

High-dose melatonin, if taken soon enough after a heart attack or stroke, can help preserve these tissues and reduce their tissue damage. While the ideal dosage is uncertain, Reiter says he would not hesitate to take anywhere from 50 milligrams to 100 mg of melatonin, ideally intravenously if paramedics are on the scene, or sublingually if no professional medical help is around.

Melatonin has no toxicity, so it's safe to take even at high doses. It may interfere with your sleep cycle, but that's a small price to pay to salvage your heart or brain in an acute health emergency.

Another emergency kit essential is methylene blue. It's a primary antidote for metabolic poisons (any poison that interferes with oxygen transport or displaces oxygen, either from the blood or from the mitochondria), such as carbon monoxide or cyanide poisoning. By improving mitochondrial respiration and brain energy metabolism, it can also help protect your heart and brain during an acute heart attack or stroke.

To learn more about this useful remedy, see my interview with Francisco Gonzalez-Lima, Ph.D., who is one of the foremost experts on methylene blue, featured in "The Surprising Health Benefits of Methylene Blue."

The third remedy to keep on hand at all times is a jet nebulizer and food grade 3% hydrogen peroxide. Nebulized peroxide is a simple, inexpensive and incredibly effective way to kill viruses, improve oxygenation and optimize your redox pathways. For more details, see "Nebulized Peroxide — Immune Support for Respiratory Viruses."

How to Improve Your Metabolic Health

The vast majority of Americans are metabolically unhealthy; they are insulin resistant, which sets them up for obesity and just about all chronic diseases. Two key strategies that will improve your metabolic health include:

- **Time-restricted eating (TRE) —** This is a form of intermittent fasting where you eat all your meals within a six- to eight-hour window, and fasting for the remaining 16 to 18 hours each day.

  Be sure to eat your last meal at least three hours before bed. An estimated 90% of Americans spread their meals and snacks across 12 hours or more, which is a recipe for metabolic disaster. Your body simply wasn't designed to eat continuously.
- **Eliminating linoleic acid (LA) from your diet —** I'm convinced most insulin resistance is caused by excess omega-6 fat in the diet, not sugar, and the majority of the omega-6 is in the form of linoleic acid (LA).

  LA creates loads of oxidative stress — it basically acts as a metabolic poison — so eliminating it from your diet can go a long way toward improving your mitochondrial function. It's called an essential fat, but it's in so many foods, it's basically impossible to become deficient if you eat regular food. Most get FAR too much — dangerous amounts — as processed foods are chockful of seed oils.

  The best way to ensure your LA intake is within the safe range is to use a nutritional calculator such as Cronometer. Once you've entered the food for the day, go to the "Lipid" section on the lower left side of the Cronometer app. To find out how much LA is in your diet for that day, just note how many grams of omega-6 is present. About 90% of the omega-6 you eat is LA.

  Industrial seed oils or vegetable oils (those listed in red below) are a primary source of LA, but even food sources hailed for their health benefits contain it, such as olive oil and conventionally raised chicken and pork, both of which are fed LA-rich grains. To avoid these harmful oils:

Don't cook with seed oils (red list below)
Avoid store-bought processed foods and condiments
Avoid fast food and regular restaurant food
Avoid chicken and pork
Don't eat fake meat products like Impossible Burger, as all the fat in these meat substitutes come from seed oils
Limit seeds and nuts as all nuts — with the exception of macadamia nuts — are loaded with LA
If using biodynamic, unadulterated olive oil, limit it to 1 tablespoon per day

For cooking, use the oils in green in the chart below.

Cooking Oils	% Linoleic Acid (LA) Average Value (Range in Parentheses)
Safflower	70%
Grape seed	70%
Sunflower	68%
Corn	54%
Cottonseed	52%
Soybean	51%
Rice bran	33%
Peanut	32%
Canola	19%
Olive oil	10% (3% - 27%)
Avocado	10%
Lard	10%
Palm oil	10%
Tallow (CAFO)	3%
Butter (CAFO)	2%
Coconut oil	2%
Tallow (Grass Fed)	1%
Butter (Grass Fed)	1%

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Nice to see Dr. Mercola at the 2022 Summer Festival Preview. Great tips for supporting mitochondrial health. Consider, as reported by Dr. Mercola, the relationship between ferritin and systemic inflammation, the origin of cardiovascular, neurodegenerative and metabolic diseases, including cancer. Laboratories mark high limits of ferritin as admissible (24 to 320) following the protocols of Allopathic Medicine marked by BigPhama that does not take into account the factors associated with high values in Ferritin associated with the disease and increased risk of death reported by the articles of the Dr Mercola.

Ideally, his serum ferritin should be between 20 and 35 ng/mL. By monitoring your serum ferritin (stored iron) and GGT levels, and taking steps to lower them if they are too high, you may be able to avoid serious health problems Virtually all postmenopausal women and adult men are at risk for iron overload due to poor excretion of this mineral. If this problem is not taken care of, it could contribute to the chronic health problems mentioned. GGT is a liver enzyme involved with glutathione metabolism and amino acid transport.

This could be used as an indicator in the detection of an excess of free iron, and is a powerful predictor of mortality. articulos.mercola.com/sitios/articulos/archivo/2017/09/20/monitorear-n.. Conventional laboratory tests of iron status commonly referred to include tests for serum ferritin, iron, transferrin, or total iron binding capacity (TIBC), and transferrin saturation. Iron is a key component of hemoglobin in red blood cells, myoglobin in muscle, and in many metalloproteins and enzymes.

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Iron overload typically results in elevated ferritin and transferrin saturation. Iron deficiency is best assessed using serum ferritin, which is low in the absence of inflammation. High iron and ferritin levels are associated with chronic and degenerative diseases

which is low in the absence of inflammation. High iron and ferritin levels are associated with chronic and degenerative diseases, however, in inflammation, liver disease, and malignancies, ferritin levels may increase, and may mask actual iron status. Ferritin is the intracellular storage form of iron. A very small amount is found in the serum. Serum iron refers to ferric ions (Fe3+) bound to serum transferrin.

Serum iron concentration is highly variable and is affected by dietary iron intake, inflammation, and infection. Transferrin is the main iron transport protein in plasma. Increases in iron deficiency to maximize utilization of available iron. TIBC is an alternative test to transferrin; reflects the availability of iron-binding sites on transferrin. The total iron binding capacity test checks how well iron moves through the body. Values increase in iron deficiency and decrease in iron overload. Transferrin saturation is calculated from serum iron and TIBC or transferrin measurements.

Typically, transferrin is 30% saturated with iron. Transferrin saturation rises in iron overload and falls in iron deficiency. Ceruloplasmin shows a copper-dependent oxidase activity, which is associated with the possible oxidation of Fe+2(ferrous) to Fe+3(ferric), which is why it helps its transport in the plasma by being associated with transferrin, the which can only carry iron in its ferric state. It also has functions such as the oxidation of serotonin, epinephrine and norepinephrine.

Mark as Spam | Posted On 8/14/2022 2:47:47 AM

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Guillermou
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Hyperferritinemia, with or without increased hepatic iron, represents a common finding in nonalcoholic fatty liver disease (NAFLD), reflecting hepatic inflammation or true iron overload and how it influences disease progression. A mixed pattern of hepatic iron deposition is associated with the presence of steatohepatitis, whereas serum ferritin increases with worsening fibrosis to the precirrhotic stage. onlinelibrary.wiley.com/.../liv.14096 (2019) Ferritin expression is under fine control and is regulated at both the transcriptional and post-transcriptional levels by iron, cytokines, hormones, and oxidative stress. Mutations in the ferritin gene cause hereditary hyperferritinemia-cataract syndrome and neuroferritinopathy.

Hyperferritinemia is associated with inflammation, infections, and malignancies. In this review, the structure and function of ferritin, hyperferritinemia in disease states and autoimmune diseases are described. Ferritin synthesis is regulated by cytokines (TNF and IL-1) during development, cell differentiation, proliferation, and inflammation. The cellular cytokine response to infection stimulates the expression of ferritin genes. www.sciencedirect.com/science/article/abs/pii/S1568997207000377 (2007) Professor Douglas B. Kell, Research Professor of Bioanalytical Sciences at the University of Manchester, UK.

And Etheresia Pretorius from the Department of Physiology, School of Health Sciences, University of Pretoria, South Africa take an approach to explain a number of apparent paradoxes of serum ferritin, including: 1) why it correlates with biomarkers of cell damage , 2) why it correlates with biomarkers of hydroxyl radical formation (and oxidative stress), and 3) it correlates with the presence and/or severity of numerous diseases. Serum ferritin levels primarily represent a consequence of stress and cell damage. pubs.rsc.org/.../c3mt00347g (2014)

Mark as Spam | Posted On 8/14/2022 2:48:39 AM

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Guillermou
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Several lines of evidence have shown that ferritin is a multifunctional protein with possible roles in proliferation, angiogenesis, immunosuppression, and iron delivery. In the context of cancer, ferritin is detected at higher levels in the serum of many cancer patients, and higher levels correlate with aggressive disease and poor clinical outcome. Furthermore, ferritin is highly expressed in tumor-associated macrophages which has recently been recognized to play a critical role in tumor progression and resistance to therapy. www.sciencedirect.com/science/article/abs/pii/S0304419X13000395 (2013) SARS-CoV-2 infection has spread throughout the world and the pathogenic mechanism is still under investigation.

The presence of a large inflammatory response, defined as a "cytokine storm", is being studied to understand what the prognostic factors involved in the progression of the infection could be, with ferritin being one of those markers link.springer.com/.../s13017-021-00354-3 (2021) Ferritin was initially described as accompanying various acute infections, both viral and bacterial, indicating an acute response to inflammation. However, with the introduction of the hyperferritinemic syndrome that connects four serious pathological conditions, such as adult Still's disease, macrophage activation syndrome, catastrophic antiphospholipid syndrome, and septic shock, another aspect of ferritin was added where it could have a pathogenic role instead of just extremely elevated protein. Indeed, suggesting that COVID-19 is a new member in the spectrum of hyperferritinemic syndrome in addition to the four conditions mentioned could hopefully direct further investigation into the pathogenic role of ferritin. www.sciencedirect.com/.../S0896841121001864 (2022)

Mark as Spam | Posted On 8/14/2022 2:49:11 AM

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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This current meta-analysis evaluates the level of serum ferritin at different levels of severity in COVID-19. Studies were included that assessed serum ferritin level in different clinical settings (COVID-19 vs. control, mild to moderate vs. severe to critical, non-survivor vs. survivor, organ compromise, ICU, and need for mechanical ventilation. In comparison with control (COVID-19 negative), higher ferritin levels were found among COVID-19 patients. Severe to critical COVID-19 patients showed higher ferritin levels compared to mild COVID-19 patients to moderate. www.sciencedirect.com/.../S0883944121002185 (2022) Iron stores are related differently to each CMD cardiometabolic disease. Serum ferritin levels were positively and independently associated with the incidence of type 2 diabetes, T2D, and the incidence of cerebrovascular disease CVD if higher cut-off points for high ferritin levels were considered. link.springer.com/.../s12933-022-01450-7 (2022)

Mark as Spam | Posted On 8/14/2022 2:49:38 AM

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axkershaw
Joined On 7/8/2013 3:01:14 PM
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Gui, It is hard for me to ferret out (or ferritin out) the evolutionary reason for the natural build up of iron. Any ideas? It can't be an evolutionary benefit. We are missing something.

Mark as Spam | Posted On 8/28/2022 12:00:43 PM

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axkershaw
Joined On 7/8/2013 3:01:14 PM
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On deeper reflexion, I may have an evolutionary answer. For a species to survive it must reproduce and the offspring must live to reproduce and so on. Reproductive age women lose blood and iron on a monthly basis. They must have an efficient system to rebuild blood and iron levels. That efficient blood building system is in all at a young age and is maintained to produce healthy babies. Males only have to stay healthy long enough to provide healthy sperm. It seems old men are sacrificed evolutionarily for the benefit of the species. Oh well.

Mark as Spam | Posted On 8/28/2022 12:17:06 PM

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forbiddenhealing
Joined On 2/21/2011 9:51:43 AM
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My standard everyday health support pantry includes; kilos of Vitamin C crystals, pounds of Arm&Hammer baking soda, chlorella/clay, NAC/RALA, Mg/Zn/Se/I, food grade H2O2, B-Complex, yogurt supplies, oregano oil..have methylene blue, MMS chlorite, ivermectin on hand... plus an outdoor "pantry" of every citrus, fruit, berry, vegetable, herb and nut I can grow..plus bees, cows and forest meat.

Reply | Mark as Spam | Posted On 8/14/2022 7:54:13 AM

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Good health, Randall. Mitochondria are especially abundant in the organs and tissues of the body with higher energy requirements. Supplements and lifestyle changes can improve mitochondrial health by increasing the availability of proteins needed for ATP production (AMPK activation, PCG-1a, NAD+, SIRT1. They also act as antioxidants, helping mitochondria to reduce oxidative stress and other important functions, including: signaling, differentiation, programmed cell death and control of cell growth. Related to Dr. Mercola's reports additional support for mitochondrial function includes Acetyl-L-Carnitine, Q10, Pyrroloquinoline Quinone, Vitamin C, Choline, NADH, -Lipoic Acid, -Ketoglutaric Acid, Resveratrol, N-Acetylcysteine, magnesium and a quality multivitamin and mineral complex.

In the following link more references: 33 NATURAL WAYS TO IMPROVE MITOCHONDRIAL FUNCTION selfhacked.com/blog/natural-ways-to-improve-mitochondrial-function/ (03/11/2021). Regarding Q10. The most common metabolic and mitochondrial diseases (MMD) are cardiovascular diseases, cancer, respiratory diseases, diabetes, and chronic kidney diseases are a great epidemic.

Prevention of the development of mitochondrial EMM by coenzyme Q 10 is one of the basic ways of protecting human health. www.sciencedirect.com/.../B9780128198155000495 (2022) Putting it two ways: A ketogenic diet combined with exercise can improve mitochondrial function and metabolic health. journals.physiology.org/.../ajpendo.00305.2020 (2020) Current experimental evidence suggests that KD may positively impact mitochondrial bioenergetics, mitochondrial ROS/redox metabolism, and mitochondrial dynamics. www.sciencedirect.com/.../S1357272521001308 (2021)

Mark as Spam | Posted On 8/14/2022 8:10:57 AM

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Guillermou
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A reduced concentration of endogenous CoQ10 can partially block electron transfer in the respiratory chain, resulting in reduced adenosine triphosphate (ATP) production in post-COVID-19 patients. Targeted mitochondrial therapy with CoQ10 supplementation and rehabilitation may improve mitochondrial health and speed recovery for patients after COVID-19. Platelet mitochondrial function and CoQ10 content may be useful biomarkers of mitochondrial health after SARS-CoV-2 infection. pubmed.ncbi.nlm.nih.gov/34967652 (2022) Prolonged COVID and mitochondrial dysregulation. Some relevant aspects: SARS-CoV-2 hijacks mitochondria and uses them for protection and viral replication, diverting resources from supporting normal cellular function to now serve as a viral factory.

Viral influence on mitochondrial activities leads to suboptimal energy production. The binding of this receptor by the SARS-CoV-2 virus decreases the production of ACE2, which has a regulatory effect on mitochondrial function. The aging process results in fewer mitochondria and decreased ATP production with a decrease in mitochondria autophagy, which contributes to chronic inflammation. The overall effect reduces mitochondrial capacity by about 50%, leading to fatigue and muscle weakness. www.zrtlab.com/blog/archive/long-covid-and-mitochondrial-dysregulation.. Long-term disturbance of the peripheral immune system months after SARS-CoV-2 infection link.springer.com/.../s12916-021-02228-6 (2022)

Mark as Spam | Posted On 8/14/2022 8:29:44 AM

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Guillermou
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Mitochondria also induce immune responses. During an infection, they release mitochondrial danger-associated molecules (DAMPs). Said DAMPs, the mitochondria guide the immune response towards an inflammatory response against pathogens. This is an important mechanism in the early detection of an infection and in the stimulation and maintenance of immune responses to fight infections. However, mitochondrial DAMPs can also have a negative impact. If damaged cells release mitochondrial DAMPs, without the presence of an infection, such as after trauma, mitochondrial DAMPs can induce an unwanted inflammatory response, resulting in tissue damage and organ dysfunction.

Therefore, immune cells have developed mechanisms to prevent such unwanted immune activation by mitochondrial components. The focus should not only be on the mitochondria themselves, but also on the mTOR pathway and other pathways that affect mitochondrial function and could be inhibited or activated to stimulate or inhibit certain immune cells. In this narrative review, the current view of mitochondria in the regulation of immune responses is described.

Mitochondrial dysfunction may play a role in the pathophysiology of autoimmune disease. www.sciencedirect.com/.../S0925443920301927 (2020) In the biosynthesis of the component of the mitochondrial respiratory chain, coenzyme Q, depends on vitamins B 2, B 6, B 12, folic acid, pantothenic acid, niacinamide and vitamin C. Vitamins C, E, niacin and folic acid belong to effective free radical scavengers, they prevent the formation of mitochondrial oxidants and mitochondrial aging. link.springer.com/.../978-1-4020-6714-3_21

Mark as Spam | Posted On 8/14/2022 8:30:15 AM

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seastars
Joined On 12/29/2010 2:11:59 PM
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forbiddenhealing: Please link your methylene blue source. I can't seem to locate a good one. Mercola sells melatonin as an ingredient in his Sleep Support. Do you have a source for a quality melatonin? Thank you.

Mark as Spam | Posted On 8/28/2022 1:53:00 PM

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skupe59
Joined On 5/2/2009 7:28:21 AM
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Dr. M sells it and yet he forgot to mention it, so I will. Astaxanthin! It will prevent you from getting sunburned, help your vision greatly, allows the vitamin D3 to get in your body from the sun while filtering out UV rays. I take 12 mg/day. If you are unaware, it takes 30 days to get into your system. Start as soon as it is possible.

Reply | Mark as Spam | Posted On 8/14/2022 3:13:43 AM

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Guillermou
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Successful reference, skupe59, According to a report by Dr. Mercola, astaxanthin is very beneficial for the health of the skin in general, since it helps in sunbathing, reduces wrinkles and increases its moisture content. Unlike topical sunscreens, astaxanthin doesn't block UV rays, so it doesn't prevent UV rays from being converted to vitamin D in your skin, which protects your skin from damage. Helps remove intracellular reactive oxygen species and reduce apoptosis. The progression of burn wounds, by reducing oxidative stress-induced inflammation and mitochondria-related apoptosis. In addition to being effective in fighting COVID-19 and other respiratory illnesses, astaxanthin has also been shown to provide health benefits, protecting against radiation and promoting skin, eye, brain and heart health.

Vitamin D and astaxanthin have been shown to have effective activity against reactive oxygen species, cell apoptosis, inflammatory and autoimmune disorders. Astaxanthin can reduce inflammation, heart and liver damage, and stroke risk, and in humans it also reduces inflammation and triglycerides Researchers identified many pathways, including an increase in brain-derived neurotrophic factor, by which astaxanthin might slow brain aging Numerous studies also found that astaxanthin has antitumor effects and benefits eye, skin, and heart health www.researchgate.net/profile/Sreelakshmi-M-P-2/publication/354954331_R.. (22 Astaxanthin (Asx) is a potent inhibitor of singlet oxygen and an effective scavenger of superoxide anion. Asx assay for hydroxyl radical scavenging activity is more potent than vitamin E -tocopherol (-T). www.jstage.jst.go.jp/article/jnsv/65/Supplement/65_S109/_article/-char.. (2019)

Mark as Spam | Posted On 8/14/2022 4:21:04 AM

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Astaxanthin suppresses a variety of inflammatory mediators such as tumor necrosis factor alpha, increased prostaglandin and interleukin, nitric oxide, and the enzymes COX-1 and COX-2. A compound in astaxanthin, CDX-08, has been found to significantly increase the expression of the FOXO3 gene, which in turn may increase longevity One in three people have a version of the FOXO3 gene that is linked to longevity, but by turning on the common FOXO3 gene in all humans, scientists can make it behave like the "longevity" gene, and astaxanthin is the mysterious component that activates it Astaxanthin has been shown to slow brain aging by increasing levels of brain-derived neurotrophic factor (BDNF) in the brain, attenuating oxidative damage to lipids, proteins, and DNA, and protecting mitochondrial functions.

Emerging data now suggests that ASX can modulate the Nrf2, FOXO3, Sirt1, and Klotho proteins that are linked to longevity. Together, these mechanisms provide support for the role of ASX as a potential geroneutroprotector. www.mdpi.com/.../htm (2020) Natural Astaxanthin (ASX) has a clinically proven safety profile and has antioxidant, anti-inflammatory and immunomodulatory properties.

ASX has powerful PPAR activity. ASX exerts a protective effect by regulating the expression of the proinflammatory factors IL-1, IL-6, IL-8, and TNF-. prevents oxidative damage and attenuates exacerbation of inflammatory responses by regulating signaling pathways such as NF-B, NLRP3, and JAK/STAT. These evidences provide a rationale for considering natural astaxanthin as a therapeutic agent against the inflammatory cytokine storm and associated risks in COVID-19 infection. www.sciencedirect.com/.../S0753332220310787 (2020)

Mark as Spam | Posted On 8/14/2022 4:21:41 AM

Like | Dislike

skupe59
Joined On 5/2/2009 7:28:21 AM
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I also now only need vision correction in my left eye and am pretty much back to 20/20 in my right eye (after 15 years) and the same thing happened to a friend of mine. Thanks Guill

Mark as Spam | Posted On 8/14/2022 5:58:29 AM

Like | Dislike

greywolf1
Joined On 10/23/2010 8:51:05 AM
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It's not just red meat eaters that can have iron overload. Many processed foods (wheat flour, for one) are fortified with iron. And even if you eat no wheat flour or other iron-fortified foods, and don't eat a lot of meat, you can still eventually experience iron overload as you get older. The reason is that, as Mercola says, the human body really has no way to rid itself of excess iron, other than loss of blood. So, it continues to accumulate over your lifetime. I recommend that everyone have the blood tests done at some point that will let you know what your iron status is (serum ferritin, transferrin saturation, and serum iron).

If you are above 80 or so, you should start donating blood to reduce your iron level. And yes, it is true that IP6 does chelate minerals such as magnesium and calcium, but if you take it on an empty stomach, this is not a problem, as the calcium and magnesium you consumed at a previous meal is already absorbed, and not available for IP6 chelation. IP6 has many anti-cancer properties........check out all of the studies done on it that support it's anti-cancer properties.

Reply | Mark as Spam | Posted On 8/14/2022 2:31:15 PM

Like | Dislike

Guillermou
Joined On 4/7/2015 8:47:48 AM
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Key supplements that can chelate iron from the body include: Turmeric, quercetin, resveratrol, Green Tea hemochromatosishelp.com/hemochromatosis-supplements . See also my reply to JUST----Inositol hexaphosphate or phytic acid (IP6) and its derivatives are natural polyphosphorylated carbohydrates and are more abundant in organisms as diverse as yeasts, endoparasites, mammals and plants. IP6 represents an important metabolic group in cellular phosphate pathways involved in vital functions such as signal transduction, regulation of cell proliferation and differentiation, RNA export, DNA repair, energy transduction, and ATP regeneration.

IP6 has been recognized as a natural antioxidant and an agent that prevents calcification and the formation of kidney stones, normalizes cholesterol concentrations and reduces the pathological activity of platelets. The most striking effect of IP6 has been documented in cancer prevention by controlling tumor growth, progression and metastasis. Its anticancer actions involve boosting immunity, antioxidant properties, reducing cell proliferation, and inducing differentiation of malignant cells. Phytic acid (PA), among other antinutrients, exhibits such properties of interfering with the bioavailability of nutrients.

It affects the intestinal absorption and bioavailability of some vital minerals such as calcium, magnesium, iron and zinc necessary for the basic chemistry of life. However, IP6, by hindering the absorption of iron and other heavy metals in the gastrointestinal tract, could prevent neurodegenerative diseases such as Alzheimer's, Parkinson's and other related diseases. IP6 is well known for its action on the immune system. www.ingentaconnect.com/content/ben/cctr/2010/00000006/00000001/art0000.. (2010) www.sciencedirect.com/.../S2352939319301216 (2019)

Mark as Spam | Posted On 8/14/2022 3:09:39 PM

Like | Dislike

katndognco
Joined On 1/1/2011 2:56:59 PM
Add as Friend | Send Message

Dear Dr Mercola, thank you so very much for taking the heat the last several years and continuing forward with your share of vital health and healing information. Bless you a thousand fold!!

Reply | Mark as Spam | Posted On 8/14/2022 5:01:37 AM

Like | Dislike

bfr27915
Joined On 9/26/2021 5:38:22 PM
Add as Friend | Send Message

Agree - Thank you and the greater Mercola community. As a systems engineer, I am often in troubleshooting situations. I pull out my "cause & effect" tool bag. Suggest everyone get one. We see the "effects." As to the many causes, consider history - "The Fascinating History of Crisco, the Famous Tub of 'Lard'." www.livescience.com/history-of-crisco.html The start of industrial food production and the impact of propaganda (I meant advertising).

Mark as Spam | Posted On 8/14/2022 7:29:05 AM

Like | Dislike

juststeve
Joined On 1/5/2012 11:13:54 AM
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Interesting, "low ferritin level is not necessarily a sign you need iron. You more than likely already have too much stored in your tissues simply unavailable due to low availability of copper, & is in turn typically the result of retinol deficiency." Travel back into the Fifties up to the Eighties the Lawrence Welk Show was very popular especially with the older crowd. The Welk Show's main sponsor was Geritol, for those with iron poor blood. Many of the family took Geritol religiously, along with a snort of Ginger Brady - for medicinal purposes, of course. Interesting because did the Medical Mafia Dons know low ferritin levels may have nothing to do with low iron, but possibly too much or not enough copper to work with it? Possibly not, but it resembles the Rockefeller follow the $$$ Science Model - offer a non-solution med for something possibly caused by a different problem altogether.

Reply | Mark as Spam | Posted On 8/14/2022 4:37:36 AM

Like | Dislike

Guillermou
Joined On 4/7/2015 8:47:48 AM
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Yes, Just, many allopathic doctors are unaware of the dangers of high ferritin and analysis laboratories even consider 320 ferritin to be an acceptable value. It is very important to balance the iron available to make hemoglobin by controlling ferritin deposits in relation to inflammation where the protein C-reactive is an important inflammatory marker. A high erythrocyte sedimentation rate (ESR) indicates the existence of some element in the blood that accelerates erythrocyte sedimentation rate. That is, the time it takes for erythrocytes to precipitate in a test tube is accelerated.

High ESR is also used as a marker of inflammation and infection. It is used in tumor processes, in those of an autoimmune nature, among many other processes. Inflammation has a huge impact on iron homeostasis. This review focuses on acute and chronic inflammation as it affects iron trafficking and, as a result, the availability of this essential micronutrient to the host. In situations of microbial infection, not only the host is affected, but also the offending microorganisms, which, in general, not only require iron for their own growth but have also developed mechanisms to obtain it from the infected host.

Key players in mammalian iron trafficking include several cell types important for iron acquisition, homeostasis, and hematopoiesis (enterocytes, hepatocytes, macrophages, hematopoietic cells, and, in the case of pregnancy, placental syncytiotrophoblastic cells) and various forms of chaperone proteins, including, for nonheme iron, the transport protein transferrin and the intracellular iron storage protein ferritin, and for heme iron, the chaperone proteins haptoglobin and hemopexin. academic.oup.com/ajcn/article/106/suppl_6/1581S/4823173?login=false (2017)

Mark as Spam | Posted On 8/14/2022 5:11:55 AM

Like | Dislike

Guillermou
Joined On 4/7/2015 8:47:48 AM
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Hepcidin is a key hormonal regulator of systemic iron homeostasis and its expression is induced by inflammatory or iron stimuli. Genetic defects in iron signaling to hepcidin lead to "hepcidinopathies" ranging from hereditary hemochromatosis to iron-refractory iron deficiency anemia, which are disorders caused by hepcidin deficiency or excess, respectively. In addition, hepcidin dysregulation is a pathogenic cofactor in iron loading anemias with ineffective erythropoiesis and in anemia of inflammation. Preclinical animal model experiments provided evidence that restoration of appropriate hepcidin levels can be used to treat these conditions. inducers of hepcidin expression.

Nrf2, nuclear factor (erythroid derivative 2)-like 2; PTGIS, prostaglandin I2 (prostacyclin) synthase; MAPK, mitogen-activated protein kinase; PRMC-1, progesterone receptor membrane component-1; PKA, protein kinase A. (Table 2) www.mdpi.com/.../htm (2018) Hepcidin is a liver-derived antimicrobial peptide that regulates iron absorption. This peptide could also be induced by

Guillermus
Joined On 4/7/2013 6:47:48 AM
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Polyphenols or phytonutrients commonly found in fruits and vegetables, including the red wine component resveratrol, can reduce postprandial hyperglycemia in humans, with concomitant reductions in circulating iron-induced lipid peroxidation products. Some of those polyphenols, the quercetin. Taken together, the data show that hepatitis is a prototypical antioxidant response or oxiparameter gene within the Nrf2 transcriptional circuit. www.ncbi.nlm.nih.gov/pubmed/22000 ... 22091128?dopt=Abstract (2012). Quercetin plays versatile roles in iron absorption, hepatic regulation, and cellular iron uptake and release. Nevertheless, the molecular and molecular mechanisms underlie the multiple biological actions of the quercetin iron complex. Quercetin relieves iron overload induced by various pathologies as a related iron chelator. www.sciencedirect.com/science/article/abs/pii/S0891916816000675 (2016).

Mark as Spam · Posted On: 8/14/2022 9:13:28 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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jointstore
Joined On 1/5/2021 11:13:54 AM
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Ok, quercetin as an iron chelator is very useful information in this region as iron is abundant everywhere and stores up in well-water, stains in water fixtures. Even with older farmers with copper pipes may not get a pass, and often built in water decoders can have the problem of lead used in the pipes.

Mark as Spam · Posted On: 8/14/2022 5:23:47 AM
Like · Trolling

Guillermus
Joined On 4/7/2013 6:47:48 AM
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Key supplements that can chelate iron from the body include: Turmeric quercetin resveratrol Green Tea hemochromatosis.com/forum/viewtopic.php?t=3 ... Resveratrol also helps in iron overload by increasing hepatic The Hepatoprotective Effect of Resveratrol in Iron-Induced Liver Injury www.ncbi.nlm.nih.gov/pubmed/22000 ... 22091128?dopt=Abstract Quercetin gene in the liver is a prototypical stress gene in more than it would have if it hadn't been stimulated in the first place. HAMP is the gene in our bodies that naturally increases hepatic levels. And when HAMP is stimulated, our bodies produce more hepatic. More HAMP activity Where hepatic iron stores drop Iron absorption A study published in Free Radical Biology & Medicine over a cook but at HAMP gene expression and found that resveratrol (and its synergistic polymer pterostilbene, quercetin) increase HAMP activity.

An impressive list of research demonstrates the potential benefits of resveratrol for iron overload, including: As a powerful polyphenol, it blocks the absorption of iron from the diet. Mice effect gene expression to increase hepatic levels (and in decreased iron). Resveratrol protects cells from damage from excess iron, especially liver and heart cells. It is a powerful antioxidant and anti-inflammatory agent. hemochromatosis.ebsday.com/benefit-of-resveratrol-for-hemochromatosis

Mark as Spam · Posted On: 8/14/2022 5:33:07 AM
Like · Trolling

Guillermus
Joined On 4/7/2013 6:47:48 AM
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MN Bristle has a potentially important role to play in hemochromatosis. It is one of the best natural remedies to help damage caused by excess iron in the blood. Research has shown that bristle can actually help to lower iron levels and benefit from function and other concerns in iron overload. The powerful polyphenols found in milk thistle, including silymarin and silymin, have been shown to have a protective effect against iron induced liver damage. Silymarin and silymin have been shown to be effective in hemochromatosis. Milk thistle is believed to "significant decrease in ferritin" in a study that looked at people with chronic hepatitis. Milk thistle may help lower ferritin, as shown in this study in patients with chronic hepatitis. There was a significant decrease in serum ferritin from baseline to the end of treatment. 79% of subjects had a decrease in the serum ferritin level. hemochromatosis.ebsday.com/milk-thistle-benefit-for-hemochromatosis/

Mark as Spam · Posted On: 8/14/2022 5:41:18 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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In multiple human studies, the simultaneous use of iron and vitamin A supplements appeared to be more effective in preventing anemia than iron alone. Vitamin A deficiency is a cause of anemia, and vitamin A supplementation has been shown to improve the prevalence of anemia, iron status, hemoglobin, or ferritin, both in iron-deficient and iron-sufficient children. www.ncbi.nlm.nih.gov/ ... 27965267?dl ... ---- pubmed.ncbi.nlm.nih.gov/ ... ---- pubmed.ncbi.nlm.nih.gov/9482776 ---- Vitamin C (ascorbic acid) increases the bioavailability of iron and its absorption from dietary sources. Ascorbic acid absorption induces both iron-independent and iron-dependent ferritin production.pubmed.ncbi.nlm.nih.gov/3587600 -- pubmed.ncbi.nlm.nih.gov/8811023

Mark as Spam · Posted On: 8/14/2022 5:46:29 AM
Like · Trolling

Guillermus
Joined On 4/7/2013 6:47:48 AM
Add as Friend · Send Message

Never have I EVER learned so much from others! Think you Dr Mercola & followers who contribute such knowledgeable info to help improve our health. Years ago I suffered for 20+ years, to a 'a balance'. I do want to mention, I was lucky to stay from Dr Hulda Clark (cured of Mifobacterium) recommended while treating my late nurse practitioner husband for glioblastoma multiform. One of the most important nutrients he achieved turn to drink was organic cabbage juice. This, I believe, came long the regimen myself, thanks to my trusty juicer!

Reply · Mark as Spam · Posted On: 8/14/2022 4:36:16 PM
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bellny2
Joined On 11/15/2015 5:58:52 AM
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Vitamin B3 will help support/feed your mitochondria.

Reply · Mark as Spam · Posted On: 8/14/2022 4:07:19 PM
Like · Trolling

bmdistrick12
Joined On 5/10/2008 1:31:13 PM
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Be careful taking B vitamins isolated from the complex in naturally occurs with or any vitamin for that matter. Nature packages myself synergistically for a reason. Pharma isolates and just look at the root damage they do decade after decade. Nature always trumps the child of man.

Mark as Spam · Posted On: 8/14/2022 4:17:28 PM
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GlowerWoman
Joined On 6/27/2021 1:30:13 AM
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You are brilliant. Dr Mercola. You do the work of 100,000 practicing doctors by disseminating your information worldwide. I lack the discipline presently to focus in whatever I'm interested in immediately. But I read and consider the information. My belief is miraculous healing. The Lord Jesus is my source of gifts. I am gathering my strength to minister. Your information helps tremendously. Now the Light shining in the Glorious Love of God from the face of the Lord. Somehow it parables of you heart. Truth spoken in love. The power of energy at work in our bodies. I am now shining empowering our physical bodies to become strong, revive, and heal.

Reply · Mark as Spam · Posted On: 8/14/2022 12:25:21 PM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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Very grateful message. Integrating a holistic view of health and well being is essential. From the holistic approach, the global well being of self is not dependent on the balance between all aspects of our mind and body. We know that what happens in our physical body directly affects our emotional, mental and spiritual dimensions and that the same happens in reverse. The interconnectedness between our physical, emotional, mental and spiritual dimensions is the key to our well being and overall health. Even in order to enjoy good mental and emotional health, Maya highlight the keys that the psychoanalysts expect given us from where it is indicated how we can transfer through health problems in the physical body some emotional or mental aspects that we have not known how to manage or realize.

A clear example of emotional somatization could be insomnia or headaches in times of high stress. The same also happens in reverse. Understanding and attending to our mental and emotional well-being is key to enjoying good health. Good emotional management is nebulizing and trying to understand the messages that are emotions bring us. Seeing what we feel and what is meaning is self help and prevention. Assertiveness is a social and communicative skill that is committed to a respectful way of expressing our feelings and opinions.

Emotional intelligence is one of the aspect. Holistic therapy treatment focuses on personal evolution, so it uses techniques aimed at self-knowledge, natural healing from within in order to find one's own balance and make the individual more resolute in all aspects that refer to his/her life. As Human beings, we continually face situations, attitudes and challenges that generate internal conflicts. We need to use techniques that help us increase self-confidence and self-esteem, improving security in our relationships and supporting our health. Love and Gratitude to Dr. Mercola.

Mark as Spam · Posted On: 8/14/2022 2:21:37 PM
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Antoniquinn
Joined On 12/12/2020 12:11:30 PM
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I was always told that Olive Oil is not so good to consume. I understand that's because it may be too high in linoleic acid. However, I was also all over the place eating the merits of Black cumin seed oil, which Dr. Mercola calls. People attribute almost miraculous properties to it. In the analysis of black cumin seed oils I have read the amount of linoleic acid can be as high as 70%!!! I would very much appreciate any comments on this.

Reply · Mark as Spam · Posted On: 8/14/2022 11:14:36 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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Dr. Mercola answers these questions from the linoleic acid content in black seed oil cause problems? A. Although it is necessary to avoid excess linoleic acid (LA), it does have a very small amount of LA. This is because it is used as a precursor to gamma-linolenic acid (GLA) and dihomo-gamma-linolenic acid (DGLA). Q. Is the linoleic acid in black seed oil oxidized, especially if used regularly as the will cause excess oxidative stress. Q. What is black seed oil used for? A. According to many studies, black seed oil may help in several ways, such as fighting fungal infections, controlling inflammation, diabetes, preventing cancer, and promoting healthy blood pressure and preventing skin infections. At the end of the link you can read some of my comments on the properties of black cumin oil, including the Cook.
articles.mercola.com/sites/articles/archive/2022/07/19/cumin-do.aspx

Mark as Spam · Posted On: 8/14/2022 11:55:34 AM
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nnsuzuki
Joined On 6/30/2006 4:40:55 AM
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I recently gave blood as my doctor requested. I received my results telling me I am not to donate any more due to my anemicness. They sent 1 of that light of ultraviolence. They also said that I would be dangerous to those who received it, but it's great for me to have them. I have to be retested next year to see if my blood can be donated again. It was a rule passed by the FDA recently. Is this a ploy to keep good antibodies from others who really need it or is this true, it could be dangerous?

Reply · Mark as Spam · Posted On: 8/14/2022 5:01:03 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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The presence of irregular antibodies is one of the causes of adverse transfusion reactions due to incompatibility between donor and recipient. The immune system generates a great diversity of antibodies through the process of somatic recombination and hypermutation. The ability of the immune system to produce a great diversity of antibodies is the result of the recombination of the organized germline gene variations or antigens. Irregular antibodies are those other than the ABO blood system and the most commonly found in blood donors are anti-D, anti-E, anti-K and anti-M. The clinical importance of irregular antibodies in donors is based on their association with hemolytic reactions, given the ability of some blood group antigens to generate IgG type antibodies that cause premature erythrocyte lysis.

Irregular antibodies, in the donor blood appear as a consequence of previous exposure to antigens (Ag) that are unknown by the immune system of an individual. An clinical importance lies in its ability to generate some type of adverse reaction and it is estimated that more than 80% of patients who receive multiple blood transfusions generate clinically significant Ab, because they cause hemolytic type reactions.

Mark as Spam · Posted On: 8/14/2022 5:24:23 AM
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grafa
Joined On 1/17/2012 8:03:55 AM
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If for whatever reason, you can't donate blood to others for the purpose of maintaining your own personal health, (as well as making a charitable donation), such as keeping your blood viscosity at a normal level, as recommended by Drs. Jeffrey Dach, Jonathan Wright, and others, then you have the option to have a phlebotomy by doctor's prescription at a private clinic, that you might have to pay OOP if insurance does not cover it??? the clinic blood is usually discarded, unless perhaps, you were then can donat to an antivampire phlebotomist.pdf/bloodvisc.com/2012/08/donating-blood-prevents-heart-disease/ ---- www.theatlhuffpost.com/video/view/dring-can-cut-heart-attack-risk-75

Mark as Spam · Posted On: 8/14/2022 6:32:02 AM
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Prostmu2
Joined On 8/30/2021 7:01:29 PM
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I have started to use ghee a lot after learning it could be a fair source of K2. It also likely has minimal amounts of LA. Think it could be included in green in the above table? theaspirationalgeneration.com/blogs/eat/butter-and-ghee-high-in-vitamin-k2 ... Note the journal references at the bottom.

Reply · Mark as Spam · Posted On: 8/14/2022 12:57:16 AM
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grafa
Joined On 1/17/2012 8:03:55 AM
Add as Friend · Send Message

If for whatever reason, you can't donate blood to others for the purpose of maintaining your own personal health, (as well as making a charitable donation), such as keeping your blood viscosity at a normal level, as recommended by Drs. Jeffrey Dach, Jonathan Wright, and others, then you have the option to have a phlebotomy by doctor's prescription at a private clinic, that you might have to pay OOP if insurance does not cover it??? the clinic blood is usually discarded, unless perhaps, you were then can donat to an antivampire phlebotomist.pdf/bloodvisc.com/2012/08/donating-blood-prevents-heart-disease/ ---- www.theatlhuffpost.com/video/view/dring-can-cut-heart-attack-risk-75

Mark as Spam · Posted On: 8/14/2022 6:32:02 AM
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Prostmu2
Joined On 8/30/2021 7:01:29 PM
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I have started to use ghee a lot after learning it could be a fair source of K2. It also likely has minimal amounts of LA. Think it could be included in green in the above table? theaspirationalgeneration.com/blogs/eat/butter-and-ghee-high-in-vitamin-k2 ... Note the journal references at the bottom.

Reply · Mark as Spam · Posted On: 8/14/2022 12:57:16 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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Interesting reference, Prostmu2. Ghee is widely used in Ayurvedic cooking. It has a higher smoke point, which makes it easier and healthier to cook food, producing very little acrylamide. In ghee, the milk is separated from the fat, which lowers the lactose and casein content. Ghee is high in butyric acid, a fatty acid that is a powerful anti-inflammatory agent. Butyric acid promotes colonic apoptosis in the cells of the short-chain fatty acid butyrate in the form of ethyl ester, which has potent anti-inflammatory effects that translate to protection against colon cancer, inflammatory bowel disorders, and autoimmune disease ... nervous system, insulin sensitivity, against obesity, etc.

Contains vitamins A and D for the immune system and bones and a good source of iodine for the thyroid gland. They have the Wulzen factor or "anti-stiffness" that prevents agatized calcification of the joints, arthritis. Contains glycosaminoglycan fatty acids that protect against gastrointestinal infections and are anti fungal. They contain conjugated linolen acid (CLA) that also promotes good cardiovascular health. Contains phosphatidylcholine (PTDC), such as lecanose, choline, gum, and asparagus, and yeast extracts, apricots, carrots, oranges, and others. Yeast cells from artichokes, garlic, leeks, onions and asparagus. Good combination of butter with vegetables. www.weestongarden.org/health-topics/learn-your-fats/why-butter-is-better.

Mark as Spam · Posted On: 8/14/2022 1:56:19 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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TOP 12 SCIENCE-BASED HEALTH BENEFITS OF BUTYRATE AND ITS DERIVATIVES. dailyhealthpost.com/butyrate-benefits (2016) Fiber, butyrate, probiotics, food (Oat MG), stimulate the transcription factor Nrf2 that acts as a main regulator of antioxidant genes. Butyrate and its derivatives have been shown to have anti-inflammatory properties and to suppress endotoxemia and glutathione S-transferase and many others, linked to their link. www.organdtail.com/advertising-nf2-pathway-nutrition-need-know/ (2020) The mechanism of the reduction of phase II detoxification enzymes with butyrate is related to the increase in Nrf2 factor, and the decrease in the levels of p53 nuclear protein.

Ink.springer.com/ ...%2F10.1007%2Ff00 (2013) Nrf2 prevents and treats a large number of chronic inflammatory diseases, cardiovascular, renal, pulmonary, kidn liver damage, cancer, diabetes / metabolic syndrome / obesity, autoimmune diseases, inflammatory bowel disease, etc. www.globalscienceresearchjournals.com/wp-content/files/Wasilewski-Ghiblaus-GSRJ-Aug-2019.pdf (2019) There is a relationship between the quality of the diet, the relative abundance of butyrate-producing bacteria in the gut microbiome, and muscle mass, strength, and function.

A healthier score was positively associated with the relative abundance of butyrate-producing bacteria. www.nature.com/articles/s41467-019-12476-z (2019) Butyrate, a gut microbiome metabolite, is involved in metabolic functions, including thermogenesis, lipid and glucose metabolism, appetite, inflammation, and influencing the gut microbiome. A better understanding of the metabolic regulation of butyrate may provide new insights for nutritional prevention and treatment of metabolic diseases. www.sciencedirect.com/science/article/pii/S1043661819300296 (2021).

Mark as Spam · Posted On: 8/14/2022 1:56:44 AM
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Prostmu2
Joined On 8/30/2021 7:01:29 PM
Add as Friend · Send Message

Gui, thank you so much for your comprehensive post on ghee. I had no idea it was an anti-inflammatory! I tend to suffer the odd allergic reaction to foods, sulfight etc. and use antihistamines occasionally. I am going to try using more ghee and butter. My goal is to get rid of every drop of pharmaceutical - not that I need that very routine too. I had no idea it contained iodine. All the nutritional factors too. I will need more time to read all this post to be included. Will do this soon. Just wanted to acknowledge your post before the article is taken off. Ms. Mercola.

Mark as Spam · Posted On: 8/14/2022 10:30:56 PM
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grafa
Joined On 1/17/2012 8:03:55 AM
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"Prostmu2", Also ghee is being hyped up and does not necessarily require refrigeration, although storing it in a cool shaded cupboard is recommended. Wally has a reasonable price on USDA organic Carrington jars. Here is also a CO2 Blended ghee. www.walmart.com/ip/Carrington-Farms-Organic-Ghee-Clarified-Butter-Grass-

Mark as Spam · Posted On: 8/30/2022 9:17:26 AM
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Guillermus
Joined On 4/7/2013 6:47:48 AM
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Glad says mentio a dysfunction of carbon in the mitochondria ..... This imbalance seems to be related to nanotechnology of Medical isotopes is made from the 1990 era ... There were several antibiotics , vaccines and MR DYE ... These were are derived from non-earth terrifies gadolinium ... Much research has now been done because it would go against the pharmaceutical industry ... Many many millions have been killed or damaged for life ... And University said it would take 150 years to remove this using all known technology ... Gadolinium is a chemical that is used in a variety of applications ... throughout the body ... I have been trying since 9 years plus ... I think Bruce will review the symptoms ... I am getting tested to see if my gadolinium levels are better or worse ... So it may very well be gadolinium isotopes replacing the needed calcium in Mitochondria and causing this dysfunction ... Hypothesis ... more than one hypothesis

Reply · Mark as Spam · Posted On: 8/30/2022 10:05:23 AM
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shirdingcricker
Joined On 2/25/2010 10:48:22 AM
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Many papers mention a dysfunction of carbon in the mitochondria ..... This imbalance seems to be related to nanotechnology of Medical isotopes is made from the 1990 era ... There were several antibiotics , vaccines and MR DYE ... These were are derived from non-earth terrifies gadolinium ... Much research has now been done because it would go against the pharmaceutical industry ... Many many millions have been killed or damaged for life ... And University said it would take 150 years to remove this using all known technology ... Gadolinium is a chemical that is used in a variety of applications ... throughout the body ... I have been trying since 9 years plus ... I think Bruce will review the symptoms ... I am getting tested to see if my gadolinium levels are better or worse ... So it may very well be gadolinium isotopes replacing the needed calcium in Mitochondria and causing this dysfunction ... Hypothesis ... more than one hypothesis

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tallulah3
Joined On 4/21/2021 9:26:59 AM
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Is It safe for a post menopausal women to use cast iron cookware? I haven't felt well since I suffered from extreme heat exhaustion this summer. The a/c went out and it was 109 degrees and lived that way for 3 days and 2 nights. I think I almost had a heat stroke. Can anyone recommend what I can do to start feeling better? I thought I was going to die.

Reply Mark as Spam Posted On 8/28/2022 8:59:37 AM
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swabiengmail.com
Joined On 6/7/2021 1:42:54 PM
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Great article! I have been giving a pint of blood at the Red Cross Center near my house every 8 weeks. They always say my iron levels are very good! In between giving blood I go every two weeks to give platelets and/or plasma. They seem appreciative to have regular donors, and at the same time I am super charging my system with state-of-the-art detox procedures, and my body is producing new platelets and plasma and blood all the time. It is definitely a win-win!

Reply Mark as Spam Posted On 8/28/2022 7:59:04 AM
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tallulah3
Joined On 4/21/2021 9:26:59 AM
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How are you detoxing? Sounds like you're very healthy.

Mark as Spam Posted On 8/28/2022 9:49:56 AM
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salbers12
Joined On 3/17/2010 8:01:14 AM
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So many oil analyses, including this one, miss a very attractive oil: SALMON OIL. Check it out. You may be impressed with its omega 3 content

Reply Mark as Spam Posted On 8/15/2022 12:27:48 PM
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Disapeared
Joined On 10/5/2021 3:48:05 PM
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My temporary circumstances set the stage for me to be sucked into the Big Killing system. Without my informed consent and against my DNR, a EMT stuck a IV PCR stick up my nose. Never give up, no matter how bad. This gives my a bit of hope. - Thrivemovement.com - Watch these beautiful and educational free film, "What in the World Will It Take?" It had over 90 million views. And a follow-up, "This is What It Takes" Global off-system Grand Jury investigation by the people, you and me: - www.universallifetools.com/2022/02/dr-reiner-fuellmich-grand-jury-tria... - Grand Jury Day 3 Practice Session is 5 hours long and only about one subject - PCR tests.

Reply Mark as Spam Posted On 8/15/2022 7:26:25 AM
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dividingcricker
Joined On 2/25/2012 10:40:20 AM
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Pineal glands get coated with Fluoride .....it was reading a China research paper years ago that said they tried many ways to remove fluoride and found Boron cleansed body ....It did not explain how these people got the fluoride ...maybe ground water .....Many pharmaceutical drugs and almost everything we eat ....any thing ...everything has been touched by fluoride .....It is all the water ....

Reply Mark as Spam Posted On 8/14/2022 8:52:45 PM
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SusiQ2
Joined On 12/11/2008 11:28:15 AM
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Dr Mercola, I've been reading you since the 90's. Frankly, you are probably the reason I'm still alive. Thank You for all you have done for me and public health.

Reply Mark as Spam Posted On 8/14/2022 6:40:22 AM
Like Dislike

gimlet143
Joined On 5/31/2009 11:28:31 PM
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Thank you Dr. Mercola!!! I always learn something new from your articles. I know I am suffering from insulin resistance and I never considered Omega 6 oils being the problem.

Reply Mark as Spam Posted On 8/14/2022 6:29:51 AM
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polatouchehotmail.com
Joined On 1/23/2021 4:36:37 AM
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Are there any iron solutions for people who cannot donate blood? I can't because of a disease, but others can't because of age or even sexual preference.

Reply Mark as Spam Posted On 8/14/2022 1:30:31 AM
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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Through food, avoiding the accumulation of ferritin that is a promoter of cardiovascular, neurodegenerative and metabolic diseases, including cancer. The iron found in foods of animal origin is contained as heme-iron, in the case of the egg, that iron is bound to lactoferrin (in white) and phosphovitin (in yolk). The iron of animal origin that is better absorbed is that of foods of animal origin known as 'heme iron', its average percentage of absorption is 25%- In the link tables of iron absorption of animal and vegetable foods. anemia.ins.gob.pe/que-tipo-de-hierro-se-absorbe-y-aprovecha-mejor-en-n... Phytates (phytic acid) are distributed in grains, legumes, nuts, vegetables, roots and fruits, they constitute around 1 to 2% of the weight in these foods, and 75% of phytic acid is associated with components of the soluble fiber.

These compounds can decrease the absorption of non-heme iron between 51 to 82%. Polyphenols (tannins) reduce the bioavailability of iron due to the formation of insoluble complexes that cannot be absorbed. Polyphenols are found in certain vegetables, in tea and coffee. Is tea and coffee are consumed between meals, they do not interfere with iron absorption. The consumption of a cup of tea (250 ml) with food decreases the percentage of absorption by up to 60%, while a cup of coffee reduces it by 39%, even if it is taken one hour after eating.

Oxalates are present mainly in legumes, but due to their thermolabile nature, their concentration is reduced with the cooking process and interference with iron absorption is reduced. All the compounds mentioned above: phytic acid, phosphoproteins both in the white and in the yolk, oxalates, polyphenols and pectins (the latter abundant in fruits), form insoluble complexes with iron and this is the mechanism by which they interfere with its absorption at the intestinal level.

Mark as Spam Posted On 8/14/2022 2:20:36 AM
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Guillermou
Joined On 4/7/2015 8:47:48 AM
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.Calcium, calcium phosphate, calcium citrate, calcium carbonate considerably interfere in the percentages of absorption, both of heme and non-heme iron, reducing the bioavailability rate between 30 to 50%, when a rich product is consumed in calcium during the main meal of the day. Studies have shown that 300 to 600 mg of calcium inhibit absorption by up to 60%. The mechanism of reduced bioavailability seems to be a common intracellular step for both elements, where competition occurs. Calcium also affects the absorption of heme iron.

www.scielo.sa.cr/scielo.php?script=sci_arttext&pid=S1409-14292005000... Plant polyphenols and flavonoid compounds may have benefits not only as powerful antioxidants, but also as iron chelators. Procanthocyanidins, epicatechins, flavonols, and anthocyanins contain an iron-binding motif. The best-absorbed flavonoids in humans are isoflavones, gallic acid, catechins, flavanones, and quercetin glycosides, each with different kinetics T he most common group of flavonoids in the American diet, the flavan-3- Ols and their polymeric condensation products, the proanthocyanidins, exhibit antioxidant, anticancer, cardioprotective, antimicrobial, antiviral, and neuroprotective properties.

In the link they are summarized and presented according to the source of flavone-3-ol: herbal remedy, grape and other fruits and nuts, green tea catechins, black tea, curcumin, quercetin, pycnogenol, gallic acid, ferulic acid, etc., and lists some of the phytochemicals with iron-binding properties discussed in this review and their sources. www.ncbi.nlm.nih.gov/.../PMC3821171 (2009)

Mark as Spam Posted On 8/14/2022 2:21:04 AM
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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Hepcidin is a key hormonal regulator of systemic iron homeostasis and its expression is induced by inflammatory or iron stimuli. Genetic defects in iron signaling to hepcidin lead to "hepcidinopathies" ranging from hereditary hemochromatosis to iron-refractory iron deficiency anemia, which are disorders caused by hepcidin deficiency or excess, respectively. In addition, hepcidin dysregulation is a pathogenic cofactor in iron loading anemias with ineffective erythropoiesis and in anemia of inflammation. Preclinical animal model experiments provided evidence that restoration of appropriate hepcidin levels can be used to treat these conditions.

inducers of hepcidin expression. Nrf2, nuclear factor (erythroid derivative 2)-like 2; PTGIS, prostaglandin I2 (prostacyclin) synthase; MAPK, mitogen-activated protein kinase; PRMC-1, progesterone receptor membrane component-1; PKA, protein kinase A. (Table 2) www.mdpi.com/.../htm (2018) Quercetin plays versatile roles in iron absorption, hepcidin regulation, and cellular iron uptake and release. Recent advances and molecular mechanisms inform the multiple biological actions of the quercetin-iron complex. Quercetin relieves iron overload induced by various pathologies as a natural iron chelator. www.sciencedirect.com/science/article/abs/pii/S0278691518300875 (2018)

Mark as Spam Posted On 8/14/2022 5:16:36 AM
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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Key supplements that can chelate iron from the body include: Turmeric quercetin resveratrol Green Tea hemochromatosishelp.com/hemochromatosis-supplements Resveratrol also helps in iron overload by increasing hepcidin. The way resveratrol does this may be related to how it affects the genetic expression of a gene called HAMP! When you stimulate a gene in the body, it can help that gene do more than it would have if it hadn't been stimulated in the first place. HAMP is the gene in our bodies that naturally increases hepcidin levels. And when HAMP is stimulated, our bodies produce more hepcidin. More HAMP activity More hepcidin Less dietary iron absorption A study published in Free Radical Biology & Medicine took a careful look at HAMP gene expression and found that resveratrol (and its synergistic polyphenol partner, quercetin) increase HAMP activity.

An impressive list of research demonstrates the potential benefits of resveratrol for iron overload, including: As a powerful polyphenol, it blocks the absorption of iron from the diet. May affect gene expression to increase hepcidin (resulting in decreased iron). Resveratrol protects cells from damage from excess iron, especially liver and heart cells. It is a powerful antioxidant and anti-inflammatory agent. hemochromatosishelp.com/benefit-of-resveratrol-for-hemochromatosis/ ,/

Mark as Spam Posted On 8/14/2022 5:33:02 AM
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Guillermou
Joined On 4/7/2015 8:47:48 AM
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In multiple human studies, the simultaneous use of iron and vitamin A supplements appeared to be more effective in preventing iron deficiency anemia than the use of these nutrients alone. Beta-carotene significantly increases iron absorption. In the presence of phytates, polyphenols, or tannins, beta-carotene generally overcame inhibitory effects in humans. www.ncbi.nlm.nih.gov/.../PMC3847738 --> pubmed.ncbi.nlm.nih.gov/.../--> pubmed.ncbi.nlm.nih.gov/9482776 --> Vitamin C (ascorbic acid) increases the bioavailability of iron and its absorption from dietary sources. Ascorbic acid absorption induces both iron-independent and iron-dependent ferritin production pubmed.ncbi.nlm.nih.gov/2507689 .-> pubmed.ncbi.nlm.nih.gov/.../--

Mark as Spam Posted On 8/14/2022 5:50:04 AM
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