

Guillermou

Vitamin D, K2, magnesium and other vitamins and nutraceuticals, in addition to moderate exercise, are great medicine for telomeres and their relationship with aging. This review shows evidence of the relationship of magnesium with all the characteristics of aging (genomic instability, telomere attrition, epigenetic alterations, loss of proteostasis, deregulated nutrient detection, mitochondrial dysfunction, cellular senescence, stem cell exhaustion, impaired intercellular communication, disability). autophagy, dysbiosis and chronic inflammation), which can positively affect human health .www.mdpi.com/.../496 (2024).-- Dietary Antioxidant Indices (DAI) May Potentially Be Associated with Relative Telomere Length www.cambridge.org/core/journals/british-journal-of-nutrition/article/a.. (2024).-- In this study, several different measures of telomere length are evaluated, to more comprehensively evaluate the effects of a Multivitamin Blend on telomere shortening in the presence and absence of oxidative stress.

www.tandfonline.com/.../19390211.2023.2179153 (2024).-- It has been shown that moderate physical exercise has a positive effect on sarcopenia, reducing oxidative stress and inflammation and inducing protective effects on telomeric DNA. www.mdpi.com/.../598 (2023).--

Posted On 04/05/2024

Guillermou

Other reviews report that micronutrients, such as vitamin D and C, folate, and vitamin B12, are involved in telomere biology, cellular aging, and genomic stability. Telomeres are repetitive nucleotide sequences that, together with the associated shelterin complex, protect the ends of chromosomes and maintain genomic stability. Vitamin D is important for a variety of vital cellular processes including cell differentiation, proliferation and apoptosis. Higher concentrations of vitamin D are associated with longer telomere length. Low levels of telomerase cause cellular senescence and apoptosis.

In addition, inflammation and telomere dysfunction together lead to age-related diseases and vitamin D is anti-inflammatory. Vitamin D controls energy metabolism in adipose tissue by affecting fatty acid oxidation, expression of uncoupling proteins, insulin resistance, and adipokine production. Inflammation of adipose tissue can have a significant impact on the metabolic disorders that are often associated with obesity. and vitamin D can modulate the inflammatory response of immune cells and adipocytes within adipose tissue. The shortening rate can be further increased by inflammation and oxidative stress and therefore affect the aging process.

Telomerase participates in the modulation of NF- κ B activity. Vitamin D could be considered an adjuvant therapy to relieve inflammation and oxidative stress. www.frontiersin.org/.../full (2022).-- www.mdpi.com/.../4546 (2023).-- www.frontiersin.org/.../full (2023).-- link.springer.com/.../jfa.2020.33 (2021) .---- www.ncbi.nlm.nih.gov/.../PMC8159757 (2021).---- www.sciencedirect.com/science/article/abs/pii/S1043661822004303 (2022).---- www.degruyter.com/.../html (2014).--- www.sciencedirect.com/.../S1568163715300350 (2016).----

Posted On 04/05/2024

juststeve

Gui, finding one's personal Goldilocks Spot can put us as individuals in different places, the one size to fit us. For some even this Goldilocks Spot can move depending on current circumstances. On a personal level because of COPD the foundation is always Endurance, or Stamina. If any of a multitude of old injuries are in a calm spot, then some focus can be put on strength training focused on some Power and Strength. It all can be a walk on a razors edge as having a tendency to push harder, further and as the article points out actually puts one on the wrong path. When the Sweet Spot is found and maintained it is a gift to have the muscle memory, the mental knowledge of where one's personal perimeters are when engaged in day-to-day function.

Followed carefully keeps one out and away from injury, setbacks. It also in general helps in recovery when old injuries are inflamed, or new ones occur beyond our control. It makes a lot of sense mild to moderate would be better than pushing oneself to their very edge. A recovery from such most likely takes longer and never achieved as one would be right back at it and adding more and unnecessary stress.

Posted On 04/05/2024

stoneharbor

Very interesting, Gui, that just raised Magnesium levels help maintain longer telemers, the best marker known for measuring chances of longevity. Your other studies show that the level of antioxidants present in the system do the same. Now we need a better education on how to preserve the magnesium that actually is eaten, but tied up in the gut from things such as lectins and glyphosate. Lectins can be tamed to a large degree by soaking grains and nuts before ingestion, and also by cooking vegetables. Glyphosate can be mostly avoided if one eats only organically raised crops.

Still, this doesn't guarantee we will get enough Magnesium from our food. We have to eat Magnesium rich vegetables and organ meats. Foods are a focus and junk food doesn't belong in the diet as every calorie eaten as junk food is a wasted chance to improve our health. Some of the types of Magnesium supplement mentioned by Dr. Mercola are probably a good idea for most people, especially if they frequently find they suffer from morning muscle cramps.

Posted On 04/05/2024

Guillermou

Thank you Just and stoneharbor, Yes, the optimal point must be found for each person based on their genetics and their possible pathologies to be treated. Food and exercise is a solid foundation. In this study, the following were tested individually and in mixtures: (1) -lipoic acid, (1) green tea extract, (2) dimethylaminoethanol L-bitartrate (DMAE L-bitartrate), (3) N-acetyl hydrochloride -L-cysteine (HCL), (4) chlorella powder, (5) L-carnosine, (6) vitamin D3, (7) rhodiola PE 3%/1%, (8) glycine, (9) red wine extract french, (10) chia, (11) broccoli seed extract and (12) astragalus (TA-65).

Some of the compounds increased telomerase activity and combinations of the higher-ranking compounds were able to significantly increase telomerase activity, from 51% to 290%, relative to controls. www.researchgate.net/profile/Ghania_Ait-Ghezala/publication/305470083_... (2016).---- In this study, we evaluated the effects of a combination of nutraceutical supplements (NS) on telomere length (LT) in healthy volunteers without a medical history of any disease. Among the supplements is D3&K2. www.spandidos-publications.com/.../218 (2019).---- In this review, vitamin K plays a crucial role in counteracting oxidative stress, DNA damage, senescence and inflammation.

academic.oup.com/ndt/article/35/Supplement_2/ii31/5803063?login=false (2020).---- In this study, a positive association was found between newborn telomere length and maternal vitamin D intake (diet + supplement) during the first trimester. www.mdpi.com/.../htm (2021).----- In this review, higher concentrations of circulating maternal folate and vitamin D were related to greater telomere length, academic.oup.com/nutritionreviews/article/79/2/148/5910720?login=false (2021).----

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Astragalus increases the production of telomerase, the enzyme that controls telomeres that play a key role in cell replication, cancer and human aging. Cycloastragenol inhibits the aging process of cells and improves their response to fight viral infections. Spanish cancer scientists identified another compound in astragalus, called TA-65, which also activates telomerase, significantly increasing average telomere length, glucose tolerance, osteoporosis and skin fitness.

www.jimmunol.org/.../177.4.short (2013).---- www.mdpi.com/.../htm (2013).-----

www.thehealthcloud.co.uk/health-benefits-astragalus (2014).----- link.springer.com/.../s11240-021-02047-w (2021).----- Chronic stress shortens telomeres. 3 herbs to reduce stress Ayurvedic medicine has many rejuvenating herbs, traditionally known as rasayana, that improve health, immunity, vigor, vitality and longevity, as well as protecting against stress.

Ashwagandha has shown promise in maintaining telomere structure. lifepa.com/healthy-dna-stress-telomeres .--- www.ayush.com/anti-aging-potential-of-ashwagandha .--- HOW TO LENGTHEN TELOMERES WITH 7 NATURAL INGREDIENTS. www.healthycell.com/blog/how-to-lengthen-telomeres-with-7-natural-ingr.. (2019).----- TELOMERASE, TELOMERES & AGING. selfhacked.com/.../telomerase-telomeres-aging (2022) DISCOVERY OF POTENT TELOMERASE ACTIVATORS: UNFOLDING NEW THERAPEUTIC AND ANTI-AGING PERSPECTIVES. www.ncbi.nlm.nih.gov/.../PMC6755196 (2019).-----

Posted On 04/05/2024

forbiddenhealing

If I recall, Dr. Patrick once recommended lotsa Vit C? Yes, SCURVY is still a thing/responsible for a list of chronic diseases! and not just appropriate volumes of Vit C , but intake of all electron sources from a variety of clean foods, sunshine/activity, and protection of whole-body charge terrain from metals/toxins and emotional stress/distress....Vitamin C, RALA, K2, NAC, Mg/all minerals oppose inflammation/oxidative stress/destruction of cell structures along with ABDE Vits missing from diet...Extreme diets/exercise, eh! Live, love, be happy...avoid the crowd and common narratives...Remain neutral and personally responsible....Our personal and national problems stem from a paucity of spiritual integrity and adolescent dependency on authority. forbiddenhealing.substack.com/.../observations-of-a-truth-seeker

Posted On 04/05/2024

Guillermou

Good recommendations Randall. Focusing on telomere dynamics presents a promising avenue in gerontology, healthy aging, and developing therapies for age-related ailments, underscoring the importance of understanding telomere dynamics. The “Free Radical Theory of Aging,” introduced in the 1950s by Denham Harman, suggests that the aging process in organisms is due to the cumulative cellular damage caused by free radicals over time. Over the past decade, the complex interplay between telomere dynamics and chronic inflammation has gained increased attention. Evidence suggests that telomere length is closely related to chronic inflammatory states.

Specifically, elevated levels of proinflammatory cytokines, such as IL-6 and TNF-, appear to trigger accelerated telomere shortening. One proposed mechanism suggests that chronic inflammation directly affects telomerase activity. Elevated levels of cytokines could suppress telomerase activity, thereby limiting the enzyme's ability to counteract telomere shortening and causing cellular senescence. Vitamin C, a powerful water-soluble antioxidant, scavenges free radicals in the aqueous cellular environment, preventing damage to critical biomolecules.

In particular, it can also increase the enzymatic action of telomerase, potentially promoting telomere lengthening. Vitamin E is a lipid-soluble antioxidant, located mainly in cell membranes, and its main function is to protect polyunsaturated fatty acids (PUFAs) from lipid peroxidation, which is a major source of damage to DNA, including telomeres. Resveratrol has been shown to have protective effects on endothelial cells and promote mitochondrial biogenesis through activation of the SIRT1 pathway.

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An in vivo study explored the possible anti-aging effects of a nutraceutical combination of resveratrol and copper in mice. Long-term administration of resveratrol and copper for 12 months significantly mitigated numerous biological indicators of aging in brain cells, including telomere attrition, amyloid deposition, and DNA damage www.frontiersin.org/.../full (2024).-- This study shows that vitamin C intake is positively correlated with human telomere length, which has guiding importance for our clinical guidance on human health care.

www.frontiersin.org/.../full (2023= In this study, the following were tested individually and in mixtures: (1) -lipoic acid, (1) green tea extract, (2) dimethylaminoethanol L-bitartrate (DMAE L-bitartrate), (3) N-acetyl hydrochloride -L-cysteine (HCL), (4) chlorella powder, (5) L-carnosine, (6) vitamin D3, (7) rhodiola PE 3%/1%, (8) glycine, (9) red wine extract french, (10) chia, (11) broccoli seed extract and (12) astragalus (TA-65). Some of the compounds increased telomerase activity and combinations of the higher-ranking compounds were able to significantly increase telomerase activity, from 51% to 290%, relative to controls.

www.researchgate.net/profile/Ghania_Ait-Ghezala/publication/305470083_.. (2016).---- HOW TO LENGTHEN TELOMERES WITH 7 NATURAL INGREDIENTS. www.healthycell.com/blog/how-to-lengthen-telomeres-with-7-natural-ingr.. (2019) .----- TELOMERASE, TELOMERES & AGING. selfhacked.com/.../telomerase-telomeres-aging (2022) DISCOVERY OF POTENT TELOMERASE ACTIVATORS: UNFOLDING NEW THERAPEUTIC AND ANTI-AGING PERSPECTIVES. www.ncbi.nlm.nih.gov/.../PMC6755196 (2019).-----

Posted On 04/05/2024

This was great to hear both diet and exercise featured as part of a longevity focused presentation by both Dr. Patrick and Dr. Mercola. It's essential to always realize that both are continually a factor in our lives if we want to live long and healthy. And it's nice to hear Dr. Mercola give an update on his "high intensity interval training" (HIIT) ideas, as it may be several years since I've heard him speak on HIIT. While Dr. Patrick and Dr. Mercola tend to agree on the nutrition elements discussed here, I really appreciated that Dr. Mercola has a more subdued recommendation on HIIT than he had before, and also more modest ideas than Dr. Patrick presents in the video.

The reasons I think that Dr. Mercola is more the one I would follow are: 1) he has more years of personal experience with HIIT and most other forms of exercise; 2) if you read about longevity from studies, it's intimately tied to telomere length as a strong marker, and the more intense exercise you do, the more cell replacement needed, and each cell generation removes from the telomere length; and 3) all the studies that Dr. Patrick cite showing "increased longevity" from HIIT are showing just a small segment of a person's life while going finally onto a HIIT program, and this does not consider how much tissue damage may occur if one does HIIT as she suggests for dozens of years.

All muscle rebuilding that occurs from extreme workouts is shortening telomeres which happen to signal "shortening your life".

I happened to do some HIIT when Dr. Mercola first demonstrated it, then I got away from it though I was fairly active in moderate sporting activities like tennis, hiking, and bicycling. Now I am still into sports, but have resumed some moderate HIIT by running sprints, but I rarely do more than 4-5 intervals, and they are shorter in duration than Dr. Mercola recommends, and far shorter than Dr. Patrick recommends. I am in old age, and don't want to shorten my life, but I really enjoy sprinting!

Posted On 04/05/2024

juststeve

Hey Stoneharbor, as it's said, life is what happens when you make your plans. Circumstances not only pulled me out of a regular routine, but also caused inflammation to old insults. When it was possible before, I found HIIT was very beneficial to me, very pleased with results. While what is possible with COPD and the impacts of major injuries would most likely look comical to many, still has a major impact on the quality of life overall. It's good to push just enough to know what one is capable off, and where to back off to keep as much as can be at their best.

Posted On 04/05/2024

stoneharbor

Thanks for your input on this Just. As you say, "let your body be your guide". If it feels good, do it. When it no longer feels good, lay off a while or change completely. There's always a wonderful feeling possible just by a change, even if it is walking a new route, or returning to a bit of weight lifting, which I've done recently on a very moderate scale. I do all weight routines at "super slow" pace, at least 4 seconds for each contraction, and even long for each extension, maybe 6-8 seconds. This gives some characteristics of what Dr. Mercola recommended lately of using pure isometric exercise, where the weight is held stationery for even half a minute, but the benefit can be a reduction in systolic blood pressure just from the constant muscular tone.

So for example, if I pick up a couple of dumb bells in a squatting position and rise to standing, I take at least 4 seconds to do that lift, Then I spend 6-8 seconds to return to the squatting position where the weights are near the floor. If I just stay there for another 10-15 seconds, continuing to hold the weight, that is the isometric phase that still is very productive of muscle, and obviously has the least chance of causing muscle tears, as no movement is involved.

Further, if I lift in this slow manner, I can get a workout with far less repetitions (often just 4-10 reps) but a lot more intense muscle activation, as there's hardly any time that I am not exerting significant energy to hold or move the weights. No jerking means no chance of injury and no "free fall" or "free flight" (upwards) of weight. That's just silly useless motion as though speed somehow matters.

Posted On 04/05/2024

Guillermou

Good recommendations. In terms of chronic diseases and health promotion, abnormal telomere length can promote the occurrence of some chronic diseases such as cardiovascular diseases, cancer, diabetes, obesity and mental illness, and factors that accelerate telomere length shortening. Telomeres, such as oxidative stress, inflammation, and telomerase activity, also have adverse effects on the development of these diseases. Regulating telomere length through exercise can reduce levels of oxidative stress and inflammation, improve telomerase activity, and improve the stability of the telomere protein complex.

Through these regulatory mechanisms, exercise reduces the rate of telomere attrition and maintains a constant telomere length, thereby reducing the risk of chronic diseases associated with abnormal telomere length, such as cardiovascular disease, cancer, diabetes, obesity and mental illness.

www.cjter.com/.../2024.384 (2024).-- Long-term aerobic, resistance and anaerobic exercises can improve DNA damage. The reason is that exercise can improve the body's antioxidant capacity.

Intense exercise can aggravate the degree of DNA damage by upregulating the expression of reactive oxygen species and reactive nitrogen oxides.

The key mechanism may be that exercise-induced reactive oxygen species change the expression of oxidized glutathione/glutathione, DNA methyltransferase, and translocation enzyme. Compared with other types of exercise, long-term aerobic exercise may have greater potential value in increasing telomere length, and its biological mechanism involves inflammation, oxidative stress, DNA methylation, and regulation of microRNA (miRNA) expression.). (4) www.cjter.com/.../2023.906 (2024).--

Posted On 04/05/2024

Guillermou

Aerobic exercise lasting at least 2 years can increase telomere length, and future research should further clarify the optimal duration of exercise. It has been shown that moderate physical exercise has a positive effect on sarcopenia, reducing oxidative stress and inflammation and inducing protective effects on telomeric DNA. www.mdpi.com/.../598 (2023).-- The findings of this systematic review and meta-analysis suggest that high-intensity interval training appears to have a positive effect on telomere length compared to other types of exercise such as resistance training or aerobic exercise in a healthy population.

publichealth.jmir.org/.../e46019 (2024).-- Regular exercise and/or physical activity, as well as other lifestyle factors such as nutrition or time and/or quality of sleep, are simple ways to implement into daily life to slow the normal aging process and ,therefore extending the service life.

www.mdpi.com/.../htm (2021).----- This study evaluates the effects of a combination of nutraceutical supplements (NS) on telomere length (LT) in healthy volunteers without a medical history of any disease.

In this study, we evaluated the effects of a combination of nutraceutical supplements (NS) on telomere length (LT) in healthy volunteers without a medical history of any disease. Among the supplements is D3&K2. www.spandidos-publications.com/.../218 (2019).---- This review discusses growing evidence showing that nuclear factor erythroid 2-related factor 2 (NRF2) and vitamin K signaling play a crucial role in counteracting oxidative stress, DNA damage, senescence and inflammation. . academic.oup.com/ndt/article/35/Supplement_2/ii31/5803063?login=false (2020).---

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Posted On 04/05/2024

Good to have you focus again on the types of exercise. As your links demonstrate, exercise can either be life-extending, or life-threatening. This whole article, plus the discussion in the comments has been a great exploration into exactly what the possibilities are for exercise, and it's nice to be reminded that there can be destruction via exercise if we are not mindful. Destruction can be quick and painful, but it can also just shorten our lives or raise our physiological stress level or our need for higher levels of nutrients. Just exercising a lot without regard for a greater need for certain vital nutrients can end up damaging our organs, even if the muscles seem to maintain their tone and vitality.

I'm just happy we've had a chance to read more here on what the latest thoughts are on the value of exercise. As I posted elsewhere here, one thing that does not shorten telomeres, though it can increase muscle strength, is Intermittent Fasting, which induces increases in numbers of mitochondria within a cell, but without causing any change to telomere length in the cell's nuclear DNA.

Mitochondria can undergo many iterations of division, when their own telomeres are shortened, while the cell they are in does not die, and thus does not have a shortening of telomeres. Therefore, intermittent fasting is a key to maintaining or even building muscle cells and keeping all the cells healthy and with minimal reactive oxygen species and minimal senescence. Here's more on "Telomeres and Mitochondrial Metabolism: Implications for Cellular Senescence and Age-related Diseases", a study from 2022: www.ncbi.nlm.nih.gov/.../PMC9033418

Posted On 04/05/2024

While we are talking about exercise for longevity, and especially, talking about how to not damage muscle tissue, but at least maintain it, I think it's in order to mention the values of intermittent fasting (IF) for maintaining muscle, because it is actually IF that encourages mitochondria to rebuild and multiply during a fasting period of greater than 12 hours, and ideally about 14 hours. Restricting our daily period for feeding to just 6-8 hours, if you work up to this level of restriction, (say from 10 AM until 6 PM) is proven to let the muscles consume most of the stored glycogen into energy and bring on a situation of absorbing fatty acids and ketones from circulation.

The ketones are proven to act as a signalling hormone as well as a source of mitochondrial energy. The signal causes mitochondria to start the rebuilding process, and it's nice if this is in the wee hours of the morning when the rest of the body is in parasympathetic mode due to the circadian rhythm anyway. The wonderful thing about mitochondrial generation to gain muscle strength is that new mitochondria rejuvenate a muscle cell, allowing it to live longer. If you don't keep mitochondria healthy, the muscle cell dies (apoptosis) and in generating a new cell from the DNA, the telomeres will be shortened.

Not good for longevity. Here's a lot on IF and it's aid in muscle gain and muscle health:

www.mentalfoodchain.com/gain-muscle-intermittent-fasting/?unapproved=4.. So the temporary, morning ketosis is critical to this muscle mitochondrial rebuilding. Here's a scientific paper on "Metabolic and Signaling Roles of Ketone Bodies in Health and Disease". www.ncbi.nlm.nih.gov/.../PMC8922216 "Ketone bodies play significant roles in ... energy homeostasis, serving as oxidative fuels, modulators of redox potential, lipogenic precursors, and signals, primarily during states of low carbohydrate availability."

Posted On 04/05/2024

Guillermou

Good fasting practices. Research over the past decade has shown that obesity and associated changes in insulin, lipids, and inflammation accelerate the rate of aging in the liver, brain, adipose tissue, and other organs, possibly by acting on molecular factors. . characteristics of aging 9. In addition to metabolic dysregulation, another characteristic of aging in both rodents and humans is altered composition and function of the immune system, also known as immunosenescence, which over time leads to decreased immune function, increased vulnerability to infectious diseases , decreased responses to vaccination and increased susceptibility to age-related inflammatory diseases.

Intervening in the aging process has the potential to improve or prevent many human diseases, as demonstrated in animals. models, by slowing cellular deterioration but also by replacing old and damaged cells and intracellular components with new generation or functional ones. Periodic cycles of a fasting-mimicking diet (FMD) protect normal cells while killing damaged cells, including cancerous and autoimmune cells, reducing inflammation, promoting multisystem regeneration, and prolonging longevity. and we show that 3 cycles of FMD in adult study participants are associated with reduced insulin resistance and other markers of prediabetes, lower liver fat (as determined by MRI), and increased lymphoid/myeloid ratio: an indicator of the age of the immune system.

According to a validated measure of biological age that predicts morbidity and mortality, 3 cycles of FMD were associated with a 2.5-year decrease in mean biological age, independent of weight loss. Together, these results provide initial support for the beneficial effects of FMD on multiple cardiometabolic risk factors and biomarkers of biological age. www.nature.com/.../s41467-024-45260-9 (2024)

Posted On 04/05/2024

Almond

I don't do vigorous exercise every day, but I believe it is just as important to do at least minimal (wake up?) exercises. For my lifestyle, stamina is more important than bursts of strength and energy. I find many young people do not have stamina nowadays. They cannot even work an 8-hour day. Maybe this is because people no longer walk much. On the few days when I finish my chores early, I consider it relaxing to walk 3 miles and observe the changes in nature--and maybe do some foraging. I do not overly stress about diet. As much as possible, I just eat what Mother Nature provides. At this time of year, that esp. includes "rugged greens" (arugula, mustard), spring garlic, rhubarb, herbs (esp.

loveage, parsley, thyme, bay leaf, etc.) and homegrown mushrooms. Not much, but it adds some fresh foods and valuable nutrients to my diet as cold storage winds down. We are enjoying baked whole onions with butter at this time of year, too, to keep up with them before they sprout. We also caught fish a week ago, so have "fresh-frozen" seafood. I have unusually high nutritional needs. If I forget my daily supplement regimen, it does not take long before I feel subpar. Makes me wonder what my ancestors ate to remain healthy--or if they died young.

Posted On 04/05/2024

stoneharbor

Yes, I agree on wake up exercises. I've felt good about doing exercises while still in bed for many years. It gets rid of stiffness, and soreness that always seems to arrive overnight. It may just be that our fascia need waking, or it may be that we have accumulations of waste material outside our cells from overnight regeneration. Whatever the cause, the wake up exercise always makes me feel more like a young man than I did when I first woke, and that's such a nice thing. This article says that the circadian rhythm we have always lowers inflammation during the nightly repair process, so then, on waking when more cortisol circulates, inflammation begins again, and that is part of the cause of early-morning soreness: www.prevention.com/health/a20476671/this-is-why-everything-hurts-in-th..

Posted On 04/05/2024

jamNjim

I've done it all and my best stamina comes from doing burst training. Stamina training reduces my stamina. I guess we're all different.

Posted On 04/05/2024

debgessell

Life at your house always sounds good and wholesome.

Posted On 04/05/2024

leslespower.com.au

I can only say to You Doctor Mercola, WHAT WOULD I DO WITHOUT MY DAILY "MERCOLA HIT"? I Don't intent to experiment on that. Question if I may Dr. Can a "mature Male" OD on Magnesium? I already take Vit D and Magenesium daily,, but my intake in 2000 mg. Too much? Thank you sincerely for the contribution you make to Mankind.

Posted On 04/05/2024

Dave R

In the studies represented in the posted graph where is the absolute risk??? In other recent medical discussions much has been made of the convenient use of relative risk over absolute risk to justify a particular narrative... it should be compared here too.

Posted On 04/05/2024

Hank64

Your magnesium "advise" is lame. All of those types of mag offer differing benefits. Geez Mercola, be specific. I have followed you for nearly 25 years and you seem to be waining today on many topics you were straight up on. What gives?

Posted On 04/05/2024

spartacusjones

Here's what I don't understand: "maximum intensity" for 4 minutes" When I think "maximum intensity" I think "30-second hill sprint." Or at least remaining in the anaerobic zone. At about three minutes it's getting pretty aerobic. I can't even imagine going at that 30-second pace for 4 minutes. I don't think anybody could do their 30-second pace for 4 minutes. Now, I can go at my best 4-minute pace -- but it's no where near as intense as my worst 30-second pace. Something here doesn't add up for me. You can go hard or you can go long, but you can't go hard AND long. Can you explain? Thanks.

Posted On 04/05/2024

stoneharbor

Good point. And Dr. Mercola also questioned the "max for 4 minutes" proposal. He has done more experimentation with different types of high intensity exercises and read more on the VO2 max studies that have been done than anyone I know. I just think we can lay aside the suggestion of even the feasibility, let alone the sense in doing this.

Posted On 04/05/2024

zbadboy72

Magnesium Bicarbonate is an excellent version of magnesium for people that consistently experience "gastrointestinal" issues with most forms of magnesium. Google it, it's made by combining club soda and milk of magnesia. I haven't tried bisglycinate or theonate (spelling?), yet. But the magnesium bicarbonate works for me, I can't take a lot of it, but it is better than nothing. And I also do transdermal magnesium.

Posted On 04/06/2024

proheadhunter

My Vitamin D3 level is 118ng/ml to 128ng/ml. I know 60-100ng/ml is optimumn. Any down side >100ng/ml?

Posted On 04/05/2024

imaginal110

I appreciate the repeats of these basics as they're working their way more strongly into my life. Even though I seem to be lying down on the job, I'm not.

Posted On 04/05/2024

vcianciolo

I love these articles!! Great Job.

Posted On 04/05/2024
