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Failures of Conventional Medicine: Strategies to Reverse Chronic Disease and Restore Health. Dr Mercola

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By Dr. Joseph Mercola

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Chronic disease stems from lack of cellular energy; increasing cellular energy through strategies like sun exposure and proper nutrition can improve health

U.S. healthcare spending reached $4.8 trillion in 2023, but chronic disease remains prevalent, as does an overreliance on prescription drugs, including GLP-1 drugs like Ozempic

Walking outdoors at solar noon can provide optimal sun exposure benefits, including vitamin D production and increased cellular energy through a human photosynthesis-like mechanism

Three major factors negatively impacting cellular health include excess linoleic acid intake, estrogen exposure from sources like microplastics, and electromagnetic field (EMF) exposure

I'm launching a health clinic and app using AI and personalized recommendations to address health issues and provide an alternative to conventional health care models

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I was recently a keynote speaker at the Biohacking Conference 2024 in Dallas, Texas. In the video above, you can watch my speech in its entirety as I expose the failures of conventional medicine and offer innovative strategies and solutions to reverse chronic disease and restore your individual health and well-being.

At a foundational level, the reason why we get sick is because we don't have enough energy. The solution is to increase cellular energy, which allows your body to heal and your vitality to increase. At a Biohacking Conference in June 2023, I ended up arm wrestling Dr. Marcos de Andrade, a research physician and CEO of BIOHAXS. De Andrade was 38 years old and an extreme fitness buff, and I was 69. But I still beat him.

This is what happens when you're making enough cellular energy. My new book, "Your Guide to Cellular Health: Unlocking the Science of Longevity and Joy," covers this process in great detail, but you can also learn key tips to start on your journey to wellness today.

US Medicine Is the Worst Example of Medicine in the World

In 2023, U.S. health care spending rose to $4.8 trillion,[1] but is fraught with failures, including an epidemic of chronic disease. Prescription drug use is at record levels, with 6.3 billion prescriptions filled annually. This works out to about 19 prescriptions for every American, every year.[2]

Meanwhile, 1 in 8 adults has taken Ozempic or another glucagon-like peptide-1 (GLP-1) mimetic drug at some point in their life.[3] Not only are these drugs expensive, costing about $1,000 a month, but when you stop taking them your health your regain your weight because they do nothing to treat the cause and result in many other adverse effects.

Drugs like Ozempic closely mimic the effects of Akkermansia muciniphila, a bacterium that's a keystone strain in your microbiome. The abundance of Akkermansia in your gut can easily be enhanced through dietary interventions, but first you need to understand the true cause of all disease.

Why Walking in the Sun Is an Ideal Form of Exercise

Getting back to the basics, sunlight is the ultimate source of energy, as it essentially provides electrons either directly or indirectly to your body and electrons are the fuel your body uses to create ATP. When you get sun exposure, the benefits come not just from vitamin D production but also near infrared radiation, which triggers photobiomodulation benefits ultimately increasing your cellular energy.

The average American spends 93% of their time indoors,[4] so fitting in that outdoor time is very important. I recommend multitasking, since we're all so busy. Walking outside at solar noon — wearing minimal clothing — will maximize the benefits of sun exposure, while helping you fit in your 10,000 steps a day to stay active. Ideally, be sure to get in your walking first, then add other forms of exercise on top of that.

Exercising outdoors in the sun is key, as there is a human equivalent of photosynthesis; we can create energy from the sun. There's a biological mechanism, which I've identified but haven't yet disclosed. We're in the process of conducting experiments in a New York laboratory, using equipment to measure mitochondrial function. The mechanism essentially converts photons extracellularly into electrons that are ultimately transported to your electron transport chain (ETC).

I strongly believe optimal sun exposure is not only highly beneficial for most people, but essential for optimal health. However, there are instances where individuals experience adverse reactions to sunlight.

One factor that contributes to these negative reactions is a concept known as reductive stress. This condition is characterized by an imbalance in your body's redox state, where there is an excess of reducing agents or electron donors in your biology. Unlike the more commonly discussed oxidative stress, reductive stress involves an overabundance of electrons in your cells.

This electron excess interferes with your body's normal metabolic functions and energy production pathways. Your body's systems struggle to efficiently use this abundance of

electrons, leading to decreased metabolic efficiency over time. This manifest as various symptoms or health issues when exposed to additional sources of electrons, such as those generated from sun exposure.

Your ETC operates on a delicate balance of electron transfer between complexes. An excess of electrons disrupts this balance, leading to a backup in your ETC. This disruption results in decreased ATP production efficiency and, even worse, increases the formation of reactive oxygen species.

It is important to remember though one of the reason's sun exposure is so valuable is that it has many other effects in your body beyond electron generation, including vitamin D production, circadian rhythm regulation, and various neuroendocrine responses. These factors also play significant roles in how you feel after sun exposure.

The ideal way to relieve this reductive stress would be discharge the electron surplus into an ideal grounding system. Due to dirty electricity, most grounding in North America likely provides serious negatives that counter its benefits. The exception would be grounding in the ocean.

Since most don't have regular access to the ocean one could consider using 5 mg of methylene blue about one hour before going out into the sun. Other strategies that have helped others include 50 mg of niacinamide or 85 mg of aspirin.

Modulate Your Sun Exposure Based on Time Off of Seed Oils

Dermatologists are right. Too much sun can prematurely age your skin and raise your cancer risk. But what they often don't emphasize is that it's not just the sun at play — it's also the vegetable oils in your diet. These oils accumulate in your skin and are then damaged by the sunlight, creating toxic compounds that can cause skin cancer and wrinkle your skin.

To truly protect your skin, consider the foods you eat as much as the time you spend in the sun. To reset your skin's health, make sure to eliminate vegetable oils and processed foods for at least six months before talking walks or sunbathing at solar noon. Over time, your body will rid itself of most of these harmful fats, allowing you to reap the sun's health benefits without the toxic side effects.

During that interim period, avoid intense sun exposure during peak hours. Go out well before 10:00 a.m. or after 4:00 p.m. (for example, 9:00 a.m. or 7:00 p.m.). The sunlight isn't strong enough at those times to give you the exposure necessary for optimal health benefits, but it will keep you safe until the vegetable oils have been eliminated from your body.

Once you have decreased the toxic vegetable oils in your skin, then you can get your full dose of healthy sun exposure without added risk. At this point, shift to soaking up rays right around solar noon. That's about 12 noon, or 1 p.m. if it's daylight-saving time. Start with fifteen minutes or so and gradually build up the time you expose your skin to the sun.

This is the prime time to soak in the sun because the UV and near-infrared light are at their peak, which is what your body needs to energize itself and synthesize vitamin D. I walk at solar noon because I have been off vegetable oils for many years, so it's safe for me to do

so.

How Your Cells Obtain Energy from Food

The food you eat goes to your stomach and intestine, and, gradually, those nutrients are transported into your blood. Ultimately, they're metabolized and sent to your mitochondria. The food that you're eating — protein, fat and carbs — essentially is a source of electrons, and your body breaks it down.

Eventually, if there's no reductive stress, the electrons go straight up the chain. And they go to the fifth complex. The chain is five proteins, they're called complexes. And the fifth complex is called ATP synthase. It's what makes adenosine triphosphate (ATP), which is often referred to as the "energy currency" of the cell because it stores and transfers energy necessary for various cellular processes.

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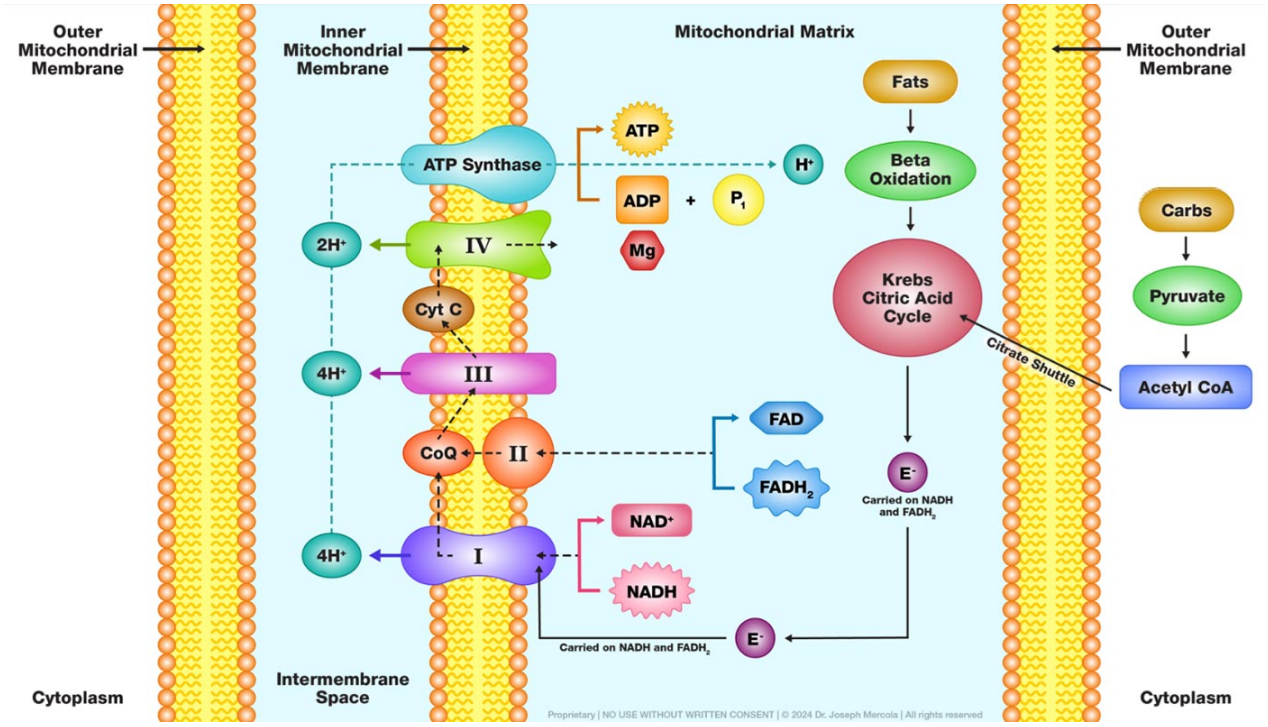

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Inside every cell of your body, a bustling powerhouse is at work, generating the energy that keeps you alive and thriving. This energy comes in the form of a tiny molecule called ATP which acts as the universal currency of cellular energy. At the heart of this ATP production lies a remarkable enzyme known as ATP synthase. This molecular marvel spins at an astonishing rate of five revolutions per second.[5]

Now, imagine the scale of this process. Each mitochondrion houses around 2,500 ATP synthases,[6]all working in unison to generate a staggering half a million ATP molecules every second. With an estimated 500 mitochondria per cell and approximately 40 trillion cells in your body,[7] you have a mind-boggling 20 quadrillion mitochondria[8] working tirelessly to power your existence.

The numbers become even more awe-inspiring when you consider the total ATP output. By multiplying the number of mitochondria by their production rate, we arrive at a figure that defies comprehension: 200 million quadrillion ATP molecules per second, constantly being generated within your body. This colossal energy production is so immense that, over a single day, you produce the equivalent of your own body weight in ATP.

As Nick Lane eloquently describes in his book "Power, Sex, Suicide,"[9] mitochondria are not only prolific energy producers but also incredibly energy dense. Gram for gram, they are a staggering 10,000 times more energy-dense than the sun itself. This extraordinary efficiency allows your mitochondria to meet the tremendous energy demands required for the constant repair and regeneration of your cells and tissues.

The ultimate fuel for your mitochondria is glucose, but many cannot use it properly. The primary reason glucose cannot be burned in your mitochondria is because the mitochondria are dysfunctional. This dysfunction is the result of the electron transport chain being backed up with an excess of electrons that are unable to flow easily through the five complexes, or, in other words, reductive stress.

Three Poisons That Destroy Your Mitochondrial Function

There are three pernicious poisons that destroy your mitochondrial function, by affecting intracellular calcium and your body's overall cellular health. Elevated intracellular calcium can result in increased superoxide and nitric oxide levels, which combine into peroxynitrite, a potent reactive oxygen species that can contribute to poor health. These three poisons include:

- **Excess linoleic acid (LA) intake —** LA, an omega-6 polyunsaturated fat (PUFA), is found abundantly in seed and vegetable oils as well as ultraprocessed foods, may be the most harmful ingredient in the Western diet. When consumed in excess, it negatively impacts your metabolic rate and gut microbiome, which are the two of the most important factors that impact your health.
- **Endocrine-Disrupting Chemicals (EDC) —** Exposure to EDCs from sources like microplastics is over activating your estrogen receptors. Microplastics are so pervasive that you may be eating a credit card's worth of plastic every week.[10] That plastic is loaded with phthalates and bisphenol A (BPA), which activate estrogen receptors. Estrogen increases intracellular calcium levels,[11] which can result in the generation of peroxynitrite.
- **Excessive electromagnetic field (EMF) exposure —** People are bombarded with EMFs, such as from cellphones, every day with hidden consequences to public health. EMFs activate voltage-gated calcium channel (VGCC) receptors within the cell, catalyzing the production of peroxynitrite by triggering an influx of calcium.[12]

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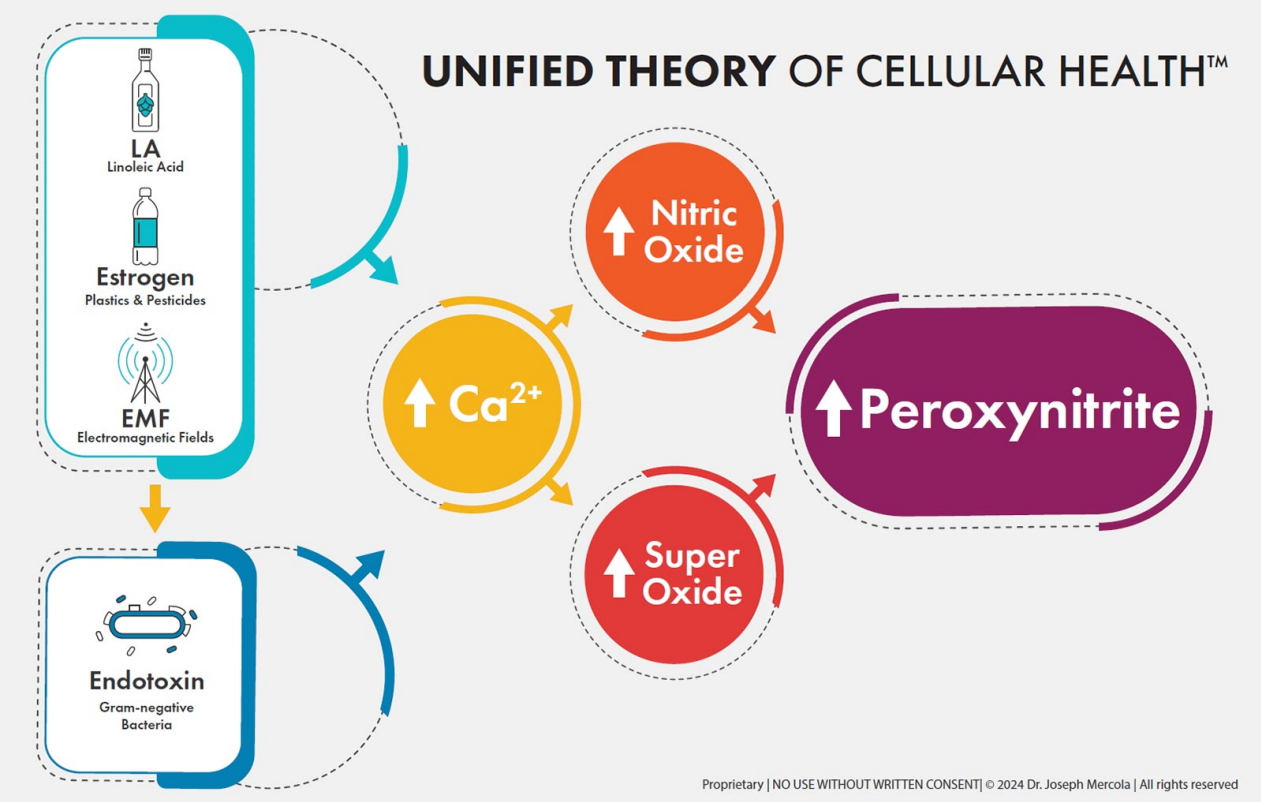

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Mitochondrial Dysfunction Destroys Your Gut Health

Daily exposure to these three poisons catalyzes the destruction of your microbiome. And if you don't recover the health of your microbiome, you radically decrease the remaining time you will have on this planet. A healthy gut with a properly maintained anaerobic environment supports the growth of beneficial oxygen intolerant bacteria, such as the keystone species Akkermansia.

When the oxygen gradient is disturbed due to insufficient energy production (as seen in metabolically inflexible individuals), it allows pathogenic oxygen tolerant bacteria to proliferate.

These bacteria often produce more virulent endotoxins, also known as lipopolysaccharides (LPS), which can cause inflammation if they translocate across the compromised gut barrier into the systemic circulation. Colonocytes are the epithelial cells lining the surface of your colon, where they make up the majority — about 80% — of the epithelial cell population.

Not only do they serve as the barrier, the actual lining of your gut, but they perform beta oxidation and are involved in the metabolism of short chain fatty acids that the beneficial bacteria produce from the fibers that you eat — typically from healthy foods like vegetables, apples and other fruits. In the process of metabolizing these short chain fatty acids, like butyrate, your colonocytes consume a significant amount of oxygen, and reduce the oxygen levels in your colon.

These fibers nourish both good and bad bacteria. However, if you have a preponderance of pathogenic bacteria, eating healthy foods can frequently make you feel worse due to the radical increase in endotoxin, which, in excess, can kill you and frequently does because, in my view, the No. 1 cause of death is septic shock, and endotoxemia is often its underlying

cause. Even chronic diseases like heart disease and cancer are triggers for increasing endotoxin production.

To help address the root of poor cellular health, it would be wise to keep your LA intake below 5 grams from all sources. If you can get it below 2 grams, that's even better. To help you track your LA intake, make it a habit to enter all your foods into a new app I am creating and will be available shortly in the app store, called Mercola Health Coach.

One of the most important steps you can take is to remove and avoid all sources of seed oils and nuts from your diet, as these are high in linoleic acid. I also advise restricting your intake of monounsaturated fatty acids (MUFAs) like olive oil and macadamia nuts as they contain oleic acid, which is nearly as bad for your health as linoleic acid.

Revealing a 24/7 Learning System to Address Global Health

Walmart recently closed all of its health centers in the U.S.[13] One of the most successful businesses ever in the history of the U.S. could not make the conventional health care model work. This is a clue that the system is broken, but there's a light at the end of the tunnel.

With the support of a team of 20 developers, we've created a 24/7 learning system that's globally patented, which will be the foundation for the solution to address declining public health worldwide. We'll be launching the Mercola Dynamic Health Coach app, which I'm predicting will be the most popular app on all platforms.

This innovative platform personalizes recommendations with real-time feedback and adaptive deep reinforcement learning that addresses your specific needs. This tool will create tunnels under the existing medical industries and allow them to self-implode because people will regain health independence that frees them from medical tyranny.

The groundbreaking new coach has access to all your health data, food history, bodyweight and health goals. Our coach acts as an endlessly patient teacher that understands and adapts to your unique health journey with real-time feedback to help you make wise health choices.

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Notes

[1] Reuters June 13, 2024

[2] Demography. 2023 Oct 1; 60(5): 1549–1579

[3] CNN Health May 10, 2024

[4] Journal of Exposure Science & Environmental Epidemiology volume 11, pages 231–252 (2001)

[5] Neupane P, Bhuju S, Thapa N, Bhattarai HK. ATP Synthase: Structure, Function and Inhibition. Biomol Concepts. 2019 Mar 7;10(1):1-10

[6] Gnaiger, Erich, et al. "Mitochondrial respiratory states and rates: Building blocks of mitochondrial physiology." Biochimica et Biophysica Acta (BBA)

[7] Sender R, Fuchs S, Milo R. Revised Estimates for the Number of Human and Bacteria Cells in the Body. PLoS Biol. 2016 Aug 19;14(8):e1002533

[8] Picard M, Wallace DC, Burelle Y. The Rise of Mitochondria in Medicine. Mitochondrion. 2016 Sep;30:105-116

[9] Lane, N. (2005). Power, Sex, Suicide: Mitochondria and the Meaning of Life. Oxford University Press

[10] World Wildlife Fund, Assessing Plastic Ingestion From Nature to People

[11] International Journal of Biological Sciences 2022; 18(3): 1065-1078

[12] Open Journal of Veterinary Medicine, 11, 57-86, Abstract

[13] Walmart April 30, 2024

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