

TENSEGRITY #5: YOUR MAGNETIC SENSE

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My name is Jack Kruse and my day job I am a neurosurgeon. My night-time job is bio-hacking my own N=1.

I got into the biohacking business by accident ten years ago. I got ill for the first time in my life. After researching my specific issue I began to do serial life-hacking on myself.

I came up with something called the Leptin Rx and Cold Thermogenesis. The Leptin Rx concerns itself with the photoelectric effect and CT is a synonym for your magnetic sense contained in your mitochondria.

From my decade of biohacks I learned three fundamental things.

1. My understanding of science was too narrow and superficial
2. The environment dictates how genes are expressed

3. No one really has a clue how mitochondrial really work.

The last one is why I am here today.....in Pasadena

I believe no one really understands the scale that life fundamentally works at.

Most people I survey believe that healthy food is key part to optimal health. I have not been of that mindset for a decade now because of my first hack ten years ago. Shocking huh?

My injury provided me a clue about this “scaling problem”.

Food gets converted to electrons, and electrons are subatomic particles. They are not bio-chemicals as we all think, they get broken down to things that are way smaller. The rules that govern their action are far different than chemicals at this scale.

They are among the smallest things that make up nature. How we study biology today is using experiments that look at a macroscopic version of our current beliefs. These experiments never control for these smaller effects. These actions occur in all of our mitochondria in many of our cells in a coordinated, connected, coupled, and complex coherent dance.

Realize that all food is broken down to electrons.....The input to mitochondria is also built around electrons and protons (H^+). It is called electron chain transport. It is not called carb, protein or lipid transport chains. There is no transporters there for lipids, proteins or fats on the inner mitochondrial membrane. There is a specific way protons are recycled in the matrix. Where electrons enter electron chain transport (ECT) is quite important. The faster they flow to end of ECT, to oxygen creates alterations in electric and magnetic fields in our mitochondria. I realized that mitochondria were fundamentally nano-electromagnets at the smallest scales of nature.

This is when I realized I might not know enough to help myself lose weight ten years ago. This is when I began to read about physics. I created my first every bio-hack called the Leptin Rx and the Cold Thermogenesis Protocol. The results have been posted for over 4 years at my website.

My epic bio-hack back then led me to believe that circadian signals determine how we use those electrons from food, and not the food sources they come from. In other words, obesity was not a food story, it was a story of altered circadian signaling.

This insight also gave me an idea that I might be able to fix myself if my insight was correct.

I realized an idea is worthless without action tied to it. Ideation without execution leads to deletion of any good idea.

Reflection often turns experience to insight.

Just because I was getting more experienced in my specialty as I got older, did not mean I was getting more wise, in fact I was not, I was getting worse. I was gaining weight at an alarming rate as time elapsed in my life and I could not explain why.

That did not sit well with me, so I began to ask better questions.

With reflection, we create to waves of knowledge.

When we reflect inward, we think, analyze and then we can conclude.

This is when I innovated the Leptin Rx and CT protocol. So what are these protocols at a fundamental level?

They are protocols that tie us all to the three legged stool

of life. Light, water, and magnetism.

Every life hack I have done has shown me that light & magnetism are the key that starts and stops life's engine, our mitochondria.

Water is life's battery, powered up by sunlight.

To borrow a phrase from Intel, magnetism is the integrated circuit board that organizes that current of electrons.....from sunlight captured by the quantum abilities of DHA. DHA captures that current of electron flow carrying the sun's light and sends it to every square millimeter of our body over our water and collagen networks. Food and hormones are just proxies for the addition or subtraction of electrons from our cell membranes and proteins within our tissues. The brain is the navigator that derives the environmental electromagnetic spectrum signals to allow our mitochondrial DNA speak to our nuclear DNA using a language both understand. Optimal requires all systems working in concert, if one is off the entire system doesn't work properly or efficiently.

It's brain surgery without a scalpel.

Some myopic people have stated to others that Cold Thermogenesis (CT) is a hormetic process within the cell. Nothing could be further from the natural truth. When someone tells you they think CT is a hormetic effect, this is a clue that their understanding is on the **wrong scale of thinking**.

Our "scale of thought" is what holds us captive to our current beliefs.

That really is what this blog is all about.

I found this ten years ago initially, so I set out to prove it once and for all for myself.

It's about what I have found in my current hack that began in

January 2014.

CT acts directly upon the mitochondria by causing an enlarged electric and magnetic field in our mitochondria. Our mitochondria are designed by lady evolution to be nano-electromagnets that control the flow of information in our brain and body by allowing for the proper delivery of DHA and oxygen to our tissues. This occurs because DHA and molecular oxygen have one specific unique quantum feature.

What does cold do fundamentally to things that make us up?

Cold temperatures slows down the electrons around all atoms that make us up.

Anytime electrons slow down orbiting around atoms magnetic field strength increases of those atoms. This is determined by the Curie point in physics

Cold also increases electron tunneling in mitochondria. This means it increases the flow of electrons towards oxygen.

Cold increases the “magnetic sense” in our mitochondria by increasing oxygen tensions in tissues with a lot of mitochondrial density.

Electrons are used to create di-molecular oxygen in our Electron Chain Transporters in mitochondria.

As electrons flow faster they reduce more oxygen and create larger electric and magnetic fields in mitochondria. When oxygen is reduced by food electrons, it is in its molecular state, called O_2 .

Most people do not know molecular oxygen (O_2) has two unpaired electrons.

It is the only gas on the periodic table that is naturally paramagnetic.

This means that it reacts more to the magnetic field strength it is found within. This is why O_2 is coupled to a mitochondria's magnetic strength.

When mitochondria have a large current of electron flow it induces mitochondria to become strong electro-magnets in our tissues; this system is designed to raise oxygen levels in our tissues with a lot of mitochondrial density.

As electrons flow faster on our inner mitochondrial membrane, the associated magnetic field strength also increases. The only other way to induce a stronger magnetic sense in mitochondria is by introducing cold. This is why the CT protocol was innovated. From this point forward any time I mention CT you should immediately think magnetism of your mitochondria.

As it increases, oxygen becomes more magnetically susceptible to a mitochondria's magnetic effect because of the F_0 spinning head and the recycling of H^+ to NADH. This is why oxygen is the output chemical coupled to electron flow, because it is the only gas on the periodic table that is paramagnetic.

At night during sleep, cold stimulates melatonin release from our pineal gland. Melatonin levels rise in our brain at night only when our temperature falls a few degrees. Remember temperature effects electron density in water. Cooler water has more electron density and this is why your pineal gland is submerged by CSF in the third ventricle in your brain. The energies from the light and day cycle is transmitted in a complex fashion all the way from the environment to your CSF to stimulate melatonin release when its dark.

Melatonin increases our "magnetic sense" by making mitochondria more magnetic. This causes a spike in oxygen levels in the brain, naturally, not hormetically. This also

happens to be when anabolic activities are highest in the CNS. It also happens to be when DHA is replaced within the brain's circuits.

Light has the opposite effect on mitochondria. It decreases their magnetic effects because light un-condenses matter in us by the physics coupled to the photoelectric effect.

This is why light destroys melatonin levels as the sun rises.

We are all made of protein polymers. This comes from our nucleic acids. These protein polymers are just a condensed form of matter.

Remember Einstein taught us that all mass is essentially energy, in his $E = mc^2$ equation.

Light photons un-condense the matter in us to release this energy in all matter. This is the basis of the photoelectric effect.

Cold and magnetism re-condenses energy in our matter at night. Magnets work best in cold temperatures because of its fundamental tie to the Curie point.

This is why at night during sleep we transfer electrons that carry sunlight's photons to our proteins using anabolic pathways.

We lose electrons in catabolic reactions that break tissues down.

The colder a magnet gets the stronger its magnetic field becomes.

Melatonin is designed to augment this effect by increasing the electron flow on our mitochondria when we sleep. We do this by uncoupling Electron Chain Transport naturally in cold. This is why in cold mammals shiver. They lose heat from their mitochondria in a process called uncoupling.

This increases the current of flow of electrons by releasing free fatty acids (FFA) from adipocytes to make more oxygen to replenish our tissues as they repair in sleep.

Free fatty acids are essential for proton transport across the inner mitochondrial membrane to uncouple oxygen consumption from ATP synthesis and to maximize electron flow down the electron transport chain with minimal resistance and minimal non essential superoxide generation.

With no free fatty acids, we get no uncoupling. Free fatty acid generation are core to the uncoupling process. ATP levels in the cell however have to be low when this process occurs. High cytoplasmic ATP levels inhibit uncoupling naturally.

If there is ATP in the cytoplasm but very little in the mitochondria the implication appears to be that ATP synthase is not generating enough mitochondrial ATP. This is because we are either **hypoxic** or experience over-uncoupling focally in certain areas of the brain as I mentioned in the MS blog. This is when we lose excessive IR light from mitochondria.

This gave me a huge idea to use hypoxia and an ancestral diet to prove something fundamental in a massive bio-hack.

Melatonin is released at night from our brain when we sleep, but only when our brain lowers our temperature in the hypothalamus. This is why cold thermogenesis has worked to keep my health and increase my abilities in all my hacks to date. We become energy efficient because our mitochondria generate a stronger magnetic field when we have high electric currents on our cell membranes. Every electric current is designed to have an associated magnetic field according to Maxwell's law's of electricity. The more current we have flowing in mitochondria the larger magnetic field we induce in mitochondria.

When we generate a strong magnetic field at night this has another big effect on a chemical humans need in our brain,

heart, and immune system. DHA is better known as fish oil.

It can only be incorporated into the brain when it is in the SN-2 position of the glycerol backbone of Free Fatty Acid.

Why is this the case? It becomes like oxygen, by becoming paramagnetic in this specific position. This is a huge quantum issue.

This means DHA becomes magnetically drawn to tissues with **high mitochondrial densities which are magnetic**. The brain and heart have massive amounts of mitochondria. Heart disease and neuro-degeneration kill more of us than any other diseases.

How do we know mitochondria are, in fact, magnetic in the brain? EEG and MEG testing. We've known it for years but have had no idea why it was the case. When a chemical is made paramagnetic it becomes drawn to any local magnetic field. This is why the brain and heart are designed to be loaded with DHA and oxygen in humans. When the brain is sick, it lacks DHA and it loses its normal EEG and MEG signals. The brain has more mitochondrial density than any other organ we have, and that is why humans concentrate DHA in our brains.

Without DHA in our brains we can not properly receive the environments signals in our suprachiasmatic nucleus (SCN) and in our cell membranes. The SCN needs DHA in its neurons to decipher these signals. Remember DHA is needed to turn sunlight to an electric signal too. When you lack DHA in the SCN you have lost that fundamental ability. That electric signal is transferred from the SCN to the inner mitochondrial membrane over water and collagen topologic insulators. Here, DHA is designed to transfer the electric signal back into light. That light is in the form of heat of infra red light. When we can't tell time properly in the SCN, we uncouple cellular metabolism from cell growth cycles.

This is where all modern illness begins.

This insight might wake you up about our current plight on the surface of our planet. Your current safe boundaries were once unknown frontiers.

Anytime you have excess energies in your personal environment it destroys your ability to couple cell growth to metabolism and disease results.

What about modern light? Modern blue light is a real problem for us when you understand scientific scale. Our brain can't tell the difference between blue light or sun light well.

It turns out blue light, which is a type of non EMF, destroys melatonin levels in the brain. As melatonin drops, less DHA can enter our brain's SCN where circadian rhythms are set. This signaling controls the release of many hormones designed to keep us asleep and wakes us up. As signaling declines even further this leads to serious diseases, like obesity, T2D, and cancer.

Let's think about light's main purpose in life.

Cortisol wakes us up by un-condensing matter by removing electrons from our tissues. This subtraction of electrons releases energy in our tissues. It is designed to correspond when sunlight is rising.

Why? Sunlight is made up of photons. Photons and electrons are two forms of the same thing. This is called the photoelectric effect.

Cortisol opens the triple helix of collagen and this action liberates water in the AM to wake us up.

This water stretches the space between neurons and glial cells. That stretch tells the brain its time to rise.

Sunlight's photons in the early AM are designed to re zip our collagen to tighten it slowly over the day.....and allow water

to rebind to collagen. This tightens the system as the day goes on.

Melatonin at night is designed to really clamp down our protein polymers even tighter, by increasing our magnetic sense. It does this by increasing oxygen tensions in our tissues by increasing electron flow to mitochondria by breaking down our fat at night. Excess light makes us fat. Certain foods only grown in excessive light periods.

When fat is broken down during sleep in your body, it turns into water and carbon dioxide. The water is in the form of sweat and urine. The sweat cools you down to increase your mitochondria's magnetic sense. Urine is old recycled water that has poor electron carrying capacity. It is less dense than your blood plasma and your CSF. Less dense water is expelled electrically and magnetically by your kidneys. The more dense water is the more electrons it can carry. CSF is more dense by design. This happens by the action of your choroid plexus in your brain. This is why in cold temperatures make you urinate quickly. You are ridding your body of less dense water and structuring more dense water in your CSF naturally. This cycle occurs via water carried in your blood plasma. This is how you structure your own water naturally.

When we use blue light to excess we destroy melatonin levels in the brain and the pineal gland calcifies. This decreases oxygen tensions in the pineal gland and all our tissues because we become chronically and slowly hypoxic and sleep deprived. This radically changes how H^+ is handled in mitochondria and in CSF

This immediately slows and eventually stops DHA from entering the brain. DHA needs oxygen tensions to remain high to get into our brain and make us human. We are now losing that ability because our current environment we live in is stealing electrons from us.

DHA is fundamentally designed to turn light to an electric signal and then back to light to signal our mitochondria what is going on in the world around us. DHA has never been replaced in 600 million years of eukaryotic evolution for a deep reason. You now know why.

Without DHA in cell membranes of neurons you can not have any proper circadian signaling in your suprachiasmatic nucleus.

This is the part of the brain where our circadian clock is found.

This should help you understand why scale is important in bio hacks now to me. Scale is hard to explain to lay people because of how we communicate. Words can only describe things of which we can form mental pictures in our mind. You should not be surprised that our language is incapable of describing the processes occurring in our mitochondria during disease because the problem lies within the action or inaction that happens in atoms.

Our language was invented to describe the experiences of daily life we all share. Language does not explain the interactions that occur between atoms and the 4 fundamental physical forces. It is very difficult to modify our language so that it will be able to describe these subatomic processes.

I had to teach my mind to think this way over ten years ago to wrap my mind around these concepts. My bio hacks were instructive in getting me to this level. They created a mental picture for what was happening at a quantum level.

Many have told me I need to dumb down my blog.

I can't.....because they are collections of words.

I dumb it down when I do bio-hacks. Here you can visualize the quantum scale in the results.

Fortunately for physicists who deal in the quantum scale,

mathematics is not subject to this limitation of communication and this is why math is the language of nature. Most of us cannot understand fractal geometry, Mandelbrot's numbers, and tensor calculus well enough to understand how nature works using math alone. I see my job as giving you the ability to scale your mind to this level without the math. It is incredibly difficult, but this is why I use bio-hacks to get the job done. Physicists use mathematics called the quantum electrodynamic theory to describe nature. It was sprung from Max Planck, solidified by Einstein and Heisenberg, and perfected by Feynman. This framework is entirely adequate for the treatment of atomic processes. Where QED fails, is that it won't allow for visualization of the concepts.

Visualization is how humans appear to learn best. This problem of scale is tough to overcome.

When you scale your bio hacks only to the superficial biochemical level you must content yourself with two incomplete analogies in order to make sense of the quantum world— you have the wave picture of light and matter and the corpuscular picture of matter we all see daily with our eyes.

People can't visualize our life this way.

Now lets scale my current 2014 bio-hack to today's world for you to understand. Most of you know I am no fan of technology and if you did not know this here is why:

When you have excess energies in the environment, as we do today, because of non native EMF from modern conveniences, it steals electrons from your cell membranes and mitochondria.

Think about satellite TV during a thunderstorm.

You can't watch your program when the storm is present and ongoing and similarly your mitochondria can't sense the circadian signals from our ionosphere work when your environment is filled with excess energies in our ionosphere from technology gadgets that emit excessive electromagnetic

energies and blue light.

These two things act to destroy DHA levels in your cell membranes and tissues. They also affect oxygen tensions in our tissues because the loss of DHA lowers the current of electric flow that controls our magnetic effect generated by our mitochondria naturally.

Fundamentally, DHA takes sunlight and turns it into an electrical signal that the brain can use. That electric signal is sent to the inner mitochondrial membrane over water and collagen highways. This is why our tensegrity system has water and collagen touching. The electrical energy is stored in the hydrogen bonding networks of water. This will be covered deeply in the next blog. This electrical energy is then transferred back to light by DHA in the inner mitochondrial membrane. This light is contained by the electric and magnetic fields near the inner mitochondrial membrane. The light is infra red light. This is why surgeon or you can't see it when you are cut open. This light can be perceived when you're in the cold environment as shivering thermogenesis. This naturally uncouples the electric charge from the magnetic charge and we lose some of our energy in the form of infra red heat to our environment. When we are ill we lose a lot more light than we should.

Within the tissues with the excessive mitochondrial IR light loss, eventually determines the phenotype of the disease humans get. We can see this direct effect with thermography or an infra red camera. Modern medicine does not see this yet, because they don't understand how to scale their perspective to this scale yet. Dr. Fritz Popp work has also confirmed this experimentally. It is no longer controversial, just widely unknown and ignored.

Most people who do thermography for breast cancer detection believe the "hot spots" we see on thermograms are site of increased blood flow. This is not true in my opinion. The hot spots come from mitochondria within that tissue that are

leaking excessive IR light. This is why areas of inflammation always feel warm to touch. Moreover, the natural response of the body is to increase blood flow to that area to deliver DHA and oxygen. This can only happen if you are eating a lot of DHA and breathing well.

This idea shows you how important understanding scale is in biology. Today's perspective in science we have it all wrong because we operate on the wrong scale. We think the heat associated with swelling is from the increased blood flow in a tissue with disease. It is not.

RBC's are naturally designed to have DHA laden cell membranes to deliver both DHA and oxygen to tissues. To deliver these packages they have to have less magnetic ability than the tissues they are delivering these packages too. If they did not RBC's would magnetically and electrical hold DHA and oxygen forever. **This is the fundamental reason RBC's do not have nuclei or mitochondria in them!**

Without a nuclei or mitochondria in them, they allowing easier delivery of both DHA and oxygen to tissues that do have higher mitochondrial density. Mitochondria act as small nano-electromagnets when they are fully charged with DHA and this draws paramagnetic substance to the tissues with mitochondria.

Mammalian red blood cells also lose their mitochondria during erythropoiesis at phase 3. Now you know why this is common in all mammals.

Magnetic field strength increases only two ways in nature. One is by increasing the current of flow and the other way is by lowering the temperature. Lowering the temperature increases the magnetic effect of tissue by invoking something called the Curie temperature. Since DHA and oxygen both are paramagnetic they are dramatically affected by the innate strong magnetic field of a mitochondria when it is fully charged with electrons. The transfer of DHA and oxygen goes to the tissue with the stronger magnetic field effect because they are paramagnetic. Paramagnetism makes chemical very reactive to

the local magnetic effect. This should also point out why an external magnetic field stronger than the one creating inside of your mitochondria is deadly chronically.

Moreover, this quantum magnetic effect within mitochondria is why the brain and heart get the highest amounts of blood flow to them. Magnets draw paramagnetic chemicals to them. It is also a natural effect requiring no external energy input. It is a magnetic effect of mitochondrial density or capacity of the tissues. DHA naturally increases the electric and magnetic fields in all of our mitochondria because of its ability to carry a high semiconducting charge of electrons due to its pi-electron clouds. It also needs iodine to generate the large current of flow. If you don't see the scale of these actions you think they don't happen. They do.

When we see a thermographic hot spot it is a sign that infra-red (IR) is being lost from mitochondria and blood flow is trying to increase to that area. If the RBC's in our blood do not have DHA and oxygen within them to a large degree the illness will never be reversed. The reason blood flow returns to this area naturally is because oxygen rich blood is highly paramagnetic and drawn to the mitochondria in the tissues losing energy to its environment. This increases the magnetic power back to the "sick mitochondria" to allow the electromagnetic energy transfer to deliver DHA and oxygen to the mitochondria without any ATP to contain the infra-red light in the tissues leaking the infrared light.

I showed people in my first bio-hack that if I controlled the input and output of mitochondria simultaneously, I could lose weight fast using these quantum principles. People saw the before and after shots. They saw me reproduce the effect on my son and nephew. Many of you have done the same.

I realized was losing electrons quickly in the major parts of my brain that controlled metabolism and sleep. I was losing them from my leptin receptor. I was leaking huge amounts of

energy back to the environment because of this single change.

When we lose energy masses increase by virtue of Einstein's mass equivalence equation. We get bigger, fatter, and sicker. We become less connected, coupled, and coherent with respect to light and magnetism. This is where the Leptin Rx and Cold Thermogenesis protocols come from. The Leptin Rx was designed around the light concept of matter, and CT was designed to increase the magnetic field of your mitochondria. You could have never understood this when I gave it to you on the blog because you did not understand scale of science in how I created them. ***Now you can, and hopefully you will gain that wisdom.***

This loss of electrons was caused by my lifestyle choices and my day job. I realized I was bathing my mitochondria in a personal environment of things causing me to leak IR light from my leptin receptor cause my adipocytes to enlarge. That is how I got fat. It was not food that did it, it was a loss of DHA in my SCN that destroyed my leptin receptor. I no longer could count electrons from my environment well.

Remember, mitochondrial density are greatest in the brain, heart, and immune system. This is where the largest electric and magnetic fields in humans are generated. The human heart has been shown to generate a magnetic field effect 22 feet from our chest when you use a magnetic cardiogram. This device uses a SQUID to sense this field. You can't observe this field, but your mitochondria senses it in you and in other people. It should be no surprise to anyone from here on out, that these are the complex tissues systems in humans that tend to use the most electrons and IR light. This is why we are seeing the diseases in these systems today.

Electrons build complexity anywhere they are found because they build are magnetic abilities in out mitochondria. This is how we 'mind our mitochondria" using nature's fundamental recipe, not our current beliefs.

REALITY CHECK: Manufactured stability leads to natural magnetic instability in our mitochondria.

Where these systems naturally innovate our “innate levee system of protection” is in the Paraventricular Nucleus (PVN) of the brainstem. At the PVN, quantum form meets natural quantum function in the brainstem. When the PVN loses DHA in its cell membranes it begins to lose oxygen tensions slowly over time you develop adrenal fatigue (AF) first.

This is the first thing a clinician should expect in someone who is afflicted with an local environment filled with excessive non native EMF. This is why all clinicians who measure adrenal stress indicies are finding the epidemic of AF. The other effect is low Vitamin D levels and destroyed DHEA level. These are proxies for the underlying loss of electric and magnetic filed power to control the flow of light from a mitochondria. When you lose your magnetic sense here, in the PVN, health goes south rapidly because you lose autonomic control of your parasympathetic nervous system. Your vagus nerve connects your gut to your brain in the area postrema. Leaky gut is not a food disease either.....it is tied to a loss of DHA in your PVN which allows the brain and gut to communicate well environmental signals.

Loss of DHA in the PVN leads to an excessive amount of amount of sympathetic discharge from the lateral aspect of your brainstem. This is why leaky gut, tinnitus, Meniere's disease, and migraine's are always a clues for me that a person's environment is causing energy loss to the environment. It also signifies that the CSF is encumbered by an isotopic fractionation issue. You should increase your intake of DHA and good water while simultaneously searching your environment before you do anything else. The IR heat loss from the PVN neurons heats the local CSF to lower the CSF density to deliver electrons to neurons that control electric and magnetic field flows to the acoustic system and dura. The acoustic system is most sensitive to this loss because they

use more electrons than any other tissue in the brain. This is why people who die of strangulation have necrosis of Ammon's horn in the brainstem. I see what others can't because I see health and disease at the quantum scale. Now you should too.

Ask any functional doc and they will tell you it appears the entire world has adrenal fatigue by ASI testing. They do because we all live within a self created microwave oven in our ionosphere. Think about the Direct TV analogy I used above. The more you allow abnormal electromagnetic waves in your personal space the more it affects your mitochondria. They lose their magnetic powers and you slowly lose DHA everywhere and you can't replace it regardless of what you eat. You also become slowly hypoxic at a tissue level. This causes you to rely on carbohydrate metabolism and not beta oxidation. This is a Warburg effect. The next step is cancer. This is why cancer is a 20th century disease. We began introducing abnormal fields to our ionosphere in the last 150 years.

Patient's get frustrated with doctors because they don't seem to help you much with these chronic diseases. It is not because they don't want to help, it's because they were not trained to see and treat diseases at this quantum scale. I realized ten years ago my knowledge was also on the wrong scale level. I was hurting more people than I was helping them. It was sobering to me. It was the worse 18 months of my life, honestly. It is here where I made myself a personal pledge to get things fundamentally correct going forward.

I had no way of changing the past, but I had ultimate control on controlling my future so this is when I became a master bio hacker of nature's Rx's. In biology, we have no way to see the experimental effects of topologic insulators on subatomic particle's, so I decided to figure out a way to see the effects without fancy math. This is why I embrace bio-hacking. It allows me to see nature's effects with my eyes. My new perspective allows me to decipher what is going on in my

mitochondria. It is how I am able to see the quantum world at work inside of me.

Today, you all need to realize the beliefs in medicine, ancestral health, and functional medicine remains on the wrong scale. This means a lot of what they believe might be not so accurate. It is now my job to explain why they might have somethings backward. And I need you, my fellow bio-hackers (Pasadena crowd) to show them the error of their ways.

Where I get into trouble with the ancestral crowd, is because the deeper in scale I go with my hacks, the more I show you that ***food is not the biggest deal in wellness.*** Their cottage industry is based around food dogma. My bio-hacks have showed me your personal environment is what fundamentally controls your mitochondrial signaling. This is the biggest deal in wellness. It is counterintuitive, but I have found it to be spot on accurate. In my humble opinion, ancestral health won't help you reverse anything longer term, because they are on a food and biochemical level. The danger in their approach longer term is they advocate a higher carbohydrate template while using more non native EMF's to spread their dogma. I want to be your beacon and warn you about what they are missing.

So what was the idea that created this Bio Hack?

When you understand the problem of scale you begin to see why stepping back in time for your diet, might be deadly when your environment steps forward at same time?

THIS IS TODAY'S REALITY and no one wants to accept it. That makes me a "bad guy" to people selling food as a lifestyle product.

My bio-hacks have taught me to not be afraid of giving up the "good" to uncover the greatness that lies within me naturally. Conformity, in my opinion is a sure fire way to never regaining the ability to see where wellness really springs in

us.

Technology allows us to constantly sample the path of least resistance in life, while nature's recipes, require that we use the path of persistence of delivering DHA and oxygen to tissues to maintain light within our mitochondria. We've all got both light and dark inside us literally and figuratively. What matters is the part we choose to act upon. That determines who we really become.

Once you feel you know everything, you will be a poor student and even worse educator. We need to keep our beginner's mind set by remaining curious.

We are living a collective delusion that technologic productivity is the road to success. When it's technology leading us to a biologic cliff few of us see.

Success is often a balance between being well researched and being decisive with massive actions done via the correct scale of science. To me, that is what bio-hacking is all about.

Circadian biology is the most important fact to get right in health. It can only be accurate when DHA is preloaded in our cell membranes. In my opinion, good sleep is a product of proper circadian signaling from sunlight to our mitochondria.

So why do I persist in being a non conformist? Why am I a pain in the ass for conventional wisdom? One thing medicine, ancestral health, and trainers all agree on is how important sleep is. No one has a clue why it is so important, but the quantum scale shows its importance easily in my view. It couples the cell cycle to metabolism.

Many people talk about bio hacking sleep a lot. Sleep and performance are quantum level bio hacks in my opinion.....because they tie to 3 fundamental things. Light, water, and magnetism.

So in 2014 I decided to take my current bio hack to the next level, the quantum scale, yet again. I decided to show definitely to me, food was not primordial to wellness. The only food that is critical is DHA from the marine chain. So what did I do? I decided to control input to my mitochondria using an ancestral diet while reducing the output of mitochondria by lowering my O_2 levels on purpose.

Basically, I decided to reverse the bio-hack I did in my book. I decided to create and experiment where I could control the input to mitochondria, while just altering the output of mitochondria. Many people don't realize all the laws of physics that control electron flow are time invariant. This means my first biohack should work in the opposite way.

The initial hypothesis I had when I began in January 2014, was that food (input of electrons) would not control the results in my health, but altered circadian signaling might.

My hypothesis was, what would happen if I delivered electrons from a standard ancestral diet, while altering oxygen levels in my body? Could I gain weight and develop a sleep disorder?

This was the opposite effect of my original bio hack I did ten years ago. I thought this hack might work, because the laws of physics are time invariant but I had to bio-hack it to prove it to myself.

As a brain surgeon, I realized early on that sleep, anesthesia, and death have a lot in common, but also a lot that differentiates them all. This is where I visualized a "whirlpool" to gain insight.

I also realized that this hack be able to do some benefit in showing people who also bio hack that our environment is in fact, stealing electrons from us chronically below our ability to perceive it, while causing many of the diseases we are seeing in the modern world.

Back to the whirlpool idea. Think of your life like a whirlpool. The whirlpool exists because the vortex persists as long as energy or flow is added to it. This simulates life. When energy flow ends the whirlpool ceases to exist. This simulates death.

When flow slows in the whirlpool the size of the vortex changes within the whirlpool. This simulates sleep and anesthesia. The more flow is slowed the closer one gets to death. Becker proved this effect in his experiments on salamanders and documented in his book called "The Electric Body".

So you might be thinking, how would I alter flow in mitochondria? By lowering my DHA intake by exclusively getting most of my DHA from grass fed meat. and by simultaneously reducing oxygen levels in during sleep chronically. This would slow flow in ECT while giving me electrons from ancestral foods. If it slowed enough.....It should destroy my sleep and cause weight gain while I controlled my food intake with their diet.

I thought, if I did it long enough it might also affect the leptin receptor because it is yoked to sleep neurons and cause weight gain. I thought back to my initial biohack and I did that over a year's time. I knew I was in far better shape now, so this current hack would need to last 3 months longer to see the effect. So the 2014 hack is scheduled to last 14 months.

I believe bio-hacks are like history lessons. However, I have found they differ in a specific way. In history, we have the cliché that history always repeats itself. In my bio-hacks, I have found that history never repeats itself exactly, but it always rhymes.....What does this mean to me? You can expect a close facsimile of a result and not the exact one, because no two people have the same personal environment when they re-create their hacks at different times.

Think of identical twins as an example of this effect over a lifetime. They're the same genetically, but different epigenetically because their environment is never identical over a lifetime. As part of my initial bio-hack ten years ago, I used CT and its magnetic effects to increase my oxygen tension in tissues to lose weight and improve my sleep simultaneously using the Leptin Rx and the Cold Thermogenesis protocol.

On January 1, 2014, I altered my own O₂ tension by making myself slowly hypoxic while eating an ancestral template with lower levels of DHA from grass fed meat. I stopped my massive intake of oysters and seafood. I stopped all my normal lifestyle I have shared with you that increases my magnetic sense, and began to eat an ancestral diet as outlined in *two popular* books. I stopped all CT and stopped using my magnetico sleep pad. In late September of 2014, I went public with the biohack at a bio-hacking conference. I made a very public appearance in April of 2014 to many of my members too, and made sure they saw me. People once, again were able to visualize my results there. People were also able to hear about the bio hack in the recent podcast I did with Dr. Dan Stickler from ePhysiologix.com.

You might be asking yourself, how does one measures a loss of magnetic effect in mitochondria?

I measure those effects with NADPH levels, pulse oximeters, EEG's, EMG's, MEG data from my heart, muscles, and brain to prove that cold thermogenesis is not a hormetic effect, but a magnetic one. That is another falsehood that I targeted. CT is the result of the quantum effect of DHA and oxygen acting within our mitochondria. MRI's, EEG's, and MEG data all measure these effects in tissues that are jam packed with mitochondria. I got this idea from Willie Sutton's insight. Why did he rob banks? Because that is where the money was!

Why did I decided to use an ancestral diet for this bio-hack?

Because ancestral health community believes that health is tied 100% to food quality. All my hacks have taught me that is fundamentally not true. I know they don't buy it, and this is why they shun my advice. They would be wise now to pay attention to my warnings. I now know what happens when you step back in time for your diet when you live your life in a modern microwave oven. It is not a pretty result. Food electrons are controlled by circadian signals, not by macronutrients.

What have I learned so far in these 9 months?

Magnetism is the father, not the child of the electric charge contained in our cell membranes.

The less oxygen we create in mitochondria, directly lowers the amount of DHA in cell membranes everywhere in our body, no matter what we eat.

Hypoxic also lowers electron flow in ECT. This is a real big issue. Anytime the current of flow of electrons is lowered so are the magnetic fields generated in mitochondria. This diminishes our ability to transfer DHA and oxygen to our mitochondria.

Any time you slow electron flow in mitochondria you also increase AMPK signals. This up-regulates carbohydrate metabolism (Warburg metabolism) and slows electron tunneling. This action sends fewer electrons to oxygen to reduce it to create O_2 .

When oxygen declines you also lose your magnetic sense in mitochondria. You also become hypoxic chronically. When you become hypoxic you no longer can transfer DHA to your cell membranes from your diet. When you can't put DHA into your cell membranes you lose the ability to change sunlight to an electric signal in the brain and its CSF. You also lose the ability to signal environmental signals to the inner

mitochondrial membrane via hydrogen bonding networks in water.

The reason I decided to do this quantum bio-hack is because O_2 is special quantum gas magnetically.

Oxygen is paramagnetic. It is the only element that is a gas that is paramagnetic on the entire periodic table of elements. This means it reacts to any magnetic field it finds itself in. Mitochondria gain their magnetism from electron currents in the inner mitochondrial membrane. Maxwell's equations show anytime we have an electric current we must have an associated magnetic field at 90 degrees. You may not see it.....but you can bet your ass its there. And your mitochondria is constructed to use that field. Only two things increase magnetic field strength, current and cold. The Cold Thermogenesis protocol is designed to increase the magnetism of your mitochondria so you transfer DHA and oxygen to your cell membranes simultaneously. When you are sick, grass fed meat does not supply enough DHA to reverse your disease, but the Epi-paleo Rx does. It is designed to increase current and magnetic field effects. This is why levee one in the quilt talks about field effects.

This paramagnetic effect of oxygen occurs because it has two un-paired electrons in its valence shell making it unusual element in the periodic table. This is a quantum effect, not a biochemical one. This is one that paleo missed in a big way. This is why I asked long ago do you believe an electron has a quantum effect? I was setting the table for a much bigger reality for you all. One you could not see because your understanding was not yet at my scale. Today, I believe you are there, so I now want you to see what I see.

How did I see this level? Remember my day job is as a neurosurgeon. My patients in surgery are asleep under general anesthesia. Anesthesia machines also use this quantum effect of oxygen to identify how much oxygen is being delivered in an anesthesia circuit to a patient. These machines take the partial pressure differences in the oxygen gases and convert

them to a sound wave for the surgeon and anesthesiologist to hear. Each stream of oxygen gas has a different magnetic footprint to identify them. Notice.....I said magnetic foot print, not a biologic one. This was my big clue to the puzzle.

When oxygen tensions are low the ATPase in the inner mitochondrial membrane swells and this slows the rotating head of our ATPase. When it does not rotate well, we can not make ATP well.

Hypoxia cause mitochondria to swell.

The spinning head (Fo) of the ATPase velocity is controlled by the magnetic field of oxygen. We neurosurgeon's pick this effect up on EEG and MEG machines all the time in people with brain disorders. People with neurologic disease show loss of voltage and magnetic field effects.

In my hack ten years ago, I called obesity an inflammatory brain condition; now you can see why I did. Inflammation is associated with swelling and a positive charge. This lowers electric and magnetic field effects in mitochondria and we lose IR light and our fat mass expands to make us more thermodynamically fit. This is called Kleiber's law. This is why elephants are big and mice are small. It also points out why obesity researchers studying mice will never see or find the real cause of obesity.

Its quantum effect they cant measure yet, they can only observe it. We have no way to measure these subatomic changes yet. We can however use thermal camera's to see the effect macroscopically but no one but Fritz Popp is doing so and he is not looking why humans are getting fat everywhere. Moreover, a mouse is a horrible model for obesity when you understand this effect. Why?

Mice can't generate high electric potentials on their cell membranes because they don't have access to DHA naturally, nor do they have massive lungs to deliver lots of oxygen to their

mitochondria to turn their mitochondria into strong electromagnets to increase their life spans. Compare this to an elephant, another mammal. He has massive lungs and access to water, but no access to DHA. An elephant lives a lot longer than a mouse because it expands its mass to remain more thermodynamically responsible.

ECT normally flows electrons toward oxygen because of the electric and magnetic fields mitochondria generate. As oxygen is created it expands our mitochondria's ability to generate it's magnetic field and oxygen being paramagnetic must be quite reactive to it. When a current flows it develops a magnetic field at 90 degrees to the flow by Maxwell's laws. The faster the flow of electrons the bigger the associated magnetic field is as well. The ATPase is the 5th cytochrome and is locality distally to the major electric current and is closer to oxygen atoms; it also happens to be atomically structurally at a 90 degree angle to ECT current of flow, allowing it to be maximally effected by the magnetic forces generated by the electric current of flow. None of this is controversial when you understand Maxwell's laws. Guess what? Medicine and ancestral health don't.

Oxygen is the only gas that is naturally paramagnetic. It is *naturally drawn* to magnetic fields. This is why I scoffed when I heard and ancestral leader call CT hormetic. This is why blood flow is so brisk to the heart, brain, and bone marrow where immune cells function. It is also why the gut expands its blood flow after something is eaten.

Many people do not realize that most other gases on the periodic table are *weakly diamagnetic*. Gases that are diamagnetic naturally repel magnetic fields. I did not miss this effect because I am surgeon and work with anesthesia machines. I knew where to look because I was looking for quantum effects on macroscopic levels to teach me something new. This is a fundamental quantum effect of oxygen that gives each individual mitochondria its own magnetic field.

These are the fields that EEG and MEG of the heart pick up when we do these tests. Magnetic field strength in our mitochondria and everywhere else increases when temperature's decrease. Magnetic and electric field strength decreases as temperature rises. This is why inflammation is bad.

In fact, every one degree our temperature rises with fever in our brain, our metabolic rate increases 13%. This is more proof I might be correct.

So what does all this mean for the current bio hack?

When people are made chronically hypoxic by any means, they are slowly losing their magnetic sense in mitochondria. This effect allows them to release improper amounts of energy from our mitochondria in the infra red frequency range. We lose excess light in the form of heat. This directly alters the hydrogen bonding network in water surrounding mitochondria within the cell.

Normally this IR heat is captured by water around the mitochondria. When your magnetic field is lowered the water around your mitochondria cannot carry this energy, so that we lose it back to the environment. My initial biohack ten years ago you taught me, that we get fat when we lose more energy to the environment for any reason. Obesity is not about calories. People who believe that have a myopic view of science because they do not see the quantum scale of how mitochondria fundamentally work.

I realized pretty quickly that hormone panels are quantum proxies for electron movement in our mitochondria.

People on my site get that, the rest of world does not.....yet.

Medicine wants to see data in RCT to see if history repeats. They require repeatable data to count as data to base clinical decisions they call evidence based medicine. The problem is

when RCT's have been re done.....we rarely get the same results. This should clue them in.....maybe what they believe is off a bit. This story was told recently in this article.

Unfortunately, this is not how biology fundamentally works in our mitochondria. Nothing is ever repeated perfectly, because the environment is always changing on this planet and around our mitochondria. Think about identical twins. They have the exact same genome, but they don't have the same life or outcomes, but their lives and health often "approximate" one another. This is why doctors ask about your family history as well, because our lives do rhyme with our families outcomes because we often share a lot of similar environments. I learned in my own biohacks over a decade that history never repeats itself, but it rhymes, and the rhyme varies as the environment I select for changes.

The circadian signals our mitochondria sense determine how electrons from food are handled. There is no protein, lipid, or carbohydrate transporters as the input to mitochondria.

It's called ECT for a reason, people. You need to think of your hormone profile as the information profile that electrons provide between your environment cell membranes and mitochondria. The signal occurs on collagen and water.....all by the movements electrons and protons.

Understanding food macro's and biochemistry is a confusing dead end; ask any fat person or post menopausal women if I am correct about that.

Biology today is a detailed, disorganized collection of disparate facts. It is like a hoarder's basement, or a rat's nest. There is no connecting design.

You can scoop up a bag full of facts and try to make sense of it, but that would be an exercise in futility.

Biochemistry is knowledge, but true wisdom requires that

knowledge to be connected in a fractal. A fractal is self similar design which is another way of saying it is a "rhyme".....

The design can be complex, with microscopic details, but the overall design is quantum coherent and fully connected and coupled.

So how do I measure these effects during the bio hack?

Electrons are lost in catabolic reactions. Electrons are gained in anabolic reactions. Oxygen formation leads to complexity in all condensed matter of life.

NADPH is the key reducing element in biochemistry that is tied to ultimate performance and proper DNA and RNA biochemistry.

I laid all this data out 2 years ago in a blog post called the EMF 4 blog post that was popular with the Quantified self people and the endurance athletes.

It was the back bone of this current hack.

The goal of this ongoing bio hack is to flip the switch October 1, 2014 when light cycles diminish where I live now, and to see what the effect of re-condensing my matter will be by using many things to increase magnetism in my mitochondria.

What are some of the things I plan to use? You'll have to wait for that answer in my next book.

I know what the effects have been over the first 9 months of the hack.....I showed everyone the current results in Pasadena, California. I let them observe my current state. People were present who knew what my state was before the hack and people were present who saw me in April of 2014. I am crafty like that.

The hypothesis I began with before this hack was that food is not the major factor in weight gain or loss or in the

development of a sleep disorder. What might I expect based upon how circadian biology controls electric and magnetic fields in mitochondria? I believe that artificial blue light and non native EMF's might cause the energy losses associated with DHA and oxygen's paramagnetic ability to restore a strong electric and magnetic effect to mitochondria.

SUMMARY:

So far, in the past 9 months I have found out that magnetism is the father, not the child to the electric charge in biochemistry. I also think I may have found out why sleep apnea really happens fundamentally, and why we really gain weight at a quantum level. I believe I might have extended the reach of the CT protocol and Leptin Rx.

Your world view has to be structured in principle on some specific doctrine which shapes how you function and view humanity. **Embracing QED in your own bio-hacks is akin to wearing steel-toed boots in a ballet-slipper world.**

I rather like that idea because photosynthesis, black holes, and quantum physics are all counterintuitive yet they have all been shown to be parsimonious in how the world really works..... The Epi-paleo Rx, which is my specific template, is designed around our epigenetic mechanisms, and not our cultural or medical beliefs. The Epi-paleo Rx is a Rx based around the collection and assimilation of electrons in a connected, coupled and coherent cell so that information from our environment can be properly signaled from our environment to our cell membranes in the brain to the tiny nano-electromagnets in mitochondria.

It is the organization of our cell that is the key to wellness in my opinion.

All my bio hacks have showed me that wellness won't be found

in a modern RCT. Is this a controversial opinion? Yes it is, but it is the mark of an educated mind to hold a thought you fundamentally do not believe in and examine it for its merits. This is what bio-hacking does for me. It lets me observe the quantum scale in me to make better decisions in my life.

Unlike the rules that govern the modern scientific method tied to a RCT, we should not expect data to reproduce precisely.....but the results of biohacks will certainly rhyme in their results. This parallels what we see in identical twin studies we have in the literature. In my view, the twin data shows these quantum effects but modern science is missing that whisper from Mother Nature. I have not missed it. It parallels my results as well. In this current hack I did not gain back 137 pounds. I gained weight for sure. But it was not the same amount because my mitochondria were at a better starting point then they were ten years ago. Moreover, when one considers what I am pointing out, this “rhyming effect” will get washed out in Modern RCT’s because of how we construct scientific experiments today and how we ask questions in science. I believe big pharma takes full advantage of these effects in their RCT’s. Clinicians and patients would be wise to understand the implications of this insight.

This means bio-hacks are incredibly important to us all. They maybe the most important thing we could do to help one another in this microwaved world. Each one of us has our own personal thunderstorm following us around daily. You need to bio hack this bubble to regain your wellness.

I believe understanding how your mitochondria react in your specific personal environment should be what you focus upon.

I want to tell each one of you hackers, each day complete hacks of excellence, do work that astonishes, and make gestures that inspire others to reach their potential.....

My legacy is going to be made in transferring the scale of knowledge to the younger generations for them to become more

wise, so that they may innovate better options for human life and potential.

I say follow the data in your own N=1 hacks and share them with the world. We need to find how your “results rhyme” in our modern environment to make sense of this new world we inhabit.

Remember a good idea is worthless unless you execute it.
With that thank you for listening and reading.