UBIQUITINATION 7: PALEO's BITTER TRUTH

READERS SUMMARY:

ARE YOU AWARE OF THE IMPLICATIONS OF THE ADVICE YOU FOLLOW?

Why you need to do your due diligence about the advice you take? Is sugar/fructose really toxic, or might it be something else in your environment that you really need to detox? If, as many say sugar is like an addictive drug, then I will say artificial light is akin to shooting heroin. That make fake light something we need to detox.

See the Rainbow? The one closer to Diane's head, the blue range, that is the problem you really need to detox from. Sugar should not be the real target. Excessive blue light however is a signal that simulates an environment that is currently in a consistent excessive summer time signal, electromagnetically speaking. Blue light destroys DHA levels in your retina and it inactivates mitochondrial electron tunneling at cytochrome c. This causes massive flows and in cell water and swelling. In fact, a study done in England in 2009 found that 40 percent of the light people absorbed during summer evenings was blue light. In winter, the percentage dropped to only 26 percent of blue light during the same early evening time. The amount of blue light frequency we allow our mitochondria to sense is the key issue. It has a seasonal dose response curve. The dose makes the toxin, for blue light. Modern life allows for a constant barrage of blue light because of technology, TV, computer use, and indoor living. The effect is magnified when the ***cold is missing*** from the environment that you allow your mitochondria to sense.

Blue light is the major non native EMF we face now

The excessive blue light signal is a signal to your mitochondria like you are eating ice cream and cookies all day, on top of a standard american diet. The relationship of light frequency in altering mitochondrial signaling, is what paleo misses in a big way, because they don't understand how physics links to biology. Red light frequency, the furthest away from Diane's head, is the best frequency for humans and our mitochondria cytochromes. Your skin brain cells and mitochondria need a steady diet of red light frequencies to overcome their blue light buffet, we allow them to sense.

Most people do not even realize blue colors are pretty rare in nature, to begin with. You would expect people interested in evolutionary biology, as the paleo movement is, to ask, why no one could see the color blue until modern times? Why is that? Blue light is a very small part of natural sunlight. Blue light is the key frequency of light modern humans have used to make technology. Anything that is blue in color, reflects blue light and blue light in excess, is toxic to all living things. Health and wellness has little to do with sugar in your diet in proper seasons, and a lot to do with water and light chemistry when sugar is present outside of those light seasons.

PHYSICS OF LIGHT

The color of anything we observe depends upon a few factors.

Firstly – Everything is made up of electrons and atoms.How something will look when bathed in light, is governed by these atoms and electrons.

Different materials, objects and items have a different make up of atoms and electrons. Any object, by its nature, will, when exposed to light, do one of the following:

reflect or scatter light (reflection and scattering)
absorb light (absorption)
do nothing (transmission)
refract light (refraction)

Sunlight is a white light is not a spectral color. It's a perceived color by our brain. Many people think the sun is yellow. If the sun is supposed to be producing white light, why does the sun appear yellow to the eye instead of white? We need to start with the fact that white light is a combination of all colors produced equally by a glowing object. ***A glowing object that appears blue is blue because it's producing more blue light than it is producing red, orange, yellow, green light***. The color of a glowing object depends on the temperature of the object.

Two Reasons why the Sun appears yellow:

1. The Sun's surface temperature (5,500 degrees C) produces a range of visible light (red to blue) in which yellow is the most plentiful, but not much more than other colors it produces. If the Sun were cooler, say 2,500 degrees C, it would look red, like the stars Antares and Betelgeuse. Or if the Sun were hotter, say 15,000 degrees C, it would look blue, like the star Rigel.

2. The Earth's atmosphere acts as a kind of light filter. Some colors are filtered more than others. The Sun is a yellow star, but the Earth's atmosphere makes the Sun look more yellow than it appears than if you were to observe it from space where it would appear more white than yellow. But you

don’t have to leave Earth to see that the Sun is really less yellow than it appears. If you are in the Rocky Mountains at 11,000 ft elevation, the Sun looks less yellow and more white than it does at sea level. There are fewer air molecules at this elevation to filter the Sun’s other colors. Imagine what the Sun would look like from an airplane at 40,000 ft altitude—quite white! Also, when you are able to look at the Sun where you live, it’s morning or late afternoon. It’s easier to look at the Sun for a few seconds than it is a noon. The Sun appears more yellow at those times than it would if you were to observe it at noon (12 PM) when Sun is highest in the sky for the day; it’s at its brightest and whitest—hard to look at. Because of the Sun’s high position at noon, the sunlight has less air to travel through. Less air means less filtering of other colors. Remember: Light appears white because all colors are equally reaching your eyes. So, at noon the Sun appears to be more white, less yellow—closer to the way it really is! Don’t try to make this observation without hi-tech eye protection.

The short wavelengths of blue light from the sun are scattered by the atmosphere. This action is why the sky appears to be blue, and why few things in nature reflect blue light. Consider why we see color in things: An analogy as to why things have color they do, consider the image of ripe tomato in your mind. Tomatoes appear to be red because when ripe, tomatoes contain a carotenoid known as “Lycopene”. Lycopene is a bright red carotenoid pigment, a phytochemical found not only in tomatoes but also other red fruits. Lycopene absorbs most of the visible light spectrum, and being red in color, Lycopene reflects mainly red back to the viewer, thus a ripe tomato appears to be red. **There are few blue pigments in nature because blue light is a rare form of light in nature. Natural sunlight has 1/7 th of its light in the blue range.**

This filtering mechanism (prism) in the atmosphere continues in our bodies tissues, and leaves behind the longer (yellow-

red) wavelengths for us to use. These are ideally present in AM sunlight. This is why the human circadian cycles exist as they do. Re-read cold thermogenesis 7 to see how our cells match the frequencies of IR and UV light in the AM. This also marries light frequencies to maximize the charge separation in water in our plasma. These wavelengths, in the IR and UV range, are the frequencies life seeks in the gut, skin, and in our mitochondria. We eat and absorb specific frequencies. In this way, our body's construction is designed to limit blue light to daytime exposure only. We see our greatest amounts of blue light in summer time.

From a high-flying airplane, or from the moon, the sun appears to be white. The human eye has three kinds of color receptors, commonly called red, green, and blue. Note that there's no receptor for yellow. A spectral yellow light source will trigger both the red and green receptors in a certain way. We see "yellow" even though we don't have yellow receptors. Any spectrum of light that triggers the same response will also be seen as "yellow". Computer screen, tech gadgets, and your TV screen manufacturers depend on this spoofing. Those displays only have three kinds of light sources, red, green, and blue. these gadgets have far more blue light present because there is no filtering system between the device and your eyes, skin, and gut. They generate the perception of other colors by emitting a mix of light that triggers the desired response in the human eye. There is a mistake in the above image in the labels "bluish purple" and "purplish blue". That should be "blue-violet" and "violet-blue" (or possibly "indigo"). Purple is a beast of a very different color. It is a non-spectral color. The spectrum is just that, a linear range. Our eyes don't perceive it as such. We view color as a wheel, with blue circling back to red via the purples. The real magic at the end of the rainbow, is that blue light causes a loss of a key signal in mitochondria, and the result of this action, leads to elevated glucose in the blood to slow down clock genes

speeding out of control by blue light. So what really is the problem……the stimulus of the problem or the reaction to that stimulus? The picture above tells you the paleo solution for this blueprint. Is it right? Blue light toxicity is akin to eating a SAD and cheesecake all day. What might the real solution be?

EPI-PALEO SOLUTION AND BLUEPRINT: Fix your blue light exposure before you do anything with diet

Here is a clue for you: Ubiquitin pathways link the filtered light from the sun, directly to the cell cycle and to metabolism. These wavelengths of light are critical for life. Sulfated lipids and proteins further filter light to get to the specific frequencies we use for energy. Ubiquitination is a topic rarely spoken in ancestral health, medicine, functional medicine. Ubiquitnation is all about light, and light links to optogenetics; optogenetics is the stimulus that leads to hormone release from the pituitary. Two hormones, oxytocin and ADH are made there; ADH, controls water flows in the CNS, and the remaining hormones are made from the anterior gland. The pituitary is surrounded by a special vascular system. Given what you should have learned about the interaction of the pineal and Superior Cervical Ganglion and light, consider this: Sunlight is made up of a mixture of red, orange, yellow, green, blue, violet and indigo. Our modern world uses microwave technology which uses blue light exclusively……..the dose makes the toxin for cells when this frequency is present and alters hormone release optogenetically…….why is blue light fundamentally bad? It destroys melatonin and DHA in you retina. Light in the retina entrains circadian cycles via the SCN……and you need DHA in your SCN to run your circadian clocks and to control OPTICS in your brain to release hormones that control mitochondrial programs that handle food electrons to generate proton signals in cytochromes and the free radicals, superoxide and hydrogen peroxide, and the hydroxyl free radical.

THE KEY EPI-PALEO Rx POINT: When you're blue light toxic you lose superoxide burst at cytochrome 1 where glucose enters Electron Chain Transport.

The Epi-paleo Rx is simple……..DHA with ketosis is the key. Why? DHA is never metabolized for energy, but other fats are.

Excessive chronic blue light destroys DHA in the retina. We need higher levels of DHA in the retina to run the SCN faster than the organ clocks that are below the SCN. This is precisely how the physics of a GPS device works to keep accuracy. DHA is used to restore the faster running clock mechanism in the SCN while other fats are used to generate electric and magnetic fields in mitochondria to get to autophagy using a free radical called superoxide. Superoxide has an unpaired electron that becomes reality, by the action of the iron sulfur couples in cytochrome channels as protons pass through it. Without fatty acids, you can't activate, nor us the glycerol 3 phosphate shuttle, to make carbs appear like fats in mitochondria by altering where their electrons enter the electron chain transporter to help optimize the the F:N ratio. The F:N ratio is $FADH_2$ to NADH ratio in mitochondria. This is why the Pentose Phosphate Pathway can be accessed without a direct dietary glucose being needed. The F:N ratio is that key. When the ratio is optimized, no $FADH_2$ input occurs to the CoQ couple in mitochondria. This was the key point I mentioned in the quantum electron blog post 4 years ago. **Without ketosis from fats, no free radicals can be made, period.**

When superoxide vanishes from cytochrome 1, there is no signal for mitochondrial biogenesis. Without mitochondrial biogenesis, you work with old, redox shifted mitochondria, hence, they can't recycle themselves using autophagy. In fact, this situation causes you to develop an idea glucose/fructose/carbs are fundamentally bad for your biology, and you get Robert Lustig, Jimmy Moore and Gary Taubes beliefs about carbohydrates. However, you do get some things partially correct about the science in this situation. *But being partial correct is akin to being partial pregnant;* ***it confuses the truth.*** With a "Taubian belief paradigm", you embrace ketosis, but not DHA ketosis; and this becomes a huge problem for your belief paradigm. This is where the Epi-paleo solution exceeds paleo's solution, primal blueprint, and LCHF, because it fundamentally goes after the key problem.

Why do I say this? It is because you do not realize that DHA is the only lipid that can keep your SCN ahead of your run away organ clocks because of the blue light exposure, you allow in your life. DHA is the only lipid in evolutionary history capable of turning light into an electric current and vice versa. In 600 million years it has never been replaced once. Moreover, we have none of the enzyme to make it effectively. So we have to eat seafood to replace it when it is turned over. The higher amount of DHA in the SCN allows our retina-SCN tracts to increase the current through the retina while landing in our SCN, which we are awake, is what drives the speed of the SCN. This action always keeps the SCN faster than the organ clock genes. When you put your laptop or cell phone in your lap you are speeding the pelvic organ clocks up in relation to the SCN and infertility, GERD, and lower body fatness progresses. **This is how an IUD acts to prevent pregnancy.** It alters sperms clock and ovarian clocks and blocks ovulation and fertilization.

When organ clocks run faster than the SCN, in the tissues this occurs in, we get diseases like T2D, autoimmune conditions in

that organ, and Alzheimer's disease. This points out why DHA is not an energy source for humans and why we are not biochemically equipped to extend long unsaturated poly unsaturated fats. We need to eat them constantly to replace the DHA. The less we eat the worse we get, when our environment makes turnover rates substantially increased for any reason. The reason I tell people paleo is a step in the right direction, is because grass fed meat and lamb has DHA in it. The problem with a dietary solution only, is that when you consider the modern microwaved world, we get way more destruction of DHA in our cells. Normally, DHA brakes down to maresins, protectins, and resolvins which are highly anti-inflammatory. These protect us normally, but the DHA destroyed needs to be replaced. If your environment allows for excessive DHA turnover in your cell membranes, for any reason, and you can't meet the supply needed. You replace omega 6 fats in your cell membranes and this lowers the DC current and your ability to regenerate. Dr. Robert O. Becker's clearly showed in his research that the DC electric current is how all animals regenerate their tissues. Our modern world is that perfect storm for this scenario. Paleo thinks eating excessive omega 6's is a problem, when in reality, the real problem exists because of excessive DHA turnover due to environmental pressures given to us by technology. This key point I am making here, is the paleo solution can't solve the problem the modern world presents to us all. Not one of their key science leaders, have clearly got the story correct on this how omega 6's become a real problem. I mentioned this here: Hyperlink. I believe this is a critical error in their belief paradigm. It has caused many people to avoid certain foods for the wrong reasons. Your environment is what is causing the massive replacement of omega 6's for omega 3's because DHA is under constant destruction. You need to realize why omega 6's are a problem, and it is not your diet, it is the excessive replacement rate you have for DHA in cell membranes, because you inhabit today's microwaved world.

BIOCHEM 101 of WHAT HAPPENS IN THE MITOCHONDRIA IN THIS CASE FOR THE BIOLOGY GEEKS

Let us review the F:N ratio before we begin. The ratio of (FADH2) to (NADH) made in mitochondria. NADH is in cytochrome 1 couple and FADH2 is in cytochrome 2. NADH is made by electrons from carbohydrates and FADH2 is made via fats.

The FADH2:NADH ratio doesn't apply to DHA (22:6) because it **isn't used for energy**, and never enters the ECT. *This is why the "version of ketosis" you employ matters deeply in a microwaved world being cooked with a major side of blue light.*

For example, in summer time, lady evolution expects us to be "more inflamed" on purpose, by increasing water flows between glial cells and in neurons when blue light from the sun is present in higher amounts than our baseline naturally. Summer time light has more blue light photons in it by design to cause this effect naturally. In fact, this perspective on summer time light, is a synonym or another way of saying we are "more fertile"or "more insulin sensitive", or "have proteins that are less condensed". Light alone, uncondenses all matter to some degree. The degree determines its function. Magnetism condenses matter. The degree of condensation of matter determines its effect on matter. Becker showed that in salamanders a 4000 gauss magnet was able to induce general anesthesia in the brain by itself with no drugs needed. Just removing the magnet, woke the animal up.

In a microwaved world, this season and sensory vibration signal, via Archimedes principle, never ends in the mitochondria. In summer, humans, especially females, are more sensitive to the environment and this is why pregnancy is more common in those months. Today with a controlled environment, pregnancy is no longer yoked by light, and this

is why I believe clothing alone was the main driver of why the estrus cycle has been extinguished in humans. Humans began wearing clothes about 700,000 years ago. This was our first mistake, and caused the first circadian mismatch. I believe this alone, drove the extinction of estrus in our species.

BIOLOGY GEEKS: The FADH2:NADH ratio is basically a numeric representation of which fats are suitable for the season. The amount of superoxide signalling required in each season should be different, to signal mitochondria, and thus the type of fat consumed should generate the appropriate level of superoxide for that season. Each cycle of beta oxidation (assuming an even numbered carbon chain fully saturated fatty acid) produces one $FADH_2$, one NADH and one acetyl-CoA. This gives a total of 2 $FADH_2$ inputs and 4 NADH's per cycle of beta oxidation. This is why I asked "the Kracken" the question I did 4 years ago at AHS. I wanted to see if the 'smartest guy in paleo' had a basic understanding of how physics alters biochemistry. The answer was in this blog. HYPERLINK

The very last pair of carbon atoms in a saturated fat do not need to go through beta oxidation as they already comprise acetate attached to CoA, so they can simply enter the TCA as acetyl-CoA. This last step only produces 1 $FADH_2$ and 3 NADH's, with no extras.

The shorter the fatty acid, the less $FADH_2$ per unit NADH it produces. Short chain fatty acids like C4 butyric acid have an F:N ratio of 0.43 while very long chain fatty acids, up at 26 carbons, have an F:N ratio of about 0.49.

The F:N ratio of C8 is about 0.47, a value chosen by metabolism as the end product of peroxisomal shortening

Very long chain fatty acids end up in peroxisomes for shortening, usually to C8, which is then shunted to mitochondria for routine beta oxidation.

Of course, peroxisomal beta oxidation generates zero $FADH_2$, except that from acetyl-CoA, because peroxisomal FADH2 is reacted directly with oxygen to give H_2O_2. And heat, of course. The heat shrinks the water around the mitochondria, called the MINOS, to condense the mitochondria to make them smaller. They also become closer to the nucleus of the cell, to fully control epigenetics and genetic expression, as laid out in Ubiquitination 5. Hat tip to Hyperipid on all this fine work on details. We have been on a collision course for years, and it is about time I show you why he is the smartest guy in the paleosphere.

<u>The Ferrari in the mitochondria works as follows:</u>

The ratio of F:N generated by a metabolic fuel sets the ability to ***generate reverse electron flow through complex I and subsequent superoxide production, macroscopically described as insulin resistance.***

An F:N of 0.47 is not a serious generator of superoxide and an F:N of 0.48 is. **Key Point, don't forget it.**

Superoxide production is tied to the DC electric current voltage generated by Electron Chain Transport in mitochondria. This is why DHA ketosis matters, and why it helps in a disease states. Fats liberates more protons and electrons and this in turn generates a higher current. But because of excessive DHA losses you can not utilize that higher current to turn it back into a light signal in your cells. This is what DHA does. Light is used to signal in the brain at night. Our most important hormone releases happen at 12-3 AM under the direction of growth hormone and leptin. This was covered in Cold Thermogenesis 7. We also learned this from Becker's work on anesthesia and the DC current, and the recent work on optogenetics by DeLecea and Carter. Any time a current is present, Faraday's laws and Maxwell's math tells us there is a resultant magnetic force or flux generated from the current. That magnetic flux attracts atoms that are paramagnetic. O_2

is paramagnetic. DHA is too, only when it is in the SN-2 position. (Tensegrity 7 alert) DHA can't get into your brain unless it is in the SN-2 position. Seafood provides that naturally, and paleo fish oil supplements do not. Remember, in the paleo solution Wolf advocated for massive amounts of man made DHA. I warned you 4 years ago this was a bad idea. Even Wolf, has backed away from that ledge.

These relationships, pull the veil back on how a low superoxide level is a proxy for ECT current changes and the polarity of magnetic flux at the 5th cytochrome: The ATPase. The ATPase has a F_o rotating head. Anything that spins or rotates generates its own electric and magnetic flux to augment electric and magnetic fields from mitochondria. We can measure these magnetic effects today directly with EEG, ECG, and MEG data. Paleo forgot these details. I did not.

The quantum truth: *Insulin sensitivity is just another way of saying that you have a suppressed superoxide generation response. And you have a lack of AM sunlight exposure lowering your vitamin D levels. This is why MS patients get the disease they do too……it ain't veggies, like some have espoused. It is quantum light story. It is physics, behind this disease.*

When superoxide drops, magnetic flux in the mitochondria are also destroyed, leaving cholesterol circulating in the blood way too long, allowing it to become oxidized. Sunlight on our skin 8-12 AM makes cholesterol more water soluble in blood to go where the mitochondria need it to be, by sulfating it. AM sunlight also helps you lose weight, because it increases your DC current. This drives sulfated Vitamin D3 production. This is why obesity and low vitamin D exist. AM sunlight has another massive cardiac effect. It creates cholesterol sulfates in the skin and arterioles to help diffuse the frequencies of AM sunlight to the correct frequency for a

cell. These specific frequencies of light, drive the zeta potential in the plasma. The zeta potential adds negative electric charge to the arterioles in the skin to make all proteins hydrophilic in these arterioles. Pollack has showed that any hydrophilic substance causes massive charge separation in water making an electrostatic battery. This electrostatic spark in water, allows the birth of the exclusion zone in water. IR light starts the charge separation process, and UV light grows the EZ to a greater size to create energy in the plasma of the arterioles in the skin. This is where the zeta potential is built. As the EZ grows on the circular interior of the arterioles, in the center a large proton flow forms. This proton flow naturally augments blood flow in arteries lowering your blood pressure. This is why AM sun exposure is the best antihypertensive you can get. AM sunlight has IR and UV light in it to a greater degree than light at any other time of the day. This AM light cycle is directly linked to the hormone cycle laid out in the cold thermogenesis 7 blog post. Gerald Pollack's work in nafion tubes and proton flow prove this is how physiology is designed to be yoked to the photoelectric effect. This is why blood from young animals injected in old animals, has an amazing restorative effect. The zeta potential of plasma is a homologue of superoxide production, which directly stimulates autophagy. Autophagy stimulates sleep and autophagy is how we stay young and fit. Autophagy is how all things in a cell renew normally. No one is making these connections to AM sunlight. AM sunlight reaches all the way to your anterior pituitary at night to open the compound pharmacy in your brain to make you well.

When you understand 3 D atomic molecular dynamics of atoms in humans, superoxide is a fundamental signaling molecule, where transition metals and sulfur co-exist. The inner mitochondrial membrane is loaded with molybdenum, a transition metal, for this reason. The cytochromes all have iron sulfur complexes. Iron is a transition metal and ferromagnetic.

Sulfur is dimagnetic. These differing properties is what generates spin of electrons to make free radicals. All free radicals have unpaired electron spins. These processes happen in the skin and the cytochromes with AM sunlight. Superoxide production is actually needed to oxidize sulfur to make sulfated versions of proteins and lipids to get the correct frequencies of light from the sun. This is why Mr. Moore is in deep trouble. This is how we tap the compound pharmacy in the sun to make our own hormones in the pituitary at night. If you are not sulfated in the AM, the compound pharmacy remains under lock and key at night. *We open the pharmacy in our brain at night, only when the proper frequency of light is present.* This is why Luis DeLecea has found that red light can release pituitary hormones when red light is delivered via the retina alone. Red light is the antidote to blue light. Red light opens the pharmacy and chronic blue light exposure closes it. This is why hormone panels and infertility are sky rocketing. Using an exogenous Rx hormone to open the door, only worsens the problem if your circadian cycle is uncoupled from light. It can create more problems when ubiquitin is uncoupled from metabolism or the cell cycle. This is why IGF -1 or Growth hormone is a wonder drug for kids with growth retardation, but can be a problem for an older person with tons of blue light toxicity. You might be playing with fire, and not know it. If your cells are filled with chaos and you stimulate its growth, cancer is very likely. If your cells are in good shape, with a low redox potential, growth hormone can be a wonder drug. No one seems to get the linkage.

Blue light, a form of non native EMF, is paleo's real issue. It is LCHF issue, as well. **Chronic blue light exposure essentially mimics eating carbs 24/7 in your mitochondria.** Blue light is one of the strongest signals from your environment and to your mitochondria that it is summertime 24/7. Blue light also bends most under the force of gravity. This is why living at a higher altitude can lead to some really surprising results, like looking like Adonnis and then

killing yourself.

You must hack your environment before your mitochondria or your diet.

NON GEEKS LESSON: The major biologic coupled cycles work in a specific order set to seasonal signals to your mitochondria where electrons and protons are handled. This is how biology works. Light dictates all control in the coupled systems because it controls ubiquitin, which is the first coupled cycle.

Ubiquitin = light (photoelectric effect)
Cell cycle = growth (second coupled cycle)
Metabolism = is the third level of importance (third coupled cycle)

Said another way for the NON GEEKS:

Ubiquitin is a deep story of light = photoelectric effect = DHA in Cell membranes = leptin receptor = Leptin Rx

Leptin is a light story and is a synonym for ubiquitin down regulation. It is not about food. This is why I disagree with Jane Plain on leptin function.

When light is coupled to metabolism you are leptin sensitive, by definition…….when it is not, you are leptin resistant.

If you are uncoupled long enough, you get T2D, AD, obesity, neuro-degeneration, autism etc. Essentially, the disease you get is tied to tissues it happens at, and the stage of your life you're in why?

What is the second thing ubiquitin is coupled too? CELL CYCLE.

Food and metabolism is step three.

Things for you become amazingly easy when you get the insight

that light is the driver of our biology, but your current beliefs stop you from this reality.

Most have forgotten the 48% to 10% third grade math equation I gave you to consider in Cold Thermogenesis 11. Blue light is equivalent to eating 14 cheesecakes a day, for 24/7. That is why people are having issues today. Diet alone can be a help, but it cannot a big difference maker unless it is loaded with DHA. A paleo diet has more DHA than a regular western diet, but not nearly enough for this modern world filled with blue light. Moreover, young paleo's and those in LCHF world's are all addicted to technology that uses these frequencies in excess, it begins to make sense why people with a paleo diet begin to have problems as time elapses in the environment they allow. With time, their problem becomes massive. In the last blog I showed you 5 specific cases where this has already happened.

People like, researcher Sarah Ballantyne, will be at Paleo fx this year in April of 2015 giving a talk in why ketosis is bad for you. If you understand the core of this blog, caveat emptor on her talk.

This is why this blog has to exist before that event. In my opinion, you could be being lead into the shadows of illness and a faster demise, because they don't understand the scale of the science that controls cell membrane chemistry or protein turnover. Ubiquitination uses AM sunlight to naturally couple these cycles, and these cycles are organized and driven by light. DHA needs to be present in excess when it is being destroyed constantly.

The real shocker for believers in LCHF and paleo? Food is not

even position two, of importance. Metabolism is the third coupled system to ubiquitin. The cell cycle is number two, and this is why cancer is exploding, in my opinion in the last 120 years. When you get to food in the third coupled cycle to light, DHA is the critical piece of the equation. DHA is critical for one reason. It is the only lipid that can turn light into a DC electric current and vice versa. DHA must be within the cell membranes of your leptin receptors. This is how it functions as an electron accountant for energy balance. DHA must be continually replaced in this region of the brain to properly function. DHA is critical for proper functioning of the circadian clock in your SCN. Moreover, if you allow your body see a high level of blue light or non native EMF, you will need massive amounts of DHA to replace the losses in every cell of your body. This is why exogenous DHA from seafood really matters. The amount of seafood you need is tied to the environmental exposure you allow. Paleo diets cannot provide this amount of DHA from their protein sources.

Those people with good ubiquitination rates and low EMF exposure will correctly believe that food can help tremendously. The key is the light/EMF environment they create and inhabit. This is why my tribe, bio-hacks their environment first, and foremost. **Food can be perceived as an important driver of wellness only when the first two cycles are properly yoked to light cycles.** Very few in the paleo movement fit this bill today. Very few in LCHF fit this bill today.

This is why I have always maintained, in my templates and Rx's, that carbohydrates in season, are important parts of the optimal health. Carbohydrates in summer time, slow the clock speeds in your organ clocks in relation to your SCN. This seasonal action allows you to make the required dose of free radicals your mitochondria need to signal properly to

your nucleus to drive proper epigenetic signals. **You need the superoxide burst at the right time of the year.**

If you have a toxic environment you will think you need to avoid all carbs, all of the time. Simultaneously, you will have a horribly low Vitamin D level even on supplements. You also will crave carbohydrates and paleo snacks. This is why all of their paleo diet books are loaded with paleo treats!!!! They have no idea what they are doing to themselves. *I tried to warn them in the past, but I discovered you cannot help anyone who is not ready to accept they have a problem.*

Carbohydrates can break an acute circadian mismatch we develop, if the first three cycles are coupled to sunlight. Jet lag is one of those examples of an acute mismatch. This is why I gave you the Jet lag Rx. This is why most who are jet lagged crave carbohydrates when they are on the plane and when they arrive at an eastward destination. When the mismatch is present chronically, as it is in our microwaved world, carbohydrates cannot do what they were designed to do, because the metabolic cycle is uncoupled from sunlight. Carb cravings develop quickly, and you start to graze 6 times a day like a gazelle, instead of eating like a great white shark would.

Paleo folks sense's this information in their mitochondria if they have some superoxide present, but LCHF folks cannot, because they have no superoxide present. This is why there is a divide in those two communities, but yet their ideas, have a lot in common.

TRUTH BOMB: ***My community/tribe is the one who lives in the middle of both of them, because they have been informed that light is the physical force that controls the coupling of those top three cycles. We eat a massive amount of DHA while avoiding non native EMF and blue light.***

Cycle 1 = ubiquitin

Cycle 2 = cell cycle

Cycle 3 = metabolism

When cycle one, is uncoupled from cycle two and cycle three, carbs become an emergency brake that can't engage the brake drum to stop the problem.

Ubiquitin pathways link the filtered light from the sun through the atmosphere, our skin, gut, and plasma to directly couple to the cell cycle and to metabolic cycles. Ubiquitin rates, when increased drive protein replacement. This occurs during inflammation. Inflammation is positively charged. The corollary is that excess dietary protein, in this context, (***paleo solution/blueprint***) basically pushes excess positive charge to our proteins, and excess positive charge leads to the over-active ubiquitin cycle expression. What does protein breakdown to? Nitrogen. This is a big problem for coupled cycle two, the cell cycle.

A little known fact about a Warburg metabolism: everyone focuses in on the glucose aspect of Warburg's findings, but if you read his papers he also found a lot of ammonia released. Why did he find that? Ubiquitin up regulation creates excess protein turnover, and this leads to a lot of ammonia and Reactive Nitrogen Species. When nitrogen gets oxidized, this means electrons are taken away from its molecular structure. *When this happens mTOR is activated.* This is why mTor expression is a problem for longevity and for "current paleo beliefs." NAD^+ drops and NADH rises. **You need to be smarter than they currently are.** ***This is why I am warning you about Sara Ballantyne's upcoming talk on ketosis at Paleo fx.***

When you're blue light toxic, for any reason, you lose the superoxide burst at cytochrome 1, where glucose enters ETC. NAD^+ levels drop. This is why sugar is a real problem in a microwaved world. **You completely annihilate superoxide production in your mitochondria.** Sara has no clue how light

alters mitochondrial cytochromes or electron tunneling. It is not that sugar is bad for us; but you get the idea this is harmful, when in reality it is your environmental light exposure driving the process. This light signal alters our mitochondrial signaling. You need to detox blue light from your life, and limit sugar/fructose to spring and summer. The more blue light you allow, the less carbs you need to use to generate superoxide. **Toxic levels of blue light, is our species' bitter truth**. Dr. Lustig is mistaken about fructose use too. He has his belief that fructose is a toxin, because his university (UCSF) sits in one of the worse areas of the USA for blue light. This is why his beliefs exist. Sugar/fructose, itself, is not the problem. ***What frequency of light your skin, retina, and gut are allowed to consume, however, is the 900 lb gorilla in the discussion everyone is missing.***

WHAT IS ANOTHER EMERGENCY BRAKE WE CAN USE WITH THESE UNCOUPLED CYCLES?

Toxic blue light exposure, is akin to eating a summertime load of sugar 24/7. You may want to believe "the metabolic winter hypothesis", if you want too, but you better do your homework on optogeneics before you eat like a gazelle. The people behind this hypothesis, embrace cold correctly, but they totally ignore why the tissue levels of DHA are the critical aspect. Nothing in this hypothesis deals with our modern blue light reality, and its quantum effects in our cells. Chronic cold stimulates AMPK pathways, to put an emergency brake on mTOR and IGF-1 naturally. This works even if we are uncoupled from light. ***65 million years ago mammals were uncoupled from light and it worked like a charm.***

AMP-activated protein kinase (AMPK) is a sensor of energy status that maintains cellular energy homeostasis. It arose very early during eukaryotic evolution, 600 million years ago, and its ancestral role may have been in the response to poor sun exposure in concert with starvation and chronic cold

exposure. It turns out each of the 5 extinction events on Earth had these 3 conditions present. This environmental situation was the likely driver of why AMPK first evolved in eukaryotes. It is no coincidence that DHA also arose 600 million years ago when oxygen showed up in the Earth's environment. Oxygen provides excessive electrons to lipids and proteins to increase the electrostatic charge in cells. This perfectly marries to the concept of why eukaryotes have so many internal cell membranes to hold these charges like a capacitor would. In fact, these environmental conditions were precisely what existed when eutherian mammals became the dominant species after the K-T event 65 million years ago. Humans come from this group of mammals. This is why the K-T event was expanded in my book's last chapter.

I also think this is why my book was not well received by Mark Sisson, and his marketing entourage; I gave him the manuscript to publish in 2012. Today, I believe the reason he passed on the book, was because he was afraid of the potential backlash effect, on his blueprint brand of ketosis. It was in stark contrast to my own version of the ketosis template in the book, required to fit the present day modern world. After all, what good is stepping back in time for your diet, when the Earth has taken 3 giant steps forward in creating blue light and non native EMF? That would have disrupted his brand, hence in my opinion, he passed on the book. I was more than happy to self publish my book, but to me, it was a clear sign that this movement grassroots leadership was more about marketing and money, than evolution or ancestral health. Slowly I began to separate from their ideas.

Recent work on AMPK signaling has shown that the kinase is activated by increases not only in AMP, but also in ADP. Although best known for its effects on metabolism, AMPK has many other functions, including regulation of mitochondrial biogenesis and disposal, autophagy, *cell polarity*, and cell growth and proliferation. Both tumor cells and viruses

establish mechanisms to down-regulate AMPK, allowing them to escape its restraining influences on growth, so they can survive forever. **Survival in mammals also is deeply linked to cold environments because of this relationship.** It is also why when astronauts leave the Earth's surface they begin shedding viral particles. The virus becomes able to sense higher energized electromagnetic waves in quantized fashion. Their proteins sense the change in the environments redox potential, and electrostatically release themselves from the host genome because the environment is not conducive to immortality.

This is why in high non native EMF environments in space NASA has found viral shedding in astronauts as they leave their nest in our DNA and proteins. I believe this can happen in frequent air travels and pilots and is why communicable disease is quite high in airplanes. Moreover, I also believe the same effects can occur on the surface of the Earth today, in people in a bad EMF environment. You might remember from Brain gut 2 that most of our DNA is made exclusively from viral parts. Energized EMF has massive effects on genetic material movements. It appears genes jump and mix based upon electromagnetic frequencies. Again, I want to remind you both tumor cells and viruses establish mechanisms to down-regulate AMPK, allowing them to escape its restraining influences on growth. **AMPK slows growth and promotes survival for this reason. This is why Cold thermogenesis needs to be in your toolbox in this modern microwaved world.**

This is why I scoffed loudly, when I heard on Robb Wolf's podcast, multiple times, that cold is just a hormetic stressor. Anyone who understands biochemistry well, as Robb does, should know cold is not hormetic and increases survival and improves longevity because its major effect is on AMPK signaling. This is why CT 6 was written long ago. The science of AMPK signaling is clear in uncovering how chronic cold environments becomes an emergency brake for up regulation of both IGF-1 and mTOR. I assumed someone well versed in

biochemistry knew this. I learned right there not to trust anyone else's ideas. **This blockade even works if you are blue light toxic!!!** This is why it is critical to perform my cold thermogenesis chronically in a microwaved world. My tribe has gotten that information for 6 years now. It seems the leadership of the paleo tribe has no idea why cold works, fundamentally.

If you want to believe in unicorns and that cold is hormetic, go ahead, and be my guest. Blue light is the same light frequency of sugar on this planet because of its tie to sunlight. Sugar consumption within the seasons it grows in is fine, provided you don't live in an EMF cesspool. Most do, however, today. Since excessive blue light destroys DHA and melatonin, and we need melatonin to sleep, blue light, and not sugar is what destroys your sleep. **If you're really following this optics lesson, carbohydrates can help sleep when your blue light toxic because every mammalian gene has a clock gene before it that glucose slows down.** This is why snacking is a sign of blue light toxicity. If you look at most paleo cookbooks and diet books, you'll see a ton of paleo dessert snacks. It has become a staple of their books. Now you might see why this is the case. Their lifestyle embraces a strong blue light exposure, because of how they embrace technology. Sunlight has a cornucopia of light frequencies, and we see them in nature, in rainbow's, when water acts like a prism to separate life as pictured above.

Think of the Pink Floyd prism now. Sunlight is only made from a specific amount of blue light isn't it, based upon the picture below.

The Dark side of wellness!!!

In your tissues, proteins and water interactions can do the same thing that occurred on the Pink Floyd album cover above. *The dose of light and its associated frequencies is the key to wellness.* The interaction of those specific frequencies of light with proteins cause size and shape changes and this alters optics inside the water in cells. The resultant optical interaction determines protein's size, shape and the density within the hydrogen bonding networks in water to control the clarity, or the atomic debris, for light scattering in us. This optical change causes a change in the tension of the cell, and directly alters the pattern of epigenetic expression.

Light controls the sea within by changing water's density and that light and density allows proteins to do what they can do.

Look closely at the prism above: the prism on the album cover was crystal clear. A crystal prism doesn't give you a beautiful beam of rainbow color if it is cloudy and malformed, does it? This is why the atoms 3D molecular arrangement within our cells is the key to the proper signaling that ubiquination requires for optimal life. **This is how ubiquitin controls this aspect of biologic optics.** Details matter in this branch of science, and it is why my blogs have to be as they are. I apologize that this complexity makes it harder to fathom, but this is how "lady evolution" uses her cosmic wand in us. *Prisms work on light rays, in a very similar way as gravity does.* When light passes through a prism, it bends naturally. What else can make light bend naturally, beside gravity? Electromagnetism. This surprises people, when they first hear it. Want to know something else, unusual? **Blue light bends more than any other frequency of light.** This, is a huge deal, because it might be where the arrow of time in

biology comes. It might be why telomeres evolved.

It turns out, all electromagnetic waves can bend light, through an indirect, quantum effect, that is not well known. This is called Delbrück scattering. *The bend is to such a tiny degree that we cannot yet measure it!!* Absence of measurement, however, does not mean it does not exist. Physicists have confirmed this version of scattering occurs. I believe we see the Delbrück scattering every time I see white matter plaques in the brain of MS patients. This is why I look at white matter changes in the brain with a discerning eye now. **It tells me how blue light toxic someone really is.**

Max Delbrück was a theoretical physicists who felt that rays of light interacted with the electromagnetic field of nuclei in atoms, and at close proximity, and believed the effect could be rather strong at the smallest scales of science because of the math and experiments he performed 85 years ago. Within the brain, these conditions exist, for this situation to potentially occur.

PHYSICS GEEKS: Delbrück scattering, is described as a process where, for a short duration, the photon disintegrates into an electron and positron pair. The charged pair interacts with another electromagnetic (EM) wave and then recombines into **the photon with a changed direction**. Thus, the EM wave bends the light. If your brain is loaded with blue light signaling, and blue light bends the most, I have the deep sense, that this interaction is very important in control of the aquaporin 4 gates (AQA4) in the brain. AQA 4 controls water flows between glial cells and neurons. We know that MS plaques are abnormal water diffusion signals. No one has any clue why they exist, but I have suspected this mechanism for ten years now. I also believe this queer quantum effect will be found to be linked to where the" arrow of time" comes from for biology, and where consciousness begins in animals.

Multiple Sclerosis' real problem: Blue light toxicity

People with Multiple Sclerosis are the poster child for alterations of these optical interactions in the brain. It is not minding your mitochondria, or eating vegetables, that is critical, in my opinion. In fact, eating vegetables is a poor man's way of gaining solar power, and it might help by lowering the blue light photons present in these foods. DHA, however, is the ultimate evolutionary creation for using solar power efficiently. Remember that DHA is destroyed by blue light. When DHA is present in cell membranes it is capable of turning sunlight into a DC electric current and vice versa. Without it, you lose a major way to concentrate solar power in your cell membranes for use. This is why all people with MS, seem to have low sulfated vitamin D3 levels.

Human cells can use all forms of energy in thousands of ways by virtue of the laws of physics. Minding the frequency of light you allow in your environment is the biggest issue clinicians are missing. To focus on things that are out of your control, whether true or not, is a disempowering strategy in my opinion. My perspective is very counterintuitive in this way. In my opinion, it's better to focus on strategies and solutions, based upon the laws of nature rather than our present beliefs. This is what a leader should advocate, in my opinion. The first responsibility of a leader is to define reality, and then offer a solution; that is a problem today. The last thing they should do, is to say thank you, to those who listened. In between, the leader is a servant to those they aim to educate. In this post, I am showing you that reality that I have seen for 10 years now. I have offered a solution on this blog and forum……..***now the key is, will 'you examine the evidence' of this reality presented, or just continue to be led off a cliff, believing, that sugar and diet is the key to your wellness?***

BACK TO THE RAINBOW: Delbruck scatter strikes paleo.

Each color of this rainbow, seen above in the prism, can be seen at a different angle. Violet/blue light bends the most while red bends the least. When you consider Delbrück scattering, in this situation, violet blue light is more bendable and would lead to very altered optical transmissions in the brain. This is a critically important aspect of optics, because gravity also bends light; this implies as we go higher in altitude the effect is magnified. There is a massive link with MS patients and altitudes no one seems to speak of. In fact, anyone with a neurologic disease should avoid altitudes because of Delbruck scattering. This is why suicide is increasing in states with altitudes. This is the story of ubiquitination 1 and why muscle mass disappears, and why you don't really need a sugar detox. *You need to re-evaluate how you allow blue light into your biologic box.* The modern world is microwaved, so EMF is present enmasse, and it will naturally cause a lot more Delbrück scattering in our brain; Clinicians need to expect this, because the physics say its effect is present. I believe MRI is the only way today we can measure it, but no one is looking for it. We also need to be mindful this effect will be magnified, because it has bigger effects on violet and blue frequencies than it does on red frequencies. **This is why I believe white matter disease shows up in MS patients.**

PHYSICS TRUTH BOMB: ***When you go higher away from Earth's core, even by an inch, gravity, and the Delbrück effect on light, becomes more magnified. This is why elevation in a microwaved world is a really bad idea. It is also why living in a high rise, flying frequently, being a pilot, or an astronaut is a horrible idea for your biology.***

In 2010 scientists at the National Institute of Standards and Technology went further in proving my insights might be spot on. Their experiments showed that just at 1 foot elevation, a clock ticks four-hundreth-quadrillionth faster per second. I would remind you all most humans stand erect and are 5-6 feet

tall. Now we have proof why the SCN must run faster than organ clocks. Physics proves it. This relationship cements why any altitude is deadly for biology. Living in a high rise building or flying constantly should be a Rx for term life insurance, not a paleo diet.

Now ruminate on those realities: excessive blue light exposure bends light in the brain to make aquaporin 4 water gates stay open much longer than normal in places (which forms white matter plaques) and this causes problems for glucose metabolism. Now for the real mind bender: If time dilates when one moves at high speeds, what happens to it when height alters gravity? As we go higher in elevation, gravity effect on light allows less bending. Because gravity naturally bends light, in those plaque, time is sped up massively (time dilation) causing early aging of these tissues, on a relative basis. This all occurs while glucose levels remain elevated, because rather ironically to modern thought, glucose elevation is trying to slow down the clock genes to re yoke ubiquitin to metabolism and the cell cycle. High blood glucose becomes one of the best measures the clinician has to diagnose blue light toxicity. This high blood glucose is used to slow time down, to restore metastability. This is why all chronic cold environments are associated with higher blood glucose levels. Note, how this is a light mediated problem, and not a dietary one; **sugar detox starts with avoiding blue light.** It is not a food story, and never has been a food story.

When you understand optogenetics well, then you'll see another more fundamental reason why my Cold Thermogenesis protocol is not hormetic, like Robb Wolf has told his flock of sheep. That statement, alone, shows his lack of knowledge about biochemistry, optics, and physics, all at the same time. Moreover, for an ex-biochemist, it shows a complete lack of effort to understand the science that controls AMPK pathways in chronic cold exposure. *God knows I have tried the olive*

branch approach with him, but he was not interested in a message that extended his own solution. Why should he reconsider his position on cold? Simple, because it is well known and published, that chronic environmental cold can directly alter signals in the AMPK pathways, shut down IGF-1 and mTOR. Both of these pathways are known to limit health and longevity. Cold alone puts the brakes on illness and death. **How is that for irony?** ***This is how mammals survived in a chronically cold environment and near total starvation 65 million years ago, when photosynthesis was ABSENT.***

TRUTH BOMB: Chronic cold exposure is how AMPK naturally puts the brakes on mTOR and IGF-1 one pathways. This is why winter is restorative and why life can survive better in cold environments. Every single extinction event on Earth has been associated with a cold climate after it.

It appears optical physics and research biochemistry may be an educational mismatch all in itself. If you follow his logic you might have a huge problem down the line with illness and longevity. Ten years ago I was no expert in physics, but I knew something was missing to the story because of what I found in mammalian evolution 65 million years ago. What spurred survival with no light, no food, and cold? I asked better questions of myself, and got a different answer than Paleo has. When you don't fully understand something you should remain curious, and not make up some partial truth to believe in.

Robb and I have not seen eye to eye in quite sometime, because of this very issue. I brought it up at Paleo fx in Austin, and it was not well received there. I have carried this same torch, on this long road, as a beacon of light to show you something no one else seems to see. When I stare a "Wolf" in the eye I will not be a lamb for my flock. I am the sheepdog who stares back and protects my flock from bad advice. I have

a duty to do no harm and that is what I have done for 4 years.

AMPK activation is something a research biochemist should know about, and his actions and word clearly show us otherwise. Anyone who claims cold thermogenesis is only hormetic wears their ignorance as a facade for the smart to visualize.

Chronic cold temperature changes water optics, because it affects water density. This is why Archimedes principle is critical to understand regarding the sea within your cells. Water density changes facilitate AMPK signaling, which then ***inactivate IGF 1 and mTOR*** pathways in one fell swoop. Cold exposure extends longevity because surface cold exposure is able, by itself, to increase AMPK and blood glucose to try to slow clock genes down. This is why the mammalian dive reflex is based upon surface changes to our face alone. It is also why it forms the basis of my CT protocol.

These clock genes, that are normally affected by blood glucose, are located in front of every single somatic gene in our DNA; When cycle one is uncoupled a high blood glucose cannot activate AMPK. In our modern microwaved world, this is exactly what happens, and this increases somatic gene expression to make more proteins. That is how ubiquitin runs wild. Only chronic cold can stop the process. For this reason, protein regulation is tightly coupled to the redox status of the cell, and when redox Rx is low for any reason,

proteins get marked much faster for replacement by ubiquitin. This series is dropping some knowledge and wisdom on you, why things really work.

Dr. Luis DeLeCea should be smiling now, because someone is beginning to make sense of all his work in optogenetics. Paleo is only a step in the right direction, because grass fed meat and lamb has “some DHA” in it. When you are a modern human, living in a microwaved world, the amount of DHA in paleo food’s does not come close to scratching the surface of optimal.

Paleo bro-science is not going to be pleased, and I am sure will continue to have issues with me. I am fine with that, because I have a larger flock to protect. That protection comes in the form of mother nature’s wisdom yielding her cosmic wand, called “physics.” All that matters is that you know now, that our species, and mother nature are quantum, and there is no running from it. *Your zip code determines your blue light exposure and is more important than your genetic code.* **This is a story you won’t hear at Paleo fx in April.** Think about this subject, before you go to Austin. Ask better questions of their leaders. *Force them to do for you, what they won’t do for you on their own.* 4 years ago I believed they just did not know this info, but now 4 years later, my beliefs have changed; I believe they do not want the truth out. I really believe they want you believing its about “food, and not about light”. I think money and marketing is a huge issue here.

It should be clear to you by now that your mitochondria is the sensor that connects you directly to your zip code, and reacts to what you allow it to sense. That is the story of this series.

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