

# Energy and Epigenetics 4: Light, Water, Magnetism

## Readers Summary:

1. Just how much has light, water and the magnetosphere changed in just 63 years?
2. How does Oxygen-related to light and temperature and to food?
3. How does  $O_2$  relate to the ocean, cold and photosynthesis?
4. Does global temperature difference in the southern hemisphere?
5. What are the two systems used in the brain to entrain circadian signals?
6. Are you wise or otherwise? Ordinary or extraordinary in your questions?

250 million years ago oxygen levels on earth = 35 percent. In 1850, oxygen levels = 22 percent. Today's levels now hover around 19 percent or less in most westernized cities. This assumes, of course, these cities are at sea level.  $O_2$  levels required for healthy humans = 19.5 percent. This proof is found on an oxygen dissociation curves of hemoglobin. This is not a good development for our mitochondria. But this is really bad news for modern-day marine life. Twenty years ago people scoffed at the idea of selling bottled water. It now is a 4 billion dollar industry because most people do not understand the real value of water. Water is directly tied to the amount of oxygen on our planet. In the next several years I would tell you to expect to see Big Food selling us oxygen as well as fresh water very soon on massive scales...just watch. Today's blog post is about the three laws of nature for all life anywhere on our planet. I refer to this three primordial factor of life as the "3 legged stool". These are axiomatic laws not subject to debate, research or your beliefs. All

decisions that life has made revolve around these three things. Reducing things to these three things is simple, but the application of how life and evolution have done it is very complex. Today, we begin to unravel the mysteries.



## 1950

To understand why I make this prediction, we need to look back in time for a minute and take a comparative look at our planet at 1950. From space, you would probably first notice that millions of pieces of 'space garbage' called satellites and the International Space Station is no longer present and had disappeared from orbit around the earth. The moon would appear six and a half feet closer to earth back then. Moreover, the continents of Europe and North America would be four feet closer together. Antarctica would have been a few degrees colder and its western shore would be frozen solid water and not be mixing with seawater of the Southern Ocean, as it is today. Zooming in for a closer shot, you would be able to spot some of the industrial clamberings of the Golden Age of Capitalism in the West and some of the stilted attempts at the Great Leap Forward in the East. Lasers, barcodes, contraceptives, hydrogen bombs, semiconductor chips, credit

cards, synthesizers, superglue, Barbie dolls, pharmaceuticals, factory farming, and distortion pedals for electric guitars would just be coming into existence on the surface of our planet. All this happened in the last 63 years.

All of these things were the forebearer of the massive increase in the use of fossil fuels used to create electric power to electrify the surface of the tectonic plates of continents of the earth. There would be 66 percent fewer humans on the planet than there are now. Over a million different species of plants and animals living in 1950, would exist, that have since gone extinct in those 63 years. There would be 90 percent more fish in the oceans, a billion fewer tons of plastic in our garbage dumps, and 40 percent more phytoplankton in our oceans. There would be 200 percent as many trees covering the land and about three times more drinking water available from ancient aquifers planet-wide. There would be about 80 percent more ice covering the north pole during the summer season and 30 percent less carbon dioxide and methane in the atmosphere. The earth's magnetosphere would still be relatively stable, as it was for the last 4000 years. None of these conditions currently exist any longer on this planet. Why should you care today in 2013? Well, begin by looking at the incidence and prevalence of neolithic diseases since the same time. You will notice a distinct coupling.

## **How the Macrocosm of Space Meets the Microcosm of the Planetary Field**

All of these events have another evil twin called ocean stratification. This is an even more important factor in nature that few seem to understand. Water chemistry is a huge factor in life. Moreover, it is tied directly to the last chapter in my book, The Epi-paleo Rx. We are losing one of our

best defenses to mitigate excessive environmental non-native EMF, as seafood dwindles in our oceans. When seawater temperature rises for any environmental reason, oxygen diffuses out of it. When your temperature rises, oxygen diffuses out of your tissues too! These are natural chemical and physical laws of the universe people. Biology is not immune to these laws. Biologists just act as if they are. When oxygen drops in the ocean so do iron levels in seawater. When iron falls in you, so does your tissue oxygenation. You have much in common with Mother earth.

Iron levels in our ocean are have been measured and are dropping today. Iron is an element that is vital for life. In fact, every form of life on this planet uses it to some degree to make sense out of the random chaos of the chemistry of atoms that life orders together to make the beautiful musical composition that is life. For humans, metabolism requires iron in many tissues. The thyroid can not maintain energy balance without it working in its proper context in a cell. iron carries oxygen to tissues in our cells via hemoglobin. We can measure hemoglobin and oxygen disassociation rates in medicine easily today. Do you know what happens to seawater when iron falls? It changes the color of seawater. A loss of iron can paradoxically make the ocean water crystal blue clear and devoid of life. Anyone who has seen the water around the tropics or the equator know the water there has always been really blue. It is not blue the further you get away from the equator. What else should you know about blue sea water and may not? The bluer sea water is, the less life it contains. The further north or south you go from the equator ocean water becomes green. When iron is present in abundance the water is green and filled with life.

What else do humans need iron for? Without iron our immune system crashes, we become dazed and confused, cold and very lethargic. Our metabolic rates can plummet. Neuro-immunity, it turns out, is tied to proper iron levels too! If you think

iron does not have amazing properties, think about this geologic evolutionary trick that occurred since India crashed into Asia to form the Mount Everest and the Himalayas. Without the formation of the Mount Everest, there would be no Sahara desert. The Sahara desert dumps billions of gallons of iron dust into the oceans to stimulate the phytoplankton that supports the marine life of the North Atlantic by creating oxygen from sunlight in the photic zones in sea water. Moreover, this iron dust also allows the ocean to become a massive sump to generate massive plant growth like seaweeds in the ocean that can absorb massive quantities of CO<sub>2</sub> out of the atmosphere to offset all the CO<sub>2</sub> humans have been releasing into the air since the Industrial Revolution.

## **What Else Does Iron do for Life?**

Iron protects the marine food supply from excessive man-made EMF by absorbing excessive EMFs just like it does in the core of a dying star. It is here where space physics should be instructive to us humans about our current healthcare plight.

When a star depletes all its hydrogen it begins to fuse heavy elements to make sunlight. As the core of the star changes its fuel source the spectral color of the star also changes its photoelectric effect in its light. In nature, a star explodes when it burns through all of its hydrogen and helium. It then progresses through nuclear fusion turning those gases in its core to other elements. Its core produces energy from hydrogen fusion first, then helium, then carbon, then neon, then oxygen, then silicon, and it all ends in iron. Stars, like humans, also have a life cycle. Very few people see the fractal pattern of human life in a star's life, but nature does. I think you might need to remember this too. It is going to be quite important as this series goes on.

Iron plays an important role in normal brain metabolism. It is a co-factor to enzymes involved in neurotransmitter synthesis

and metabolism, and a component of cytochromes essential for energy production in mitochondria. However, iron reacts with oxygen, resulting in the production of neurotoxic free hydroxyl radicals responsible for membrane lipid peroxidation and accumulation of lipofuscin in neurons.

Why do you think iron accumulates in neurons when they are sick and dying? In a star, it accumulates iron as it becomes energy depleted and it begins to emit large amounts of EMF before it explodes.

Iron is stored in the ferritin protein that is present at higher concentrations in the basal ganglia. Excessive iron accumulation has been associated with various neurodegenerative diseases, such as Parkinson's disease, atypical parkinsonian disorders, pantothenate kinase-associated neuro-degeneration, Alzheimer's disease, aceruloplasminemia and different types of hereditary cerebellar ataxias, such as Friedreich ataxia.

Iron is not present at birth in neurons, and progressive iron deposition in different structures of the brain accompanies normal aging processes. In healthy adults, the maximum iron concentration is found in the globus pallidus (GP), the red nucleus and the pars reticulata of the substantia nigra (SN). In the dentate nucleus of the cerebellum and in the neostriatum, deposition is much slower. Iron levels are much higher in the gray matter than in the white matter (myelin), with a content ratio ranging from 2:1 to 4:1.

## **How a Dying Star and an Obese Human are Congruent Using Nature's Laws**

Stars burn bright with light because they first burn hydrogen. As the atomic fuel changes the quality of the photoelectric spectrum of light they emit also changes. Light from hydrogen has a powerful spectral profile. Light from a red giant has a

far different spectrum of light. A dying star does not have strong powerful light. The photoelectric effect decreases its spectral power because of the fuel used in nuclear fusion, but the simultaneous frequency of the EMF released from the dying star simultaneously increases dramatically. What else happens as a star loses its energy? It gets larger and has a larger radius along its equator. This causes the star to evolve into a Red Giant. See, an obese person also gets larger radius around their waist when they lose energy too! Remember what I told you in EMF 2? As the dying star begins to burn all its fuel it is left with an iron core and an increasing EMF frequency is emitted from the star. As this powerful EMF ramps up and increases it heats up the iron core of the star and causes it to explode into a supernova. From this stardust all the other elements on chemistry's periodic table manifest. We are made from the remnants of that very same dust! In fact, life on earth requires 85 of the elements on the periodic table. Seven of the most abundant elements in the universe, hydrogen, helium, oxygen, nitrogen, magnesium, silicon, sulphur and iron are represented in most organisms. This is ingredient list for the recipe of all life.

What binds them all to create the whole is that life is energy, from the star's photoelectric effect. The fuel it uses to make light alter its color. This color change is very important in spectroscopy of stars. In humans, it is even more important. Humans lose energy in our modern world and emit black box radiation just like a dying star does. In the upcoming Energy and Epigenetic 6 blog, this effect will be seen to be massive.

## **Back to Modern Earth**

Since 1950, we have lost 90 percent of the fish in our seas. No one seems to notice this. It appears nature is now battling last, in the human line up of priorities. This is when the world's vertical circulation current, from shallow to deep in

the sea, and vice versa, shut down. It becomes important because that's how oxygen is sent down to the ocean depths via (higher density water) the water column and important marine food sent up via the thermohaline current. This effect is will be felt differently in different places on the earth. This will be felt strongest at the mid-latitudes between the Tropic of Cancer and Capricorn. As it happens, the water there will become bluer as life dies in the ocean. The reason is simple physics. When seawater temperatures rise, oxygen diffuses out of it as we mentioned earlier. Hotter ocean water becomes "less electron dense" and colder water allows more oxygen to become dissolved within it. When there is less electron density in water, the sun's visible light can not liberate all the electrons to make the maximum amount of energy possible. Electrons give chemicals their specific chemical phenotype in chemistry. It seems many biochemists may have forgotten that very basic natural truth too when we speak about foods. When electron density goes down in chemistry, life also begins to simplify because of a lack of energy to split electrons from water. This limits life ability to survive. This is why water chemistry matters huge to life and to the marine food chain.

## Water Chemistry

All life transfers energy using chemical redox reactions. This means they involve the transfer of electrons from one substance as a donor to another which is an electron acceptor. They do this based on the math called the reductive potential. (We spoke about the main reducing element in biochemistry in EMF 4: NADPH made from the Pentose Phosphate Pathway (PPP). The reduction potential is based upon the affinity for electrons compared to the affinity of hydrogen for electrons as a baseline. It begs the question then, where do the electrons come from to power these reactions? The short answer is the sun.

Albert Szent Georgyi knew electrons and photons held the key

to life. He just did not follow that pathway of physics. He was a trained MD, and this is why he fell short.

The sun splits water from its molecular chemical composition of H<sub>2</sub>O into 2 Hydrogen + 2 electrons + oxygen. These electrons are transferred to plants and foodstuffs via photosynthesis on the back of the water molecule. This is why plants, trees, and bacteria need water to grow. Animals have a more complex way of doing it because as more complex life forms they require more energy to power their newer evolutionary designed systems. Animals transfer the electrons from food to their mitochondria using water in a cell as the transfer mechanism. In this process, they use proteins loaded with iron to do it using quantum tunneling. If I were you, I would not forget that point.

## **How Food is Codified by Light and Its Electrons Delivered to CSF Water**

Foodstuffs just happen to be the way life packages this energy transfer of electrons from plants to animals to deliver them to the inner mitochondrial membrane when we eat to use the power of the sun's electrons to make chemical energy in ATP. This is how food codifies the photoelectric effect of visible light from our sun for the brain to perceive energy. Moreover, where these electrons come from, is very important for food and for proper brain function. I posted this question over two years ago to some paleo luminaries and "they" did not get the connection at all.

The SupraChiasmatic Nucleus of the brain pays attention only to light and dark signals, not to codification of electrons or protons from food.

I first eluded to this in Cold Thermogenesis 6. This system is

the “digital system” (fast) of light transfer in the brain we spoke about in Brain gut 11 through the eye and into the SCN. This is the major circadian clock of life forms. Light sets the photoperiod and vitamin A cycle in the human brain. There is another system in the brain that works as an “analog system” (slower) alongside this digital system. It uses other tissues derived from neuro-ectodermal tissues in an embryo to power itself. Skin happens to be one of these tissues. The skin also collects sunlight to make Vitamin D from UVB light.

The gut collects the sun’s photons and electrons from these seasonal food sources based upon where the animal is on the planet.

Both of these neural circadian systems act in unison to help activate the DC current that begins in the brain/Cerebrospinal Fluid (CSF) interface surrounding our brain’s surface and then oozes out of our spinal nerves above our peripheral nerve fibers that control motor and sensation but are below our myelin layers. This layer of CSF forms the interfacial water of Schwann cells and oligodendroglia in the CNS and PNS. Every Schwann cell, oligodendroglia cell, and microglia cell in humans has been found by electron microscopy to have open nanopores in their cell membranes linking these water molecules together in this system. Becker was the first scientist to show how they work in human bone regeneration. Later on, Becker found this DC current was also found to be present in all vertebrates, to regenerate their own tissues. Once again, the DC current is an experimentally proven scientific fact since the 1960s.

In Energy and Epigenetics 1, I showed you how the human infant myelinates its own brain normally. It does it well only in ketosis from its mother’s milk, which is designed by evolution to be chock full of fats and proteins. Here we see that fats are critical in myelin maturation. Seventy percent of myelin is fat, whose substrate building blocks are found in human milk. This assumes a mother breastfeeds her child. This shows

you how food electrons are processed in a growing nervous system. So how else might food affect this analog system by evolutionary design? Food electrons primarily affect the peripheral molecular clocks in organs like the liver and the gut by using incretin hormones hormone system. This system is part of the analog system for neural circadian control. As the electrons are stripped from the food they are being carried to the inner mitochondrial membrane.

The amount of electrons in food is also directly tied to the microbiota present in the gut, too. Few people seem to know that certain gut microbiota is immune to the effects of non-native EMF like lactobacillus. Remember, bacteria make energy from the photoelectric effect, too. This means that our gut microbiota also is codified by the food we eat in seasons. As the seasons roll on, the earth's native EMF also changes in a subtle fashion. This means the brain has to be able to sense this change, and it does. How it does it is nothing short of amazing. It is also why certain gut bacteria are associated with obesity and thinness. No one seems to see this homology. I do. This is a story tied to the electromagnetic spectrum. This adds a layer of complexity but how the environmental information gets codified by the brain is the same in all animals.

## **The Two Circadian Systems**

The vagus nerve connects the digital and analog systems together in the brain. It also is the protector of the blood-brain barrier, the gut barrier and the pneumo-environmental barrier in humans. The vagus nerve connects the entire gut down to the transverse mesocolon of the hindgut to the fourth ventricle of the brainstem. This ventricle is filled with CSF and the vagus nerve is covered with myelin in connection with this CSF. This is how the "central digital" circadian system of the SCN and the "analog circadian system" of the gut are linked to light and the timing of food grown in the

environment so that the signals can be yoked via the area postrema and the median eminence in the brain. These are two areas of the brain do not have a blood-brain barrier so the electron density in the CSF is accurately tied to the local environment. The area postrema and median eminence are called the circumventricular organs. Both of them are bathed in CSF that surrounds the brain. The digital circadian signals project visible light photons from the retina to the median eminence to affect hormone release in the pituitary. The analog system from the gut's photoelectric code for food projects directly to the area postrema. This unifies how the analog and digital circadian signals in the brain work in unison to tell an organism what their energy balance is at any time of the year by counting electron density in the CSF. Within CSF layers there also is a stratification of water by density as well. This is another example of the fractal design of how water stratification occurs in the oceans to create oxygen. This is also how the central clock and peripheral clocks yoke the photoelectric effect from the different sources in our environment. It should be intuitive now why environmental mismatches in the brain are perceived as a mixed message by our leptin receptor in the hypothalamus now. Your leptin receptor job is to count the electron density in CSF that surrounds it to send this information to different areas of the body. When we have any mismatch in the photoelectric signaling in the hypothalamus, the result is a cell with the leptin receptor is molecular crowding. Molecular crowding is a synonym for inflammation. Inflammation is a synonym for leptin resistance.

**Key Point:** It is why eating carbohydrates out of their proper light/growing season will alter dopamine and prolactin levels due primarily to altered light signals from both systems. It also why melatonin signals are linked in the digital system to light and dark cycles. Proper melatonin signaling is tied to proper calcium signaling and proper melanopsin signaling that uses calcium signaling in the brain's pineal gland as well.

They must match in the brain; if they do not, all hell breaks loose, and illness follows.

## **Geek Fest for Electrons from the Photoelectric Effect**

Why is the magic of water so important to our brain? Consider how plants do it: to synthesize one molecule of glucose by photosynthesis in plants, 24 electrons must be removed from water molecules by sunlight alone. These electrons are held by the redox potential of oxygen (+0.82V). They are pumped uphill to carbon atoms that are partially reduced to a carbohydrate with a redox potential of -0.42 V. The potential energy difference is 1.24 Volts. This change in free energy is in the positive direction. The result of this energy transfer creates 2870.2 kJoules of energy. This is an astounding amount of energy capture when you understand the quantum dance of the sun's photoelectric power on the water. Water becomes essentially liquid sunshine for any cell. This is why trees and plants only need water and sun to grow. They don't need food, as animals do because they spend 100 percent of their life connected to the ground and 100 percent of their life with their canopy in the sun. Animals do not.

Therefore, they need different ways to manufacture the electrons the sun's power to split water into electrons. Did you know that all bacteria, fungi and archaea, plants and trees also have the analog DC electric current? They do. They do not have the digital current because they do not use food or vitamin D. To codify this information for complex systems requires a neurologic system. Photosynthesis is where evolution initially came up with the DC electric current. As life got more complex, so did circadian signaling and this is why animals evolved a brain and came up with the adipocyte and subcutaneous fat stores. Less simple life forms did not evolve body fat because they codified all their energy needs in light

and water only. A life that moves across the earth (animals), not connected to the earth, sun, or water 100 percent of the time, got “the energy of the photoelectric effect” in food and other ways. Life was quite smart tapping the potential of water for electrons in this fashion. Nothing in the universe has the ability to transfer energy this well or this easy to create complexity. This helps explain why water makes up 71 percent of the earth surface and most of our cell’s insides as well. Coincidence? Doubtful.

## **Water and Oxygen**

Moreover, the liberation of oxygen from photosynthetic plants and bacteria also allowed more complex life forms to evolve using more complex energy transfers. The more complex things get in an organism as evolution has evolved, the more brain one needs to control all the circadian systems tied to the environmental signals. The more oxygen in seawater meant the more electrons would be in our seas. The more life present in the sea would mean the world’s oceans would be more green, and not blue. The colder the water meant the higher the electron density would become; this directly correlates to the amount of energy available for life forms to tap for evolutionary progress. This is why the Cambrian explosion occurred 580 million years ago. Nick Lane’s book, *Oxygen*, clearly lays that out brilliantly. This greatly enlarged the energy pool available to the biosphere on earth, as it evolved slowly over 3.5 billion years. These energy transfers are what living creatures are interested in it. They are not interested in macronutrient ratios or beliefs about food that modern man has today. Life uses these laws of nature 100 percent of the time. When you live outside the laws of nature, you first get ill, with a neolithic disease, and then you die of one earlier than you should have.

# The Magic of Water in a Magnetic Field

Water also is the perfect chemical magnetic dipole chemically, so this is why it is the major substrate on the earth to become active or passive in energy transfers with the earth's magnetic field. When water finds itself in our native magnetic field, water becomes able to transfer more energy from the sun's light to living things. This is why water is the liquid of life and is called liquid sunshine by quantum biologists. It is also why NASA, first looks for water than a magnetic field, when it is searching for life elsewhere in the cosmos. When water exists in an extreme low-frequency EMF field, as was normally found on earth before 1850, water's hydrogen bonds oscillate and resonate and at 7.83 Hz or harmonics of this frequency up to 89 Hz. In actuality, the earth magnetic field alters itself seasonally from 0-30Hz due to the sun's magnetic field. These changes in micropulsations directly act upon life by changing DNA and RNA expression. We call this epigenetics. How does this happen? The amount of oscillations from these extremely low-frequency natural EMF's causes a favorable change in the hydrogen bonds of water to alter the bonding angles in the dipoles of water molecules to become maximumly efficient to transfer energy between the sun to our cells. Since 1950, that magnetic field has been radically altered by man.

If you do not believe a man can affect our magnetosphere, read this quote by Dr. Marino testimony on EMF effects from electric transmission lines:

"On November 1, 1975, barely six weeks before the testimony was filed, R.A. Helliwell and his colleagues at the Stanford Radioscience Laboratory published a paper in the Journal of Geophysical Research. They presented evidence that showed that radiation from high voltage transmission lines traveled out from the earth about 90,000 miles to a region of the earth's

atmosphere called the magnetosphere, causing changes therein. The existence, composition, and characteristics of the earth's magnetosphere are universally recognized as important influences on life on earth. Prior to Helliwell's work, no one had known that power lines could produce such a global impact."

Or this one:

"A detailed explanation of VLF spectra shows that the strongest waves emerging from the middle magnetosphere during the storm recovery period and during isolated sub-storm activity are often emissions stimulated by radiation from the electrical power distribution system. Several different types of power line radiation effects are illustrated using broadband spectral data from stations in Antarctica and North America. It appears that man-made VLF noise has a strong influence on the energetic particle population in the magnetosphere."

It is time for you all to become aware of something modern science has totally missed.

**Circadian Biology Super-Geeks:** This electromagnetic field effect also allows voltage-gated calcium channels to work properly in the central nervous system of every animal that has a brain on our planet. I showed you this on the last blog. Twenty-three recent studies have confirmed the pathologic role of increased intracellular  $Ca^{2+}$ , nitric oxide, peroxynitrite, following pathologic man-made EMF exposure. When EMF is excessive, increases of ROS are leached from the mitochondrial membrane, the gut, gut bacteria and lung barriers, the blood-brain barrier all become leaky to inflammatory products. Normal physiologic ROS leak in mitochondrial are vital in optimizing ATP synthesis by stimulating mitochondrial biogenesis. When you leak more you become energy inefficient in processing electrons across your inner mitochondrial membrane via quantum tunneling. In Nick Lane's book, Power,

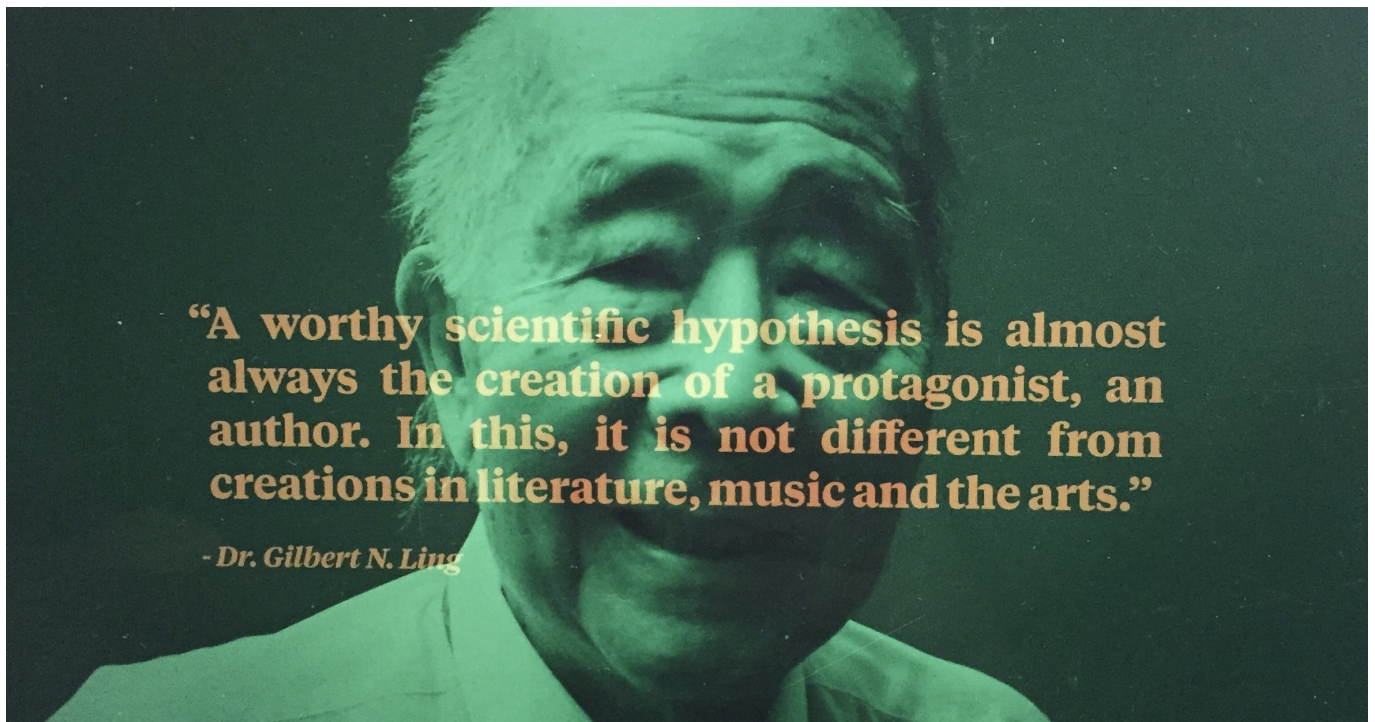
Sex, Suicide, this view is supported by the fact that antioxidants lower not only ROS leak but also mtDNA copy number and ATP synthesis levels. This native ROS leak in our mitochondria, in effect, signals we have a low capacity for energy production relative to the demand cells are calling for, stimulating compensatory mitochondrial biogenesis to meet the stress from the environment field. Remember, excessive man-made EMF causes a massive stress response across the brainstem, as Becker, Parker, Wertheimer, and Savitz's experiments have shown.

How does EMF minimize mitochondrial biogenesis in the brain? By forcing neuronal mitochondria to run its metabolism on glucose through cytochrome 1. We covered this in EMF 4. When this happens we get excessive mitochondrial leak over time. These things are well documented in the literature already. What people have not done yet, is connect this story to how excessive man-made EMF increases this process to further stimulate ROS production in mitochondria. Supra-physiologic EMF also lowers superoxide generation when oxidizing polyunsaturated fatty acid (PUFA) in the mitochondria. Remember I told you in EMF 7 that PUFA's are ingested in excess, they act as dielectric blockers inside the cell membrane? Here is the mechanism on how it works. The key factor in generating new mitochondria via biogenesis is to oxidize fat, and burn it well as a primary fuel source to offset this field effect. This is where the PPP comes in. It is the simplest metabolic pathway to get this desired effect.

## Regulation of the PPP

**Geeks:** The first step of the phosphopentose pathway is the irreversible committed step. This reaction is catalyzed by glucose-6-phosphate dehydrogenase. This step is of course allosterically regulated. The product of this reaction NADPH is a strong inhibitor. So when the cytosol concentration of NADPH is high, the enzyme's activity is low. It is also

allosterically regulated by fatty acid acyl esters of coenzyme A. The transcription of the gene for this enzyme is under hormonal regulation. These hormones come from the pituitary gland, which is anatomically located next to the median eminence, which links to the “analog circadian system” to environmental signals coded for by the water found in CSF. What ultimately controls this regulation? The EMF found in the environment of DNA at this time controls it. If the CSF surrounding this area is electron dense or not, this is what ultimately determines if the DNA/RNA of the cells making our hormones are paramagnetic or not? Whatever electrifies DNA/RNA controls its epigenetic expression. Making any connections yet, folks? Oxygen and DHA are paramagnetic for a deep reason. They are drawn to magnetic fields. What do you think mitochondria might be on a quantum level?



You must become a fat burner using the PPP because this will limit excessive ROS mitochondrial leak when your environment is littered with man-made EMF waves. You should also know the PPP requires no ATP and makes no ATP showing you that Dr. Ling may be correct about what ATP really does in us. It is not what we are all taught. With excessive EMF fields found in

our modern environment, one loses the ability burn fat well unconsciously, regardless of the food you eat, because our five senses were not evolved to sense when the field effect moves from a waveform micropulsation event to a particle based field event.

On this planet the electromagnetic field was a given at life's beginning, so life used it as its straight edge during evolutionary design. That given is no longer a constant.

In fact, it is why many constants are no longer constants when you bother to look. From 1928-1945 the speed of light was slower. Since the 1960's a 1 Kg stainless steel ball used for comparison measurements was no longer found to weigh 1 kg. It got fatter! Rupert Sheldrake's recently banned TEDx talk uncovered this truth. Constants can only change when the field they exist in is altered for some reason. Modern science has just ignored them all, at your peril. This blog is all about what it really means for you today. The neolithic disease appears out of the blue, when EMF fields vary.

To see what you can not perceive watch, this video on the observable effects of RF/MW radiation.

The only thing we seem to sense when the native EMF field increases in power is that we perceive we need more carbohydrates to regenerate our ATP levels faster, to offset the energy inefficiency in our inner mitochondrial membrane by the loss of electrons to our environment. This is why you begin to sense you really need carbs. I spoke about this in detail in the EMF 4 blog post. Please re-read this and make the connections to the altered field we now have to live in.

## **EMF Smoking Gun**

**Biology Geeks:** When EMF is high, so are inflammatory cytokines that raise your temperature, and tissues begin to concentrate iron for protection from the EMF. I told you in the beginning

of this blog that a higher temperature also means your tissues are losing oxygen and getting hypoxic. This is what happens when you lose energy to your environment for any reason at all.

Typically peroxynitrite levels can be highly elevated when both of its precursors, nitric oxide and superoxide, are high. Consequently, agents that lower nitric oxide synthase activity, like anesthetic agents, are quite effective in mitigating excessive EMF exposure risks. It would appear Michael Jackson intuition about what he might have needed to live and sleep may have been correct! I would bet that his brain at autopsy, was loaded with iron too. Have a look at Brain Gut 9 again and see how we linked fake light, EMF and the gut flora together. You might be asking why the King of Pop "sensed" that he needed anesthetic drugs to in fact sleep? The reason is now fully understandable; he was becoming extremely hypoxic because of the EMF he bathed himself in to make his music of 50 years.

People who spend lots of time in ICUs are at risk, too.

Superoxide ( $O_2^{\cdot-}$ ) reacts avidly with vascular  $NO^{\cdot}$  to form peroxynitrite ( $ONOO^-$ ). The cofactor tetrahydro-L-biopterin ( $BH_4$ ) is highly sensitive to oxidation by  $ONOO^-$ . Tetrahydrobiopterin is a naturally occurring essential cofactor of the three aromatic amino acid hydroxylase enzymes, used in the degradation of amino acid phenylalanine and in the biosynthesis of the neurotransmitters serotonin (5-hydroxytryptamine, 5-HT), melatonin, dopamine, norepinephrine (noradrenaline), epinephrine (adrenaline), and is a cofactor for the production of nitric oxide (NO) by the nitric oxide synthetase. This ties it to most of the neurotransmitters involved in feeding and in circadian signaling as I laid out in Brain gut 11. It also directly links food to abnormal prolactin signaling, too.

Nicotinamide adenine dinucleotide phosphate (NADPH) oxidases

represent major sources of this reactive oxygen species. NADPH oxidase generates superoxide by transferring electrons from NADPH inside the cell across the membrane and coupling these to molecular oxygen to produce superoxide anion, a reactive free-radical. Superoxide can be produced in phagosomes, which contain ingested bacteria and fungi, or it can be produced outside of the cell. In a phagosome, superoxide can spontaneously form hydrogen peroxide that will undergo further reactions to generate reactive oxygen species (ROS). Superoxide kills bacteria and fungi by mechanisms that are not yet fully understood, (but we know it kills them) but may inactivate critical metabolic enzymes, initiate lipid peroxidation, and liberates redox-active iron, which allows the generation of indiscriminate oxidants such as the hydroxyl radical. Superoxide anion is particularly important as the product of the one-electron reduction of dioxygen  $O_2$ , which occurs widely in nature. Both dioxygen and superoxide ion are free radicals that exhibit paramagnetism.

**Key Point:** The generation of superoxide requires NADPH and thus ties the Pentose Phosphate Pathway (PPP) to this reducing co-factor to mitigate the risks of EMF. This means that a high fat diet is the preferred diet to mitigate an excessive man made EMF risk to biology. This means that what we have believed to constitute a healthy diet can no longer be true in an altered field. It implies that most of the nutrition research is null and void because it never controls for an altered field effect. I laid these foundations out in the EMF 4 and Quantum Biology 8 blog; the current of flow of electrons becomes massively important to increasing energy generation for life to survive. This sounds very similar to what a star faces as it is dying, doesn't it? Quantum physics describes what happens in the macrocosm and microcosm congruently because both must follow the laws of nature. Our beliefs do not allow us to side step this relationship.

**Geeks and Non-Geeks:** Diminished levels of BH4 promote

elevations of superoxide. Glucose metabolism also happens to lower BH4 and NADPH levels extremely quickly. Chemical agents that raise superoxide dismutases (SODs), the enzymes that degrade superoxide) such as phenolics and other Nrf2 activators that induce SOD activity, as well as calcium channel blockers may be useful in mitigating EMF risks in an altered field. The NRF2 pathway regulates the production of important molecules that impart antioxidant activity, such as glutathione and superoxide dismutase (SOD). It also regulates the production of phase 2 detoxification enzymes in the liver, including glutathione S-transferase, and down regulates signaling factors such as NF-kappaBeta for a healthy response to inflammation. Many chemically diverse NRF2 activators have already been identified in foods, including the glutathione peroxidase-1 mimetic ebselen, sulforaphane found in cruciferous vegetables, caffeic acid phenylester from the bee product propolis, cinnamic aldehyde (found in cinnamon bark). It seems the scientific literature is just ignoring what is becoming substantial scientific data. The facts are known, but no one is connecting these dots to excessive EMF!

**Cauliflower**



**Brussel sprouts**



**Kale**



## **Rich sources of sulforaphane**



**Kohlrabi**



**Cabbage**



**Broccoli**

These cellular effects eventually all lead to calcium efflux from the cell and this ultimately alters transmembrane resting potential. This is where the environment meets the life within the cell. It is the battle line of where epigenetics occurs. All of these things affect the ability of water to properly electrically charge RNA and DNA, and thus, alter genetic expression. This is what is causing all neolithic disease generation, in my opinion.

## **Why Calories are a Useless Metric**

So what electrifies DNA and RNA? Water, in earth's native magnetosphere is the short answer. Water in rain, is energized by the sun's photons and electrons. This energy is transferred to the earth by rain and rainwater allows all plants and

animals to survive on this planet. This is how trees, flowers, and grass live and grow. They do not need to eat food to make energy, so they have no need for fat stores as mentioned earlier. Animals, however do not live this way. Animals evolved fat cells for this reason alone. Plants and trees are 100 percent connected to the earth in the ground and their canopy is exposed to the sun all the time. They get what they need by how they live. Life is all about energy transfers. This is a missing link for most biologists. Energy transfers in physics are measured in joules, not calories, in open systems. Biology happens to occur in an open systems, not closed systems.

This is why calories are a useless metric for mankind. They are only useful for the Hawthorne effect which is a psychologic and not biologic effect. This is one of the first mistakes modern science men have made in their misunderstanding of nature laws. If you think calories matter, you too are making the same mistake. Again, these are natures laws folks. So we humans have adaptive methods to complete life's energy transfers. In the earth's native magnetic field, water becomes coherent in the native ELF EMF, called the Schumann resonance, and this means it can transfer energy from the sun's photons and electrons with 100 percent efficiency. When the field is altered from the native state the ability is lost or becomes very inefficient. This leads to illness first then an early death next. Where do these electrons and photons come from? They come from the splitting of water in our body and from our food. Sounds familiar doesn't it?

Just to give you perspective how powerful this is, a modern combustible car engine gives you 14 percent–26 percent energy from gasoline. Your mitochondria gives you 39 percent efficiency from glucose or fat to make ATP. Thirty-nine percent fuel efficiency can not account for enough energy to mathematically explain enzymatic fluxes or reaction speeds to overcome the energy of activation we have measured in

experiments today. In physics, they say if your theory does not meet your experimental results, then your theory is wrong. Sadly, biochemists do not follow this line of reasoning. Biologists do not understand nature's laws and physicists do. You would be wise to understand this distinction.

## Food and Water

Again, where does this energy come from? It comes from the electrons from water and food. We still use water to complete them, but we also procure electrons and photons from our foods. Food happens to grow according to the light and water cycle everywhere on this planet. This means the photoelectric effect is built into the seasonality of food where it grows based upon the latitude and longitude of its location on earth. This means that food, also has a natural tie to the native temperature cycle on the planet as well. Read the hyperlink you just passed over. Water exists in different physical states as temperature varies on earth. The state of water changes its ability to transfer energy to cells. Liquid water, for animals, become liquid sunshine to move the electrons from food to oxygen in our mitochondria to make ATP to unfold proteins to bind water to protein to electrify them. Ice helps store energy when life is in trouble, and water vapor combines in the atmosphere to form liquid rain in clouds to transfer the electrons liberated from sunlight to plants and animals on our planet. Water has amazing affects within cells. It is here where water is split by the photons and electrons from the sun to make more energy for life to use. How does this happen? When proteins are synthesized they unfold and take on their tertiary and quaternary structure because of ATP to expose water binding spots on their surface. This acts to make super conductive water cables surrounding proteins exposed to the photons and electrons liberated from this water shell around proteins called reverse micelles.

# Gilbert Ling Truth Bomb

This architecture mimics the function of CSF around the neocortex of the brain. The physiologic function of this water, however, is not to liberate oxygen as it is in the brain, it is to generate massive amounts of energy from the liberation of electrons to drive the enzymatic fluxes of biochemical reactions. It is not ATP that does this, because its action can not explain the energy of activation rates of how biochemistry occurs. Gilbert Ling showed this in the 1960s, but people just ignored his very precise work. Very few people know about how water becomes capable of "protonicity" using reverse micelles around the collagen in the cells cyto-architecture, but even fewer people know that all enzymes are trapped in reverse water micelles to account for the superactivity of proteins and enzymes in a cell. Water chemistry is critical in understanding how enzymes can react at the speeds they do. Biochemistry uses the electrons liberated in the liquid crystal phase of water inside a cell and around organelles to generate coherence energy transfers. It uses protons with a specific quantum spin number to control energy flux inside of a mitochondrion. This is how semiconduction works in a cell. The finding of the spin Hall current in a cell, proves biology uses it to create life. Who discovered that? Robert O. Becker did in salamanders and in human bone. Read the hyperlink you just passed.

**Quantum Biophysics Geeks:** It occurs on the interface of water on the collagen cytoarchitecture and around the reverse water micelles of protein. When tropocollagen is electrified by the DC current in cells it lines up in long cylinders of collagen fibrils found in all tissues. Collagen is the major protein in all animal cells. When tropocollagen is non electrified it turns into a gelatin mush. Water is split into photons and electrons to generate wave/particle energy solitons to run the kinetics and flux of all biochemical pathways. Solitons, among other mechanisms, are a quantum process to transfer energy in

a biologic system. Herbert Frolich found these in cells also in the 1960s. ATP is not an energy substrate like most biochemists believe it is. It is used to unfold proteins and expose their -NH and -COO moieties to bind water to it using water's amazing hydrogen bonding network. That network works best for these energy transfer on earth for life when the magnetic field is resonating between 0-30 Hz. This is why the Schumann resonance stays in these ranges on this planet when the sun is shining its EMF, called visible light down upon us. When the electromagnetic field becomes altered for any reason at all, or blocked by man made EMF field signals, all life forms lose energy because of de-coherence of these transfers. When life loses energy, life first gets ill, and then it dies faster. These are Nature's rule, not mine.

**Non-Geeks:** The visible spectrum of light from the sun has not changed in 4 billion years. It is the one constant. Modern earth's problem begins with alterations in water chemistry due to dielectric blockers introduced to water by man and the excessive artificial EMF man has created for technology since 1850. These changes have created an alteration in how biochemistry unfolds inside our cells as cells lose water intracellularly and become dehydrated from the effects of EMF. The sheer volume of useable water on earth is also declining because the amount of people on earth has grown tremendously since 1850. The earth is covered by water, but most of it is sea water, which animals and plants can not use. Most land based life needs fresh water. 71 percent of the earth is covered with water. 96.5 percent of it is in the ocean, 1.7 percent glaciers and polar regions, 1.7 percent in ground water and lakes and rivers, and 0.001 percent is in air as water vapor of the clouds. Out of all that, only a total of 2.5 percent of the water on our planet is fresh water in ice and groundwater. Less than 0.3 percent is in lakes rivers and in our atmosphere.

This is a real issue for modern human's is that two of the

three basic natural laws and foundations of life have been radically changed on earth by man – namely water chemistry and the electromagnetic field. Fresh water depletion rates are astounding in the last 30 years. This is why selling bottled water was a smart business move 20 years ago. If you really understand this blog, you will see why people will begin to clamor to sell oxygen commercially now and in our immediate future. If you read the aqua-diversity literature, as I do, you would see in 2010 a major meta-analysis showed that the combined effects of pollution, dam-building, and agriculture run off , conversion of wetlands, and the introduction of exotic species to new habitats is destroying the fresh water cycle we depend upon. We are not going to run out of sunlight any time soon according to NASA, but we are already running dry on water and losing atmospheric oxygen at alarming rates and no one seems to know it. Why is this important to solve the puzzle of modern neolithic disease generation? I hope by now you are getting where this is all headed. Without water in its proper magnetic field, earth eventually becomes a hypoxic furnace because of the alteration of these two laws of nature. Sounds like Mars, huh?

## **Quantum Water and Oxygen**

When fresh water falls in life forms, oxygen levels also fall for life in kind. This is why intracellular dehydration is devastating to mitochondrial function in life. They are inextricably linked, evolutionarily speaking. This is precisely what is happening today on earth primarily due to 50 years of a massive scaling up of man made EMF for modern convenience and luxuries. Fresh water is going into the sea at record rates now. This causes the pH and the density of water to change. This acidifies the ocean and this kills the photosynthetic plankton which make most of the oxygen for all life in the sea. This is the base of the marine food chain and the marine food chain supports all land based life through the massive generation of oxygen. It is the ultimate circle of

life. When man faces dehydration in their cells and loses water, guess what also happens? Their pH changes in serum and the density of water in their plasma also changes to cause elevations in particle suspended in our blood plasma. These particle are what doctors measure in a lipid panel called, triglycerides and small dense LDL particles. Particle size and density of cholesterol lipoproteins also act in kind using nature's laws as well. This is why lipid profiles are altered when a lack of water and excessive EMF are present in our environment. Once, again for "real cholesterol clarity" based upon the laws of nature, when we become dehydrated and the magnetic field is altered artificially, it causes a change in density and particle size of the LDL lipoproteins. This change mimics the disease we call metabolic syndrome today, perfectly. In Dr Becker's books, he spoke explicitly about a US NAVY study in 1973 done in Pensacola, Florida, where the exact same relationship in lipids were found in US NAVY personal who were exposed to radar microwaves over time.

It amazes me no one has thought to see how the same thing that happens on a planetary wide basis, in water chemistry using physics laws, also happens inside our blood plasma, too! It is only a mystery when you're blind to nature's laws. The law's of physics in our liver and blood vessels are no different than the physics in our oceans and atmosphere on our blood lipids. People with metabolic syndrome all have altered AVD02 which signifies a metabolic and/or respiratory acidosis at some physiologic level. When water is lost via dehydration, magnesium is lost as a normal consequence from a cell because it is hydrophilic cation. We already discussed how calcium is lost from tissues in an altered EMF environment, because of the changes on voltage gated calcium channels. This is where neuro-degeneration, diabetes, heart disease, autism, and any other disease you can name originate. I have been telling you all this for three years many different ways in blogs. Maybe now you are starting to see how it all ties together using three of nature's basic laws?

# What Does the Future Hold?

As the future unfolds and EMF increases and water decreases, ocean acidification will get worse, and it will be felt greatest at poles of our planet. NOAA data already have revealed small shelled creatures are having their shells dissolving right off their backs. The cause? As ocean acidification increases we lose phytoplankton. Phytoplankton make oxygen for the ocean systems from the sun's photoelectric effect as I showed you in the Quantum Biology 9 blog post here. Ocean acidification will double in less than 40 years from today based upon current data. What is the major driver of this? Some will say it is carbon emissions and the use of fossil fuels, but I don't. There was always a problem with the CO<sub>2</sub>-as-cause explanation proposed by maroons like Al Gore in governments. Why the strong words? A better way to explain the decline in temperatures from the mid-1940s and relatively flat temperatures until 1975 when carbon dioxide levels were rising all the time was tied to the use fluorocarbons. Ronald Reagan's scientists got that message when he was president, when he authorized the Montreal Protocols, and did not support or sign the Kyoto treaty. The Montreal Protocols did require massive declines in CFC's in the USA. It appears to be working too. The media has the world believing we are heating up but the data say it has stopped since 1995. Recently, one conclusion being drawn from a new paper by Canadian physicist Qing-Bin Lu of Ontario's University of Waterloo, is that climate change might be tied directly to the EMF issue I have been painting for you here on this site.

## The Australian Donut Hole: A Proxy Lesson for Modern Humans

Instead of carbon dioxide emissions, Mr. Lu argues that ozone-depleting chlorofluorocarbons (CFCs) and other halocarbons are behind the loss of fresh water due to climate change.

Antarctica has a large donut hole in its ozone layer over it because of this very effect. It also has to deal with the South Atlantic Anomaly where the earth's magnetosphere is being weakened by the solar wind of the donut hole. Almost all of the water that Australia gets from the atmosphere is subjected to higher levels of solar EMF, from the solar wind, because of this donut hole. Their problems acts as a beacon for us all, to understand precisely how EMF and water chemistry lead directly to massive increases in cancers, autoimmunity, and autism. In fact, this is why Australia has the highest incidence and prevalence rates of obesity, melanoma, and autoimmunity of any continent on earth today. The incidence and prevalence of autoimmune diseases and obesity in Australia now are astounding when you consider their small population. If you thought the US was in bad shape, you should look at the data coming out of Australia and New Zealand now. They don't get as fat as Americans do, but they get other diseases, like cancer first. The Australian link to skin cancer is hard for modern medicine and biology to explain because they do not understand this EMF field effect. This is happening because of the presence of higher ionizing EMF's contained in the solar wind is altering water chemistry in their atmosphere above. In the USA, the magnetosphere protects us better because we have no ozone hole. We just make a boat load of man made EMF in the USA. Its power and frequency is no match for the sun's gamma rays and, therefore, will cause diseases seen more commonly in ionizing spectrums, like melanoma.

It is simple physics math, and tied to the wavelength and power of the EMF from the sun. Becoming fat and obese requires a longer, and more sustained loss of water and energy, so the EMF that causes metabolic syndrome won't need to be as powerful as the ones that cause cancer which can happen quickly. Getting cancers is the first thing one should expect with a higher frequency and power of an excessive EMF from the environment. Guess what? Ask any Aussie about the rate of skin

cancer or melanoma in their country today, and you'll see they are worried. You will see it is a massive factor in Aussie life. Then ask about their rates of autoimmunity, autism, and genetic defects in offspring. Considering their small population size, the numbers are astounding in what they are facing. In fact, the incidence and prevalence of cancer and autoimmunity now outnumber the top ten causes of death in Australia, and has now for sometime. The reason why melanoma and skin cancer are up there on the list is simple. The solar wind has more power to cause a dehydrating effect on water in the upper atmosphere, which makes the sun's photoelectric effect act like a laser beam on their skin cells instead of normal natural spectrum of the sun's light. Remember water is liquid sunshine.

The higher the frequency of EMF that hits their skin drives their cancer risks because there is no ozone to block it in the atmosphere. The donut hole allows more of the sun's EMF to enter the atmosphere above Australia to alter the biology of life forms below it. Electromagnetic waves do not act at a distance because you cannot see or perceive them. This, however is how you all believe they act. Maxwell's laws of electromagnetism treat EMF's just like natural light from the sun is treated. They travel at the speed of light and effect distant atoms and particles in environments far away from their point of origin and give up their energies. This is the essence of what a field is, in the science of physics. When EMF energy increases in the atmosphere of earth for any reason, it causes the CFC's to liberate their halogen's from these chemical molecules and the halogens are liberated and compound the problem by altering the chemistry of atmospheric water vapor before the rain can fall to earth for the life below.

Remember, you have already learned that chlorine, fluorine, and bromide all act as dielectric blockers in water in the EMF series. This makes Australian water vapor, circulating above

the continent, in its clouds and rain even less able to transfer energy to living things below. This includes plants and man. This is why they see the diseases they do. When anything is energy starved, things get sick first then die faster. The more energy starved water is the more severe the disease we should see in life below. For the non geeks, when energy decreases we see more disease. Pretty simple concepts when you understand how nature acts. This illustrates how water's chemistry is altered by halogens by acting as a dielectric blockers for energy transfers that occur on water.

### **Physical factors affecting apparent dielectric strength of water:**

1. It decreases slightly with increased sample thickness of water. (The ocean around Australia are very deep)
2. It decreases with increased operating temperature. (Oz is arid and hot, another major non hormetic benefit for CT.)
3. It decreases with increased frequency of the EMF found in the field a cell lives in. (hello, donut hole)
4. For gases (e.g. nitrogen, sulfur hexafluoride) it normally decreases with increased humidity. (Tropic effect is here: think the cassowary bird)
5. For air, dielectric strength increases slightly as humidity increases (Australia regions with lowest humidity have the highest rates of melanoma and AI's; 45 percent of Australia is desert in its center where there is no water.)
6. Dielectric is altered in water higher in deuterium.

Australian politicians would be wise to begin to desalinate sea water to make reverse osmosis water in large amounts for its people to help slow down their continental disease incidence and prevalence. In my view, it is the biggest way to decrease their melanoma and autoimmunity rate. Those who live outside the humid regions should be expected to have different disease risks based upon nature's laws, and will develop

metabolic syndrome and its associated disease more commonly. Oz's epidemiologic reports are already showing this trend in humans. Where the cancer and autoimmunity happen is a big sign that water chemistry is more altered. Anyone with metabolic syndrome by testing alone may benefit greatly from the use of calcium channel blocking drugs and certain modifications to their diet I have mentioned in my book, the Epi-paleo Rx.

The CFC's in the atmosphere have another effect, by also trapping radiant heat from the sun's infrared spectrum in their atmosphere that bounce off the surface of the earth to heat them up. This acts to dehydrate life even further. This is why the interior of Australia is really a desert and arid and why kangaroo's have to lick their forearms to stay cool all day long to survive. This is from the infrared part of the sun's emissions. More of this gets into the atmosphere, because of the donut hole and the South Atlantic Anomaly. More of it getting into the atmosphere over Australia because of the donut hole. This is precisely why Australia is the most arid continent on the planet. It is all basic QED physics folks, and how it acts on biology below.

## **The Rest of World: Oz is Teaching Us a Lesson**

Recent climate data seems to suggest that we maybe facing an irrevocable, non-linear, positive feedback loops on earth with regards to the magnetosphere and donut hole. These include significant melting of permafrost in the Northern hemisphere, the liberation of methane hydrates from gas clathrates in ice and in the sea floor in many areas of the ocean, and the fresh water of arctic sea ice decreasing the salinity of the thermohaline currents. When you factor in all these physical changes, and then add in the man made EMF effects, on atmospheric water, that makes the current guesstimate of the potential average global temperature increase of only 2° C by

2100 seem like a very low estimate. I think the only thing holding these effects at bay now is that scientists forecasts on what they think is causing global climate change is proving to be wrong. It is not warming as fast as they think because of green house gas emissions. The natural cycles of the earth seem to be getting cooler protecting us.

I think the more local effect at the poles, that making news now, are all due to these polar EMF effects from the magnetosphere. Interestingly, most climate models do not include the EMF data and dielectric energy changes I just mentioned to you found in atmospheric water loss. Because of this, I believe we are more likely to face temperatures in the tropics increase by 4°C, 6°C, 10°C, 16°C. Australia maybe saved by the global declines in the natural cycles found on our planet. In 2012, the donut hole was smaller and the effect could be seen in the Eastern ice sheet of Antarctica which is stable. The September 2013 issue of National Geographic magazine has an excellent article on this phenomena. It appears the one thing that could helps us the most is the natural cooling trend of the planet we seem to be entering now, while we are increasing the use of modern technology loaded with man made EMF.

The USA has not assessed EMF levels over its airspace since 1979, yet the amount of EMF from man made devices now is 2 million times stronger in 2013 than it was in 1979. If you think this has no biologic effect, than your sensibilities are quite different than mine. Australia to me, is the earth's canary in the coal mine for this risk. Australia has never examined its own atmospheric EMF effect, and they should, because it is their populations' biggest risk to their health, because of the physics of the Antarctic donut hole and the South Atlantic Anomaly. Antarctic ozone depletion occurs primarily between the altitudes of 12 and 20 kilometers above land. This is a region where polar stratospheric clouds, necessary for the chlorine-catalyzed chemical ozone

destruction process, readily form. I am covering all the details here folks. It is here, where the halogens become dielectric blockers in water vapor, water vapor eventually coalesce and become clouds, then becomes rain, which falls to the ground below in Australia to effect all life forms. The water "down under" is their biggest weakness because of the combination of these effects.

## The South Atlantic Anomaly

If the people in Oz think this science lesson is a joke they should know the salinity of the Southern Ocean is decreasing while the western ice sheet of Antarctica melts into this same ocean and speeds the process up. On Antarctica eastern coast the ice sheets are growing larger and maybe their best signal they are not totally screwed if they make changes now. The western shore of Antarctica affects Australian climate most. It is also affected by a weakness in the earth's magnetosphere called the South Atlantic Anomaly. Because of excessive solar EMF, our species will be altered in Australia first, and will be mankind's canary in the coal mine for this field effect, in my opinion.

What causes the South Atlantic Anomaly? Ionizing Solar EMF. How was Mars killed off? The same way.

We are beginning to see evidence of change already in a large area of the South Atlantic, reaching from southern Argentina to South Africa, which has lost a lot of the earth's magnetosphere in this area already. This is caused by the Sun's magnetic field overcoming our own declining magnetic field in that area close to Oz.

**Physics Geeks:** Highly energized electromagnetic particles can still enter our magnetosphere by a process known as magnetic reconnection. Magnetic reconnection allows highly conducting plasmas in which the magnetic topology is rearranged and magnetic energy is converted to kinetic

energy, thermal energy and particle acceleration. This process is what is drying out Australia and its people. The solar wind carries with it its own magnetic field, and when this magnetic field points in the opposite direction as earth's magnetic field, the field lines connect in an explosive process that catapults charged particles into the magnetosphere. What's more, this is not the only way our magnetosphere can be infiltrated. Particles traveling along earth's magnetic field lines at high enough speeds will penetrate our magnetosphere and enter the atmosphere through the north and south poles. Here the energetic particles interact with oxygen and nitrogen in the air to create aurora. The aurora maybe a stunning thing to see because of its colorful ribbons of red, blue and green light that ebb and flow across the sky, but the more fireworks they give the worse the news for life below comes. Recently the aurora has recently been seen close to the equator on earth in the southern hemisphere in 2012. These grand displays of light can usually only be seen at very high latitudes, but escalate in size and intensity with increases in solar activity. Intense solar storms may be beautiful to watch on Youtube, but don't be fooled by this dazzling façade. The high influx of solar energetic particles from these storms can pose a serious hazard to life on earth, disrupting power grids and communications networks while potentially exposing living things to harmful radiation. People in Australia already have unreal risks for melanoma and autoimmunity, and no one seems to have a clue why. I think I do. Magnetic reconnection by solar EMF should be a lesson to all humans on just what excessive EMF is capable of. Currently, melanoma and autoimmunity are runaway diseases in Oz. The South Atlantic Anomaly allows the Van Allen radiation belt from the Sun's gamma rays to dip into the earth's upper atmosphere. This deposits a lot of solar EMF energy into the clouds in this region that will affect the isotopic fractions in rainwater in Australia. This increase of electromagnetic energy directly affects water chemistry in the atmosphere, before it falls on Australia as part of the water cycle.

The EMF from the sun has essentially burned a hole in the southern hemisphere's ozone layer, which in turn is allowing intense ultraviolet radiation, causing melting of part of the ice sheets in Antarctica while things have been cooling. This is a big warning to those who are paying attention to why many of the things we cover in this blog are important to life. NASA is now finding the same fluxes are also just beginning to happen in the North Atlantic.

## **How the Magnetic Depletion Effect Drains Living Things of Energy**

1. It adversely affects the magnetic resonance, which is a process where the protons and electrons in your tissues lower their energy levels during autophagy in sleep. This is what powers the PPP at night when we are supposed to be the most chemically reduced during sleep. This lowered energy state occurs simultaneously when we release all of our anabolic hormones from 12-2 AM after four hours of dark. The release of these chemicals are tied directly to the magnetic field strength during sleep. Magnetic resonance aids an efficient transfer of energy by improving the hydrogen bonding in water. During sleep we become more efficient in this process in the absence of light, under the direction of melatonin. Our temperature during this time, drops because of melatonin. A falling temperature helps increase the Hall current in our brain to improve electron currents. Consider this analogy to understand magnetic resonance. For example, when we begin to push a child on a swing. The child will swing back and forth at a particular frequency. If we push the swing at the right time, we will efficiently transfer energy to the swing and child. If we consistently push at the right time, we will be in resonance with the swing, and the efficient transfer of energy will allow the child to swing higher than we would normally expect. The same things happen with our

protons and electrons and normal circadian rhythms when we sleep in a normal steady state magnetic field like we used to see on earth. They should act in unison but instead they begin to decouple. When this happens we lose energy because our protons and electrons lose energy.

2. We are now living in a modern world filled with electronics using semiconduction filled with aberrant electro-magnetic frequencies far different than our native field that are much stronger than those produced by the brain or the Schumann resonance, thus over-riding the natural restoring frequencies and DC current that Becker discovered in the 1960's. This DC current has been shown to be regenerative in all animals and is the source of animals ability to heal and regenerate our tissues endogenously. When this resonant energy transfer is lost, sleep efficiency declines, and if this continues, the end result is sleep apnea and correlation of poor sleep with many neolithic diseases.

## **How the Magnetosphere and Temperature are Coupled to O<sub>2</sub>**

The link between rapid climate change, an altered magnetic field, ocean salinity and human extinction is basically this: the planet becomes uninhabitable by humans if the average temperature goes up by 4-6°C. It doesn't sound like a lot, because we're used to the temperature changing 15°C overnight, but the thing that is not mentioned enough is that even a 2-3°C average increase would give us temperatures that regularly surpass 40° C (104° F) in North America and Europe, and soar even higher near the equator. This heat index alone would cause massive dehydration in all life quite quickly. Human physiology begins to break down after six hours at a 100 percent humidity and a temperature of 35° C (95° F) because of the dehydration effect of a loss of water. This makes the 2003

heat wave in Europe that killed over 70,000 people seem like a mole hill in comparison. No one seems to understand these relationships in nature today. Food is the smallest natural effector on what we are seeing in the world today. These are the natural laws of physics, not my own. I understand them and apply them, to biologic systems. I connect them for you to ponder. Ultimately, you must decide what to do next.

## Summary

If we begin to factor in the changes we have already seen at the poles and in the tropics in this solar maximum cycle 24, we've already seen massive heat waves, droughts, wildfires, massive storms, food and water shortages, deforestation, ocean acidification and sea-level rise. The signs are all present now if you look for them. Now let us consider excessive man-made EMF in addition to these other factors.

Excessive man-made EMF of all kinds act to dehydrate us of water. So an altered EMF field causes:

1. Forest fires because living wood is easier to catch fire dried out. (Yosemite)
2. Deforestation worldwide that create oxygen sinks that prevent O<sub>2</sub> getting back into the air. (Think the Amazon and Pine Belt in US.)
3. Lignins in forest trees are more reduced, having less O<sub>2</sub> than cellulose and starch in crop plants. (Think Monsanto.)
4. Synthesis of fertilizers that tie up oxygen in nitrates. (Think Potash and Monsanto.)
5. The biggest effect on climate and water is the industrial use of ozone-depleting chlorofluorocarbons (CFCs) that change the dielectric properties of water in our atmosphere.
6. When a cell becomes dehydrated, intracellular molecular crowding ensues and causes molecular chaos. This causes

alteration of enzymatic fluxes of biochemistry. Molecular chaos in non quantum terms is called inflammation = Leptin resistance in humans.

Clinicians can see the effect of molecular crowding with MRIs, called magnetic resonant imaging exams. Here the concept of magnetic resonance comes back for you to consider. With an MRI we can actually see the effect of the altered field on biology. It seems no one in medicine realizes this basic natural law can be seen in a picture of a person's MRI. I look for these changes every time I order a MRI now. Just about every person on the planet has dehydrated lumbar discs, and fat in their liver, muscles, and bones from the new disturbed magnetic field we all live in. To date no one has been able to explain this observation in the literature. I think I can. When a cell becomes dehydrated the temperature of the organism also rises. When this happens a cell loses its ability to burn fat and it will seek out carbohydrates.

This is how EMF 4 ties into the quantum story I am carefully laying out for you. Hot conditions make your body crave carbohydrates. Don't believe it? Read this article on how heat affects fat-burning.

Exercise in the heat (40° C) increases muscle glycogen oxidation and reduces whole-body fat oxidation (Febbraio et al. 1994), in comparison to the same exercise intensity performed at 20 C. When temperature rises, serum lactate levels rise. Read this link on temperature, appetite and your weight.

**Truth Bomb:** Food is directly tied to thermoregulation via a physical natural physical law that is ingrained in the process of evolution. Food is codified by the photoelectric effect as well. When temperature rises, cytokines also rise simultaneously inside a cell. As a person's temperatures rises, we see the same effect in human cells. This happens in sepsis, stress, and extreme exercise. An elevated lactate is

associated with increased mortality across the board. Usually a lactate level  $\geq 4$  is associated with bad clinical outcomes regardless of whether it is from sepsis or not.

Using consistent Cold Thermogenesis while drinking water, will lower lactate levels, across the board in all conditions. This is why Cold Thermogenesis is primordial in all stress responses for humans. This is also why the Hall effect was found in Becker's studies to increase when he froze human nerves.

People in paleo are not aware of what they never learned. Be mindful of this before you advocate for one idea over another. The heart and the brain can actually take up lactate and use it for energy, so lactate generation is an adaptive response to all causes of low energy stress situations in humans. This ability is decreased by peripheral artery disease, atherosclerosis, and low Nitric Oxide levels. Cold conditions always call for ketosis and fat burning as optimal fuel. This is why winter time and fat burning are yoked in nature. Foods are also yoked to temperature in this fashion. Even at the equator, their dry season correlates to winter, so the amount of water found in foods alters with the wet dry climate at the equator. Light is a constant at the equator so water and magnetism are more important to life in the tropics.

The skeptics will tell you the ocean is alkaline naturally and there is nothing to worry about; GILLS and NOAA data say otherwise. So do deep ocean divers observations and NASA observations. It was the oceans that first gave us life on earth, and it is the oceans that will take it away. Oceans are where the water cycle begins on this planet. The oceans are massively electron dense because of cold water which is more dense. This is why cold water sinks, it forms more oxygen and makes life in polar seas bigger. This is why Alaskan crabs are king sized. Physics 101. This is also why land-based creations evolved from the ocean first. New research shows that it was ocean acidity that caused all the mass extinction events earth

has previously faced and that what caused the acidification is essentially irrelevant if you're facing it again. You currently are. This is extremely important because we appear to be acidifying our oceans even faster than when the Permian extinction crisis eliminated 95 percent of all life on earth. When oceans lack oxygen, bacteria thrive that give off hydrogen sulfide which poisons the life on land by turning the skies green. Insects and birds go first because they need huge amounts of O<sub>2</sub> to power their mitochondria to fly. Human civilization will flame out long before this happens, because of our brain's extreme oxygen and water demands. The key is loss of phytoplankton using the photoelectric effect to make oxygen from water's electrons due to excessive EMF acidifies the ocean and plankton dies – no O<sub>2</sub> is made for life in the sea. Here humans lose their Epi Paleo Rx to excessive non-native EMF on land.

You may think because you live in a condo and walk to the farmer's market that you are an ecologically sound person, but nothing could be further from the truth, because urbanites live in a world of concrete and pavement. Pavement is made from the tar of oil refinery waste, and concrete is one of the biggest contributors to carbon emissions there is. Rural folks are no better off because factory farming techniques are now mandatory to compete in the world market. It is the perfect storm, that few seem to see. In this scenario it is clear, nature is battling last, because of human ignorance of the universe's physical laws.

What do I think paleo's big problem is? They think in terms of food and exercise and not in terms of the broader picture of the effect of nature's laws on both of these issues. They do not understand how food is really tied to nature's laws of light, electromagnetism, and water energy transfers. Instead, they are more interested in wanting to believe man-made paleo laws, made by a small group of people, missing huge chunks of evolutionary and QED data. I guess when you are creating a

“new empire” you have to protect the franchise from nature’s evolutionary truths. You need to be aware of what they are missing.

Many will ask for cites on this blog’s ideas to try to tear it down. You’ll get your cites, but you won’t get any on nature’s laws. Nature’s laws are what they are and are self evident, and they are not subject to your beliefs that more research is needed, or that your beliefs are superior to her laws. They are our species reality to deal with now. I’m not married to any dogma; just to the science that reveals the natural truth to me about my world and my biology.

I refuse to lower my standards to those who refuse to raise theirs. The most important Rx I have ever written is for knowledge. I believe quantum physics holds all the cards for biology’s answers and our species answers. We don’t have a *healthcare* crisis in this country; we have a *health* crisis. We have an excellent illness quotient in the US because we treat symptoms and not the foundations of disease because treating symptoms is highly profitable business. Patients are in the dark that there is a high cost for cheap living. They also have no idea their luxury items for convenience are slowly bleeding them of their life force. Living within nature’s rule is not only possible, it is mandatory to remain healthy.

Nutrition, exercise, and a low stress environment can no longer be considered “alternative” medicine. They are essential medicine for everyone in our species.

Excessive non-native EMF causes a stressed environment to all biologic systems. You are all just beginning to learn this, but it is factual and based in the work of Becker, Marino and Reichmanis from the 1960s.

Some people are wise, and some are otherwise.

Modern healthcare, modern research and paleo leadership have a common tie: when your income depends on denial of reality,

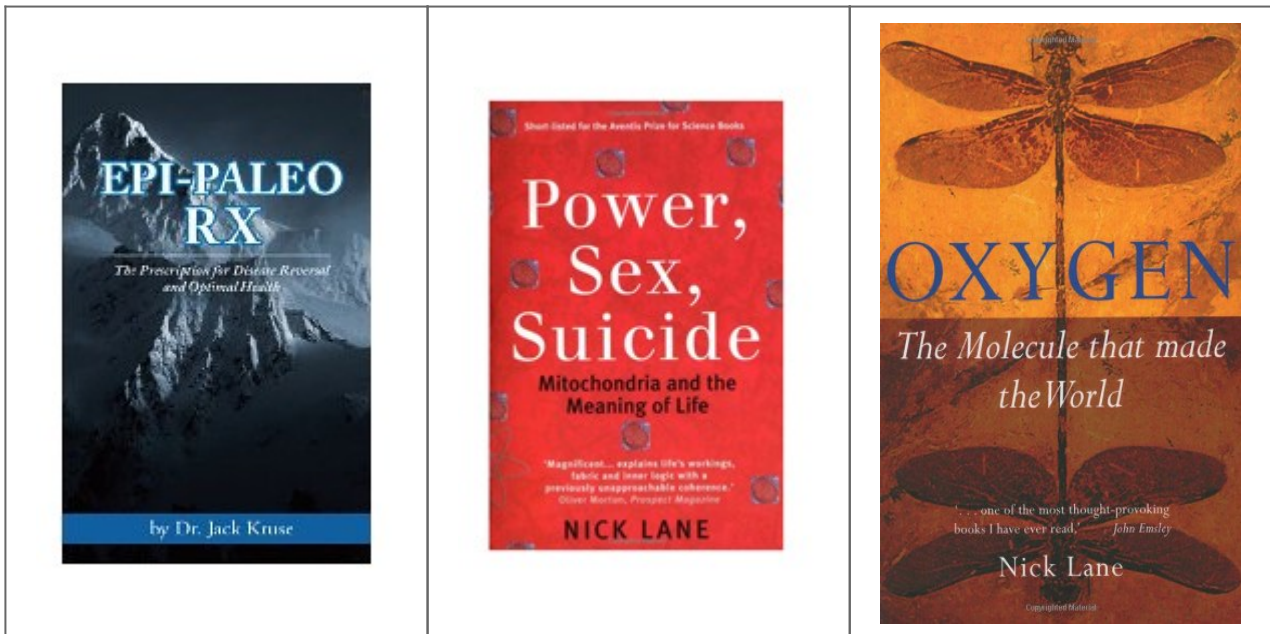
apparently reality often loses.

If you use nature's laws to dictate your lifestyle you will likely side step more neolithic diseases than using any of man's ideas. The laws of nature are simple, but act in bizarre ways that make it appear counter intuitive to us, but it is what is at play. Once you understand what the quantum biology series is showing you, it should become clear, that not only is the universe stranger than we think, it is stranger than we are capable of routinely thinking, in many respects.

One more for the skeptics: when the EMF field changes so do constants we base things on, watch the You tube video. Sunspots speed up radioactive decay rates on earth? Scientific constants are not constant with excessive EMF, which acts more like a particle instead of a wave form? Yep, welcome to a new world reality.

Leave a comment.

## Your Shopping List for this Post



The Epi-Paleo Prescription	Power, Sex, Suicide: Mitochondria and the Meaning of Life	Oxygen: The Molecule that made the World
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- View The Energy and Epigenetics Store

## Additional Resources

- Do Food Electrons Impart a Quantum Effect?
- Energy and Epigenetics 1: The Infant Brain is Unique
- Energy and Epigenetics 3: Autoimmunity, Cancer, Autism
- EMF 2: Einstein, Leet Leptin
- EMF 4: Why Might You Need Carbs for Performance?
- EMF 7: Quantum Prometheus
- Brain Gut 9: What Really Killed Michael Jackson
- Brain gut 11: Is Technology an Achilles Heel?
- The Cold Thermogenesis Protocol
- Cold Thermogenesis 6: The Ancient Pathway
- CPC #6: Pseudotumor Cerebri
- Quantum Biology 7: Vitamin D
- Quantum Biology 8: Quantum Scaling
- Quantum Biology 9: Photosynthesis

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**My Note:** \*\*\*Slide 13 of the presentation in cite 30 shows you why I also say that when you eat is more important than what you eat. It also points out why seasonal food is important – because the peripheral organ clocks are tied to the electrons and photons present in our foods. The amounts vary as the seasons vary. This is how the photoelectric effect is codified in food. It is also why diabetes really happens. It is due to a circadian mismatch to the photoelectric effect. Jeff is knocking on a pretty big door. This kind of work will destroy a lot of obesity research dogma and metabolic syndrome dogma. It also begins to explain why Cycloset works on T2D. For those who do not know, Cycloset works independent of *all insulin* pathways. It works on light, cortisol, dopamine and prolactin levels.