TIME #14: BIOHACKING "TIME" WITH METHYLENE BLUE

BLOG TAKE AWAY: At the end of the blog are bio-hacking ideas for methylene blue (MB). It has very interesting quantum effects on mitochondria with stretched out respiratory proteins that lead to almost all illnesses. The modern world creates an environment that favors activation of the paraventricular nucleus (PVN) to cause a chronic stress response. MB can help someone who lives in a highly stressed environment. Moreover, focal activation of the sympathetic nervous system to lead to many syndromes that lower vagal tone chronically and can cause an acute vasoplegic syndrome with any acute stressor confounds the patients environment. Few clinicians look at the person's environment as the main driver of the stress response. Dr. Doug Wallace research says this is a grave error. Acute vasoplegic syndrome is generally defined in medicine acutely as an arterial pressure <50 mm Hg, cardiac index >2.5 L /min/m2 , right atrial pressure <5 mm Hg, left atrial pressure <10 mm Hg and low systemic vascular resistance <800 dyne/sec/cm. Chronic vasoplegic syndrome = adrenal fatigue syndromes. There are many Rx's in the alternative world for adrenal fatigue which are wholly non satisfying for clinicians and patients. Might the use of **methylene blue** be something clinicians and patients now consider for treatment of these syndromes? *The supplement sellers and biohackers like to use nootropics and tech gear to hack this.* I don't. In this blog contains the quantum reasons why I feel as I do. These options often steepen the recovery on a long term basis of patients who employ these options. Are their any other options for these conditions that people are not talking about?

In the Time 6 blog, I briefly mentioned methylene blue as part of a bio hack for people with neuro-degeneration and

various types of traumatic brain injury like concussion, photosensitive seizures, autoimmune brain diseases, migraine headaches and exercise induces changes in neuro-cognition. Methylene blue (MB) is an inhibitor of nitric oxide synthase and guanylate cyclase has many uses in medicine. MB main effect is on proton spin in the TCA cycle. Few people realize the main defect off nnEMF is a loss of H+ recycling in TCA intermediated because or a change in proton spin fractionation. MB can lighten this load in environments with nnEMF. Red light from the sun helps extend the effect and water from glaciers can be another adjunct. It turns out ketosis can also extend the effect too but all need to be present together to get the mitochondrial effect of removing a Warburg shift. Nitric oxide synthases are a family of enzymes catalyzing the production of nitric oxide (NO) from L-arginine. MB is capable of lowering nitric oxide when something in the environment is stimulating calcium efflux that releases too much nitric oxide to lead to diseases. Nitric oxide is an important cellular signaling molecule that has sensitive and specific functions that have to be controlled on a dose response basis but more importantly on a time scale basis. When both are affected, cell signaling is unyoked and can lead to autoimmune, metabolic, and cell growth disorders that all have elevated ubiquitin marking associated with them. It helps modulate vascular tone, *insulin secretion*, airway tone, and peristalsis, and is involved in angiogenesis and neural development.

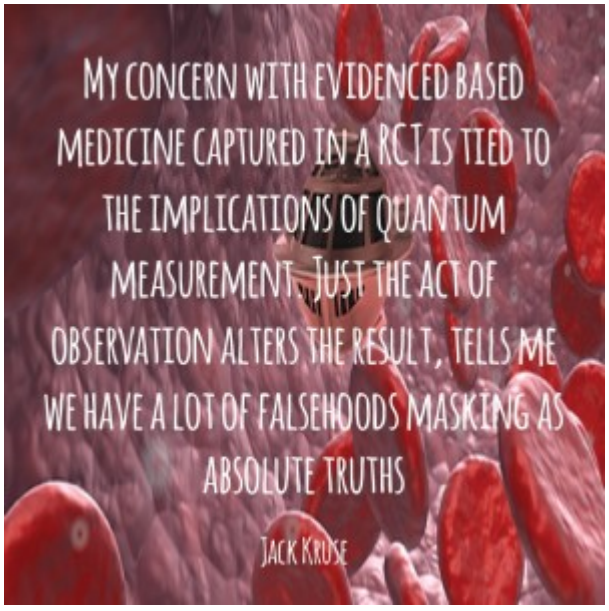
This makes MB have significant uses at surfaces where light interacts with our atomic lattices. To work with the CNS, MB is better tolerated with an IV infusion. If the BBB is already disrupted, by definition, so is the gut barrier. This is seen in many brain and gut diseases like MS and neuro-degeneration. Oral MB can be considered in these cases. MB has been found to improve the hypotension associated with

various clinical states. It also improves hypoxia (***improves pseudohypoxia by improving magnetic flux***) and hyper dynamic circulation in cirrhosis of liver and severe hepatopulmonary syndrome. It also results in transient and reproducible improvement in blood pressure and cardiac function in septic shock. Nitric oxide (NO) is a free radical with an unpaired electron with a specific spin state that is affect by electric and magnetic fields. It is the proximate cause of septic shock and functions in autoimmune disease generation. This is because nitric oxide is mediated in mammals by the ***calcium-calmodulin*** controlled isoenzymes like eNOS (endothelial), nNOS (neuronal NOS), and iNOS (immune). This is how calcium efflux and calcium flows in mitochondria can be affected by nnEMF and blue light link to diseases like Hashimoto's, MS, all types of diabetes, and brain degeneration.

HOW DOES MB LINK TO SUNLIGHT AND TO WATER: CALCIUM CONTROL

What lowers atomic and molecular vibrations in living systems? Water and sunlight are the short answer. Water is the ideal Faraday cage to lower molecular vibrations induced by bi direction microwave devices in technology. But do you know that UV light is even better Farady cage? How? UVB light too? It increases nitric oxide and Vitamin D3 in the skin simultaneously. This is why many autoimmune conditions like MS tell people to eat a lot of green leafy vegetables. These foods replace NO that is being constantly released by nnEMF and blue light stimulus of the environments we humans have created. Just eating these things does nothing long term if the light environment is not repaired. Rarely do people get told this, and even fewer can explain how this is quantized. Minding your mitochondria is not a food only Rx. It requires you understanding how light controls mitochondrial energy flows. NO and Vitamin D3 work together to make our cell membranes very sensitive antenna's of native waves. All autoimmune conditions, at their core, have poor antenna function. This is why all AI's have altered NO and D3 levels.

Both are linked to natural sun light exposure. What does NO and Vitamin D3 do fundamentally in the skin when sun light hits it ? NO causes vasodilation of the skin to absorb more UV light in hemoglobin and porphyrins in RBC's that float in our blood plasma. RBC's cell membranes are filled with DHA and all RBC's lack mitochondria. Vitamin D3 is made from sulfated cholesterol by UVB light to act as nature's ideal calcium channel blocker on our surfaces or our eye, skin, gut, and lung. When calcium is effluxed NO signaling is destroyed and you lose the ability to assimilate UV light from the skin to your RBC's and blood plasma.



When you lose the ability to assimilate UV light you also lose energy and angular momentum to make things spin. When an electron loses its spin it also loses its magnetism. It turns out when you live within an an environment that blocks you from the sun or the native wave forms you also lose magnetic flux in your mitochondria to make free radicals properly. When this occurs it seem to disappear in a magnetic field. Every electron in every atom has four quantum numbers that organizes the periodic table of elements in quantum fashion. **Electron spin number is one of those numbers. The spins of electrons are manipulated by electric and magnetic fields, but also by light because light can change the charge of both of these fields. All three of these physical things exist in**

mitochondria and all are powerful creators of free radical signals. They can be used to collect and store information from electrons or the photons they carry to tissues in our body. This occurs on our surfaces and in our circulatory system. Mitochondria are masters at controlling the spin of electrons to do the amazing things life can do.

PHYSICS GEEKS:

At standard temperature and pressure, oxygen is a colorless, odorless, and tasteless gas with the molecular formula O_2

In this dioxygen, the two oxygen atoms are chemically bonded to each other. The bond can be variously described based on level of theory, but is reasonably and simply described as a covalent double bond that results from the filling of molecular orbitals formed from the atomic orbitals of the individual oxygen atoms, the filling of which results in a bond order of two. More specifically, the double bond is the result of sequential, low-to-high energy, or Aufbau, filling of orbitals, and the resulting cancellation of contributions from the 2s electrons, after sequential filling of the low σ and σ* orbitals; σ overlap of the two atomic 2p orbitals that lie along the O-O molecular axis and π overlap of two pairs of atomic 2p orbitals perpendicular to the O-O molecular axis, and then cancellation of contributions from the remaining two of the six 2p electrons after their partial filling of the lowest π and π* orbitals.

This combination of cancellations and σ and π overlaps results in dioxygen's double bond character and reactivity, and a triplet electronic ground state. An electron configuration with two unpaired electrons as found in dioxygen, orbitals that are of equal energy—i.e., degenerate—is a configuration termed a spin triplet state. ***Hence, the ground state of the O_2 molecule is referred to as triplet oxygen***. The highest energy, partially filled orbitals are antibonding, and so their filling weakens the bond order from three to two. ***Because of***

its unpaired electrons, triplet oxygen reacts only slowly with most organic molecules, which have paired electron spins; this prevents spontaneous combustion.

A trickle of liquid oxygen is deflected by a magnetic field, illustrating its paramagnetic property

In the triplet form, O_2 molecules are paramagnetic. That is, they impart magnetic character to oxygen when it is in the presence of a magnetic field, because of the spin magnetic moments of the unpaired electrons in the molecule, and the negative exchange energy between neighboring O_2 molecules. END FOR THE GEEKS.

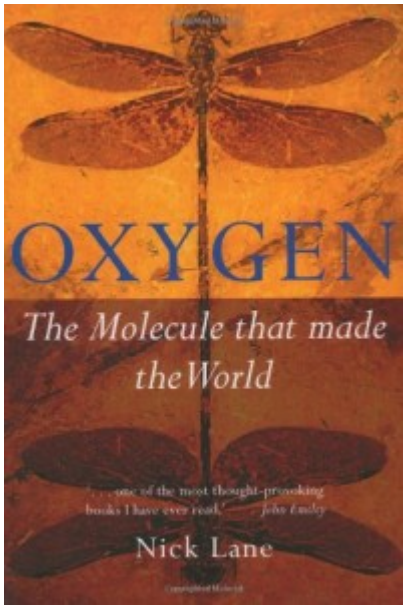
Most of the time in an atom electrons are paired. One spins up an the other spins down. ***This is called their singlet state.*** Singlet state oxygen is far more reactive than the triplet state of oxygen. When electrons are in their "singlet state" in atoms their electron spins are paired, one goes up and one goes down, and they cancel each other out. This signal is important for mitochondria because they use singlet state superoxide to get rid of badly functioning mitochondria. For example in diabetes, this signal is lost. When we lose sunlight on our skin or in our eye we lose the ability to make superoxide. All mitochondria create free radicals that have electrons that spin in the same directions. Did you know on Earth, its magnetic field is created by energy from the sun and it favors triplet state oxygen radicals and not singlet state?

This becomes an incredibly important issue in chloroplasts, RPE's and mitochondria. WHY? All life on this planet uses one or the other to make energy from the sun using electrons and protons. It is why all cytochromes use Iron- sulfur (Fe-S) redox complexes where quantum mechanisms dominate what type of electron spins can be made from the waves out bodies are sensing.

The mitochondrial complexes are like electromagnetic compasses, that tell the mitochondria on our surfaces what the environmental wave forms are calling for. In this sense, **mitochondria are quantum mechanical heat pumps because they all generate some amount of infrared light from their matrix filled with protons.** This from the amount of UV light frequencies that are fed into it at cytochrome 1. This is why NADH is a fluorophore protein. The amount of UV light fed into it is also a factor in how much infrared light is released. The amount released is quantized to the redox potential difference inside the cell and from the environment. Oxygen is a mitochondria thermostat for the temperature in the environment. The more we have the cooler the environment is and the more UV light can be assimilated. This is why pseudohypoxia is a sign of higher temperatures and more CO_2 in the environment.

The resultant free radical signal is the quotient of this ability of the mitochondria to sense temperature in the environment. The free radical chemical signals a mitochondria creates is determined by how much gets to it at cytochrome one from our surfaces and blood plasma. This input of energy signals how much light or energy can and should be released to the MINOS water layer surrounding the mitochondria to drive signaling and to set the energy output that controls physiologic functioning in a tissue. This evolutionary system is clearly quantum and based upon random probabilities that the environment brings to a life force that is designed to harness energy. In probability theory, a purely stochastic system is one whose state is randomly determined. Nothing is more random than evolution and lifeforms on this planet. Everything life faces is random and non deterministic. Oxygen levels and temperature have been linked for billions of years and this is why mitochondria are built as they are. Oxygen is the ONLY terminal electron acceptor in mammals for this reason. They came to power on Earth after a major cooling event that lead to a massive uptick in photosynthesis

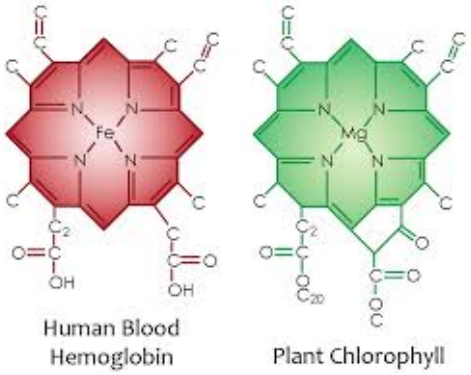
right after the KT event 65 million years ago. This links perfectly to the quantum level of understanding that physics has provided us in the 21 st century.



Evolutionary design is based upon making sense of the random probability distribution. It makes sense of patterns of waves of all sorts of stimuli that an organism may face. It appears this is how our sensory organs were built by nature. Not all waves need to be accounted for to make sense of the environment.

This is why UV and IR light are not used in the eye camera part of the retina. They are used in the eye clock and in mitochondria to sense waves to control growth metabolic programs to control energy flows through our atomic lattices. It appears our senses pay attention to the ones that give us the most “bang for our buck” to drive change on a chaotic planet. In this way the rate of change of the environment can be linked to the quantity of heteroplasmy in mitochondria. It then appears that the shear amount of heteroplasmy would determine the phenotype of the diseases a life force gets because they fundamentally underpin energy flows from outside in, and from our mitochondria through our tissues atomic

lattice. This is a very slick arrangement nature has built. In this way, our 5 sense's ability yoke to the ability of the mitochondria to sense how to control the flow of electrons and protons within it to give an appropriate output of energy as the planet's environment changes. This arrangement can be assessed and analyzed statistically but may not be representative of the reality the life force faces. This is why biology is blind to the real causes of most diseases. They do not see how how the system is built to read and react. They only see the reality we have. This is why the human brain seems to be built to sense trends and why our senses seem attuned to certain wave forms that evolution has found to be good enough to predict accurate trends. It appears our mitochondria and sense's maybe built to be Mother Nature's weather forecaster for light and for temperature just as chlorophyll is for plant leaves.



Here you can see the atomic lattice of nitrogen around different metals. Nitrogen electrons are excited by sunlight and this energy is used by the metal inside to create electric currents from sunlight frequencies.

The amount of light absorbed at cytochrome 1 is also stochastically linked to the amount of oxygen needed by a mitochondria. Remember all electrons in mitochondria are sent to reduce oxygen to O_2. This is the only reason animals need to breathe. In this way oxygen is a measuring stick for how fast electron tunneling needs to be. This means that tunneling speeds are also linked to temperature of the surrounding local environment. As oxygen from the environment lowers in pseudohypoxia, ECT must also slow.

As it slows, time speeds up for an organism and illness and death become more likely. This is why taking cyanide is so deadly. It stops ECT transport of electrons immediately and death is the result. This linkage between incident light, free radical chemistry, and oxygen tensions becomes the critical measuring sticks for how well the mitochondria part of the cell yokes to the nucleus and cytosol of cell. The better they work together in unison the less food is needed to run life. This lowers the looseness of ECT = increases the % heteroplasmy that is SAFE based upon the environmental signals the respiratory proteins sense.

As life goes toward the poles, and away from UV light, life mito-nuclear connection becomes more leaky to liberate more heat (IR) and more to tolerate living off the equator. Creating more IR light shrinks the MINOS around the cytochromes to increase ECT speeds, and making more water allows a cell in a poor UV environment capture more sunlight to make an exclusion in cell water and blood plasma. This is a critical step in understanding how mito-nuclear coaptation works naturally.

Since water normally has a high dielectric point (78) this means that the charges it receives from incident light can directly affect its electric abilities photoelectrically. *Angular momentum of photons is just one of the ways electrons are linked to magnetism.* **Temperature also links to electron**

spins and so do electric fields in membranes. This is why oxygen is a mitochondria critical temperature thermostat. The dielectric constant in water is designed to vary with light frequencies because in this way water becomes the ideal molecular mirror for these effects. It also becomes an excellent way to for the circulatory system to gain information from the surface about what the environment is bringing to bare on the organism.

The first step in photosynthesis and sunlight effect on water in our skin arterioles is charge separation into positive and negative charges. Charge separation links directly to the dielectric constant in our blood plasma. Our carotid body receptors sense this information and link it to the eye and brown fat in a very novel quantum way. **The dielectric constant effectively measures how effectively water can shield the negative and positive charges from one another and hence reduces the force between them**. This is why water fundamentally breaks symmetry in nature because it is very effective in separating electric and magnetic charges from electric and magnetic forces.

This is why water and UV light are the ideal natural Faraday cages in nature's bag of tricks. She has others but this blog is focusing your mind on light water and oxygen. I would remind you again that heat shrinks or condenses water when it interacts with infra-red light. This is why frozen water floats on liquid water and does not sink; heated water shrinks and tightens things. When we tighten the hold around a mitochondria we bring respiratory proteins closer together to increase quantum tunneling speeds between respiratory proteins. Cold thermogenesis does this as well, and oxygen tensions in tissues are a proxy for temperature. This is why cold = magnetism in nature. The Curie point makes this linkage for the skeptics among us.

TYING IT ALL TOGETHER IN A NICE BOW:

Calcium has an amazing effect on cell membranes being able to stick together tighter. The tighter they are the less they move. What did I tell you calcium does in eukaryotic cell membranes when I spoke about their antenna function of the cell membrane in ubiquitination 14 blog post? Calcium is the concrete of the lipid bilayer in all eukaryotic cell membranes.

Now think about what impact that has when UVB light hits your surfaces when nitric oxide (NO) and D3 are present and working together? Working together, they lowers molecular vibrations of the atoms on those surfaces when sunlight or light liberated from the microbiome hits them during meals. What does this mean if you live at sea level at a high latitude? It means you have a lower threshold to handle electromagnetic non native energies and you will suffer from more diseases like MS, cancer, or diabetes. This is what we see in Scandinavians. This is why autoimmune conditions like Multiple Sclerosis, cancer, and diabetes cases are explosive in incidence and prevalence as we travel away from the equator.

It is never been a food story; it is a story of light and QED physics built into the photoelectric effect to affect the photochemical production of NO and Vitamin D3 because of water. These signals cannot properly link our surfaces to the waveforms that are truly presented in our mitochondria and humans get diseases. Our mitochondria move further from our nucleus and the illness causes more heteroplasmy in mitochondria and the disease get more severe and have a different phenotype. *This is how obesity can turn into Hashimoto's and Hashimoto's into MS, and MS into psoriasis, and psoriasis into a cancer.*

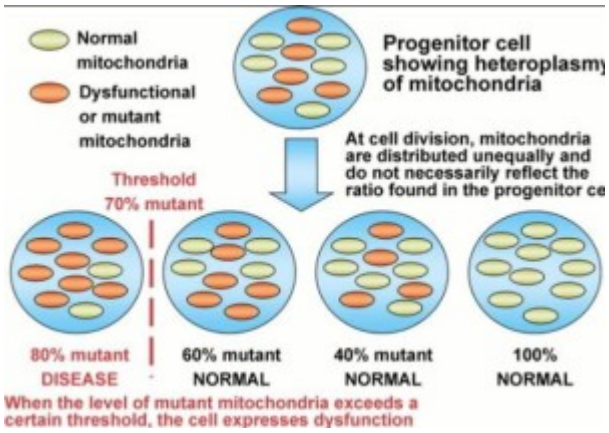
WiFi and microwaves have the opposite effect on cell membranes function, with respect to calcium. In fact, the more nnEMF or blue light they face the larger the amplitude of the vibrations and this causes the cell membranes to lose

electrons. A loss of electrons from the pi -electron cloud on cell membranes lower lipids and proteins hydrophilic potential. This lowers the exclusion of cell water in cells.

Blue light and nnEMF both liberate calcium by causing it to efflux. This causes mitochondria to swell, the respiratory proteins get further apart, changing their geometry, causing the tunneling of electrons to slow dramatically. **Every increase of one Angstrom between respiratory proteins slows tunneling of electrons by a factor of ten**. More bad news? It also slows proton tunneling; and since proton tunneling is how enzymes work this slows biochemical flux and leads to even more circadian disruption. Anytime electron and proton tunneling are disrupted timing in life is altered and diseases manifest. To view things as nature uses them, you have to look for them in different ways. To view things as nature does, you have to know how to look for them. Modern biology lacks this critical ability.

As signal transduction is degraded from environmental stimuli that are non native, signaling is degraded and then eventually the mitochondrial matrix swells pushing apart the respiratory proteins to slow the tunneling of electrons leading diseases. The more microwaves and mobile technology you use or allow in your life the less NO and Vitamin D3 you can make on your skin, retina, gut, and lung to quiet the atoms in your cell membrane to make the energy or decipher environmental signals from the Schumann resonance or from the sun. This is why people get ill from neolithic diseases. This is how life loses the ability to organizes in life. It becomes chaotic with our modern choices and our mitochondria no longer function and heteroplasmy increases. As it increases many diseases manifest because heteroplasty is a function of the clonal amplification of badly functioning mitochondria. The quantitative amount of heteroplasmy is as important as the qualitative changes. ***The amount of heteroplasmy has been shown to alter the phenotype of the disease humans get without any changes every occurring to the***

nuclear genome. This is the work that Doug Wallace has worked on for 4 decades.



Humans are eukaryotes. All eukaryotes result from the fusion of two organisms. Today we believe the fusion was from an Archea and from a bacteria. I am not sure I buy that idea. I think eukaryotes might have resulted from the fusion of a virus and bacteria at endosymbiosis 600 million years ago. Since we are made from some combination, it should be clear eukaryotes got one part of their cellular structure from one and some from another. The division of labor explains that our nuclear/cellular cytosol gives rise to the "anatomy part" of our cells. We are also made from an oxidative bacterial portion from this combination, which gave rise to our mitochondria. This provides us our energy source to animate the matter and atoms in us using light. In this way mass can be inanimate or animate if energy and information are added. Light is the key ingredient because NADH is a fluorophore protein that absorbs at 340 nm. Today, most disease are linked by how these two parts of a cell interact or cannot interact. We need to begin to realize how mito-nuclear co-apatation works or doesn't work in different environments. Each part of the cell could go bad individually and both could fail simultaneously under the stimulus of environmental change. We need to carefully examine how just changing environmental energies alter the disease we get. Energy flow in plants and animals occurs through symbiotic bacteria and yet, most of science is unaware of this connection in our own

cells. The nuclear cytosolic portion (particle aspects of light) works best with one part of light's duality and the mitochondrial side seems to work best with another aspect of light duality (wave aspects).

Because mito-nuclear co-apatation can occur before the genome is affected, science needs to realize that the number of genes an organism can have is linked to the amount of energy it can capture from the environment. This means the gene expression or ubiquitination rates must also be directly correlated by probabilities to how it is expressed. This is a function of the energy flow into both sides of the cell mentioned above and not the anatomy of the genome itself. Because of this arrangement the gene transfer from the oxidative bacteria (mito) to the archeal nucleus allowed cells to save 1000 fold amounts of energy (1 gene = 2 copies to serve the entire bacteria energy = 1000 fold energy saving.) **Energy flows in cells all occur through sunlight = photoelectric effect = quantum yield of the organism = organization of the atoms in your lattice = can you assimilate light properly from your surface = size = links to surface area = to heat transfers = water flows = mitochondrial respiratory protein geometry.**

AUTONOMIC SYSTEMS:

The parasympathetic system is responsible for stimulation of "rest-and-digest" or "feed and breed" activities that occur when the body is at rest, especially after eating, including sexual arousal, salivation, lacrimation (tears), urination, digestion and defecation. Its action is described as being complementary to that of the sympathetic nervous system, which is responsible for stimulating activities associated with the fight-or-flight response. So the sympathetic nervous system can be looked at as the stimulus that the parasympathetic system reacts too. This relationship can be reversed. What happens when the input stimulus is disconnected from the

output response? Welcome to the modern world. That is what nnEMF and blue light do at the most fundamental level.

The parasympathetic system uses nicotinic Acetylcholine receptors. The parasympathetic nervous system uses chiefly acetylcholine (ACh) as its neurotransmitter, although peptides (such as cholecystokinin) can be used. The ACh acts on two types of receptors, the muscarinic and nicotinic cholinergic receptors. Most transmissions occur in two stages: When stimulated, the preganglionic neuron releases ACh at the ganglion, which acts on nicotinic receptors of postganglionic neurons. The postganglionic neuron then releases ACh to stimulate the muscarinic receptors of the target organ. Acetylcholine is associated with a higher DC electric charge in the CNS and on EEG. Anticholinergic drugs lower the DC current and have been implicated in many neurodegenerative disorders recently. My advice is to avoid them.

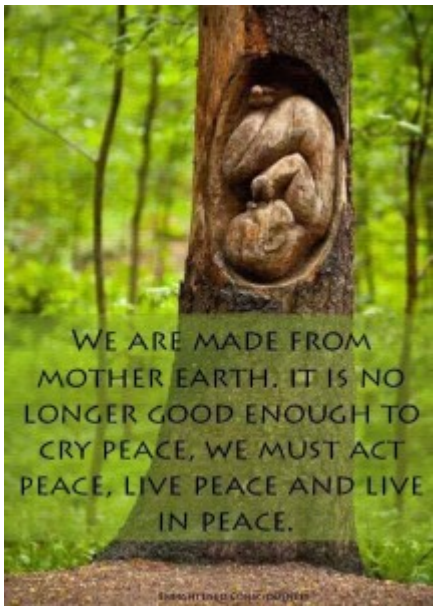
Nicotine mimics the neurotransmitter acetylcholine and can directly activate acetylcholine receptors (which can then induce increases of catecholamines such as adrenaline a dopamine; this mechanism underlies both potential addiction and fat burning. Nicotine also has pyrrolidine ring that chemically relates it to the racetams nootropic drugs. It also houses its quantum relationships to sunlight. Nicotine is a

fluorophore protein.

Specific nerves include several cranial nerves, specifically the oculomotor nerve, facial nerve, glossopharyngeal nerve, and vagus nerve. Three spinal nerves in the sacrum (S2-4) also act as parasympathetic nerves. These are commonly referred to as the pelvic splanchnic nerves.

Because of its location, the parasympathetic system is commonly referred to as having “craniosacral outflow”, which stands in contrast to the sympathetic nervous system, which is said to have “thoracolumbar outflow”.

The sympathetic system key governor is the eye surface. We need to remember though that the blood flow to the eye is under sympathetic control. There is however parasympathetic stimulation of the eye deep in the orbit. These two systems are fundamentally linked to the sympathetic system by the first 4 thoracic roots. The sympathetic autonomic system connects to the RPE in the eye by the way the circulatory system links to the oculomotor nerve at the base of the orbit connecting to the first four thoracic white rami communicates that form the superior cervical ganglion. This ganglion controls cerebral blood flow by its ability to vasodilator or constrict based upon autonomic tone. UV light in the eye vasodilates the RPE via nitric oxide release. Lack of UV light constricts it because nitric oxide is absent. Light normally should constrict the pupil. I mentioned this effect in Ubiquitination 24.



The oculomotor nerve (CNIII) is responsible for controlling the pupillary size. It contains several parasympathetic functions related to the eye. The oculomotor PNS fibers originate in the Edinger-Westphal nucleus in the central nervous system and travel through the superior orbital fissure at the base of the orbit to synapse in the ciliary ganglion located just behind the orbit (eye). From the ciliary ganglion the postganglionic parasympathetic fibers leave via short ciliary nerve fibers, a continuation of the nasociliary nerve (a branch of ophthalmic division of the trigeminal nerve). The trigeminal nerve is critical in the mammalian dive reflex. This is why cold water on the face can be used by the astute quantum clinician to help people. The short ciliary nerves innervate the orbit to control the ciliary muscle (responsible for accommodation) and the iris sphincter muscle, which is responsible for miosis or constriction of the pupil (in response to light or accommodation). As bright light enters the pupil, blood flow must be provided by the carotid's circulatory systems and this coordination is optimized by the superior cervical ganglion. With circadian mismatches this is often not yoked properly. This is especially true in diabetics and children with cyanotic heart disease. This means that this ganglion control blood flow to the CNS due to a light activated mechanism. ***It also means when bright light***

does not increase cerebral blood flow we know we have a patient with a serious circadian mismatch in the local environment.

IS THE SPINE ALSO TIED TO THE EYE'S QUANTUM ECOSYSTEM?

The incidence of scoliosis in patients with *congenital heart disease* has been found to be considerably higher than in the youthful population at large. Furthermore, patients with *cyanotic congenital heart* disease have a remarkably greater incidence of scoliosis than patients with acyanotic cardiac malformations. **Cyanotic heart disease = lowered oxygen tensions in blood plasma.** The etiology of the spinal abnormality, apart from those patients with vertebral malformations, is not completely clear to classical medicine, although statistically there appears to be some relation to the side of thoracotomy when surgery is done on these patients. This is the clue that it is related to the location of the superior cervical ganglion. The ganglion is not anatomically symmetric from right to left. The right superior cervical sympathetic cardiac nerve passes in front of or behind the first portion of the subclavian artery, following the innominate artery, and terminating in the deep cardiac plexus. On the left side, the nerve passes between the left common carotid and the left subclavian artery, and over the left side of the arch of the aorta, to the left of the left pneumogastric nerve, terminating in the superficial cardiac plexus. Rapid progression of scoliosis during adolescence is often encountered; the concave side of the curve often gives a photoelectric clue to the quantum clinician because of Fermat's law. Frequent follow-up of patients at that time is warranted and I always ask about their light environment, Vitamin D3 status and check their pupillary team for hints of what is really going on. If one side is dominant in cerebral blood flow you can bet that the curve in the spine will compensate the other way because of the relationship to the superior cervical ganglion.

Does scoliosis or curvature of the spine lead to shorter life because of the change in CBF? Is this related to TIME?

According to an article published in the Journal of Bone and Joint Surgery in June of 1981, the average age of death in an untreated scoliosis patient in 1948 was 49.3 years. Here is the direct quote from the paper: “The age at death ranged from eighteen to seventy-seven years, with an average of 49.3 years.”

Upon further research, it can be determined that the average life expectancy of a US citizen in 1932 (the year the study began) was 61 years. The average life expectancy of a US citizen in 1948 (the year the study ended) was 67.2 years. This information is obtainable from official sources such as www.ss.gov. The average of the two is 64.1 years. So it appears that scoliosis does affect time by shortening longevity. This is consistent with a lowered CBF to the brain and eye. This would affect the symmetry of the central retinal pathways in the eyes and the asymmetric release or hormones from the pituitary gland that could lead to helical growth of the spine due to the amount of light and oxygen carried on the blood to both sides of the brain

If the average life expectancy for someone born between 1932 and 1948 is 64.1 years, and the average life expectancy of one of the scoliosis patients followed in this study was 49.3 years, then scoliosis patients, on average, lived 14 years less than expected (64.1 minus 49.3 equals 14.8).

One article, “Natural History of Untreated Idiopathic Scoliosis after Skeletal Maturity,” by Ascani et al, makes the following statement:

“Regarding mortality, our results agree substantially with those of Nilsonne and Lungren and Nachemson. The mortality rate of 17%, within the first 50 years, is about twice as high as the mortality rate of the general Italian population

between the ages of 20 and 50 years.”

So it does appear this time link exists in the spine. Why? Is it correlation versus causation? Let us examine how light links our anatomy to control signaling using our autonomic nervous systems. Could light and oxygen be the quantum controller?

QUANTUM NEUROANATOMY

They key is the white rami communicates at the first 4 thoracic vertebra in cerebral blood flow and in scoliosis cases. What does the first 4 white rami communicates do in the first 4 thoracic nerves? What do they connect? ***The intermediolateral cell column (IMLCC) exists at vertebral levels at the top of the thoracic vertebra. It turns out T1 – L2 and mediates the entire sympathetic innervation of the body, but the nucleus resides in the grey matter of the spinal cord. Why?***

The hypothalamic paraventricular nucleus (PVN) gives its entire output to the intermediolateral cell column of the spinal cord, where neurons project and innervate the superior cervical ganglion. (Adrenal fatigue link)

These nerves are the only nerve roots in the spine that

connect the superior cervical sympathetic ganglion to the IMLCC which then directly connect to the brown fat pads in humans which sits upon the trapezius muscle at the top of your thoracic spine. No one, to date, has figured out why human brown fat sits where it does. Now you have my opinion of why our anatomy is built this way. *It is done because the entire systems is quantized to light.* This fat provides us the ability to burn fat to heat to make infrared light and water from the brown fat when stress is present. Stress liberate ELF-UV light from cells and this is the signal that is used to change blood flow in the carotid system.

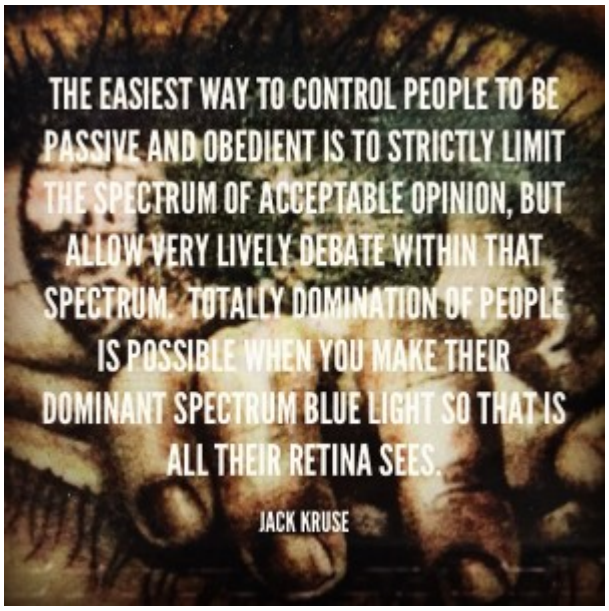
The first four white rami also take sympathetic fibers to heart and larynx as well. *This is why heart math programs work as they do.* They cannot explain any of these connections directly of specifically, but they just know it works. Why does Wim Hof push breathing as part of his CT protocol? Breathing is also innervated by these nerves. These nerves monitor blood flow to the brain in the carotid system. This is how the brain samples the free radicals, oxygen, and CO_2 in your plasma that come from all your surfaces. Neurosurgery taught me lowering the amount of CO_2 in a damaged brain can help transient lower the blood plasma temperature to raise oxygen tensions. Geology biohacks taught me lowering the CO_2 in the air will drop the environment's temperature, while raising the oxygen tension of the local environment. That geology lesson explained to me that hyperventilation is a way to maximize cold thermogenesis in a sick brain using quantum principles.

Electron spin is the key to free radical signaling in mitochondria. They determine heteroplasmy % in the mitochondria of our tissues. Heteroplasmy % in our mitochondria determine how energy can or cannot flow into any organ system. Energy flow is linked to CO_2 and oxygen tensions. Why? Mitochondria only use oxygen as their terminal electron acceptor.

One organ system can be radically different than any other. This makes the local geometry within mitochondria extremely important. It turns out that humans allow their brains to steal energy from other tissues when the carotid system and brain sense there is a major stressor present.

Anything that monitors blood flow also measures electrons spin, and electron spin is affected by electric fields, magnetic fields, and the frequency of light. **The frequency of light carries information of the angular momentum of a light wave.** That information comes via the retina of the eye. It turns out how much UV light is contained in hemoglobin, porphyrins, and in the exclusion zone of the blood plasma is a critical measure for humans because of their brain. ***Cerebral blood flow is auto regulated by this system that measures electron spin.***

I will remind you again blood is 93% water by volume. So how does electron spin directly link to all the controllers of growth metabolism in your body? Remember those are mediated by the central retinal pathways. Is the retina part of the human brain? Yep……..welcome to a new world reality. **Your *"eye clock"* controls a lot more than you thought.** It is an electronic counter for numbers of electrons and their spin and the photonic power contained in your tissues. This information all comes from your mitochondria and is dumped into your blood for your brain to decipher how to spread out the energy budget via your blood plasma. Now you should understand why all types of stressors can lead to cognitive haze. Too much stress can steal cerebral blood flow if the system is not attuned to light properly.



What is in the head that deals with light to control the central retinal pathways? **The eye clock.** What is the lumen receptor in the vascular system and skin? **Neuropsin.** These upper thoracic nerves control the information in electrons to control the blood flow to your retina and brain. ***The amount of blood flow that gets delivered to the head is delivered to the ophthalmic artery which feeds the retina and the RPE where the eye clock is located.*** The anatomy of the ophthalmic artery is very unusual as well. Every neurosurgeon learns this in detail. Why? It unusual turns are tied to sun light too. How does this circulatory pathway link your eye to your spine? Why have I told you looking at MRI"s of your spine tells me a lot about your mitochondria?

The top 4 rami of the thoracic nerves sit atop of your spine. Might the condition of your discs or the shape of your spine be a quantum sign of a loss of photons, or DC electric current? Why would your spine curve abnormally in this case as you are growing to give you scoliosis? **Might it be your brain is acting to steal blood flow from the spine to shunt it to the brain under a chronic light stress? YEP**

Is this a mechanism that a clinician should pay deep attention too? Is scoliosis a way we rob Peter to pay Paul because the DC electric current is no longer present in the anterior and

posterior longitudinal ligament in their spine? Is this why degenerative disc disease maybe a signal of a circadian mismatch? Where would the spine go to get or recover this loss of energy? *The brown fat is located where in humans again?* It sits on the top of your trapezius muscles and over your cervical and thoracic junction and shoulders. This is precisely where the first four thoracic nerves of the white rami nerve fibers go to get this energy. What does this imply?

Those 4 sympathetic rami communicantes monitor the DC electric current between brain and spine, and when the DC electric current is low, these nerves act to liberate or steal energy from brown fat or re-direct energy from the spine if they cannot harvest it from the brown fat because of your excessive use of technology and blue light. This is why discs lose water and shrink in degenerative conditions.

WHY MIGHT THE QUANTLET HELP PERFORMANCE?

This is one of the major relay centers for light energy in your entire body. How might we affect this area directly in a bio-hack? Where is the Quantlet worn? It sits just distal to the cervical thoracic junction on your wrist. If one can preload light energy into the radial and ulnar artery it passes into the venous system and goes about 3 feet to your heart and gets pumped right past the carotid body receptors to alter the system in favor of the vagal system. This “third eye” is capable of limiting the stimulus from the PVN due to any stressor. Now you can see why I think the power of the Quantlet maybe far greater than most would predict. Beta testers are going to have fun bio-hacking performance with this device, in my opinion. To engineer devices capable of extraordinary benefits you have to take advantage of the quantum design in tissues. The Quantlet has all these principles and ideas built into it.

The superior cervical ganglion controls blood flow to the head

by controlling arterial size on the autonomic side of the nervous system (sympathetic). So how does that shift the spacial curvature of the spine in scoliosis you ask?
What happens the the anterior longitudinal ligament and the posterior do not have the same current of flow in it? Differential electric currents in two conductors cause things to curl on themselves. They begin to curl like a helix. The amount of differential in the electrical potential determines magnetic flux which also affects the Cobb angle of the scoliosis curve. The bigger the loss of current the larger the scoliosis curve and the bigger deficit of blood flow to the retina should be expected. Degenerative disc disease (DDD) and scoliosis are signs of a massive imbalance of light via the eye and the spine. DDD case have less amounts of heteroplasmy in their mitochondria than those who have scoliosis. Just the qualitative difference can lead to two diseases with different phenotypes. Both are related to mitochondria in bone being starved of energy because the brain and retina have the ability to divert energy flows if UV light assimilation is mismatched severely from our surfaces. The location of the curve depends upon the amount of DC electric current differential in the rostral brain and the distal part of the spine.

Some Quantlet biohacking ideas:

1. A lack of UV and IR light with excessive chronic blue light exposure bends light in the brain to make aquaporin 4 water gates stay open and causes more seizures and poor thinking because this lowers dopamine levels……..The longer an AQA 4 gate stays open the more AMPK pathways are up regulated and the more glucose a cell uses and the more ELF-UV light it releases and the more calcium will efflux. Nora Volkow and Allan Frey have published on this. The more ELF-UV light emitted the lower your vitamin D levels will be measured in your blood plasma. This is the basis of the Warburg effect.

It is a chronic light stress response and not a cancer pathway as most believe today. Blue light elicits the Warburg metabolism. Hack it.

2. What mitigates this effect? Methylene blue might. Biohack with methylene blue. Methylene blue has massive effects on mitochondria. Remember water can be blue shifted when it has less light energy within its molecular networks. By absorbing blue light and appearing blue, it can circulate easily through the bodies' fluids; it reflects blue light inside of us while acting as another electron donor would in a mitochondria, oxygenating cells and reversing the very damages caused by an excess of blue light at our surfaces.
3. Methylene blue combined with sun light has been used to treat resistant plaque psoriasis, AIDS-related Kaposi's sarcoma, West Nile virus, and to inactivate staphylococcus aureus,[used it in a biohack] HIV-1, Duck hepatitis B, adenovirus vectors, and hepatitis C. It is now being used in autoimmune conditions, neuro-degenertion, TBI, and diabetes. Phenothiazine dyes and light have been known to have virucidal properties for over 70 years. This is why methylene blue works in combating many viral diseases. I have a sense this is why MB is on the ISS in space. It is also why I think endosymbiosis might have been between a virus and a bacteria and not an archea and bacteria. Eukaryotes still benefit from MB treatments, so it means our viral marketing is a deep evolutionary link to our nucleic acid design and function.
4. Methylene blue also blocks accumulation of cyclic guanosine monophosphate (cGMP) by inhibiting the enzyme guanylate cyclase: this action results in reduced responsiveness of vessels to cGMP-dependent vasodilators like nitric oxide (NO) and carbon monoxide (CO). These both work critically in the RPE of the retina where the melanopsin receptors are in our ganglion cells. *NO and*

CO both work with incident UV light to increase O_2 in tissues. Most diseases are associated with low venous oxygen saturation. This is why David Sinclair's work showed most neolithic diseases were always linked to psuedohypoxia and low NAD^+. Methylene blue increases O_2 by helping hemoglobin's heme protein offload more O_2. Methylene blue can also serve as a non-selective inhibitor of NO synthase based upon the amount of UV light and oxygen present in a stimulus. This is very important in the vascular bed. It also makes every tissues have its own quantum signals. This is why RCT are close to worthless when you understand mitochondria function well. It also points out why the first four thoracic sympathetic rami link directly to the carotid system in humans. This pathway can be used to modulate the central retinal pathways in the eyes of man when his environment is made alien by an altered light frequency or by nnEMF.

5. Methylene blue can act as an alternative electron acceptor, and reverses the NADH inhibition in mitochondria. This means it raises NAD^+. This is why cardiac and neuro surgeons and orthopedic muscular surgeons like to use it in their sick patients. Methylene blue can be an adjunct in the management of patients experiencing vagoplegic syndrome after cardiac surgery. I've used it for neurogenic vasospasm in subarachnoid aneurysmal bleeds. It has been used in compartment syndrome by orthopedic surgeons for these reasons.
6. Methylene blue is a monoamine oxidase inhibitor. MAOI's act by inhibiting the activity of monoamine oxidase, thus preventing the breakdown of monoamine neurotransmitters and thereby increasing their availability. Thusly, methylene blue increases dopamine, melatonin, serotonin, and melanin levels on our surfaces to increase our ability to deal with

sunlight properly. ***This makes MB a classic silent vagal stimulant.*** **It means that vagal tone and UV light assimilation are fundamentally linked in the autonomic nervous system.** It will also increase epinephrine and nor-epinephrine levels to increase BP and muscle power on a short term basis. This explains why cold thermogenesis increases beta three sympathetic receptors to liberate protons in brown fat for beta oxidation on mitochondria.

7. The parasympathetic nervous system uses chiefly acetylcholine (ACh) as its neurotransmitter, although peptides (such as cholecystokinin) can be used. The ACh acts on two types of receptors, the muscarinic and *nicotinic cholinergic receptors*. Most transmissions occur in two stages: When stimulated, the preganglionic neuron releases ACh at the ganglion, which acts on nicotinic receptors of postganglionic neurons. The postganglionic neuron then releases ACh to stimulate the muscarinic receptors of the target organ. These changes occur by monitoring how much UV light is being added back into the atomic lattice of our tissues at night. Nicotine is a fluorophore protein.
8. Nicotinic channels mediates the majority of fast excitation in autonomic ganglia. Nicotine is made from aromatic amino acids that absorb UV light. Nicotine is a nightshade plant. **People who's cells lack a decent quantity of ELF- UV light have trouble tolerating nightshade plants.** Nicotine increases dopamine levels naturally. Anything that increases dopamine levels has huge effects on ***silent vagal stimulation***. Not everyone can use this because not everyone can assimilate UV light well photoelectrically.

9. Methylene blue is also a photosensitizer that generates peroxides and has a huge effect on catalase in RBC's. MB can used to create singlet oxygen when exposed to both oxygen and light. Singlet oxygen is

needed at cytochrome one in small bursts to lower mitochondrial heteroplasmy. This is why diabetics and obese people have no superoxide burst at cytochrome 1. Diabetics and the obese are people who came into the world with loose mito-nuclear coupling that got worse by blue light and nnEMF to lead to their other diseases. My own personal story falls into this here. This is why my job limits my own results. I learned this the hard way in my own bio-hacks. Diabetics and the obese need an ideal superoxide burst to clear our badly functioning mitochondria to increase their coupling to better match the environment they choose to live in. Fasting can help, but those who are leptin resistant have low ELF-UV light so the effect is lowered. Hence why I tell people to do the Leptin reset before using intermittent fasting as a way to shrink their respiratory proteins. **MB can be used in this regard to make organic peroxides by a Diels-Alder reaction, which is "electron spin forbidden" with normal atmospheric triplet oxygen.**

10. When you know how light and the photoelectric effect altered electron spin, you simply begin to do better in your chosen alien world. Do you still think any of the autoimmune protocol's being sold by food guy's really work, or they all half truths?

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