

UBIQUITINATION 5: THE SEA WITHIN = EPIGENETIC CONTROL

READERS SUMMARY:

HOW DOES THE SEA WITHIN YOU DIFFER FROM THE OCEAN YOU SWIM IN?

HOW IS A BABY'S EPIGENETIC SWITCHES SET?

DO YOU USE NATURE TO PLUG INTO OR DOES MODERN LIFE DRAIN YOUR BATTERY?

"The sea defines us, connects us, separates us. Most of us experience only its edges, our available wilderness on a crowded island – it's why we call our coastal towns 'resorts', despite their air of decay. And although it seems constant, it is never the same. One day the shore will be swept clean, the next covered by weed; the shingle itself rises and falls. Perpetually renewing and destroying, the sea proposes a beginning and an ending, an alternative to our landlocked state, an existence to which we are tethered when we might rather be set free."

– Philip Hoare, The Sea Inside

So why, was the February 2015 webinar important to understand?

Aquatic reflexes in mammals makes you realize fluid dynamics is critical and is controlled by branch of science that is foreign to most people in biology and medicine. I told you, in the webinar, something rather amazing about the counterintuitive relationship about water and exercise. When we exercise in air, it results in one physiologic result, with respect to cardiac function. That information is well known and tested. What happens in water is the domain of Weddell seals, our mammalian cousins. When we exercise in water, the reverse action happens in exercise in heart function. This

happens in seals and in us. That was a very shocking find for conventional exercise dogma, wasn't it? Why did it happen? ***Archimedes principle is that reason.***

This is not good news for exercise physiologists, nor their current beliefs. It is really bad when you consider that most of the Earth's biomass lives in water than does out of it.

This means humans are the exception in mammals, and not the rule, when it comes to exercise. We may need to rethink our ideas, because our environment is now different. Moreover, since we are life that lives on land, and have cells that are filled with water, how might that change things in our modern microwaved world? Now I want to show you something more amazing today in this blog. How does water, light, and mass equivalence link in your cells? How might it control epigenetics? How does a child get environmental information from its maternal side? *Could Archimedes principle explain transgenerational epigenetics?*

Learning about the physics of the underwater world can help human bio-hackers to have a more complete understanding of their own experiments and capabilities, despite modern exercise beliefs. One essential concept to master for biology bio-hackers, is **Archimedes' Principle**, which states:

Any object wholly or partially immersed in a fluid will be buoyed up by a force equal to the weight of the fluid displaced.

Most people who use this principle are engineers, scuba divers, and the navy. So why am I sharing it with you on a blog about medical physics? Lady evolution is a quantum biologic engineer who uses the quantum physics of fluid dynamics to weave her quilt. A Quilt is like a hologram, the more info you add to it, the more clear the image becomes.

Today's blog is about how water can be used to alter the relationship between water, light, gravity, and

thermodynamics, by altering the density of water by a changing DC electric current or the polarization of light in water.

Remember this counterintuitive lesson of how plants and animals are coupled to the environment. Animals contain “a sea within their cells”. That cell water determines what chemistry should happen in their cell membranes. Plants and vegetables have a different strategy with respect to water and light. Light and water is outside of their cells for the most part, but also inside them. This makes them use different physics than animals.

Life has a remedy for a lack of energy when it finds a new environmental niche. It is called QED innovation of light and water.

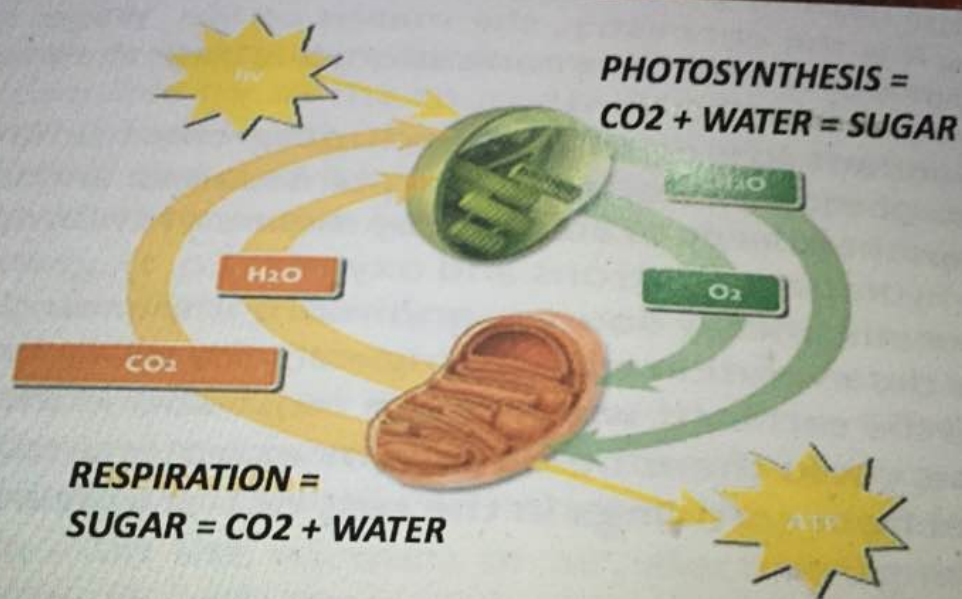


Figure 15.3 The dynamo of life running on water.
BOTH CYCLES MAKE DC ELECTRICITY FROM WATER



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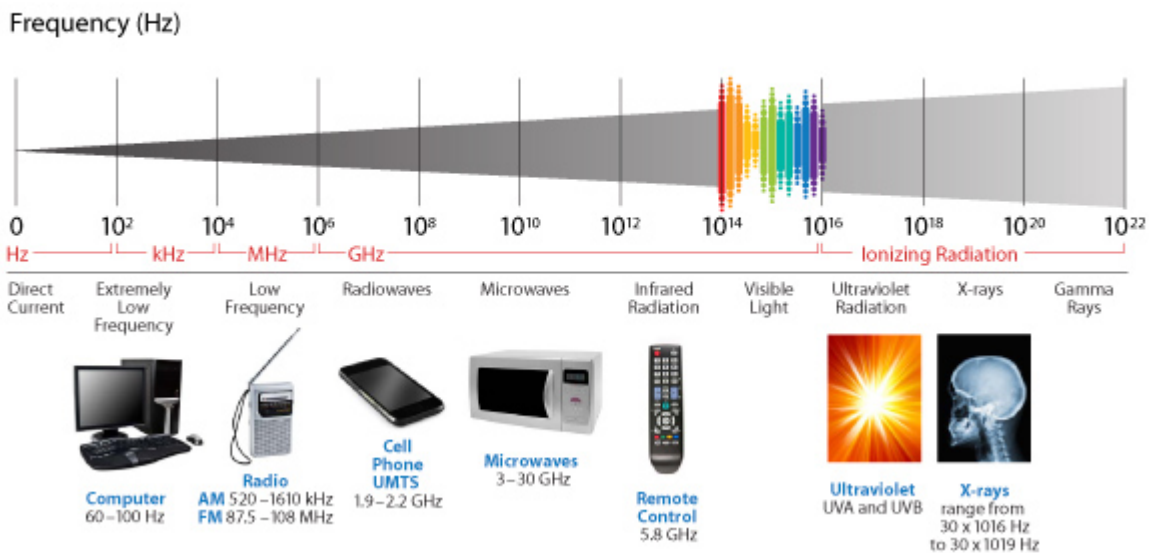
In the sea, plants first evolved in the photic zone, using nothing but light and water to create energy. They were simple life forms. Plants from the sea slowly adapted to land and still were able to use photosynthesis in air and out of water. In fact, most modern plants have morphed and mutated to become “vegetables”. Animals reversed the photosynthetic process and created their “sea within” using sunlight as the stimulus. What was their key to this innovation? Incorporating DHA into all cell membranes with the exception of the inner mitochondrial membrane and using oxygen as the only terminal electron acceptor in mitochondria. When the animal cell did this it created a sea inside of every cell. Man has further shaped and co-opted plant evolution for his own devices by domesticating them. Grasses like wheat and corn being the best examples. In essence, vegetables morphed

into versions of wild plants which have a significantly higher amount of nutrition because they have more solar frequencies exciting the electrons that make up the vegetable.. Eating vegetables chronically, however in a poor solar environment, is a poor way to capture certain light frequencies from the sun. This affects the colony of mitochondria in you capable of releasing the information and energy of the sun into your gut cells, via your microbiome and the mitochondria in your enterocytes locally. The microbiome is made of bacteria which have this unusual ability to release light from their cells.

Eukaryotes like us, can't do this well. So the bacteria in our microbiome releases light it captured from the sun. This is processed by mitochondria locally and unlocks the solar energy and information for your enterocytes to sense in their mitochondria. Enterocytes become a giant movie screen for light. These cells act like a photon detector because its cell membranes have DHA in them. DHA has 22 carbons with a massive array of pi-electrons. Light only interacts with electrons via QED laws. DHA is the only lipid in 600 million years of eukaryotic evolution that can turn light into a DC electric current, or a DC current back to light. ***Eating vegetables is a poor man's way of gaining solar power, unless you live inside the tropics.*** It works well enough, if you live a connected and coupled life. If you live in a modern, microwaved, disconnected world, you will suffer major consequences. DHA is the ultimate evolutionary creation for "harnessing" solar power; it allowed eukaryotes to become fully capable of providing a larger margin of safety, because they could capture more energy from the environment and build a massive sea of water inside of every cell capable of storing massive amounts of solar energy. This energy was used to raise the redox potential of the cell, and this is what built eukaryotic complexity. That solar stimulus inside of water allowed eukaryotes to develop more complex animals capable of more fully disconnecting from Earth's magnetic field, light, and water chemistry to live life. DHA turns sunlight into a DC electric current using water as its battery. That healing

current allows a cell a myriad of ways to use solar energy in thousands of different ways, by virtue of the laws of physics.

Electromagnetic Spectrum



Lady evolution uses every last bit of physics to extract energy from every nook and cranny it can in things that are alive. This blog is about one of her most ingenious ways.

She uses water to make the matter in us more thermodynamically efficient to extract more energy from its atoms. Engineers needed to be thermodynamically favorable in their builds and ideas. Floating any matter made of atoms in water is about the best way to extract more energy or work from that matter. Why? Anything in water has an altered density or buoyancy. This affects its weight and relative mass. Anything that reduces mass, even in a relative fashion, increases energy production by Einstein's mass equivalence equation, $E=mc^2$, doesn't it? Archimedes principle inside the cytosol allows mass to become relative too. The lower mass is the more energy efficiency can be built. Our mitochondria makes that sea inside of us using natural EMF's from sunlight.

What else does water do to the mass made of atoms? It reduces its entropy, by slightly condensing proteins when light strikes them, and allowing the matter inside to float. Doesn't the human brain float in CSF? Does a baby float in amniotic fluid? Do RBC's float in plasma? Water from a mitochondrion can create order from chaos. Water is fully capable of breaking the symmetry of nature so order comes from disorder.

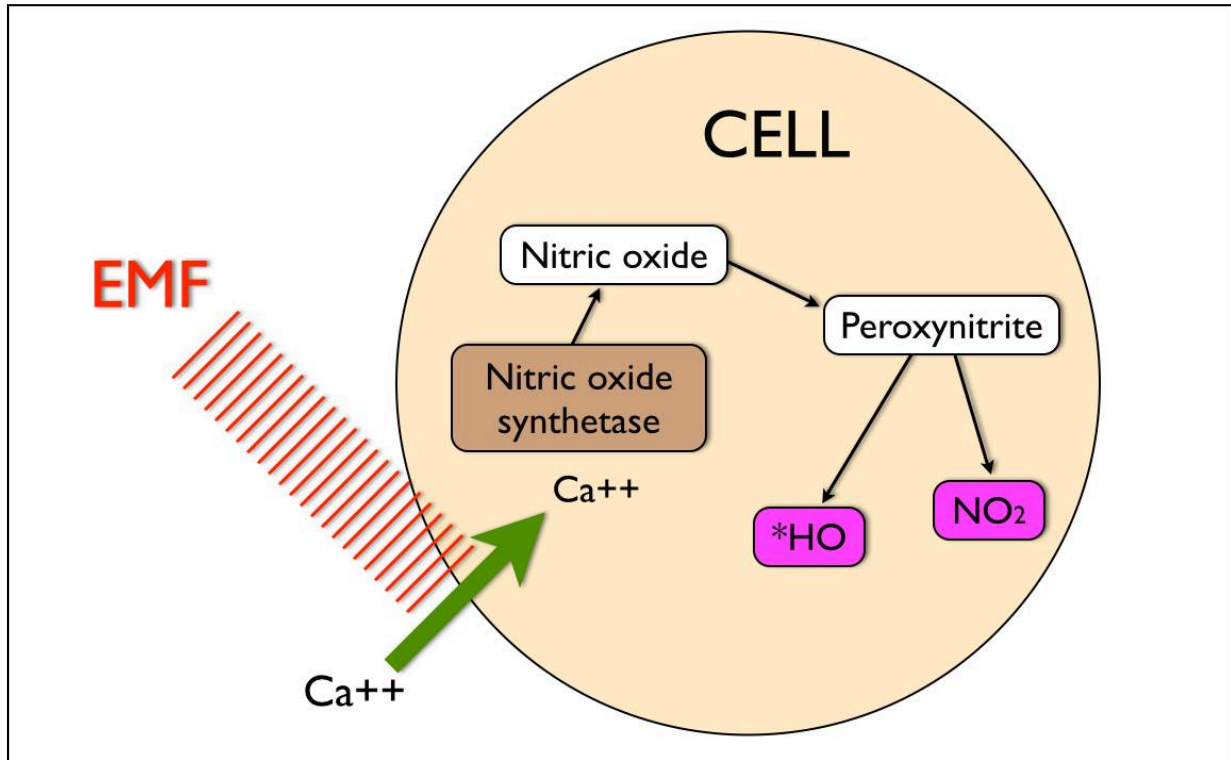
This is what makes water a complex fluid. When mass decreases, even slightly, it becomes easier thermodynamically to create order for lower energy cost. So how does density relate to mass? Density is the mass per unit volume of a substance. Why do you think thoughts come from that thing floating in CSF? The brain floats in water, called CSF.

The physics of water allows order to come from chaos, with little to no energy added to create this state. Most things in biology, can only explain how order comes from order.

Biology experiments forget to add the effects of water or light controls, so they never see these effects in their results; nor do they expect water and incident light that collides with water to alter their results. It does. Why?

Look at the picture:

EMF Activation of VGCCs Increases Free Radical Production



The incident light ray effects calcium flows, free radical signaling and the amount of NO inside a cell. All these things control energy flux in a mitochondria.

Cold water has more electrons, and a higher density, and warm water has more protons. Warm water conducts a DC electric current better, which is why during wakefulness, the DC electric current is present in the brain and at night it goes away, when CSF temperature drops a few degrees to stimulate melatonin release from the pineal. Initially melatonin is made in the eye from AM light. What happens to density of water if the DC current falls? Water's density varies with temperature, as mentioned above. Density is the mass per unit volume of a substance. The more water volume present the less something weighs and the less relative mass the floating matter has. Ice is less dense form of water than liquid water, and this is why ice floats. Marine life is grateful for this relationship, so fish can swim in this cold water below the ice, and live well. The marine way of life, couples to our life, via DHA. [Hyperlink](#). So you need to be grateful

that ice floats on water.

Density is really important to you, because it is really important to the physics inside a cell and links to Fermat's law of how light speed can vary in a cell, and I bet you never realized it. Such is the action of quantum physics works in life. It matters little that you saw her cosmic wand, but when it disappears, you will feel its loss in a disease that manifests in your life. When we eat an Epi-paleo template, we are able to harness the full solar power of the sun, to live a somewhat disconnected life. We become able to harness the proper frequencies of light, that cells need to interact with water, to create a human life. Those frequencies are mainly in the infrared range. It has its physical limits, and today's modern microwaved world is now exceeding that boundary of safety.

As the density of water increases, the DC current falls. What does this do to Archimedes principle in water? And how might life use that change, to create energy from its physics? Archimedes principle explains not only the buoyancy of ships and other vessels in water, but also the rise of a balloon in the air, and *the relative apparent loss of weight of objects underwater*. Density is the mass per unit volume of a substance.

Archimedes' Principle in layman's English:

When an object is placed in water (or any other fluid), the water will exert an upward force on the object. The strength of the upward force is equal to the weight of the water displaced by the object. Water makes up 99% of the molecules in your cells. This means water is exerting a force based upon what is in it. What is the effect of non EMF on mitochondria? They swell and increase their size, before they shrivel. **This initial change, alters their size and shape and location in a cell.** What does this do to water around mitochondria based upon Archimedes' principle? Water inside

the cell is lost. Cells become dehydrated. But what else happens to the water? The density changes. What does this effect? It effects the muscle mass to fat mass ratio's in our tissues. Why? ***Water density changes in them.***

To visualize this concept, imagine dropping a marble into a full glass of water. Some of the water will be displaced by the marble and will overflow the glass. If the displaced water is weighed, the weight of the water will be equal to the upward force.

Some objects, such as ping pong balls, will float partially above the water. In this case, the upward force is equal to the weight of the water displaced by the submerged portion of the object.

How Does Archimedes' Principle Help to Determine an Object's Buoyancy? *Density and mass.* Certain frequencies of light radically change the density of water. Not all colors of the rainbow acts the same way. Anytime we lose water in the cytosol (*low redox*), we become more buoyant, because we get fatter by expanding our adipocytes. This is why fat humans, like babies and the obese, float well in water without much effort.

What do you know about babies during gestation? They go from being small creatures with little fat in the first trimester. Small things with small atomic mass floating in a closed bag of fluid is not a stress on energy. By the time 9 months rolls around the fetus is a larger ball of fat surrounding new cells capable of life by 9 months. **What does this mean for buoyancy in their mother, mean relatively speaking? Remember, like time, mass can be relative in water.**

Archimedes' Principle describes the upward forces acting on an object immersed in water. However, an object's weight (a downward force) also affects its buoyancy. To understand an object's buoyancy, it is necessary to consider both the

downward and upward forces present, and to determine if they are equal or whether one is greater than the other.

If the downward force on an object is stronger than the upward force, it will sink and is said to be negatively buoyant. If the upward force on an object is stronger than the downward force, the object will float and is said to be positively buoyant. Finally, if the two forces are equal, the object will remain suspended in the water and is said to be neutrally buoyant.

For a fully submerged object, like the organelles in a cell, Archimedes' principle can be reformulated as follows:

Apparent immersed weight = weight of object – dispersal of the fluid in question

then inserted into the *quotient* of weights (simple division), which has been expanded by the mutual volume:

Density of an object/Density of fluid = weight/weight of displaced fluid

This yields the formula below: The density of the immersed object relative to the density of the fluid can easily be calculated without measuring any volumes:

Density of an object/Density of the fluid = weight/weight – apparent immersed weight

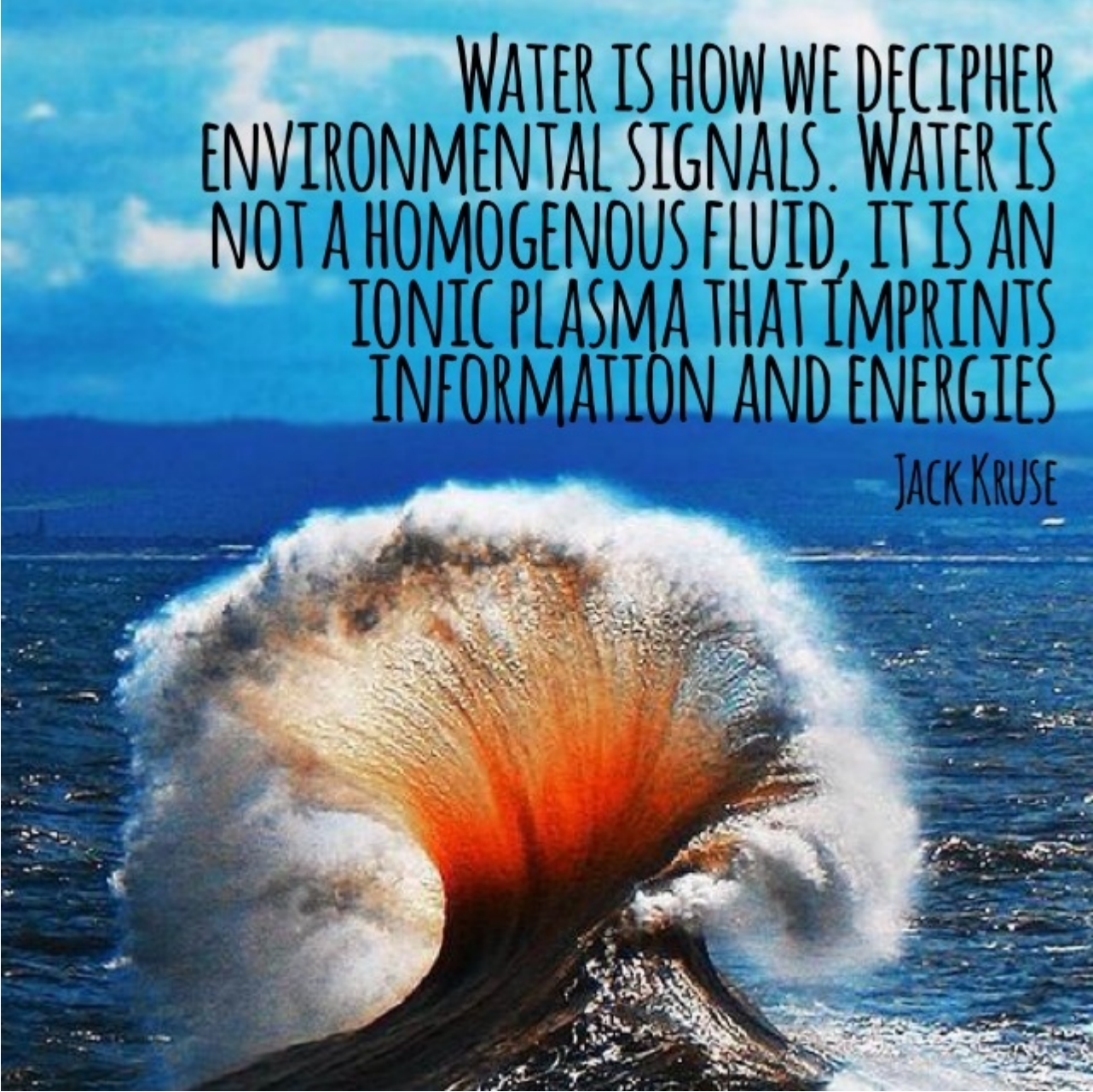
TODAY'S KEY LESSON: I have taught you a lot about how water density changes as water electro-chemistry changes in the last two years. But we have never talked about how density of water alters its optics and refraction. Water changes optically via light and the DC current because of DHA's presence or absence. These changes are unique and queer in cell water, to allow life to do so many things that life can

do. This is why water breaks the symmetry found in nature. It allows life to remain metastable, provided it stays within a cell. **This is why the “sea within mammals” is quite important.** I have showed you in detail, that non native EMF cause water changes in weight, density and mass. Moreover, these are all directly linked to calcium efflux in cells and their cell membranes. Calcium efflux and influx is related to the redox potential in cells, via calcium calmodulin kinase signaling (pic above). Soon you will hear how we use calcium flows and altered electric signals in water this later in the series. **These changes are all coupled together by three physical laws.** Note, biology has nothing to do with them individually, but collectively they do something rather amazing. *These 3 laws of physics come together to act in unison to create order from chaos, and from this order biology can begin.* Biology only concerns itself with order from order. This is why physics is fundamental to biology in all aspects of understanding. This is very counterintuitive to any student or fan of biology.

Those laws of physics are the electromagnetic force, gravity, and Archimedes principle. So what happens when they are coupled or uncoupled? Life gets its spark when they are coupled and can begin to exist. In Energy and epigenetics 4 i gave you the three legged stool, light water, and magnetism.

Gravity is a synonym for light, Archimedes principle is a synonym for water chemistry, and the electromagnetic force is a synonym for magnetism. When these are uncoupled for any reason, we lose efficiency, energy, and information in cells and it leads to massive changes in life's abilities.

Circadian signaling is tied to all three. When these forces change their tension inside the cell, you change the pattern of signaling. In essence, you change the pattern of what is possible for life. This is a synonym for epigenetics. This is also the definition of metastability. This is how we read and react the environments signals, of waves, oscillations, and vibrations.



WATER IS HOW WE DECIPHER
ENVIRONMENTAL SIGNALS. WATER IS
NOT A HOMOGENOUS FLUID, IT IS AN
IONIC PLASMA THAT IMPRINTS
INFORMATION AND ENERGIES

JACK KRUSE

TRUTH BOMB: Uncoupling fundamental forces, uncouples biologic cycles, and this directly alters how nucleic acids and mitochondria can function, because mitochondria move their location in relation to the nucleus where nucleic acids are housed. This is what uncouples circadian cycles. None of these things are tied directly to foods, but they are tied to physical forces directly, in how they interact with light and water. Foods are indirectly involved in this process.

DON'T BELIEVE A BOOK'S COVER.
IT STARTS WITH CIRCADIAN
BIOLOGY.

JACK KRUSE

IT STARTS WITH FOOD

DALLAS
SPIND
MELISSA
NARTWIG

They all are tied to circadian oscillation and vibrations from the environment that our cells face. What a plant in the sea and land faces is way different than what a sea mammal or land mammal faces. This difference has to be accounted for by the cell membrane signaling system. On land, DHA presence in our tissues becomes a critical component of a disconnected life.

In the sea, life is more connected to its environment. In the sea, water also surrounds life to keep it condensed by pressure. On land, the sea is only present in our cells, unless the animal is capable of using the water. When an

object is placed in water (and proteins and organelles in a cell are), the water will exert an upward force on the proteins or organelles. Here is where the lesson of the February 2015 webinar becomes critical.

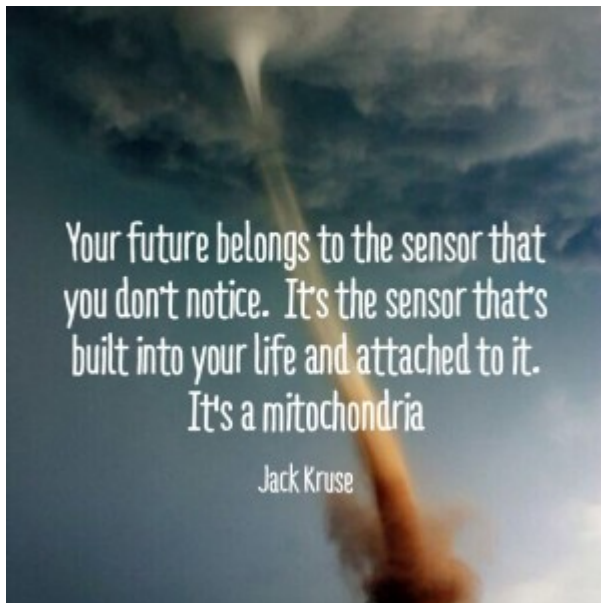
The strength of the upward force is equal to the weight of the water displaced by the object. Water makes up 99% of the molecules in your cells. This means that cell water is exerting a force on things inside the cell, based upon what is suspended in it. *Remember that all these things are anchored to the cells cytostructure.* So when they move, this generates an electromechanical signal which affects the tensegrity system anchored within the cell. This "stretch" signals the cell and its surrounding cells, about the energy status within. The leptin receptor pays direct attention to these physical forces, via optics, oscillations, and vibrations and electromechanical coupling. All of these waves are able to be transformed back to electrons that the leptin receptor can account for provided DHA is present in the cell membranes of these neurons. In leptin resistance, DHA is decreased to absent. This gives the receptor a graded ability to respond to signals.

KEY POINT: Archimedes principle alters protein and mitochondrial size, shape, and location within a cell. It seems this paper links these actions directly to calcium metabolism in the cell. Calcium movement is an electrochemical and electromechanical in a cell simultaneously, because of how a cell is organized. What have I told you all about calcium efflux in the last two blog series, and with respect to non native EMF? ***When calcium is released abnormally, water is lost in the cytosol.*** Vitamin D3 made only from specific sun frequencies and the isomerization step needs water to work. So if you're only occasional in the sun the sea inside of you is smaller and your ability to make Vitamin D3 is limited due to dehydration. IR-A light can help this via hybrid tanning. Those frequencies are capable of sulfating proteins and

lipids to diffuse sunlight to the yellow red range and away from the blue range. Moreover, sulfated vitamin D3, is the ideal calcium channel blocker in cells. UV-A light makes nitric oxide. So Vitamin D3 can offset calcium efflux if it is being made by the sun. Today's world, we live with a sun that rises but we never sense it properly in the AM. Sulfated Vitamin D3 is only created by SUNLIGHT, not food!

The physics of Archimedes principle says, in this case, when sulfated vitamin D 3 is low, water density and buoyancy in the blood plasma and in cells, must change. This change is reflected in a change of location, size and shape of things in the cell and the cell itself. It also alters the plasma and all the lipoproteins suspended within it. Moreover, these alterations all signal a thermodynamic change, or break in symmetry has occurred. Life pays attention to this, even if you and your doctor do not. And today, modern biology has the ability to see these changes with electron microscopes. So far, they have been slow to realize what it means for energy production within the cell. Anything that swells or gets bigger, loses energy via mass equivalence. As thermodynamics changes size, shape and location, life becomes less able to entangle and tunnel protons and electrons everywhere. The distance between things determines how much energy is needed to do do work in a cell. This means life begins to uncouple systems and slowly unravel, the further things move apart from on another. When this begins, we first see disease, and eventually an earlier death. This implies that the relationship of the distance between mitochondria and the cell nucleus is tied to the energy status in the cell. That distance is measured constantly by Archimedes principle and signaled all over the organism.

Where do electrons and protons work critically in us?
Mitochondria.



Now consider what the effect of non native EMF is on mitochondria? They swell, and increase their size, and they move away from the nucleus when this occurs initially. What happens when things get larger and swell? They lose energy.

What happens when you have 3600 of these mitochondria in a neuron or in your leptin receptor? 3600 balloons swells and the cell swells, this causes water loses. Water loss occurs to accommodate those enlarging 3600 mitochondria, and this in turn signals the neuron that energy is being lost. ***These physical changes alters the size, shape, and location of things suspended in a cell. And the amount stretch, tensegrity, or change links to autophagy or apoptosis optically, chemically, and mechanically.*** Today, biology only pays attention to 2 out of three of these signals. Two out of three is not bad for a song, but it sucks if you are a modern clinician. It explains why modern medicine is in the dark about many things. **Your information is only as good as your data.** We are missing a ton of key information about Archimedes principle in biology.

This means organelle movements within the cell are linked to water flows and subject to Archimedes principle. In fact, the ability to recycle bad mitochondria or suicide for your mitochondria is tied to the standing waves in the sea within you. The more cell suicide your cells face, the more sickness

you face, and if it continues chronically, the sooner you'll die because you deplete stem cells. Optimal life needs optimized autophagy, which relies on energy status. The redox potential is linked to energy status. Optimized autophagy needs to be coupled to optimized sleep with optimized circadian signaling from your environment to your brain. This coupling is huge because it conserves energy efficiency.

*When a mitochondria swells it alters that sea inside your cells. It alters the amplitude and oscillation of the standing wave cell water normally creates throughout the entire cell. This signal is also transmitted to other cells in the tissue. The alteration of that standing wave inside every cell, is fully capable of moving things suspended within the cell. That wave is critical to life. **What does this do to water inside and around cells based upon Archimedes' principle?***

What does the Redox Rx look like?

Jack Kruse

Water is lost in the MINOS if the mitochondria becomes able to swell too much. This is a fundamental law of physics, tied directly to fluid dynamics. When water is lost in a cell, it changes its ability to electrically and chemically couple cycles of light, water, and magnetism. Gilbert Ling showed us this 65 years ago. We ignored it then, and remain clueless about its significance today.

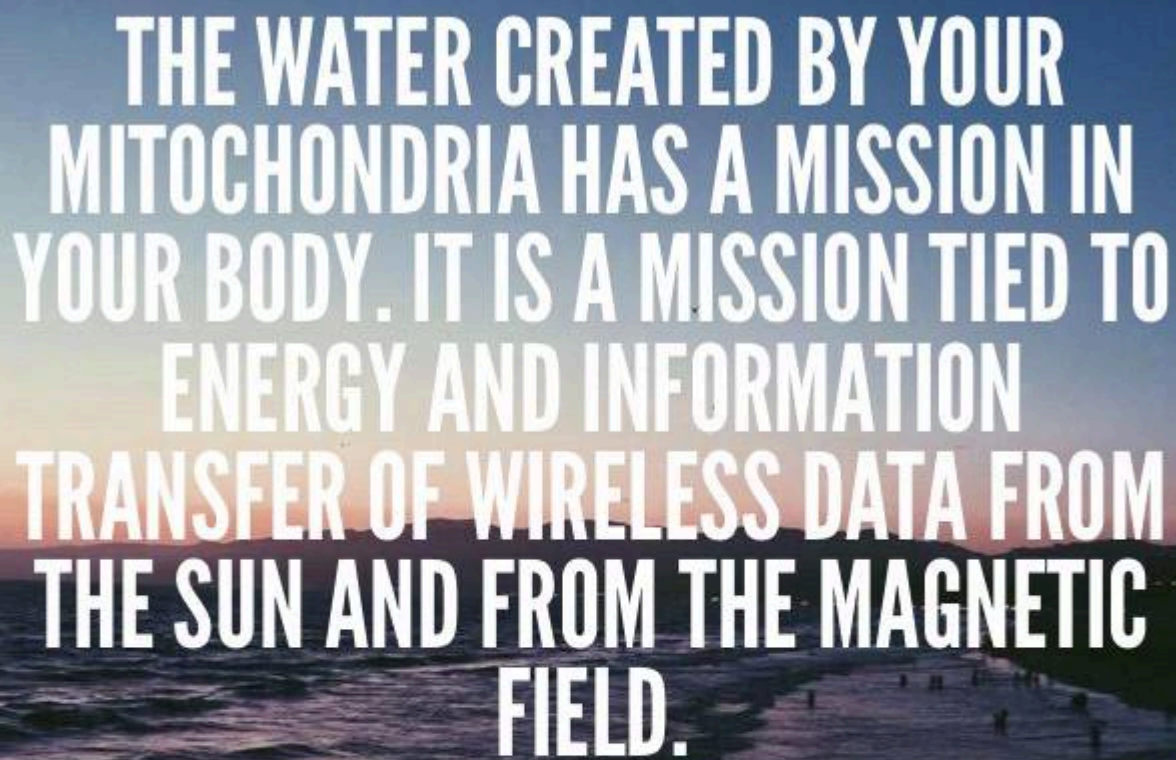
When a cell loses its ability to generate a standing wave; this creates an even bigger problem for life. The generation of a normal standing wave in a cell is the key way a cell is able to tune's itself to the native electromagnetic vibrations

and oscillations of its environment. This is why cells don't grow in culture as they do in tissues. The stretch on a cell on glass is never the same as it is inside a tissue because of these relationships. It is also why dehydration is a major clue to a clinician that coupled cycles, may now be uncoupled.

Uncoupling cycles, uncouple energy from light, and light from metabolism. This uncouples how biochemistry can act coherently, and this divorces the clinician's knowledge from how nature is acting within his patient's body. **This is why your doctor struggles treating chronic diseases.** It is not because they do not care. You can bet when sleep is uncoupled from melatonin, sulfated Vitamin D3, cortisol, and DHEA cycles, your metabolism and cell cycles are also altered, if you look for evidence. No one does, and no one knows why we should look because biology does not understand how 3 physical forces bring life's spark to fruition.

What else happens to the sea within us when we uncouple?

Water losses mean density alterations and this causes electrical and mechanical losses of energy. Energy is lost at every step. **As they change in unison, something bad happens in the brain. The optics of water changes in the hypothalamus because of physical laws.** When optics change, proteins can no longer function as they were designed by evolution. *When proteins do not function well, their redox potential is altered, and this is when ubiquitin marks a protein to be replaced.* When this occurs, it is the signal DNA responds to, to begin expression to make new protein. This is how epigenetics works. This is why ubiquitination rates are increased in all cases, where homeostasis is unbalanced from any environmental changes in any way.

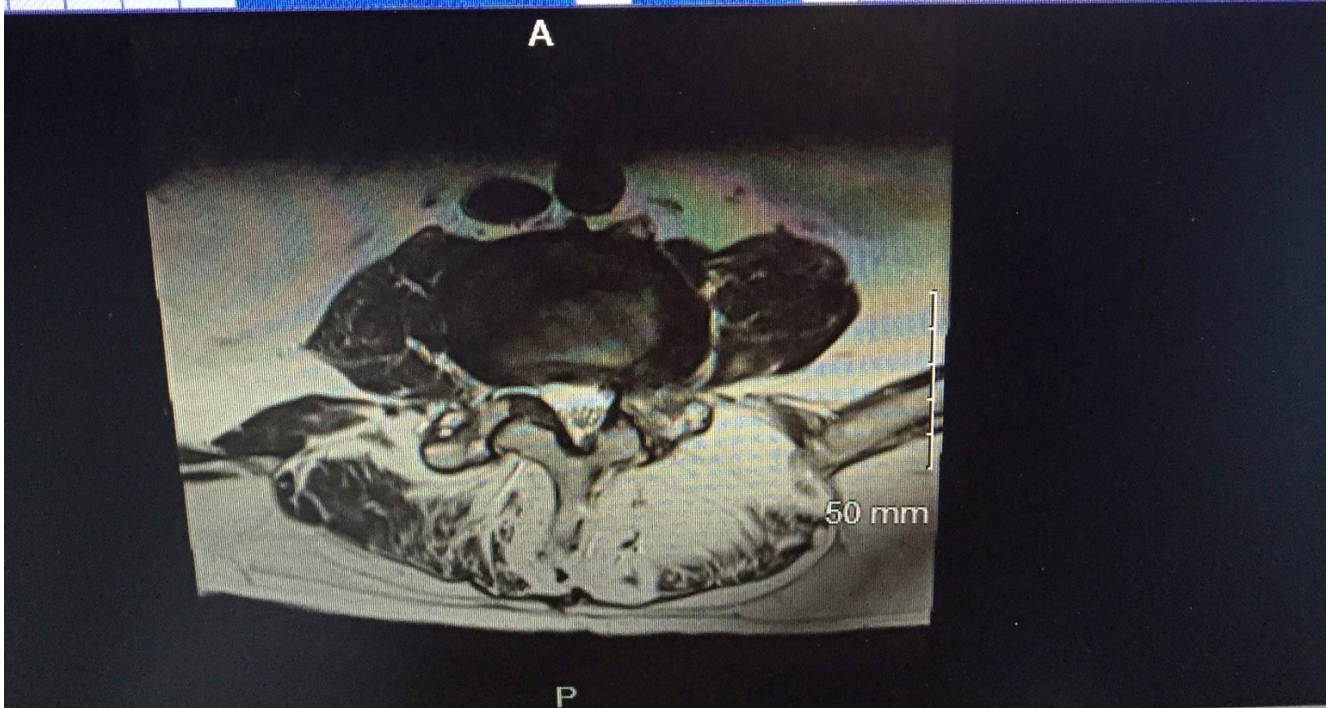
A photograph of a beach at sunset. The sky is a mix of blue, orange, and red. The ocean waves are breaking on the shore. In the distance, several people are visible in the water. The text is overlaid on the image in white, bold, sans-serif font.

**THE WATER CREATED BY YOUR
MITOCHONDRIA HAS A MISSION IN
YOUR BODY. IT IS A MISSION TIED TO
ENERGY AND INFORMATION
TRANSFER OF WIRELESS DATA FROM
THE SUN AND FROM THE MAGNETIC
FIELD.**

JACK KRUSE

What is the collateral damage of these effects? It alters the size, shape, of mitochondria and this alters the muscle and fat mass first. We store our stem cells in fat and muscle. Neurosurgeons see these changes in MRI's images all the time. We see it, but few really know what these changes mean. Humans see well, but they don't observe well. We begin to see fat where muscle should be and fat where bone should be. Why? The environment is altering Archimedes principle in us!!! Fat and muscle have different density and buoyancy to mimic the thermodynamic changes in these tissues to reflect

energy loss or gain. This is why fat replacement of muscle or bone on an MRI, or white matter changes within the brain, is a key finding of uncoupling of light from metabolism. The altered water flows are seen as abnormal proton signals in the white matter, bone, and in muscles; Moreover, every one of them is tied to Archimedes principle is occurring in the person to the astute clinician.




The bone is the "Y" in the picture. The white adjacent to the 'Y' is fat and should be muscle and black. Notice the massive intra-abdominal fat associated with this: T2D.

Why? Martin Chaplin has done all the heavy lifting experiments on water density we need to know. If you remain unconvinced, you need to read Martin Chaplin's work on water density changes, and how it translates directly to the hydrogen bonding networks in water that are easily modulated via calcium homeostasis. These density changes directly link to the ability to proton tunnel and electron tunnel in this cell water. **Dense water is easier to tunnel and entangle to make free radicals, like superoxide.**

Here, you begin to see how the complex dance between light and natural physical laws develops from quantum physics to unify circadian oscillation signaling in coupled cycles to the tensegrity system in a cell. These coupled cycles in a cell translates directly to the ubiquination rates in cells that are directly linked to nucleic acid expression.

The more non native oscillations you face in your chosen environment, the higher your ubiquination rates become, and the more chronic disease you get. Every neolithic disease has to follow these rule of physics because this is how the universe and Earth are organized.



Your future belongs to the sensor that
you don't notice. It's the sensor that's
built into your life and attached to it.
It's a mitochondria

Jack Kruse

TRUTH BOMB: What does this mean for nucleic acids, which are also suspended in cell water in the nucleus of eukaryotes?

Nucleic acids predominantly use optico-photonic, electrochemical, electromechanical signals to alter genetic expression by linking ubiquitination to tensegrity system using Archimedes law of fluid dynamics of cell water. This is also why eukaryotes have so many organelles with cell membranes which are suspended in water. The more times this is repeated in a cell, more energy can be extracted by these coupled cycles by physics, to build complexity. Coupling is way to

conserve energy. This is how evolution works. *Water and light must couple to gravity, the electromagnetic force, and Archimedes principle to figure out what to do with energy they have harvested from the environment.*

I will make this prediction now, based upon the medical physics and quantum biology in this series, biology will discover this is how life builds complexity. It is not random mutations, as Darwin suggested. **Conditions of existence, due to the actions of the sea within us, and light around us, cause epigenetic modifications that change us.** If we get more energy, we build more complexity. When we lose energy we de-evolve. This is what neolithic disease is. The systems slowly uncouple and give us bizarre findings we won't find in textbook of biochemistry. If the change subtracts energy, we lose complexity, and diseases like autism and Alzheimer's are evidence of this action in our species. I have carefully laid out these ideas over last two years; I fully expect that biology, and many of you, will scoff at these ideas for years. *You can't understand what you don't look for. **I write it now on a public forum, because someone else will realize what I am saying, and eventually change our world.***

HOW DO WE CAPTURE LIGHT WE CAN'T SEE?

Hydration Shell

SOLITONS INFINITY **SURROUNDS ALL PROTEINS** **ZN, CU = EZ**

LIGHT = ELECTRO-MECHANICAL WAVE (SOUND)

UV LIGHT

FOR IR-A TRAP IS WATER

redox pile

Mito makes Cytosol sea
nnEMF = 7.83 alpha

WATER IS A MAGNETIC DIPOLE

OSU—ACOUSTIC PHONONS (2014)

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TRANSGENERATIONAL EPIGENETICS SEEN FROM A NEW PERSPECTIVE: Light and Water

A baby is also contained in a bag of amniotic fluid, is it not? Could this mean Archimedes principle plays a role here too? Amniotic fluid also has a special density too, but it mostly water. So might a child's birth day be tied to Archimedes principle? Might this be how environmental signals are sent from mother to child? Might this be why birth time of the year has been associated with lifespan in some epidemiologic studies? Let us examine these relationships.

Buoyant forces, in fact, do change in a fetus as it grows over

9 months. Physics has a lot to do with when birth is likely to come. If you ask an OB/GYN how does a baby know when to come, you will get a blank stare. They don't know. We don't learn physics in medical school. How do we know physics is at play? Babies get fat as they get to 9 months. This is a characteristic of human pregnancy and separates us from other primates. Fat changes your buoyancy. Whose rule controls buoyant forces? See, you now can make a better guess than your doctor when the baby is going to come based upon the environment momma allows. It also ties to grandmother and great grandmother if the child is a female.

This is why fat babies often have longer gestations. They are so fat, they have a negative buoyancy and they won't go into the mother's pelvis based upon Archimedes principle, so they don't come out at 38 weeks. So what does the mother's physiology need to do to compensate? One, get an OB/GYN to cut the baby out (not the best choice), or two, increase the amount of water in the mother's vascular space and/or tissues to reverse the buoyant forces of the fat baby. This increases the muscular tension in her uterus to squeeze the baby!

Remember, the baby is packed in water during this squeeze until the mother's water breaks. Does this sound similar to the February webinar? The baby is using the science of free diving (**February 2015 Webinar**) to go without oxygen as it passes through the mother's pelvis and out her vagina.

Fat babies from mom's with gestational diabetes have a big issue. Can the baby fit out? Will labor be too long to cause hypoxia in the baby stuck in her pelvic outflow? This is why gestational diabetes in mom's have such high blood pressures and tend to gain so much weight. They must generate more force to expel a fat kid. The environment of the mother and baby were created by choices born of the environment we allowed. Quantum physics operational in us, and in this example, is trying to reverse the processes of bad transgenerational epigenetic signaling that was present in the

mother's germ cells before pregnancy. That information was coded for in her egg cells before fertilization. Where was it stored?

TRUTH BOMB: The space between her mitochondria and cell nucleus was altered after the mother's birth further moving the mitochondria from the cell nucleus setting the child up with an altered ubiquination rate. OB/GYN's needs to be looking at these oocyte relationships before IVF.

The faster the ubiquination rate, the faster your SCN has to run to stay ahead of the speed of the germ cell line and the somatic cells to help properly yoke your circadian cycles to the planet. This is how epigenetics is transmitted in all animals with a placenta, in my opinion. This yoking mechanism is tied to small carrier proteins in mitochondria of the oocyte of all mothers. The SCN clock speed, is directly tied to the amount of DHA in its cell membrane structure.

Remember, you learned in ubiquination 2, that our SCN needs to run at a faster speed than our organ clocks, in other tissues to run biochemistry correctly. In pregnancy, the SCN really needs to be ahead of the oocyte clock, otherwise one should expect problems for the mother and fetus. This is why DHA status in mom before pregnancy is crucial. This is why maternal leptin resistance is a problem for modern OB's. **It is also why leptin controls fecundity and oocyte development in humans.** More often than not, in gestational diabetes, or even an older mother, heregg pool is altered because these things are not studied before conception. If you do not measure it, these things can't be compensated for unless mom or her OB/GYN realize it before pregnancy takes place. They can be augmented by making some lifestyle alterations to her environment. *Few get told this information because no one realizes how these relationships tie physics to biology of maternal fetal medicine.* When you don't change your environment before pregnancy, you wind up being infertile,

spending thousands on in vitro fertilization (IVF) with your OB/GYN. If you do get pregnant, and do not alter your environment, you should expect some problems. **The problems in mom and the baby are directly proportional to the space between the mitochondria and her nuclear DNA.** This points out why sperm do not have mitochondria or a nucleus too!!! That measurement is critical in the maternal germ cell line and it is transmitted to each child. Dad's germ cells are fully capable of affecting the distance and location **after fertilization**. So dad does effect epigenetics in ways different than mom can.

Does this sound familiar to anyone? Infertility is now the dominant problem for child bearing women and men in the USA and Australia. It spans two hemispheres. This is a global effect. **Epidemics are controlled by epigenetics and not genetics.**

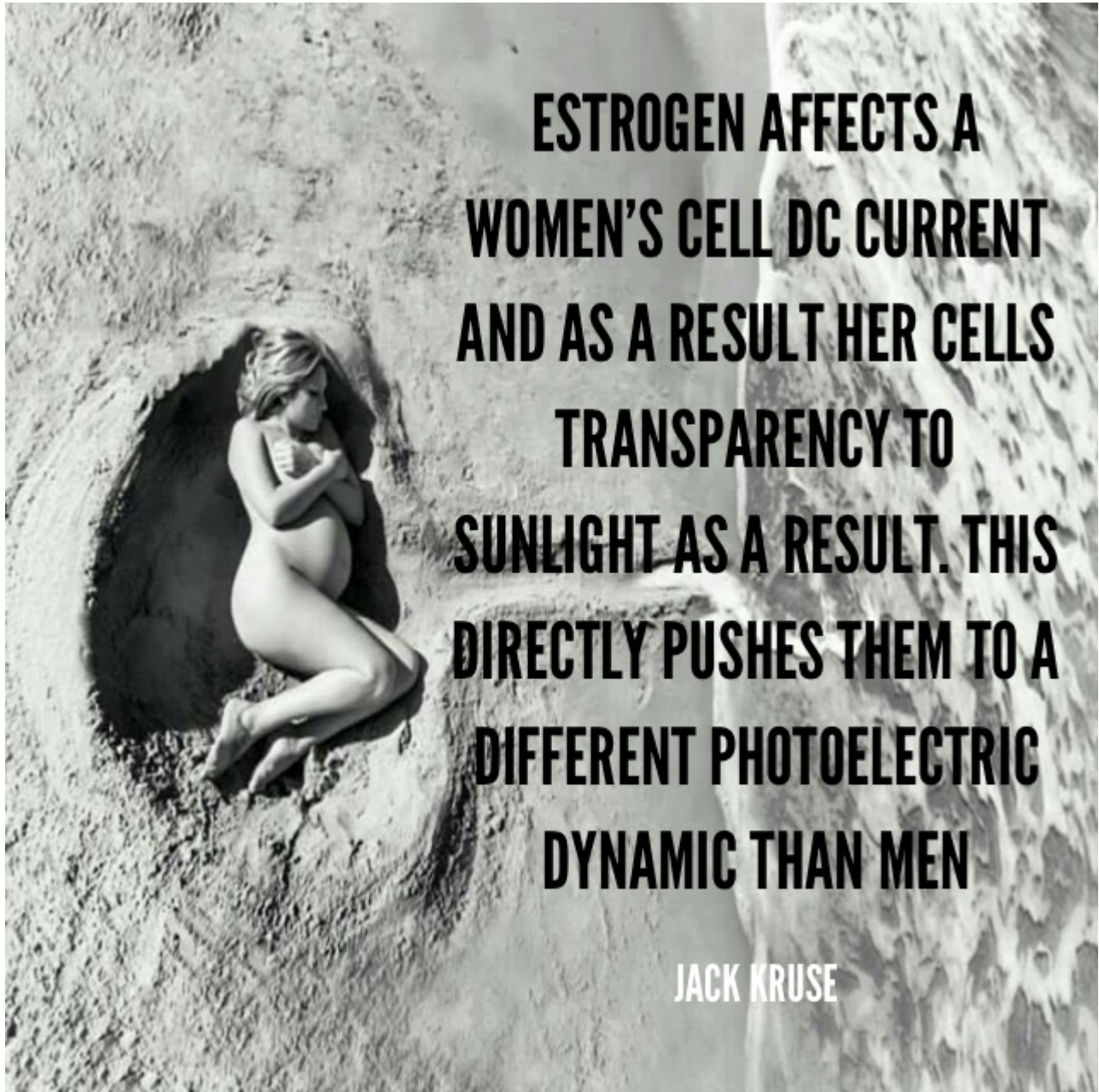
Modern medicine has figured out one thing about this process, correctly in the literature. *Most women with these conditions of existence in pregnancy, will go on to become a diabetic later in life.* Why does this relationship exist? **Archimedes principle is violated in their germ cell lines.** Women and men inherit all mitochondrial DNA from their maternal side and they get one nucleus from mom. Sperm have no nucleus. That distance between the two is how metabolic cycles link to circadian and growth cycles. These cells link our maternal side coupling information, to the environment Mom is sensing during pregnancy. This alters the distance between mitochondria and the nucleus. As the zygote divides this distance is captured by every cell in the child's somatic cell line! If it is a girl, it is captured in her germ cell line. What happens if the maternal side of your family has a chronically low tissue DHA level, due to blue light exposure? (leptin resistance)

Before the mother's pregnancy, the mitochondria had to be swollen and further away from the nucleus, while being

suspended in her cell water. Today, the most likely reason might be tied to an altered environment with respect to the electromagnetic force, the gravitational constant, or altered density of water using Archimedes principle. Today, the most common reason is likely an excessive amount of blue light exposure in her environment over her life time. **These energies change the physical relationships in our mother's germ cell lines, and the effect gets translated to her somatic cells.** Blue light bends light the most in water. This information also gets transmitted to her future fetus as soon as fertilization occurs. **The distance between nucleus and mitochondrial density is a thermostat of energy efficiency.**

This is how a baby anticipates the world it is entering, to ensure survival. All humans inherit their mitochondrial DNA from their mother. The relationship of the mitochondria to the nucleus is set at fertilization of the oocyte by a sperm.

Moreover, because women are designed by mother nature to give environmental signs to their offspring to optimize survival, these size shape relationships are sent to their children in her womb using these 3 physical laws in coupled fashion. If mom is uncoupled so too, will the child.



**ESTROGEN AFFECTS A
WOMEN'S CELL DC CURRENT
AND AS A RESULT HER CELLS
TRANSPARENCY TO
SUNLIGHT AS A RESULT. THIS
DIRECTLY PUSHES THEM TO A
DIFFERENT PHOTOELECTRIC
DYNAMIC THAN MEN**

JACK KRUSE

How else are mother and fetus linked physically that might effect this relationship? Mother and fetus share her vascular space throughout gestation, so within her vascular space, the electromechanical, electrochemical, and optico-photonics deformations in her cells are shared constantly with the fetus's cells; This is how epigenetic switches can be redirected pre and postnatally. This directly cements the physical relationships of the mother, to the fetal circulation, by way of Archimedes principle. How far does this connection reach in the child? All the way to its brain.

It really affects places in its brain that have no blood brain barrier to protect it. The child's pineal gland and leptin receptor in the hypothalamus have no blood brain barrier. These areas get this information just like a USB drive delivers a new program to a computer. The gut connects to the brain via the vagus nerve. The vagus nerve comes from the area postrema, which also has no blood brain barrier. This is how the gut and brain link, it too works using light and Archimedes principle.

TRUTH BOMB: This is the physics of how transgenerational epigenetics occurs, in all life on this planet, in all eutherian mammals, in my opinion. This idea is radically different than anyone you have ever heard before. Innovator's see the same givens in a thermodynamic system, but see it from a new perspective, to make sense of it. Not once in medical school or my OB rotation, did I ever learn how these various physical processes could be used to alter water chemistry in pregnancy. Much less, to directly affect DNA and RNA expression, just by the movement of mitochondria in relationship to the nucleus of a cell. In 1990's, when I finished medical school we did not even know mitochondria could move in a cell. Now we know the motion is quite dynamic. It took me ten years to make sense of these observations.

What about cancer? Different sized viral particles, disabled electrically, optically, and chemically are now being used to re-activate T-cells to change their size and shape to kill different cancers. Might Archimedes mechanism be applicable in these treatments? Yep. HIV infections are now curing cancers in kids using light and protein ubiquitination. As the series rolls on you will see some shocking observations in cancer I have made and fact checked, that I might be right with my ideas.

A COLOR BLIND OCTOPUS MEETS EPIGENETIC EXPRESSION

Is there another example in nature that shows us how electromechanical coupling works normally, and not in a disease state? Yes. Let us meet the octopus. ***It can change its size or shape and its color when its environment changes in a moments notice.*** The manner in which this happens, is 100% due to electromechanical and thermodynamic changes between mitochondrial size, shape, and location with its cell's tissue water. These signals change the distance from the mitochondria to the nucleus, where the DNA of the octopus also resides. As water is lost inside the octopus cell, by Archimedes' principle, mentioned above, this causes an electromechanical deformation in the tensegrity system of the cell's cytoarchitecture in the octopus. This change directly alters ubiquitination rates of proteins. How? **It turns out, ubiquitination rates are tied to a change in the buoyant forces between mitochondria and the cell nucleus to speed up to try to increase the cell's cytoskeletal strength.** As protein's change in the skin of the octopus, the color of the octopus mirrors the changes, it senses in its environment. The big shocker? Octopus aren't even able to even see color, but their skin is capable of a perfect match! That is quantum mechanics of wave frequency at work in protein ubiquitination. These changes have to be yoked in time relative to the signals generated in the octopus main circadian pacemaker in its body. BOOM!

Biological rhythms enable organisms to measure time and to synchronize their endogenous behavior and physiology with the time constraints of their environment. Since the inhabitants of the littoral zone of marine environments (where the octopus live) are exposed to complex temporal and environmental changes in water, biological rhythms play an important role in their lives. Timekeeping, is especially important, for animals with short lives like octopuses. Circadian rhythms, which are rhythms of about a day, are one of the most prominent of

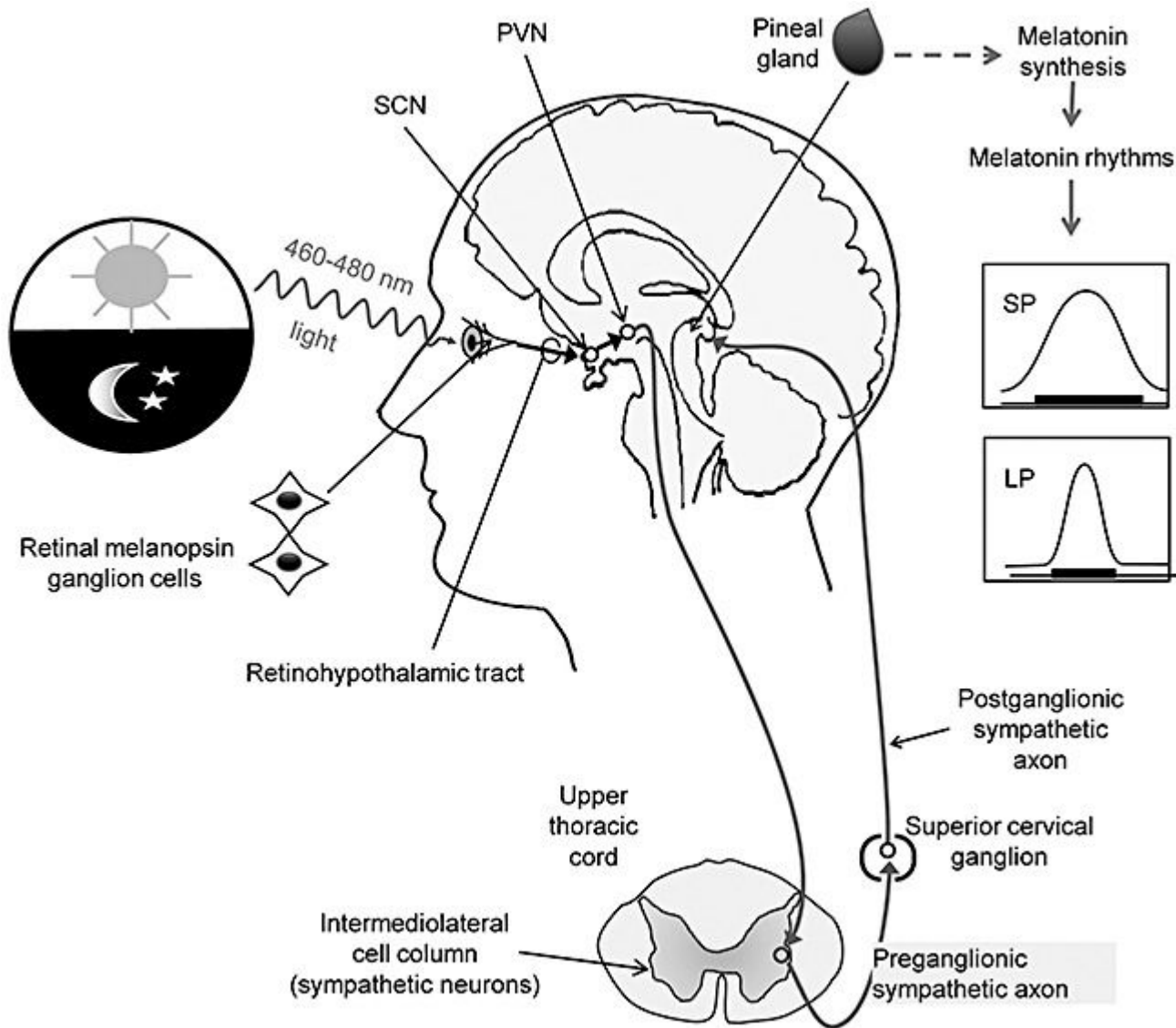
biological rhythms. They are ubiquitous through all phyla of the animal kingdom, and light being one of the most important "Zeitgebers" for almost all of them. Light has a circadian effect for octopus too, but it is not as strong as it is for humans because they live in water and have a sea within them.

Scientists still can't figure out how the octopus uses circadian signals to be the ultimate chameleon in the photic zone of the sea. We know they are able to see light using polarization of the light in water, via their specialized eye that acts like a "light compass". This is a compass that uses no magnetic effect to guide it. It uses light and gravity (in tidal changes) and Archimedes principle in sea water. It turns out, water blocks most non native EMF in the ocean, so an octopus is protected from human created non native EMF for the most part. humans who live in air on land are not so lucky. **Humans who spend a lot of time in the ocean can mitigate their risks of non native EMF.** Are the oceans a perfect resource for marine life, isolating them from human intervention? Nope. Octopus do have to deal with marine sonar waves humans create but this is a bigger deal to mammals (dolphins and whales) who echolocate in water, and sharks who use electromagnetic and electrochemical sensing.

Bowhead whales have another "aquatic benefit". They are the deepest diving mammal and use pressure to augment the link between tensesgrity and ubiquination while feasting on an Epi-paleo template. they do this, while having no teeth, in cold water. Remember what I told you about human teeth? Why would we have vegetarian occlusal surfaces, but acid in our stomachs? Why would evolution create a mismatch between our teeth and gut? To get the correct flora to make a proper light frequency and to make 8-12 liters of H₂ gas. Bowhead whales exhibit the very same effect, as we do. Bowhead whale's are rarely spotted south of the Arctic. Seafood is

most dense in cold polar waters. The last chapter of my book talked about that unusual relationship. **They also live the longest of any eutherian mammal.** I would ask members, what did I say about this issue in the February webinar and in the Q & A? Think it is not a big deal now? Longevity is tied to pressure and to water. Water density changes its optics and polarization.

This novel use of polarized light might have been used by ancient humans to navigate the seas before magnetic compasses. The Vikings were said to use the same method of using light polarization to navigate seas, by being able to precisely locate where the sun was no matter if it was dark or cloudy, using these physical principles. This ability appears to have been in use way before Europeans came to North America in the 1400's. The Viking's were able to figure this out using calcite crystals as sunstones, to see how light was polarized while navigating the sea.

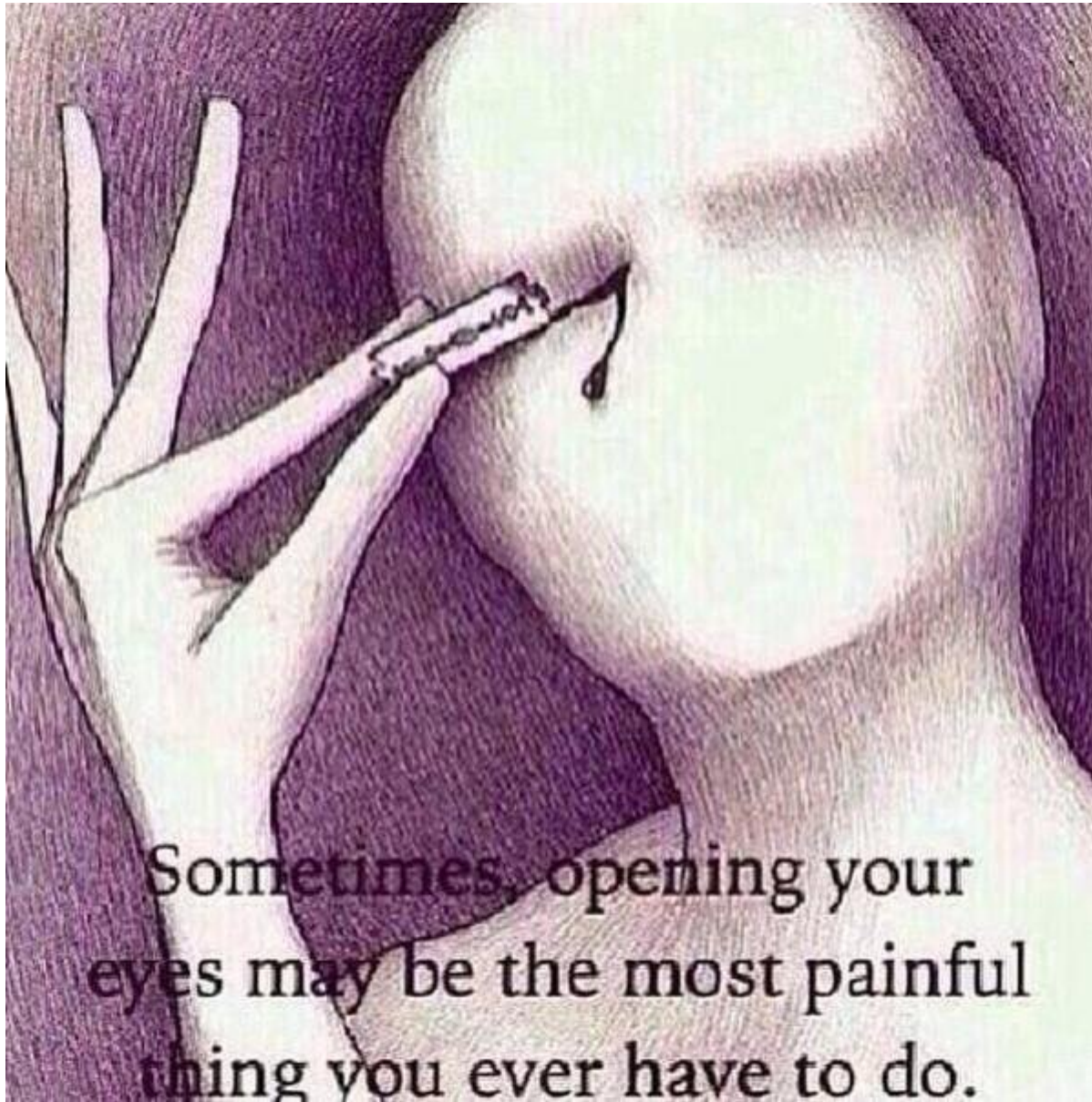


In humans, unlike octopus, we use light in our SCN as the most important "zeitgebers". The octopus lives in water, therefore, it primarily uses Archimedes principle within the ocean, to be the main "Zeitgebers", to generate its circadian signal. Lunar and tidal changes, signal gravitational effects on Earth by the sun and the moon, and are sensed by the octopus; this happens in concert with light polarization from the sun to tell time of day and seasons of the year.

That electromechanical signal, uses water density changes within the ocean and water in its body, to link to size, shape, and distance of their mitochondria to their nucleic acids and organelles.

This linkage causes piezoelectric and flexoelectric changes from the ocean water to be transmitted to their cells directly. Sea water also has a different density than cell water also allowing life in the ocean to use it as a measuring stick to tell time. This is how epigenetic expression is fundamentally controlled in the sea in most marine animals.

TRUTH BOMB Ubiquination, tensegrity, and DNA are all linked via water chemistry and how Archimedes' principle must act. Archimedes' principle is a law of physics, not biology; it is fundamental to fluid mechanics. **It is a principle that biology has largely ignored throughout its entire history, because biochemists discard cell water from cells before they examine the proteins suspended within it.**



Sometimes opening your eyes may be the most painful thing you ever have to do.

When water chemistry changes, it alters the density and water optical ability to polarize. This changes the birefringence of proteins suspended within water as well causing it to change.

Ask any color shifting octopus if I might be right! LOL. This can occur because light can be polarized by water, and things suspended in it also can sense this polarization using waves and oscillations. Water has this ability because it is a quasicrystal in its liquid state. Archimedes principle takes full advantage of the liquid state of water. The main difference between liquids and solids is the way they respond to shear, or twisting forces. Liquids barely resist shear and

can easily be sloshed, whereas solids – regardless of whether they are crystals, quasicrystals or glass – resist attempts to change their shape. Here is where Archimedes meets tensegrity, piezoelectric currents and flexoelectric currents of collagen and DHA. Humans still retain the cytoarchitecture of the tensegrity system but have largely lost many of the abilities of the octopus, because we have evolved away from the ocean since their ancestors left it, but our aquatic reflexes remain in us, as I showed you all in the February 2015 webinar. This might be the reason we lost our hair, to gain more solar power from the sun via DHA in our skin?



Guess what branch of science studies these effects color changes in animals? Quantum physics of optics of quasi crystals. In 2009 a Nobel Prize was given to Daniel Shechtman in Chemistry. Light and water is deep a quantum story folks.

Biology also ignores this. But today, biologist are beginning to realize that optogenetics plays a major role in hormone release in humans. Remember 4 years ago when I mentioned that breadcrumb here? ***Light like starlight from our sun, acts very similar to light release in collagen, cell membranes, mitochondria, and microbiome.*** This linkage to cells and star's also made me realize that hormones reflected the electromagnetic energy states within the cell. Moreover, they must act just like spectroscopy does, with respect to a star's emitted light. Why? Because they have to operate by the laws of physics, and not our biologic beliefs. We can tell a lot about what is going on electromagnetically in our own environment just by looking at a hormone panel. Very few clinicians see this homology in biology today, but I do now.

Do you now? Do you think this ability to sense size and shape changes via altered light polarization might be important in any human diseases modern medicine is stumped by?

YEP. Soon you are going to read about some in this series.

I can tell you an octopus uses this optical ability to camouflage its skin using light polarization changes with muscle contractions that are next to chromatophores on its skin. These muscles change the bonds within the chromatophores to make any color or shade it needs using light polarization changes in sea water. **Chromatophores in octopus skin and prions in human a brain act similarly in my opinion, using changes in light optics and proteins suspended in it, to change the water chemistry/density to cause radically different effects.** One helps survival of an octopus and one takes the life of a human fast when the environment uncouples light from water chemistry. This is akin to the Viking calcite crystal become cloudy so it can be used. This would lead to massive errors in navigation distance. The same thing is true of cataract formation in humans. Biochemistry in cells is markedly altered when a cataract is present. A cataract is the brain trying to limit blue light exposure.

The same principle is found in altered timing of atomic clocks that control modern GPS devices. Are you beginning to see how circadian biology is the key process in all of life's energy generation pathways yet? When timing is off, every signal in a cell goes awry. This example in octopus and humans shows how the same circadian keys, can open the door to heaven hell. The environmental context in which it happens determines the fate in much the same way epigenetic expression is affected within a mother, fetus or an infant. Octopus living in a water world, which is largely un-microwaved, comparatively to land, while adult humans do not. **However, fetuses are unique humans, because they do live in a water world, and this is why humans retain their links to aquatic reflexes.** In fact, all eutherian mammals do. And this is why you have aquatic reflexes, still built into your DNA. Our ancestors from the sea used them, at one time, to tell circadian time, and to couple light to the cell and metabolic cycles. Humans still use them in novel ways to control their cell cycle and metabolic cycles on land in an air filled

environment. This is why your mitochondria makes the sea inside of you!

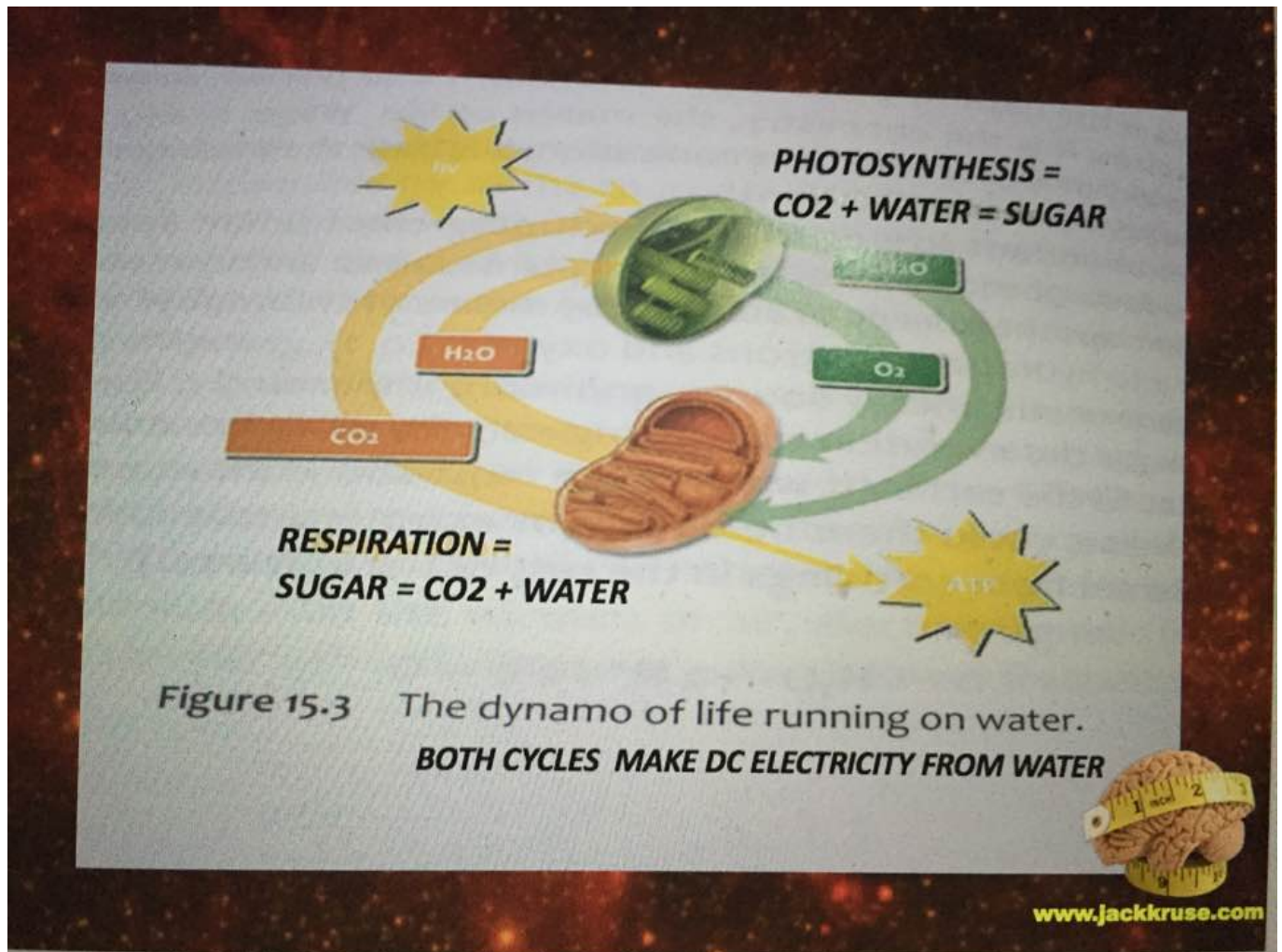


Figure 15.3 The dynamo of life running on water.
BOTH CYCLES MAKE DC ELECTRICITY FROM WATER

SUMMARY:

A single idea, taken by itself, can not lead to knowledge, but when woven together, with other disparate observations, may weave a quilt of ideas, that begins to make sense of the observations we make, as evidence mounts that disconnected cycles that were once joined can do some unusual things to proteins and water using the laws of physics as their thermodynamic lever. Earlier in this series I showed you how circadian biology is related to altitude, non native EMF, and gravitational change with respect to light. Today, I am demonstrating how water chemistry, specifically its density, affects all of these variables electromechanically, to

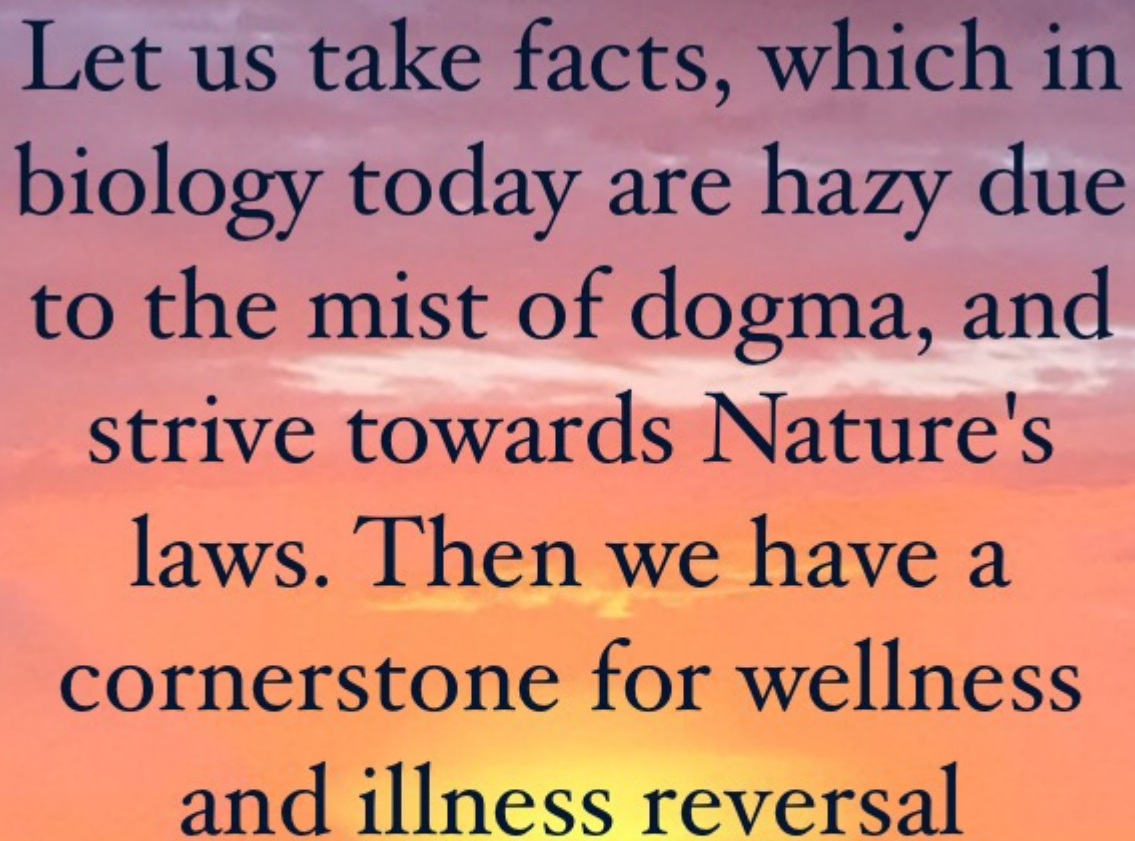
manifest within the biology of your cells. The weight of any displaced fluid is directly proportional to the volume of the displaced fluid (if the surrounding fluid is of uniform density). This is not Jack Kruse' opinion, it is a fundamental law of fluid dynamics. Water density can be altered by ANY environment it is found, because of the of the atoms of hydrogen in water and proteins. Hydrogen controls proton tunneling in small proteins that link mitochondria to many cycles in us. This is what links circadian networks to other coupled cycles in cells, in my opinion. This is why dehydration and ubiquination in any study done to date, has profound effects on life's organization and ability.

The weight of the object(s) in the fluid is reduced, because of the force acting on it, which is called upthrust. So how does water link to the universal forces that help link them to circadian biology? In simple terms, Archimedes principle states that the buoyant force on an object is equal to the weight of the fluid displaced by the object, or the density of the fluid multiplied by the submerged volume **times the gravitational constant, (G)**. Here you see, yet again, a physical force affects water. Light travels in water in the photic zone, and gravity is active in water but it too is altered by Archimedes principle. This in turn alters what water and light are capable of. And we already established in this series that light bends under the direction of gravity.

So what do all these "breadcrumbs" imply to proteins suspended in cell water?

Archimedes principle states chiefly, that among completely submerged objects with equal masses, objects with greater volume have greater buoyancy. Therefore, since light bends under the force of gravity, it should have a massive effect on the proteins suspended in water, shouldn't it? It does. When light and water interact with proteins.....it opens the door to another branch of quantum physics, called non linear optics and polarization. The polarization of light within water is

going to be quantum biologies largest story in reversals of health in my opinion. Nonlinear optics is the science that is foundational to optogenetics and will build the future clinical practice of medical physics. This is the science that will tell us what happens precisely inside a mitochondria. And, yes, I do have some opinions about that too based upon these relationships. In my opinion, this science will provide a unique and detailed introduction to polarization (and vectorial) properties of light in intense light, within tissues with electric and magnetic fields that can vary. This is why the neurons are polarized with the respect to light and their direction in the human brain. I will predict here and now, that the study and understanding of this subject will become increasingly important in medical physics, quantum biology, laser physics, optoelectronics, spectroscopy and optical telecommunications in living and non living technology as time elapses. We briefly touched on this aspect of biology in Organizational Structure and Failure series. I have told you many times that everything within a cell is linked to the environment, whether we see and appreciate the linkage or not. It should be crystal clear to you now why life begins with circadian signals and not with food, contrary to prevailing ancestral and medical belief paradigms.



Let us take facts, which in
biology today are hazy due
to the mist of dogma, and
strive towards Nature's
laws. Then we have a
cornerstone for wellness
and illness reversal

Jack Kruse

Water chemistry, acts via Archimedes' principle to altered optical densities, to become 'lady evolution's' natural Faraday cage, for times when non native EMF's are present in our environment for any reason. This is why water protects life from excessive non native EMF's. This is why water is so important in our modern world. Water has one more puzzle for us to consider at life's quantum edge, too. **Water is also considered a complex fluid in optical hydrodynamic theories.**

Complex fluids can invalidate Archimedes's principle's, in certain circumstance's. Our modern microwaved environment is

one of those circumstances. This has huge implications for the human brain. I pay deep attention to this principle as a neurosurgeon when I operate, because the brain is engulfed in a sea of cerebrospinal fluid. I have thought radically different about how we should be doing things in neurosurgery because of the science in this blog.

When quantum processes in cells or mitochondria are altered, for some reason, tunneling and entanglement of subatomic particles within mitochondria are blocked from occurring naturally within the dictums of circadian biology and in water chemistry in a cell. This is how illness begins in our species in my opinion. **All disease, tie back to this fundamental step.**

Nature allows us to plug in to our true source of power. We are able to tap the spark within us, if we allow for a native environment. Today's world is no longer the place lady evolution innovated our biology. To work, it needs circadian biology to be the "lighter" to spark the flame, present in DHA in our tissues. Our talents need this electric spark; few understand how currents work, but they know how to use their talent. Today, I am trying to share 40 years of a bad education with you. **In the last ten years, all that failure has brought me to this blog.** It has taken a lot of work and teaching. *Failure, brought me to my current understanding by focusing my attention on what really matters in medicine.*

The best way to plug into your success is make sure you don't bore a hole into your own plug. You must bio-hack your environment in ways you have not even thought of yet. **Do not live a life that is all plug and no spark.** You must use nature to tap its "lighter" and save it in your bottle of water, to electrify your talents to illuminate the world around you.

This is why I tell people that experts are not created by certificates or degrees, they are created by people who follow nature's evidence and gain wisdom from it. Anyone can do it.

Optimal health is now a choice, and not something given to you by your genes. We control the environment, we allow our genes to see. **The genome is an 'organ of the cell', not its dictator!!!** Medicine is failing, because of this observation, in my opinion. The last ten years of my life has been geared to creating Rx's tied to all the principles contained in this blog.

What I am trying to do is get people to see the inconvenient truth of how man's progress contains a veil that blocks the truth from us. The brain is filled with a CSF ocean on its surface, kind of like a patch of skin. It is akin to a rich outer membrane, hiding a thick juicy inside, laden with the "soup of our being".

Inside out and outside in and bottom up; these are worlds of things in us capable of imploding in disease or exploding in consciousness, and the only catalyst that determines the direction of eco-movement is the balance of water due to the electromagnetic force, gravity, and light that perturbs the delicate balance.

Both worlds are deceptive to the observer, much like relativity predicts, and dangerous depending upon the contexts we allow. Both, are seething with hidden life and overt neolithic illness.

The only veil that stands between perception of what is underneath, and the desolate surface, is your courage to seek that knowledge contained in this system. The answer to our ills has always been buried in our clock genes and how light is affected by them

My members on my site read what I write, because they know I dare to breach the surface and sink to find the treasures that

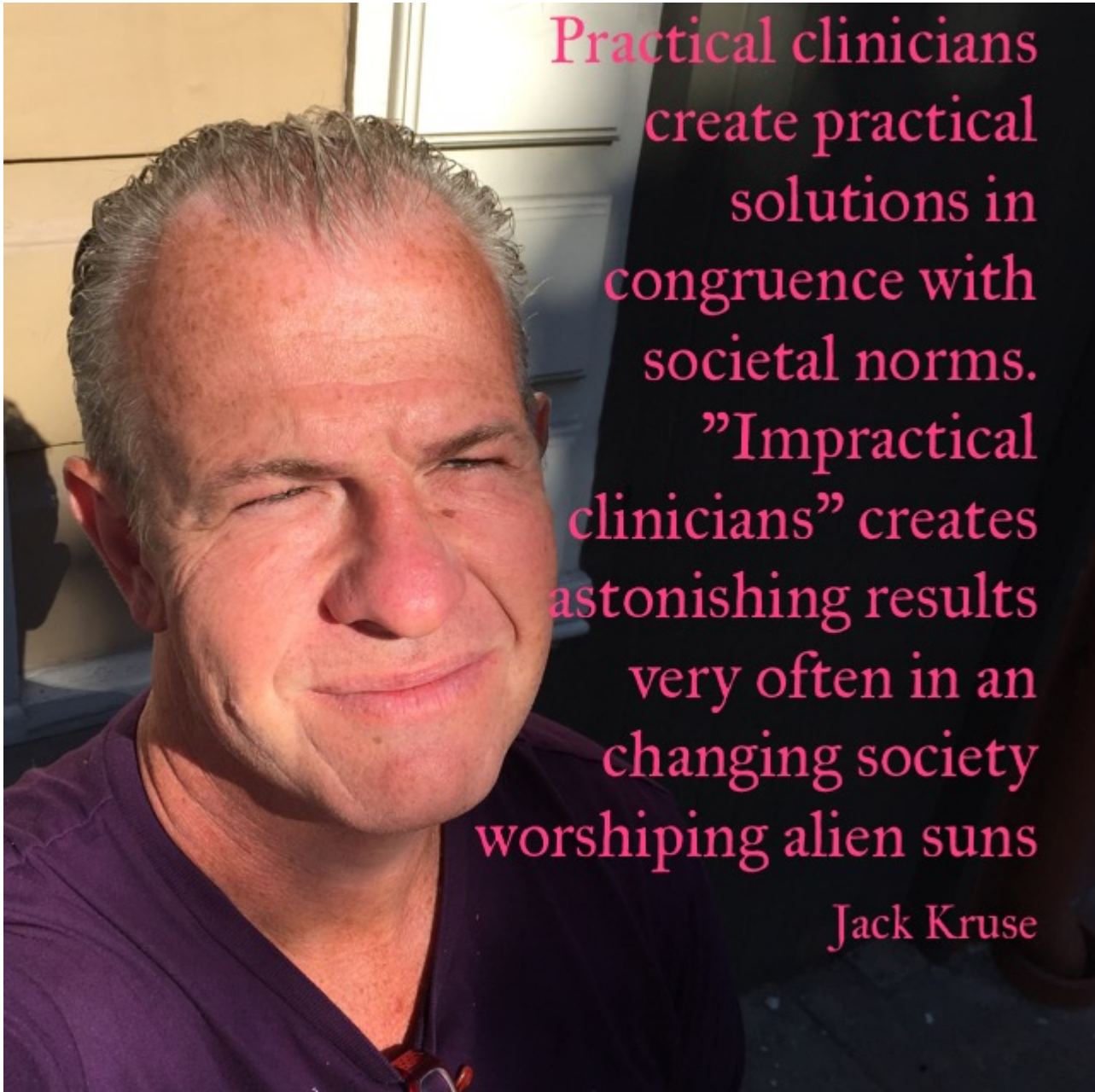
biology has missed. I guess this makes me a pirate for nature's treasures?

Water, in cells, put in unfavorable environments, can only act as a simple thermodynamic fluid. This means we may lose the ability to use water to make free radicals that signal in our mitochondria and within cells. This is the state of water we find in sick people. This is why T2D and Alzheimer's, and cancer patients all have altered superoxide bursts. We lose the ability to make superoxide and H_2O_2 , we lose the ability to control the optical, electrical, chemical density of water.

In people who are optimized, we find water is fully capable of shape shifting our proteins by maintaining its ability as a complex fluid. Only in this state can water generate free radicals in controlled fashion to create proper mitochondrial signaling. *Life uses the metastability of this "complex fluid" to create the condition of existence for life to persist.* Today, man has created non native electromagnetic wave forms in air, that destroy these physical relationships.

The result is the disease we have seen in the last 120 years.

These alterations can be either natural or man made. ***The water and the organelles suspended in this water, were not designed to decipher the difference, just their presence or absence.***



Today, man has created those risks for his own species; the results of his desires for technologic progress has cause a major regression in his ability to sustain life. This is what happens when you gain the ability to uncouple the key cycles in life that is it uses, to tap the quantum world at the thermodynamic edge of biology. The results of man's "*recent progress*" are now felt in disease generation, infertility rates, and altered epigenetic expression. These environmental changes have been unprecedented in evolutionary history, since 1950. Have a look back at OSF 3, OSF 4, and OSF 5 if

you are a skeptic about these ideas and the science acting deeply within you.

When you know better, you begin to do better.

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