

UBIQUITINATION #2: GRAVITY BENDS LIGHT AND TIME AT YOUR SCN

READERS SUMMARY

1. IS THERE ANOTHER PATHWAY IN WHICH ALTITUDE MIGHT HURT US?
2. HOW DOES GRAVITY EFFECT OUR ABILITY TO TELL TIME?
3. CAN OUR SCN BE SLOWED BY BENDING OF LIGHT OR THE FREQUENCY OF LIGHT?
4. WHY DOES A LOSS OF DC CURRENT SLOW OUR SCN DOWN?
5. IS TIMING IN THE HUMAN BRAIN A FOOD STORY OR IS SOMETHING ELSE MORE IMPORTANT?

In Ubiquitination 1, we talked about how excessive non-native EMF could alter normal protein synthesis and ubiquitination pathways in humans. Is there another way to alter these pathways to cause similar findings in humans using another physical force, like gravity? Yes, there is.

And that pathways are linked to another native electromagnetic wave on Earth, called sunlight. Sunlight is the main driver of circadian signaling in the human brain. So how does gravity affect circadian signaling, using sunlight?

The suprachiasmatic nucleus (SCN) has few efferents neurons because this *circadian light clock* has to run faster than the body clocks to work properly. **This clock has little to do with food and everything to do with light.** This is why the SCN is in the head or eyes of most mammals and close their brain mass, where they store most of their mitochondrial density. The physiologic reason the retina of humans has more

DHA in it then its brain is that the retina has to be able to handle massive amounts of sunlight to run the SCN faster than the brain. Higher DHA tissue levels are able to increase the DC electric current in the outflow neurons of the retina that synapse within the SCN at the optic chiasm. DHA in the retina – SCN tract, however, must also have iodine at these synapses to protect the DHA from oxidation. DHA from sources low in iodine actually inhibits this process. This relationship exists because the more DHA a tissue has, the higher DC current it can generate, to run the circadian pacemaker faster than the other clocks in organs and tissues. This should make sense to anyone who has a rundown car battery that can turn over an alternator to start their car.

With respect to the SCN, the same relationship is not true of non-vertebrates because of the direct photoelectric effect and the laws of physics that dictate how light works in our eyes, and in our universe. Have you ever thought to ask yourself why is the position of your body clock in your head (SCN), relative to the sun's light, such a big deal? Few people in medicine or ancestral health have asked, much less thought about this relationship, because they don't appreciate the optics of physics. They should have because light and time have been proven to function by the laws of relativity that Einstein set down in 1905.

Consider the following analogy:

Would you want melatonin levels higher or lower in your brain when you were awake or standing up? No, you would not want melatonin at its highest levels when you were awake, or when you were standing, would you? What does it mean when melatonin levels are higher when we stand, versus when we are laying down as humans? Let us consider the laws of physics, then solve for "x".

TRUTH BOMB ALERT: When light is collected further from the core of the Earth, gravity's effect is lessened on a light.

The brain is designed by evolution to have more mitochondrial density than our feet, so this distance can actually affect light via the effect of gravity to make light bend more than we would expect in our visual system. The SCN is located in the anterior visual pathways, in line, but not directly connected via nerves with our pineal gland. **This means that the SCN circadian clock has to run faster than the organ body clocks because of the warping effects of gravity and magnetic fields in mitochondria.** *If it did not, nothing would be or could be linked to our circadian cycle.*



DHA from food is the critical piece but it needs iodine from the marine chain to work in the SCN

LIGHT AND GRAVITY

The reverse of this idea is that when we live at an elevation we are further from the Earth core and gravity's effect is

lessened on light, so it can't bend light as much. This situation was covered in detail in ubiquitination 1.

Einstein's relativity shows us that light is dramatically affected by gravitational changes. The human SCN is entrained by light, therefore we need to understand this relationship more closely. This means that just living at elevation can cause a circadian mismatch because your circadian clock must get faster in a relative fashion. We saw in ubiquitination 1, the higher we go, the slower our circadian clocks work. This points out why altitude and elevation are directly affected by two fundamental physical forces in nature, the electromagnetic and gravitational force are both tied to optimal SCN function. That lesson has gone unheard by modern medicine and biology. The lesson was provided by Einstein's relativity theory, in case, you were wondering. This is fundamentally why the human SCN has few efferents, by evolutionary design. *To be the accurate timekeeper for biochemistry to work, it must run faster so it needs to pay attention to these two universal forces and light alterations.* Sometimes, when we lead the orchestra, we have to turn our back in the crowd. The SCN wiring mechanism illustrates that point as well.

Melatonin, the sleep hormone, has another interesting relationship to light. It is linked to the sun's ability to make sulfates from foods. These bind to lipids in our skin, gut, and plasma during the day. The sulfur collects in these organs and then "gets towed" to other places at night by other molecules. In blood, it is the DHEA-sulfate and in skin and gut it is cholesterol sulfate, and in our gut and brain, it is melatonin sulfate.

Why is the sulfation of lipids in biology such a critical step? **Sulfur reflects the parts of the electromagnetic spectrum of sunlight our cells have no use for or are injurious to us.** The ultimate effect is that this cools surfaces where sulfated proteins and lipids are found in our cells. Cooling has many effects, but increasing our magnetic

sense is the most important. For example, melatonin release in the CSF drops the hypothalamic temperatures by two degrees at night when it brings sulfates from our small bowel to our pineal gland. **This occurs only at night when the light is absent, fake or natural when there has been a period of 4 hours of darkness.**

This lowers the CSF temperature to allow protons in CSF to come closer together with the action iodine via the Grothaus mechanism to allow proton tunneling to occur more easily.

Lack of melatonin sulfate, cholesterol sulfate and Vitamin D sulfate in your cells and tissues leading to higher levels of inflammation and leptin resistance. When they are absent from your lipid rafts, you can't harvest the correct frequencies of sunlight and *you create the global belief that sun exposure appears to be harmful to life*. This belief is dead wrong. Why? Sulfates happen to be our species best "air conditioning system" to lower our temperature by reflecting the frequencies of sunlight we are not designed to use. This is an example of how surface cold thermogenesis works. This reflection of light, cools our brain skin and gut linings to increase the natural effect of cold on magnetism to allow quantum tunneling and entanglement more likely to happen in these three tissues. This is why cold thermogenesis helps our magnetic sense and builds our wellness. Is there another model in nature that models how sulfur works atomically on temperature generation? Yes, there is. Let us talk about it.

VOLCANIC SULFATED AEROSOLS

Three types of aerosols significantly affect the Earth's climate. The first is the volcanic aerosol layer which forms in the stratosphere after major volcanic eruptions like Mt. Pinatubo in 1993. The dominant aerosol layer is actually formed by sulfur dioxide gas which is converted to droplets of sulfuric acid in the stratosphere over the course of a week to several months after the eruption. Winds in the stratosphere spread the aerosols until they practically cover the globe.

Once formed, these aerosols stay in the stratosphere for about two years. They reflect sunlight, reducing the amount of energy reaching the lower atmosphere and the Earth's surface, cooling them. The relative global coolness of 1993 is thought to have been a response to the stratospheric aerosol layer that was produced by the Mt. Pinatubo eruption. In 1995, though several years had passed since the Mt. Pinatubo eruption, remnants of the layer remained in the atmosphere. This shows you how powerful the effect of sulfur is atomically, on sunlight. It has the ability to reflect sunlight to a great degree. NASA has data from satellites such as the Langley Stratospheric Aerosol and Gas Experiment II (SAGE II) that have enabled scientists to better understand the effects of volcanic aerosols on our atmosphere. It is too bad biologist/medicine/ancestral health do not realize how our skin, brain, and gut, use sulfur to control temperature on our tissue surface areas, where some "forms of light" is released.

Sulfation of proteins in our body makes them water soluble and able to work ideally with protons in hydrogen bonds in water.

THE PHYSICS OF LIGHT AND GRAVITY

Light has a universal speed limit at 186,000 miles an hour in a vacuum. Its speed varies in tissues because density changes the speed of light and its intrinsic optical abilities. Light travels 30 centimeters in one nanosecond in a vacuum. The only way to increase its energy is to increase its frequency. If timing is off, distant signals will also be awry. This very same feature is why GPS clocks orbiting the Earth must run faster than clocks on the ground to navigate properly. Atomic clocks are 38 microseconds faster than clocks on the ground. In 38 microseconds, at the speed of light, if this clock difference did not exist, GPS devices on Earth would be off by a factor over ten kilometers a day. When this miss timing occurs in our brains' mitochondria, the inaccurate timing results in things like neuro-degeneration, T2D, and autoimmunity. *This is why low melatonin, low vitamin D levels,*

and high ubiquitination rates are all associated with disease generation. The “mistiming” leads to massive effects at the quantum scale of protons and electrons in CSF because the scale of action of the SCN is on subatomic particles, not on GPS devices.

The differences are smaller, because unlike orbiting clocks, our SCN's are only 6 feet above our feet, while not rotating 14,000 kilometer's an hour like atomic clocks orbiting Earth are. But you better believe Einstein's relativity is still functioning in that six-foot difference even though we can not measure the precise effects well yet. *I know it exists because the laws of physics say it must.* Just because biology can't measure it yet, means little, in terms of being correct. **An absence of evidence is not an absence of an effect when you are dealing with an established law in physics.** This is a prediction, I am confident will be proven relatively soon. Moreover, when they do measure this effect, scientists are going to realize that 6-foot difference from the Earth and our head has a massive effect on how the electrons and protons in your body move in our mitochondria. This difference is actually why epidemiologic studies have shown taller people generally die sooner than shorter people.

Why am I so sure about this?

TRUTH BOMB 2: There is another interesting feature of gravity with respect to light. **Gravity bends light.** Did you know that? **This is why the further we get from the Earth's surface, the faster a clock must run to make time accurate because light bends in its wake.** Gravitational clock speeding-up accounts for half of the effect of the bending of light in a gravitational field. These are the facts about how the physics of circadian cycle dictate how you live, and not your dietary beliefs.

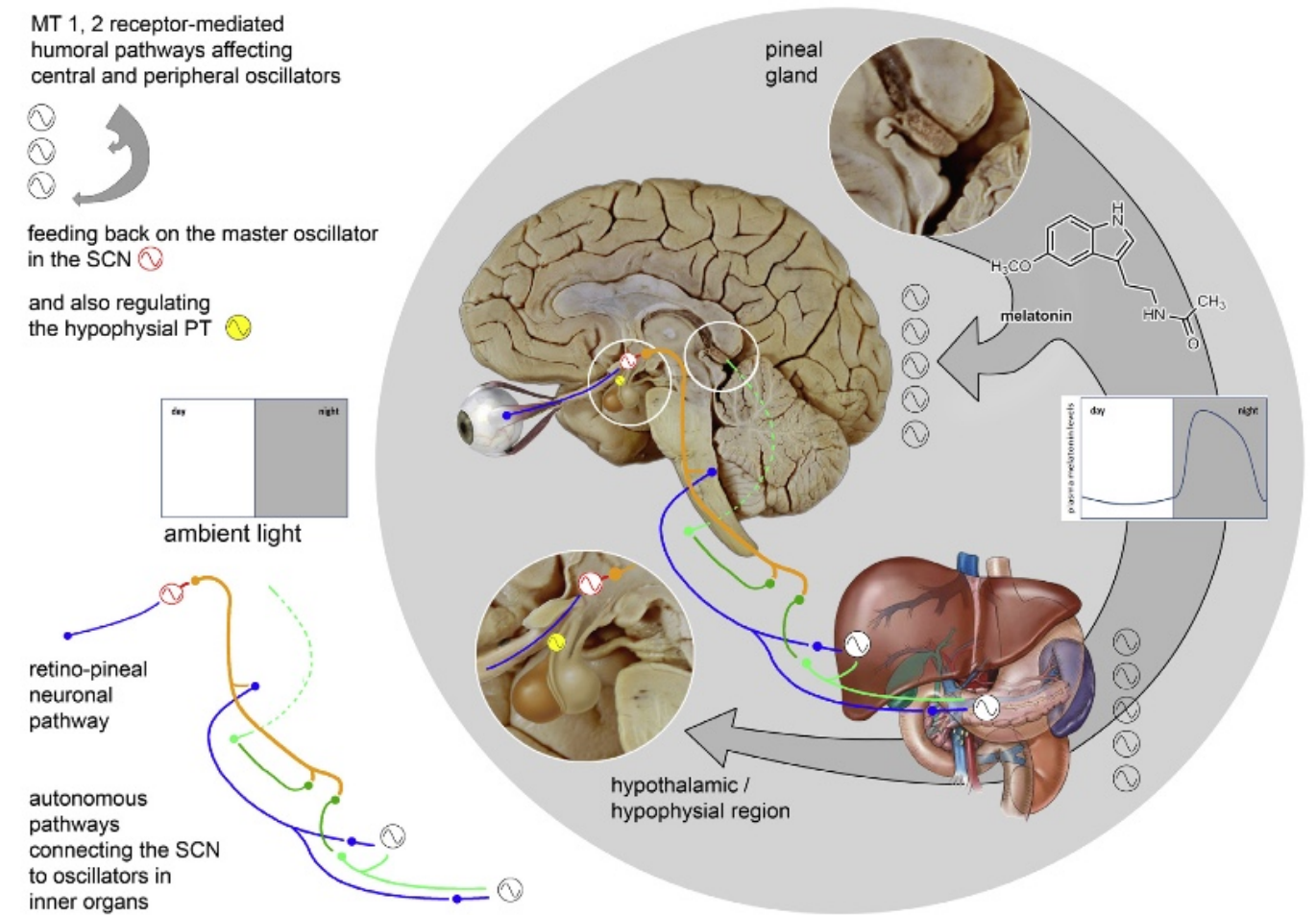
When you consider that modern life uses blue light for technology, the problem becomes even worse because of this physics relationship. Why? This is because of this light

frequency relationship for our SCN. Blue light destroys DHA in cells and it lowers melatonin levels. Are you beginning to see why modern life is destroying your cells? Do you still think an ancestral diet low in DHA and iodine, can fix this mess by itself?

TRUTH BOMB 3: Blue light has a higher frequency, longer wavelength and higher photon energies in comparison to red light. *Remember, the only way to increase light's energy is to increase its frequency of wavelength.*

This is because the Electromagnetic spectrum goes up in order of increasing frequency, decreasing wavelength and increasing photon energies. Blue light is nearer the top of the spectrum, and red light is much lower, so it must have a higher frequency. Blue light is right next to ultraviolet radiation and red light is next to infrared radiation, and ultraviolet radiation has a higher frequency than infrared radiation. That is how you can remember, infra RED's (IR) position on the spectrum.

Mitochondria release IR light best, during REM sleep. We use small amounts of blue light in wakefulness for alertness. Melatonin release is stimulated by the absence of light, and that is tied to the complex wiring of the superior cervical ganglia (SCG) in your carotid body. This is linked to the pineal gland by DIRECT neural connections. This is how sulfur from the sun's light, is first stored in our blood plasma and RBC's is then signaled to the pineal gland directly by neurons and by blood flow. This is why there are few connections in nerves. We don't need nerves, to get sulfur there. This relationship will be the topic of the next blog.



SYMPTOMS AND CONSEQUENCES OF FAILING TO UNDERSTAND BLUE LIGHT TOXICITY

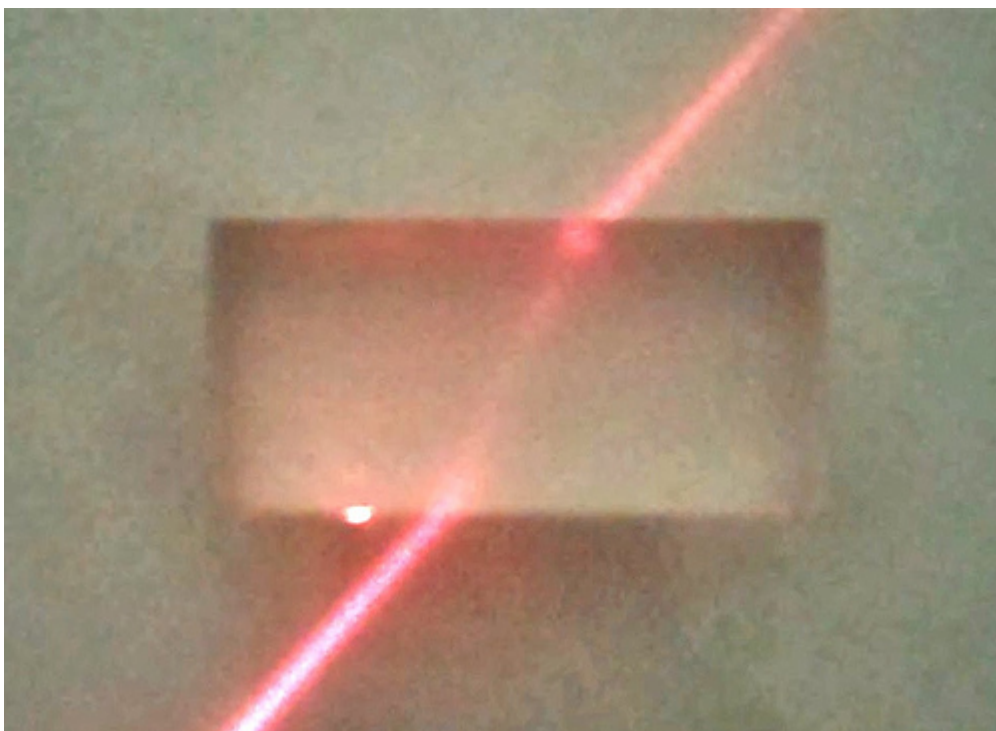
When your melatonin levels are higher in the standing position, it is often a sign that you are suffering from some type of circadian light mismatch. Having a history of cataracts or lens replacement is another. Lipofuscinosis in several tissues is another.

The very same quantum effects of light in gravity are at work in modern GPS devices but few people are connecting the dots of how blue light ages us faster than normal. Light bends under the forces of gravity and magnetism to a degree. Eddington proved light bent around the sun in 1919, and any old cathode ray TV proved that light can be bent by a magnetic field. In fact, at CERN, light is bent in a circle, to create high energy collisions that physicists use in their experiments. **All of these basic observations have been missed**

by biology, but they are taken full advantage of in modern GPS devices, and in your SCN, to give the signals to your mitochondria how to handle electrons and protons from mitochondria. Food provides electrons to the mix. That is its real role here.

Natural selection has used the same physics, to perform similar tasks in your SCN over 4.5 billion years of construction. **It is known a well-known fact that all clocks must run faster in weaker gravitation fields.** Medicine and ancestral health have never considered this in any of their advice. When we go higher in altitude, we also know that our SCN runs more slowly, because of its interaction with higher energies from non-native EMF. We covered that detail in Ubiquitination 1.

Today, we see that light, the other key natural element, that we use to set our circadian clock, is also altered by position on our planet. We believe the Vikings used sunstone crystals to navigate the seas 300 years before magnetic compasses were invented. Who would have guessed our SCN uses light to navigate circadian signals in the same way?



We also know that the stronger a magnetic field is, the

stronger gravity tends to be. Gravity can bend light, so life on another planet has to be organized much differently than it is here on Earth because of these physical effects. This would be true on the sun and on Jupiter. This has massive implications for biology because certain organs have much higher mitochondrial density, therefore they have higher magnetic fields than other parts of the body.

TRUTH BOMB 4: This means that our brain and heart can bend light more than other parts of our body. Today, we can measure this ability with SQUID devices. When the clocks in these organs can't run faster than the organ clocks in the remainder of our tissues, disease ensues in these tissues. today, heart disease is the number one cause of death globally. The very same mechanism in atomic clocks and GPS devices is used in life. **Quantum timing in biology has the same massive effects as we see in GPS devices.** We saw above, if the atomic clock speeds are not corrected by being 38 microseconds faster, we can be off ten kilometers in distance. How much do you think the biochemistry is off when your own GPS clock is off? What do you think the effects of enzymatic fluxes are for proton tunneling in enzymes now?

SUMMARY

Ancestral health, physicians, astronauts, pilots, and nightshift workers have a lot in common, with their exposure to non-native EMF's in their visual pathways. Few see, however, how it destroys the relationship of DHA in their SCN to the organ clocks or their own brain. Some practitioners do appreciate this relationship. [HYPERLINK](#). You won't find them at certain conferences because their message affects other's bottom line. Physicians have a duty to do no harm when they understand the perspective of what they learned might be radically altered by new information. That is where I have stood now for ten years. It is where patients, healthcare workers, and people begin to die faster, for reasons yet they don't perceive.

We are not designed to be awake at night by fake light because of its destruction of DHA in your eye. The story is deeper with respect to food, and especially DHA. Symbols can be beacons for truth or symbols of a facade. Symbols and myths are ways of bringing order, form, and information, into life's chaos. What is the difference between poets and mystics? The mystic nails a symbol to one meaning that was true for a moment but soon becomes false. The poet, on the other hand, sees that truth while it's true, but understands that symbols are always in flux and that their meanings are fleeting. Consider me a theoretical biologist who's wording rhymes with nature.

In our ancestral past, food was symbolic of wellness and love, but this relationship is disconnected now by man's ability to create foods not connected to the Earth's cycles. Modern fake food and artificial technologic life make food an inadequate symbol of wellness or love any longer. People have been habitualized into believing all food and technologic progress has the positive connotation for wellness and love; that would be modern man's greatest error.

Food is a variable whose context changes as the environment varies.....nothing has changed more in our modern world than our environment because of what we have created to make life easy via technology. The more or it you use.....the less DHA is in your eye. The SCN sits right above your optic chiasm and has to work fast as the central circadian clock then all the organ clocks in tissues below it. If its enzymatic flux and biochemical control are lost. This is why atomic clocks in orbit above your GPS devices have to run 38 microseconds faster than GPS devices on Earth's surface. If they don't we would be off ten kilometers in most GPS applications. That is a largest miss in distance for 38 microseconds isn't it. Become aware that your SCN needs a constant source of DHA to stay ahead of your organ clocks to make sense of the symbols contained in food called electrons. The human retina has to

have more DHA than the brain to run the atomic clock in you, the SCN, so your life can manifest and you can make sense of how to use food. Don't believe all what you read. This message was not sponsored. It was given to you to get you to think differently about what food really means. The most radical lesson you have learned today is that we should not extrapolate scientific experience beyond its own realm, for any reason. It turns out fast moving things do not behave as slow moving ones do. Moreover, it holds that more massive objects, also act differently than those without much mass. We never account for these differences in biology experiments, but physics experiments should warn us that the effect is a lot larger than we all expect. Today's blog and its analogies shows you how big a deal circadian signaling really can be when it is off for any reason.

When we do make this error in assumptions, we lose our focus and objective of what really is driving biochemistry at the smallest scales of motion in mitochondria. It is not food. It is accurate circadian signaling. When these small effects are summated into our observations, diseases seem to show up out of no where. This is what mankind has seen since 1950. Welcome to the new reality of why biochemistry does not work the way it should, when your circadian timing is broken. It is not just a food story folks.....and it never has been. You have to have both oars in the water to move forward, if you don't and use only one oar, you go in circles and never figure out why we are all getting sick from disease.

Sometimes we need to look at simple things seriously and follow through their consequences logically. I just continue to look at nature's rules, the constancy of the speed of light implied by Maxwell's equations, the equivalence principle of Galileo, and the anatomy of the clocks in th human brain and body. When you string these facts and observations all together, some new ideas and answers appear. Innovators look at the same variables as everyone else, but because their

perspective varies, they see something new. I learned to think like this in my residency to become a brain surgeon. Below: surgery to remove a brain tumor that invaded the orbit and affected the eye clock mechanism.



In my own specialty, the sudden use of the microscope by one surgeon, Dr. Yasergil, revolutionized the things we were able to do for mankind in cranial and spinal surgery. His idea only began several decades ago. My idea is to also shrink our focus even smaller than the microscope is capable of. **I believe we need to begin to operate using techniques on a smaller subatomic scale.** My bet is we will improve outcomes further. The use of the operating microscope allowed us to deal with smaller scales of complex diseases of the brain to improve outcomes for our patients. My belief today is that the same idea will bear fruit when we begin to use focus less on the macroscopic things in medicine and begin to focus on the subatomic world of medical physics and see how mitochondria fundamentally work.

The human brain has the highest density of mitochondria, and the SCN is intimately tied to how these mitochondria sense our environment. Sometimes we need to go back and rethink our current truths to see the forest through the trees. When you follow these simple aspects to their logical conclusion, it becomes apparent that circadian signaling is the most important aspect controlling human biology. **Circadian biology is where the rubber meets the road for where modern chronic diseases begin in mankind, in my opinion.**

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