

CLINICAL PEARLS: EXPLORATIONS IN PINEAL ADAPTABILITY



Source: [Borderline](#) by Shawn Dulaney

CLASSICAL AND ENDOBIOGENIC UNDERSTANDINGS OF ADAPTABILITY

SUMMARY: This article explores a wide-ranging series of issues relating to adaptation and including a critical evaluation of peer reviewed scientific studies.

QUESTIONS RELATED TO PINEAL ADAPTABILITY

AF: In your teachings on Endobiogeny, you explained that the pineal hormone melatonin has anti-oxidant and anti-tumoral properties. But, more importantly, you teach that the pineal gland manages circadian rhythm, seasonal adaptation and fertility through its influence on a number of other hormones. You have characterized these hormones as being in 4 axes of alternating catabolic and anabolic activity, but the pineal gland as an “axel”, a super-axis that directs and turns all the other hormones.

My colleagues and I, here in Brazil, have been studying the basic science and clinical research on the pineal gland and its main hormone melatonin. We find that the evidence largely aligns with what you teach in Endobiogeny. However, we have some questions that have arisen. Can you elucidate certain doubts and areas that are not clear for us?

KMH: Of course.

AF: How does melatonin work directly at the same time as an anti-oxidant and as an anti-cancer molecule, even though in cancerous cells, oxidative stress is necessary for its destruction?

KMH: One of the reasons that tumors develop is oxidative stress and inflammation that can lead to toxin accumulation, DNA fracture and the activation of oncogenes. In this sense, the anti-oxidant properties of melatonin help prevent development of cancer that is based in low-grade, chronic oxidative stress. Once a cancer has developed, melatonin also has anti-tumoral actions: it inhibits metastasis, immune evasion, and angiogenesis, for example. It also promotes apoptosis and anti-growth factors.¹

AF: In animal studies, melatonin appears to be influenced by various factors besides light. In rhesus monkeys, melatonin varied depending on social hierarchy and reproductive status. Specifically, it was found that dominant males had higher melatonin levels than subordinate males, and that females who were actively reproducing had higher melatonin levels than those who weren't. Likewise, reptiles had higher melatonin production linked to higher temperatures. So, do other factors besides light inhibit or stimulate melatonin secretion in humans and how could we contextualize this with an Endobiogenic approach?

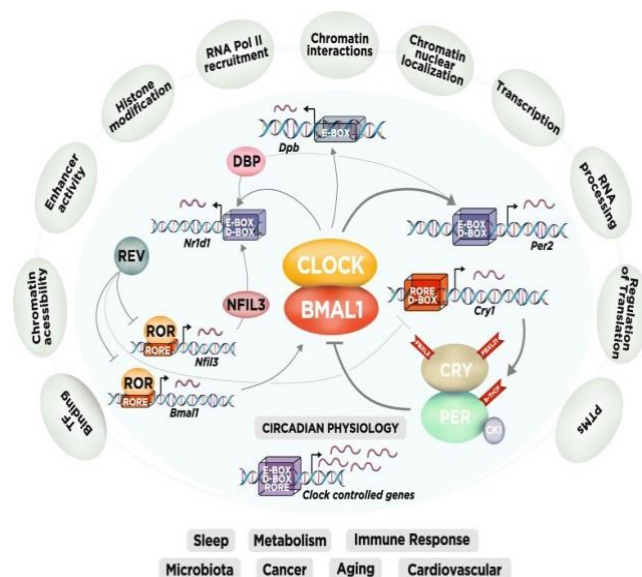
KMH: Because Melatonin also acts directly or indirectly on cortisol, oxytocin and other hormones, we can anticipate an association between behavior and melatonin levels. This is born out in human studies, but mainly in the area of psychiatric illnesses. Disorders of hyperfunctioning, such as mania and schizophrenia are associated with higher daytime melatonin levels.

Disorder	Melatonin	
	AM Serum level	PM Urine level
Anorexia	HIGH	
Bulimia	HIGH	HIGH
Mania		HIGH
Schizophrenia		Blunted peak
Depression		LOW
Seizures		LOW
Aging		LOW
Alzheimer's		LOW

Source: Verster GC. Melatonin and its agonists, circadian rhythms and psychiatry. *Afr J Psychiatry (Johannesbg)*. Feb 2009;12(1):42-46.

AF: Based on chapter 14 of *The Theory of Endobiogeny Volume 1*, The Art of History Taking, there is a section that talks about the 7 phases of life and their programs and sub-programs. In the first and second phase is about embryogenesis and fetogenesis. There is an emphasis on the corticotropic axis as the main axis of control. Literature from the last 10 years shows the importance of [melatonin in fetal development](#), its [prevention from diseases](#), and the hormones presence since the early stages of development. As the pineal gland is the one that recalls and informs the perception of time, be it in seconds, days, or months and has not yet been developed in the early beginning of the human fetus, how does the mother send melatonin to the human fetus? Also, from an endobiogenic perspective, how would melatonin act in such an early stage, with the coupling, linking and yoking of hormones for the proper Embryonic sequential development? Lastly, is this the hormone that guides what should be created next?

KMH: Every cell in the body contains oscillator clocks, which are clusters of proteins that vibrate at different rates. This cell clocks mark circadian, seasonal and circannual time cycles. This should be considered as a primordial and fundamental method of time keep. Please see my interview with [Professor Hogenesch](#), who discovered the master circadian regulatory gene BMAL1.



[Source:](#) Rijo-Ferreira, F, Takahashi, JS. Genomics of circadian rhythms in health and disease. *Genome Med.* 2019; 11:82.

The fetus is in complete darkness, so there is no direct connection with external light, only the biophotonic processes that occur during cell function. However, the mother's melatonin will influence the fetus until it has structures that can produce endogenous melatonin. We commonly see this in fetogenesis: a hormone or organ that functions in one way in utero can take on a different, or, additional functions ex utero.

AF: A study with ewes on reproduction and photo stimulation during different seasons of the year demonstrates a higher tendency to procreate in the fall.² In humans, there is a change in the pulsatile pattern of melatonin from winter, when it is more ample and slow, to summer, when it is less sufficient and fast, as you discussed in *Theory of Endobiogeny Volume 1*, Chapter 5. Could this change in melatonin expression and in consequence, prolactin and gonadal hormones, influence human procreative psycho-physiology in specific times of the year?

KMH: Melatonin and uterotonins, such as oxytocin and prostaglandin are closely related. However, industrialized and urbanized humans appear to have lost the dominance of chronobiologic influences. Even before industrialization and artificial light, humans from a longer evolutionary

perspective, stopped functioning like their primate relatives long ago. For example, estrus is not limited to a specific time of year or externalized for males to have visual cues of fertility. Thus, I propose caution in extrapolating studies of melatonin and fertility in other vertebrates to humans. In addition, there are many other factors that influence fertility, such as pheromones, which I discussed in volume 3 of *The Theory of Endobiogeny*, chapter 4. Also, humans have sex for pleasure and reproduction can be seen as an unintended consequence of acts of passion.

AF: In conjunction with the previous question, there has been scientific research conducted in the last few decades on human adaptability to different seasons of the year as well as on the exposure of outside sources such as solar, cosmic ray exposure, electromagnetic, and geomagnetic activity. You have discussed this extensively in *The Theory of Endobiogeny*, volume 1 when discussion seasonal adaptation and cosmobiology in chapter 15. Despite the fact that studies on human cosmobiological interaction are still few and short and still have a long way to go for better comprehension, there are possible links, for example, with season of birth (SOB) and the development of psychological diseases, occurrence of suicide in different seasons of the year, and mortality and comorbidities related to different energy source exposures.³

KMH: Please review the literature again. There are literally hundreds of publications with interesting statistical correlations between cosmobiologic events and the human conditions that you noted, and more. I agree that the exact mechanisms are not fully understood, but only because humans are conceived as existing in isolation from their electromagnetic environment.

AF: Thanks. We will review the body of literature more closely. An interesting fact that puzzled me is that babies born in the spring and summer have a higher tendency to commit suicide. Not only are people born during these seasons more prone to suicide, but suicide attempts are highest in the spring and summer.⁴ Why would people born in the

spring and summertime have an increased risk of suicide? What are the environmental factors and special season factors impacting their epigenetics in such a way that could lead them to act in such a dreadful way? Also, what physiological characteristic would be more present in them during childhood and later in life? Could histamines play a greater role in this, being that spring is the season of allergies, might suicide have an “allergenic” component?

KMH: There are some investigations into what has been referred to as the “fetal origins of mental illness”.⁵ I appreciate this line of investigation but caution over-reaching conclusions if it veers towards materialistic determinism. Children born in spring and summer were conceived in fall and winter. If the mother’s adrenals and thyroid do not properly adapt the immune system, the mother may experience outright or low-grade asymptomatic infections that affect the development of the fetal nervous system and regulation of inflammatory pathways. This may be *one* influence, but we must take into account maternal mental and physical health, genetics, epigenetics and lineage trauma, nutrition, etc. There may be several interrelated variables that have not been properly identified much less the strength of the relationships.

As for suicide being higher in the summer, I investigated the data compiled by the school of public health at the Lithuania State Medical University and the ministry of health in Lithuania, which has the highest rate of suicide in Europe and the second highest in world. When Professor Vainoras of the Cardiology Research Institute of Kaunas Clinics and I reviewed the data, there was a correlation between gamma wave spikes in the earth’s electromagnetic output and suicide (unpublished). Professor Vainoras explained that gamma waves are like a very high beta wave that allows for transitions between different states of brain activity. But, when gamma waves are sustained, they create disturbance in the human electromagnetic terrain. My theory is that this results in a sudden rise in ACTH and cortisol. This leads to the impulse and energy to act on suicidal

ideation in susceptible people. So, corticotropic adaptability is important to develop in order to withstand sustained gamma wave bursts.

AF: Wow, that’s amazing. I hadn’t heard about that before. The Endobiogenic perspective states that spring and summer lead for more action of depressive patients towards this fatality, granting the fact that depression is more common in winter, such one could usually see in their own lives and their community, has less sun light time and in addition Christian Durauffourd in his seminars states that at the time of spring there is an increase in overall spasmophilic states and as such a lower beta correspondent to alpha and para sympathetic activity, or in other words, more rumination and less action. Therefore, shouldn’t a depressive or schizophrenic person commit suicide more during fall and winter, where their beta is more active and has more depressive symptoms?

KMH: Again, from what I’ve understood from Professor Vainoras’ work, it’s the sudden burst of beta and likely cortisol that leads to the *impulse* towards suicide, as opposed to rumination and ideation of self-negation.

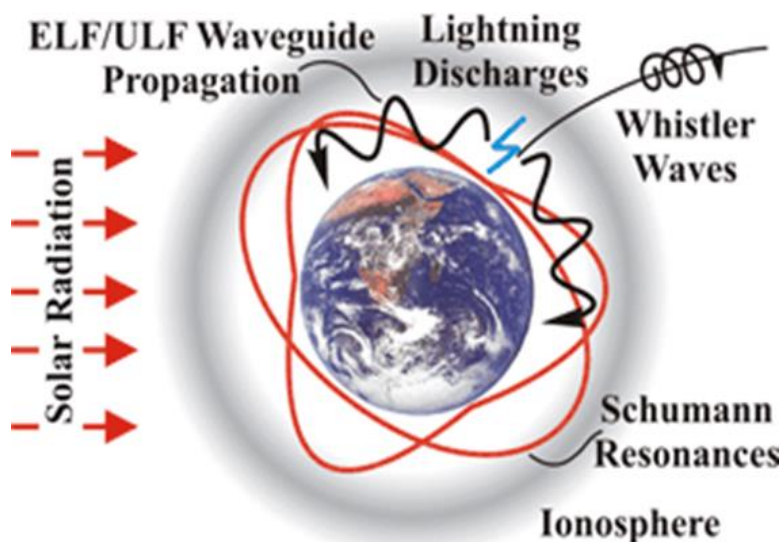
AF: Makes sense. Regarding fields of energy that we can’t directly see and haven’t been touched by mainstream medicine or have been dismissed as something unimportant, there are a few factors that can actually impact human health. A [study](#) conducted in Lithuania followed 18 years of mortality, solar activity, geomagnetic activity and cosmic ray activity and showed that there is positive correlation between months of the year where there is more cosmic ray activity (CRA) upon Earth with overall human mortality and an inverse correlation of the same kind of solar and geomagnetic.

KMH: This was done by professors Kalidienė and Starkuvienė who were my first contacts in the school of public health. They were the ones who introduced me to Professor Vainoras, with whom we have studied the effects of geomagnetic fluctuations on acute myocardial infarction and its

relationship to osteocalcin. He also published other [articles](#) on this subject as well.

AF: Based on this previous article, months with more CRA had higher levels of Growth hormone overall. What are the physiological consequences, possible concerns and types of actions we could take to ameliorate patients that are impacted by these different sources of stress.

KMH: I have developed a series of indexes regarding cosmobiology that endobiogenists can use in the [GEMMA](#), the online biology of functions tool. They evaluate resistance of the pineal gland to adapt to the various electromagnetic fluctuations be it from solar winds, lunar phases, weather, Whistler waves or geomagnetism.



SOURCE: <https://neovitruvian.wordpress.com/category/nikola-tesla/>

The protocol of treatment is to dose Atomidine, trichloro-iodine, in a variable dosing scheme according to the lunar cycle. Day 1 you give 1 drop, day 2 two drops, day 3 three drops, day 4 four drops and day 5 of the lunar cycle five drops of Atomidine. Days 6 and 7 you take a break. You repeat this pattern for all four weeks of the cycle and take the next month off. I find it works about 80% of the time when the patient follows the protocol for a total of 4 months and you retest. You need to order CEA, CA 19-9, fT4 and F3, as well as total protein, sodium and chloride in addition to the standard BoF panel

(CBC with differential, potassium, calcium, TSH, LDH, CPK, Alkaline phosphatase isoenzymes and osteocalcin) in order to generate these indexes.

AF: For my final question, I have focused on a topic that is very important in our day and age and that has been creating a lot of controversy.

Since the early 70's there have been conversations about the possible damaging effects that low magnetic frequency emitters could have on human health. Studies from the 70's throughout the late 90's propose a positive correlation between [EMF exposure and cancer in children](#). While their methodology is debated, these studies have helped us become aware of this potential danger. I believe that the index that discusses radiation sensitivity was created due to these studies. However, in what

group of people would this finding be more relevant? What would the patient's low frequency electromagnetism have to be in their BoF to display concern? And couldn't this prior physiological state lead to a higher chance of developing brain cancer, and, therefore, would EMF not make any difference whatsoever?

KMH: These studies are epidemiologic and demonstrate correlation, not causation. Low frequency EMF (low EMF) from electric equipment should be considered *a single factor* and not *the definitive "cause"* of cancer. Low

EMF disrupts the body's electromagnetic system and by extension autonomic regulation of endocrine management of metabolism. It creates chaos because natural EMF is variable and iterative. Low EMF is constant and fixed. This is what makes it disruptive and a chronic low-grade stress. The BoF claims to be able to model certain dysplastic tendencies and this can be observed and followed in patients who have chronic exposure to low EMF, especially those living near power lines and transformers, or, those who are in close proximity to tablet computers and smart phones, which put out a lot of low EMF. Close proximity is less than 45 cm (18 inches) distance. Basically, holding these

objects or keeping them nearby is problematic in the long term for susceptible individuals.

AF: Thanks for this discussion today, Kamyar.

KMH: You raised good questions. Research by the scientific community is still in its early stages and we need to move from correlation to causation. We really need to maintain a global sense of terrain and the internal and external factors that influence it.

In the meantime, we can use various treatments to improve pineal and neuroendocrine adaptability. In addition to iodine, the plants you know to downregulate sympathetic tone are helpful, especially lavender, as well as adapting the

corticotropic axis with Rhodiola, Oak bud and Cassia bud. Liver drainage is also important. Of course, periodically limiting exposure to EMF devices is also important. I recommend that my patients take a break every 1 hour for 5 minutes from EMF devices, and, to shut off their routers at night and turn off their phones, or, place it airplane mode, if they keep it near their bed as an alarm clock. It's really refreshing to NOT check our phones first thing in the morning. It's helpful to take 1 hour in the morning to meditate, do calisthenics, get some sunlight and fresh air before plunging into the frenetic world of social media, news, emails, etc. ✱

About the Author

Augusto Barbosa Fronza, born and raised in Brazil, still a bit young in age, and a great proponent of the use and spread of endobiogenic teachings, began studying and applying endobiogeny in his daily practices about a year and a half ago. Now any new case that comes his way becomes an investigative tale which has made daily practice much more fun and interesting to have.

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