



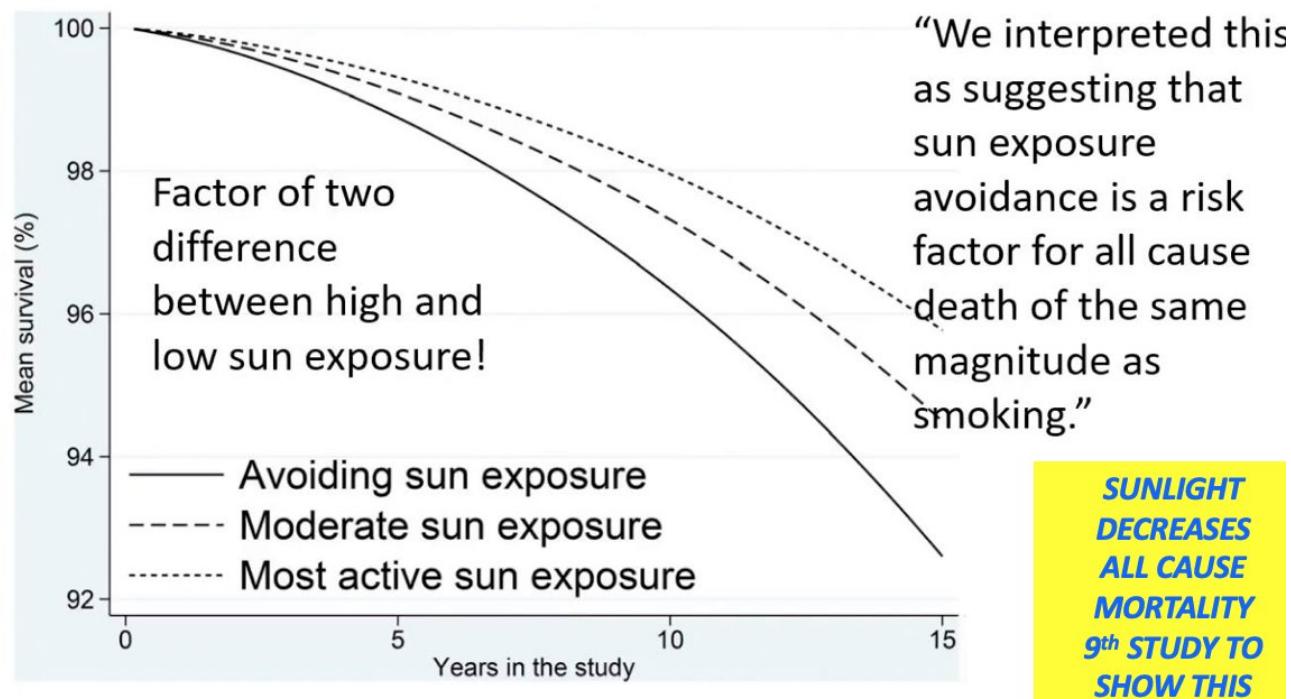
● Pleb Kruse = BTC foundationalist in exile ☀ @DrJackKrus

May 19 23 · 25 tweets

1. Longevity in humans is linked to optimal solar exposure. The reason is simple. This protects the 7 layers of energy generation inside a cell. The more sun human gets the more diseases they can avoid and the #1 risk of most diseases is AGE. Solar exposure effectively makes you younger because it lengthens the TET mechanism inside of cells to improve the Hayflick limit in all cell lines. It is not hard to understand when your perspective is decentralized.

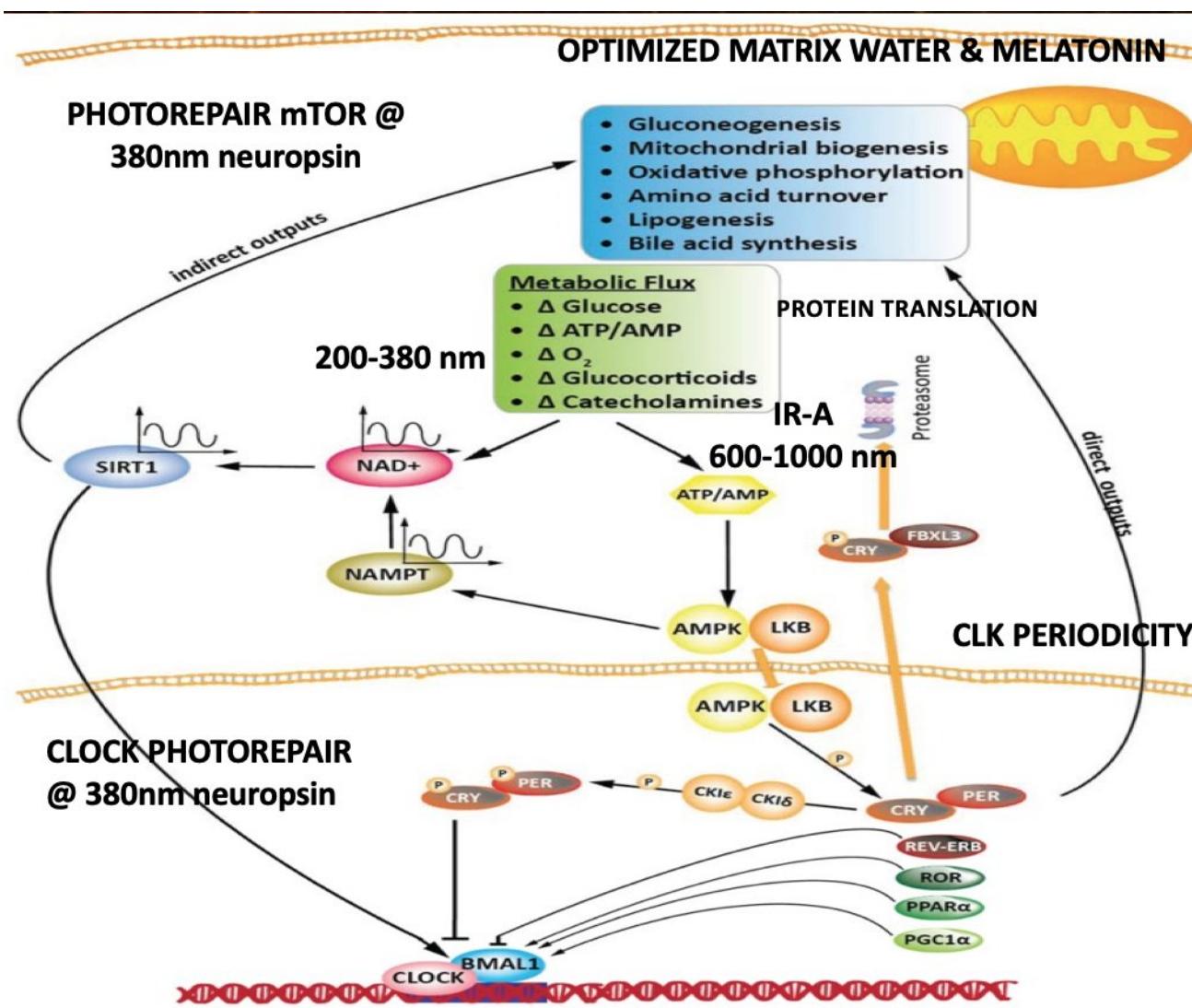
## **SUNLIGHT = LIFE**

### Mortality with Respect to Sun Exposure in Sweden [Lindqvist, 2016]



2. From an evolutionary point of view, vitamin D and melatonin appeared very early and share functions related to the defense mechanisms of the mammalian powerplant. In the current clinical setting, vitamin D is exclusively associated with phosphocalcic metabolism

when it is sulfated and in its reduced state. When it is not sulfated or reduced its role in calcium control is diminished. This usually happens in winter months with mammals when they are in the cold and LDL cholesterol production is upregulated by the light stress response of the POMC gene by a lack of 380nm light. This signal is via neuropsin & ACTH in mammals. When 380 nm light is missing mTOR signaling shifts mammalian biochemistry from anabolic to catabolic. This occurs via lipid raft electrical changes mediated by cholesterol biology and proteins embedded in the mammal's membranes.

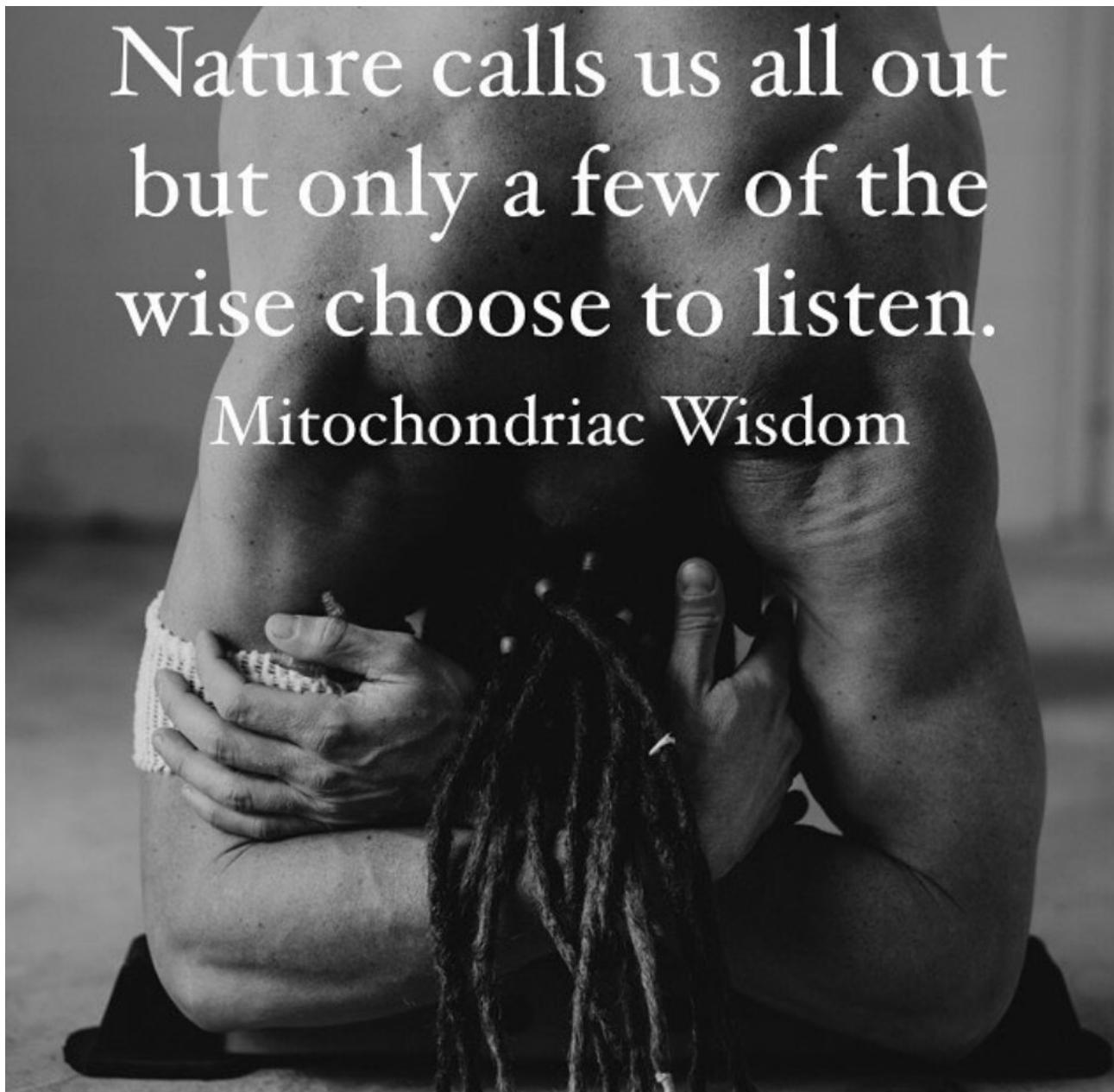


3. Calcium flows are critical in mitochondrial control because they are a key dopant atom in semiconductive proteins in humans. Meanwhile, melatonin has chronobiological effects and influences the sleep-wake cycle. Scientific evidence, however, has identified new actions of both molecules in different physiological and pathological settings. In centralized science, there is a belief that melatonin and Vitamin D are inversely related to solar

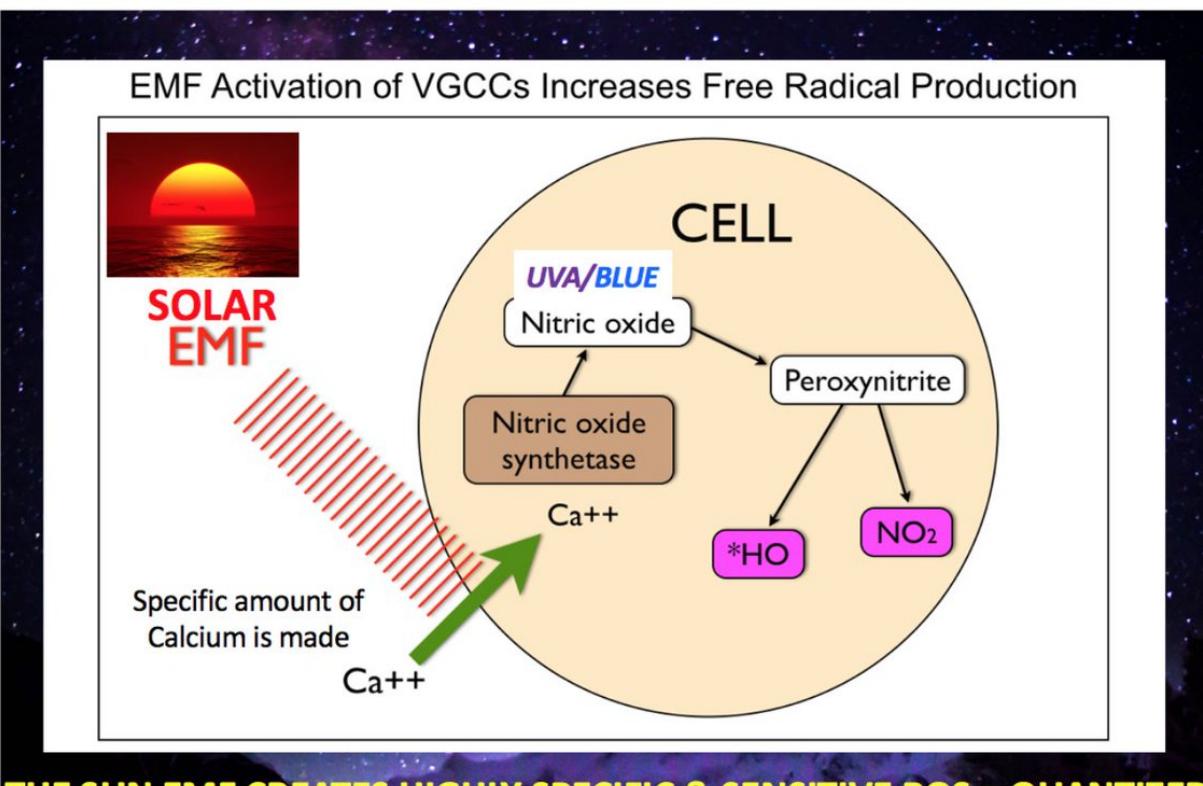
exposure. This perspective is wrong. The decentralized idea is both are controlled by the sun because melatonin absorption spectra tell us this is the case. Melatonin's spectra are 224nm & 290nm. This light is never present at night in the environment. The spectra reflect light made internally. Centralized medicine has no idea of this concept.

Nature calls us all out  
but only a few of the  
wise choose to listen.

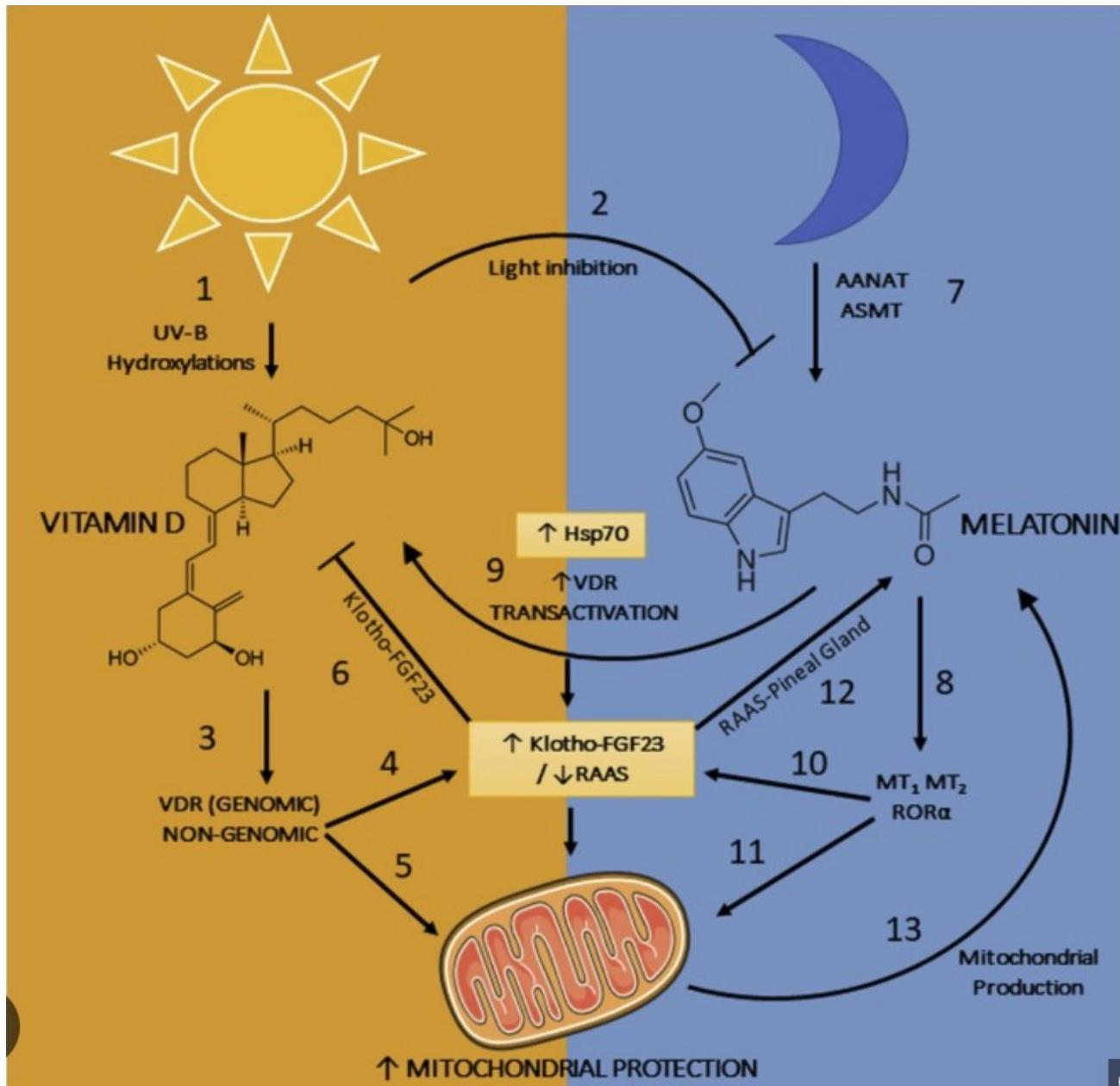
Mitochondriac Wisdom



## SPIN STATES CREATE FREE RADICALS IN MITO

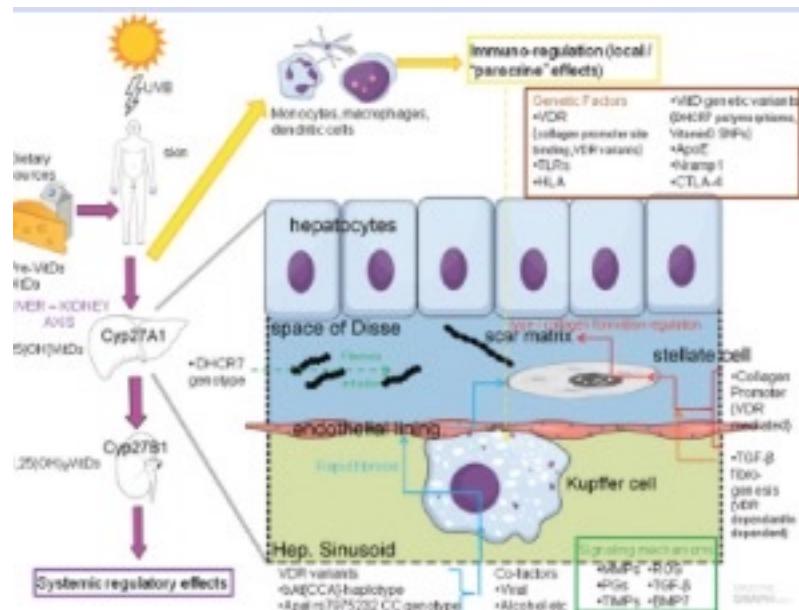


4. The biosynthetic pathways of vitamin D and melatonin are directly related relative to sun exposure. A deficiency of either of these molecules has been associated with the pathogenesis of cardiovascular diseases, including arterial hypertension, neurodegenerative diseases, sleep disorders, kidney diseases, cancer, psychiatric disorders, bone diseases, metabolic syndrome, and diabetes, among others. During aging, the intake and cutaneous synthesis of vitamin D, as well as the endogenous synthesis of melatonin is remarkably depleted, therefore, producing a state characterized by an increase of oxidative stress, inflammation, and mitochondrial dysfunction. Oxidation = lack of electrons = you cannot absorb solar light. Mitochondria also control the change program of mitochondria apoptosis and autophagy. Apoptosis efficiency is controlled by UV light and autophagy is controlled by IR-A light

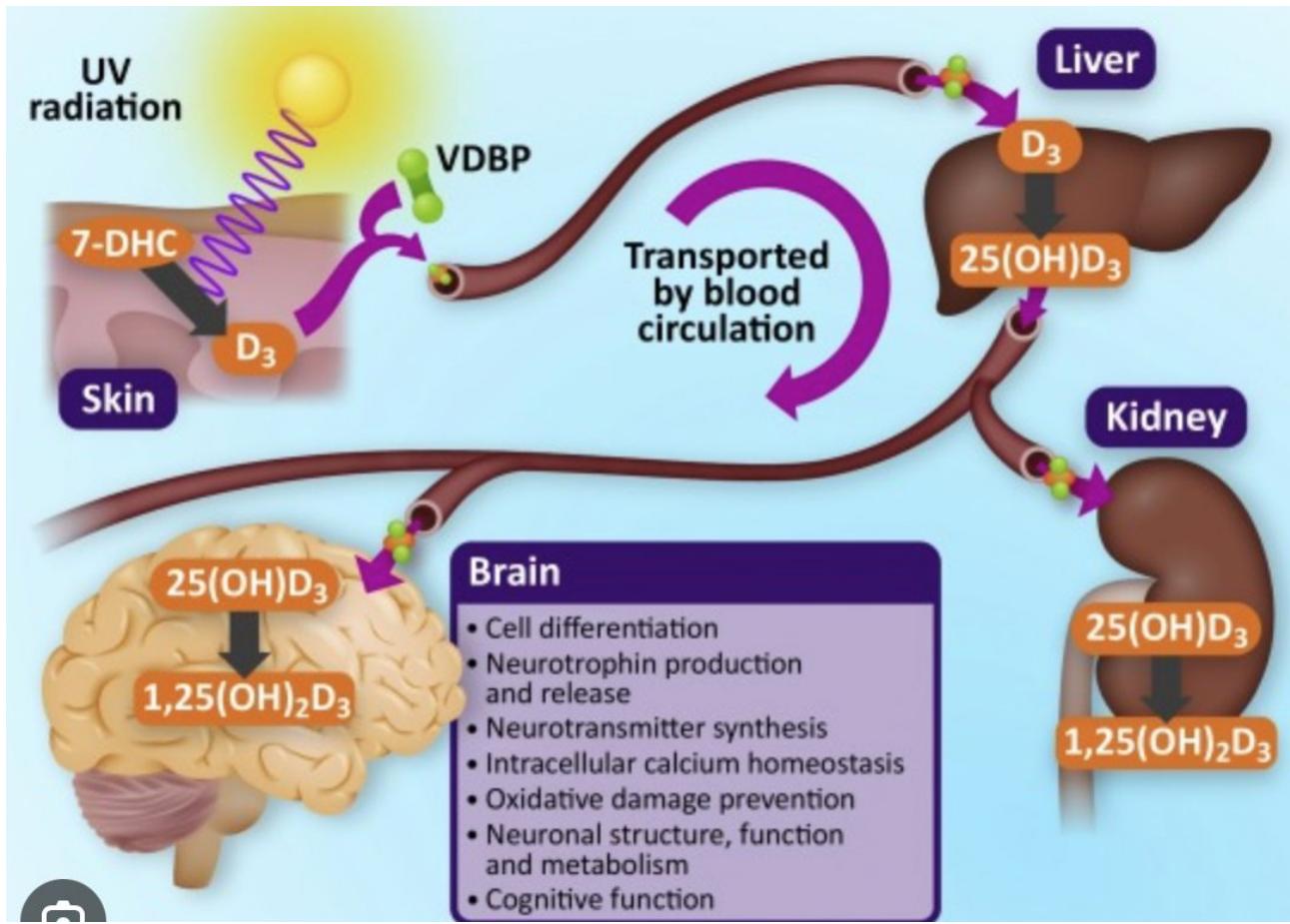


5. For example with reference to the two major diseases killing modern humans heart disease and neurodegeneration both neurohormones protect humans from both. Sunlight controls heart disease by lowering APoE, Lpa, and calcium index scores. Neurologic function is protected and extended by sunlight via POMC, VDR, RXR signaling, BDNF, and neurotrophin synthesis. Both molecules are involved in the homeostatic functioning of the mitochondria. Given the presence of specific receptors in the organelle, the antagonism of the renin-angiotensin-aldosterone system (RAAS), the decrease of reactive species of oxygen (ROS), in conjunction with modifications in autophagy and apoptosis, anti-inflammatory properties inter alia, mitochondria clearly have emerged as the final

common target for melatonin and vitamin D. ROS is controlled by melanin sheets. The primary purpose of these Tweets is to show the non-believers how decentralized medicine elucidates the common molecular mechanisms by which vitamin D and melatonin might share a synergistic effect in the protection of proper mitochondrial functioning.



6. The skin is the melaninated sheets of solar panel for the brain to give it more energy from the sun to run the Ferrari engine in our head. This has to be optimized for neurological function. Most modern human disease is linked to a break in this quantum biologic connection.



7. The quantum connection between the skin and brain is this. You must become aware that NON-VISUAL PHOTORECEPTION is the key to most diseases in the human heart and in the brain. What links both organs? They are both impotent without cholesterol and light stimulus. How do cholesterol, neuropsin, mTOR, melanin, and vitamins A and D link in this decentralized dance to optimize longevity? Issue one. Taking a starting is among the most ignorant thing one can do when you understand how disordered the centralized paradigm around LDL cholesterol is. Non-VISUAL photoreception controls this entire system in humans. Most of the non-visual photoreceptors are weakly covalently bound to Vitamin A and when they decouple photoreceptors are degraded = biophysical physiology fails. Let's begin. The heart response to strong light on the chest by making adenosine. Adenosine stops all aberrant calcium flows hence why it is on every crash cart for ACLS as part of the algorithm for SVY. Note how this system immediately linked the brain's SCN optical lattice clock via the PER2 gene. This gene controls the biophysics of the lipid rafts that change seasonally. How?

# Sunlight, cholesterol and coronary heart disease

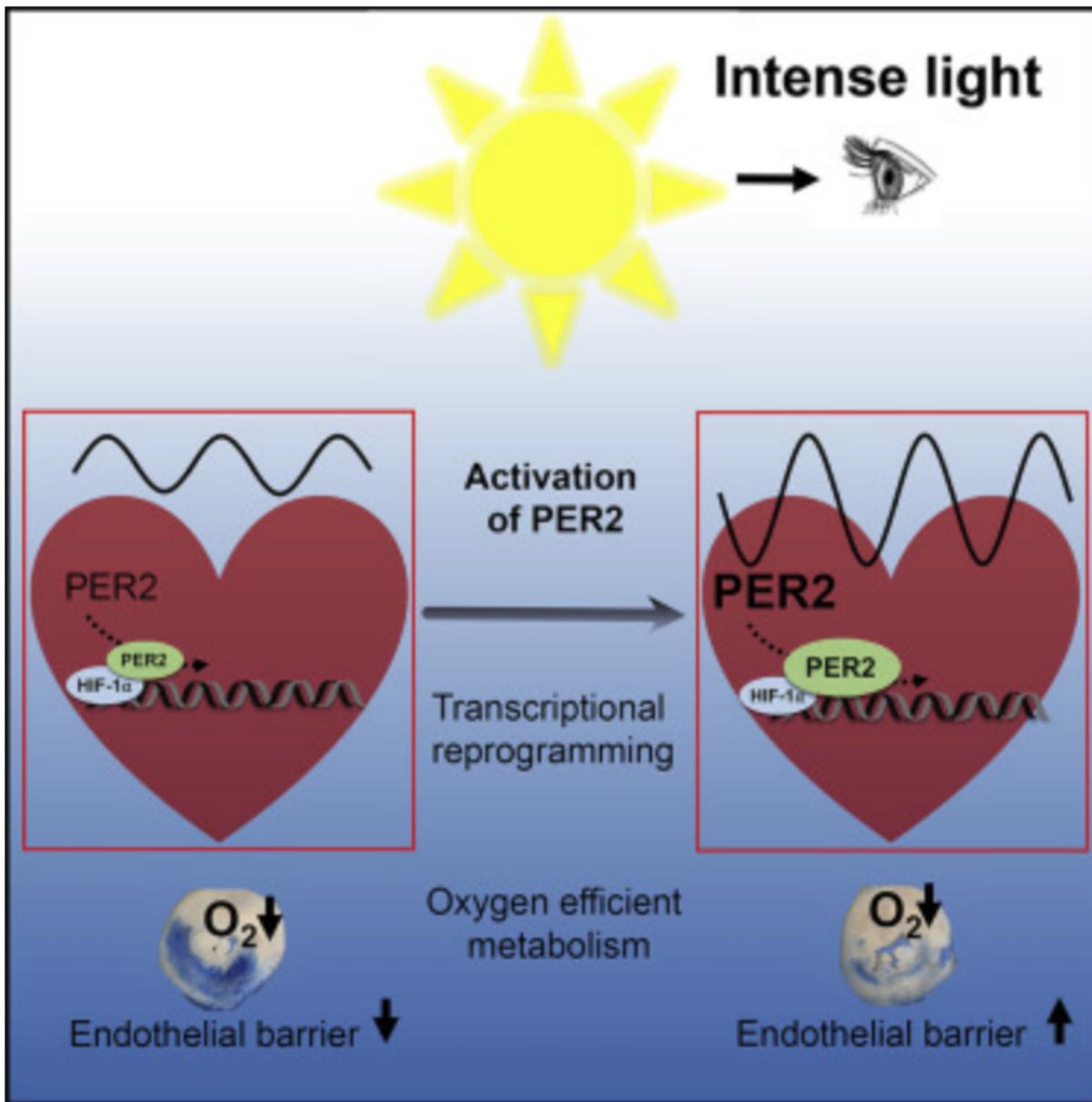
D S Grimes <sup>1</sup>, E Hindle, T Dyer

Affiliations + expand

PMID: 8935479 DOI: [10.1093/qjmed/89.8.579](https://doi.org/10.1093/qjmed/89.8.579)

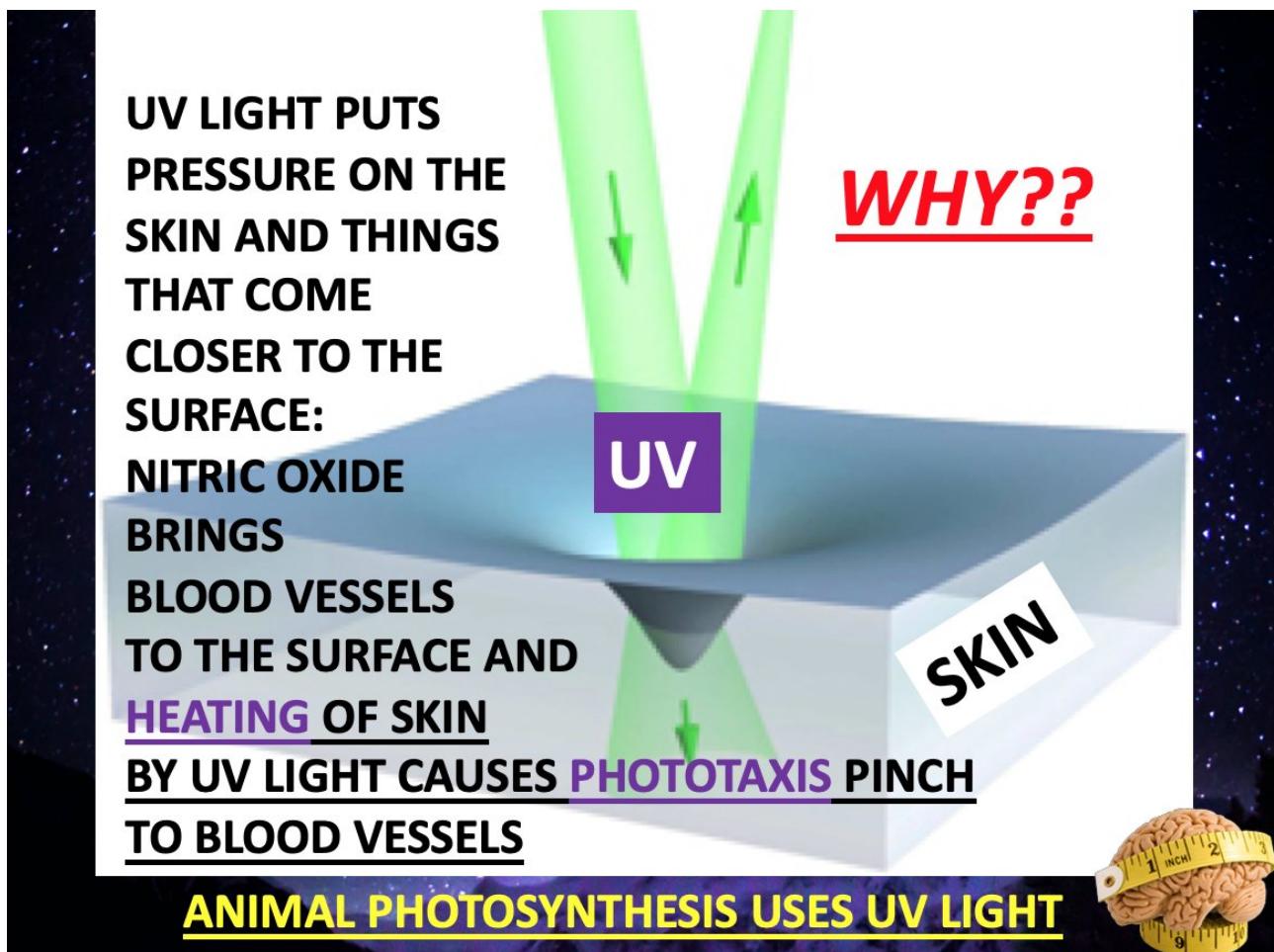
## Abstract

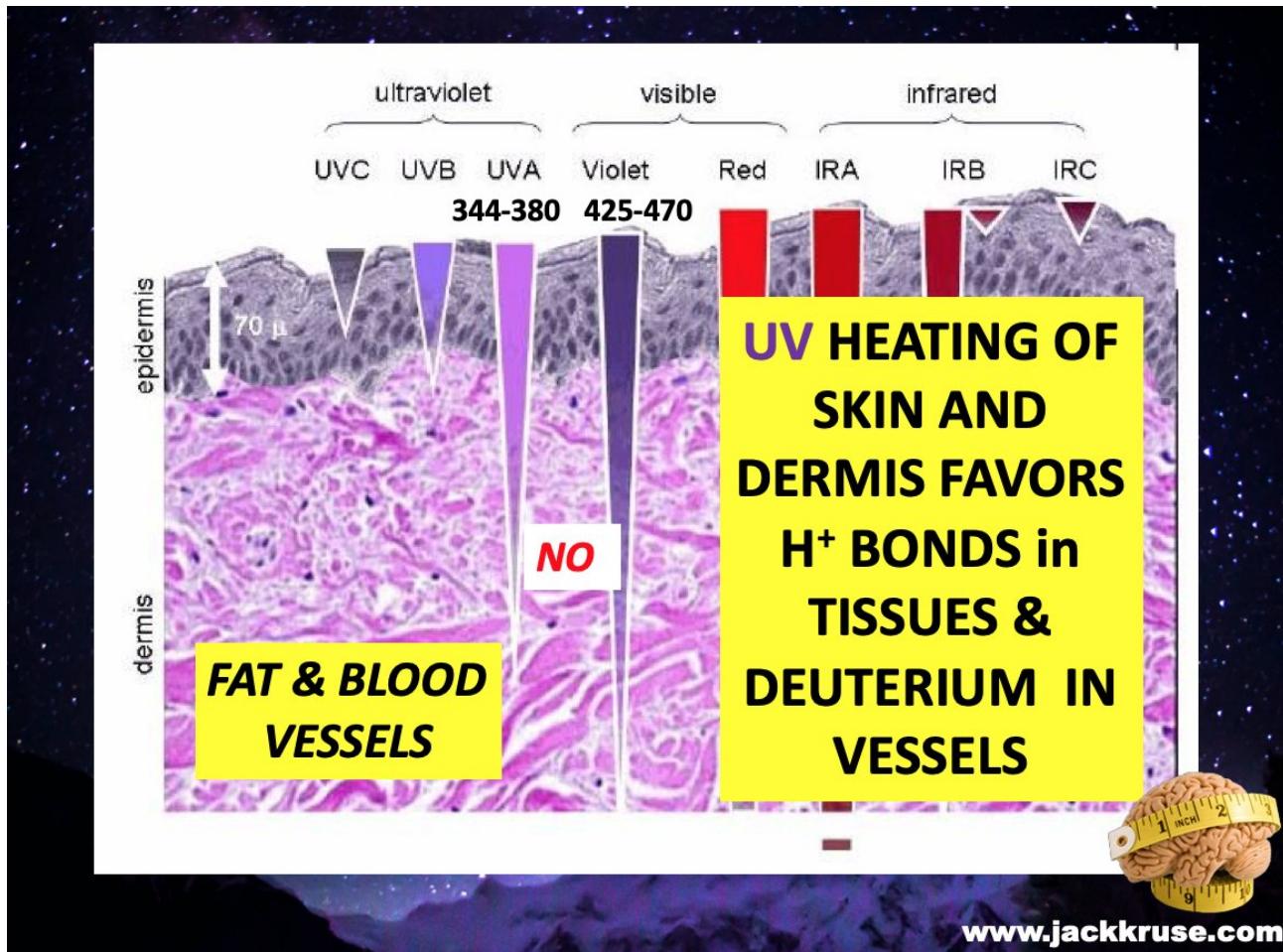
We investigated the relationship between geography and incidence of coronary heart disease, looking at deficiency of sunlight and thus of vitamin D as a factor that might influence susceptibility and thus disease incidence. Sunlight deficiency could increase blood cholesterol by allowing squalene metabolism to progress to cholesterol synthesis rather than to vitamin D synthesis as would occur with greater amounts of sunlight exposure, and the increased concentration of blood cholesterol during the winter months, confirmed in this study, may well be due to reduced sunlight exposure. We show evidence that outdoor activity (gardening) is associated with a lower concentration of blood cholesterol in the summer but not in the winter. We suggest that the geographical variation of coronary heart disease is not specific, but is seen in other diseases and sunlight influences susceptibility to a number of chronic diseases, of which coronary heart disease is one.



8. BIOPHYSICS 101 OF THE SKIN related to the heart and the liver. Eating cholesterol is of zero consequence to mammals. Creating it in the liver is critical in understanding the biophysics of cholesterol non-visual photoreception. The lipid raft's ability to change in mammals occurs by seasonal light variation and collection via the non-visual photoreceptors via perception on the skin, eyes, and gut. That external light determines the reality the mammal faces. When the solar cycles change so do the lipid rafts. This photoelectric change alters biochemistry in mTOR, PPP, glycolysis, the TCA cycle, and POMC cleavage. When the lipid content changes they induce changes in the semiconductive proteins embedded in them. This changes the physiologic ability. This is

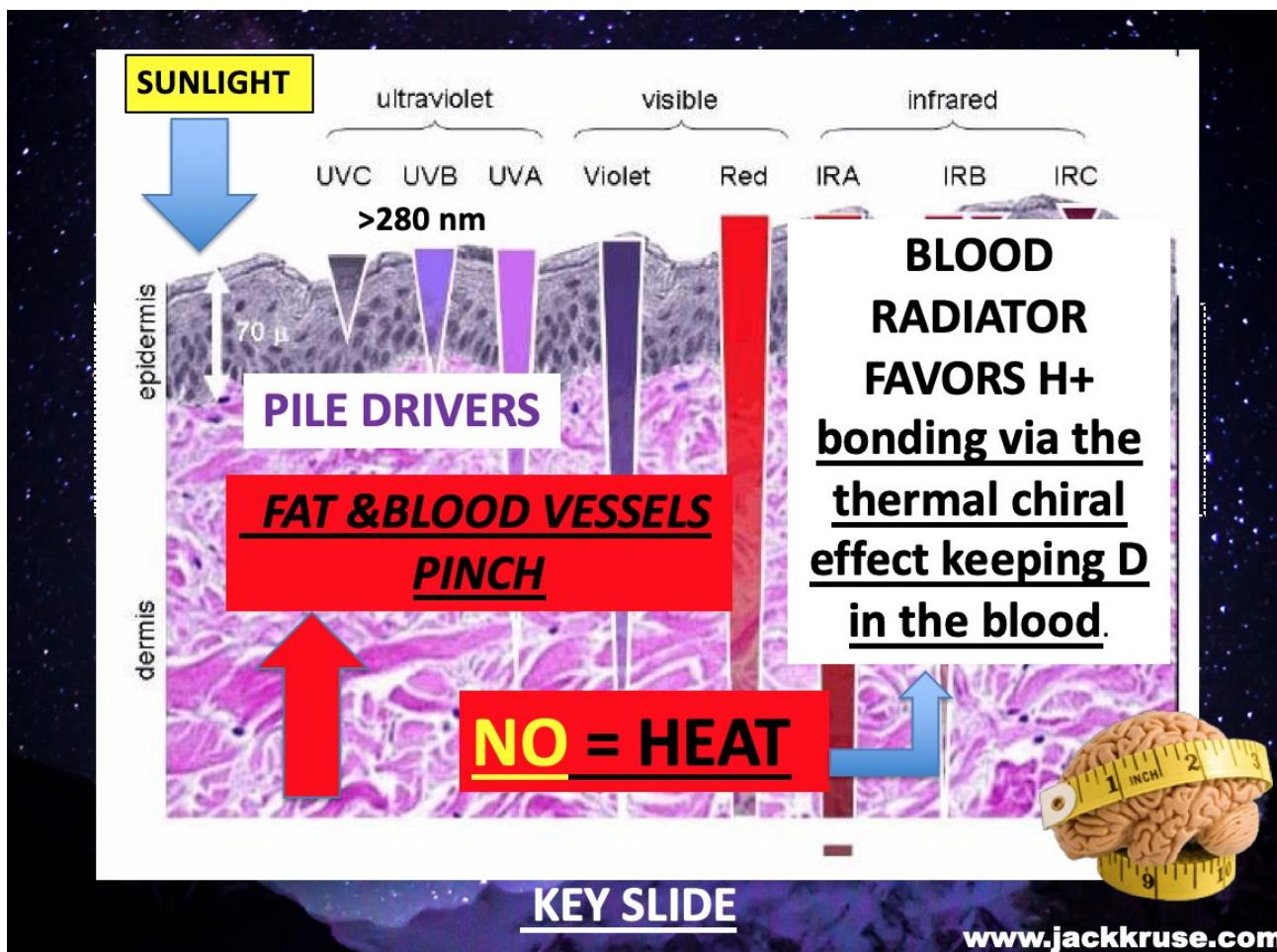
why the clock mechanism in mammals is linked to light and temperature. Both signals change to the surfaces of mammals.



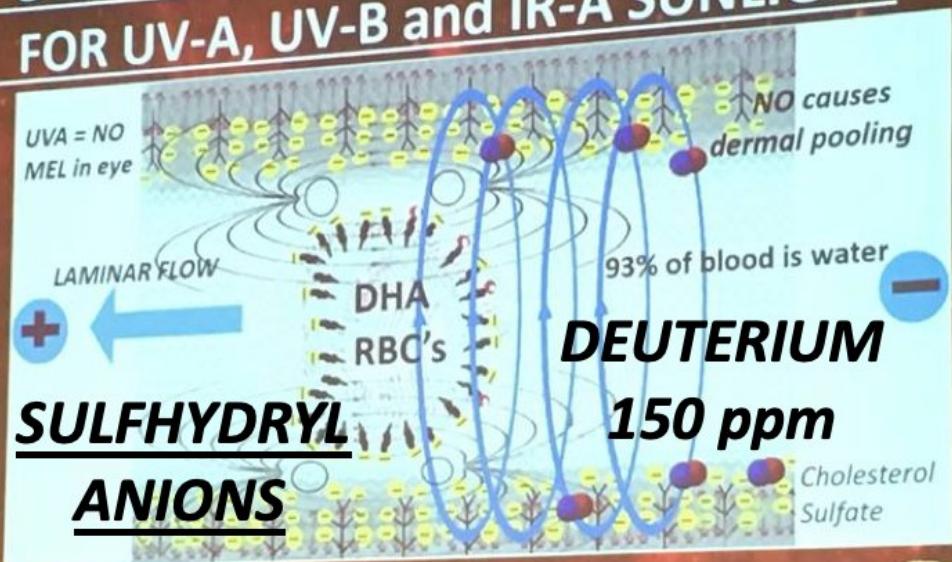


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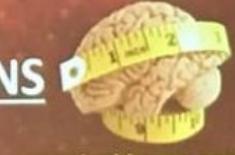
9. This change in the skin has massive implications for the circulatory system, arteries, blood, and especially the liver. Most people do not know the deuterium content of blood and the lumen in the gut is also plastic via light and temperature signaling for two reasons. Deuterium has an extra neutron so this heavier atomic mass means more energy is needed to move it. And Deuterium has a different magnetic moment than H<sup>+</sup> so this means it reacts differently when the electric signal in mammalian membranes changes.



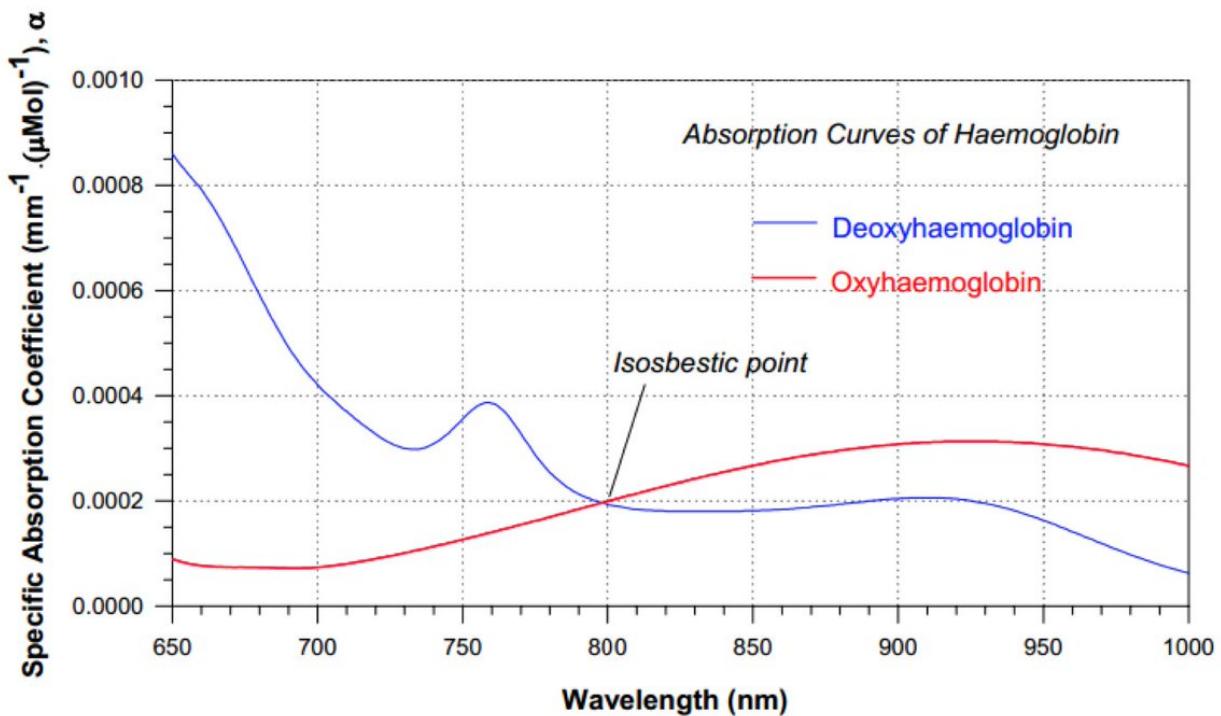
# **PORPHYRINS Hb ARE ARTERIAL SENSORS FOR UV-A, UV-B and IR-A SUNLIGHT**



**DAY = WAVES NIGHT = NONE = 5 PHOTONS**

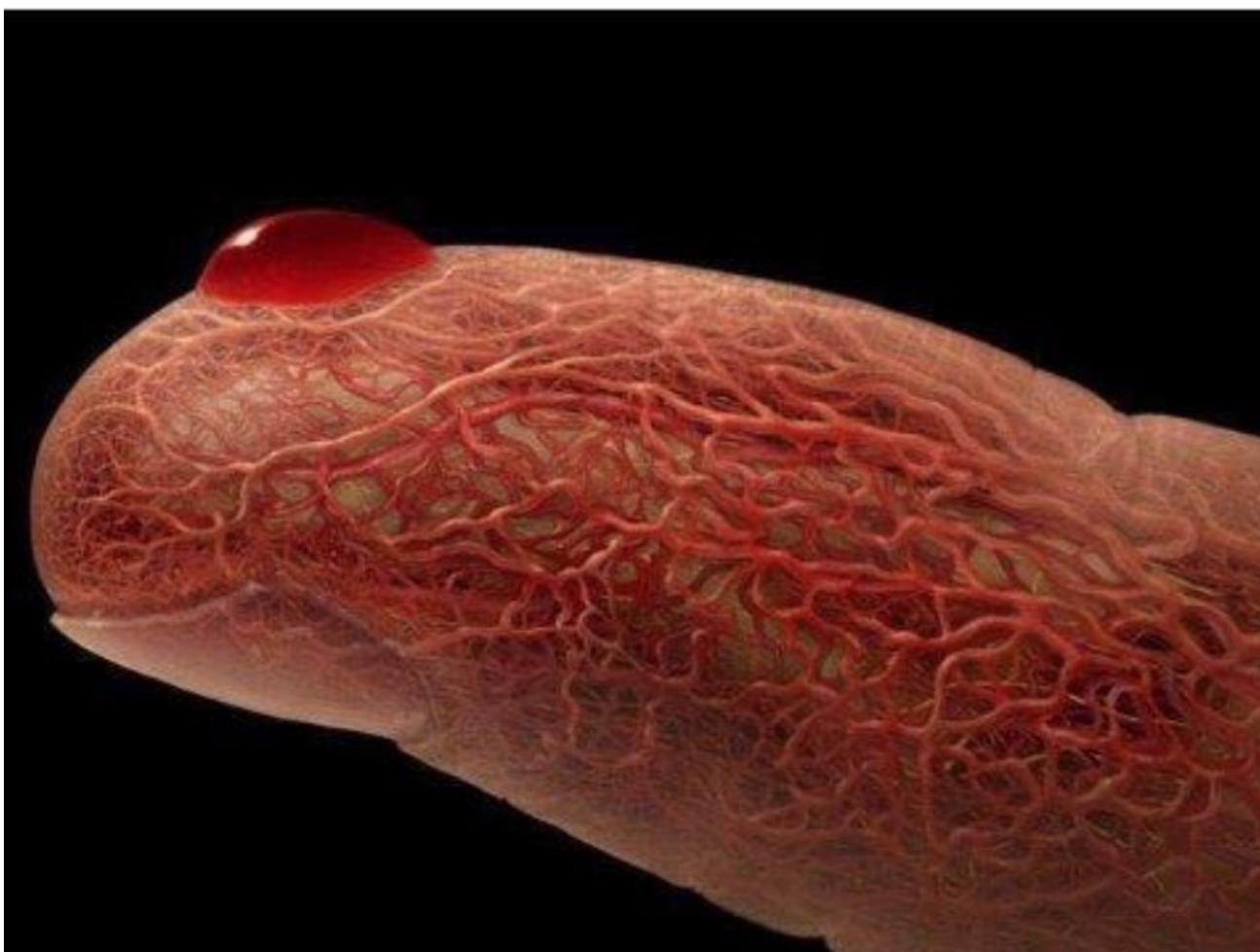


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**Figure 2.7** Absorption spectra of hemoglobin.

These are the capillaries in your skin that come to surface to collect sunlight photons when nitric oxide is released in response to UV & IR sunlight shining on melanopsin in your skin and SQ fat. This increases blood flow and decreases your blood pressure. The sunlight signal is carried to every mitochondria in your body on electrons to provide energy and information about the time of day and season = circadian rhythms. When you never go into the sun you miss out on these effects.

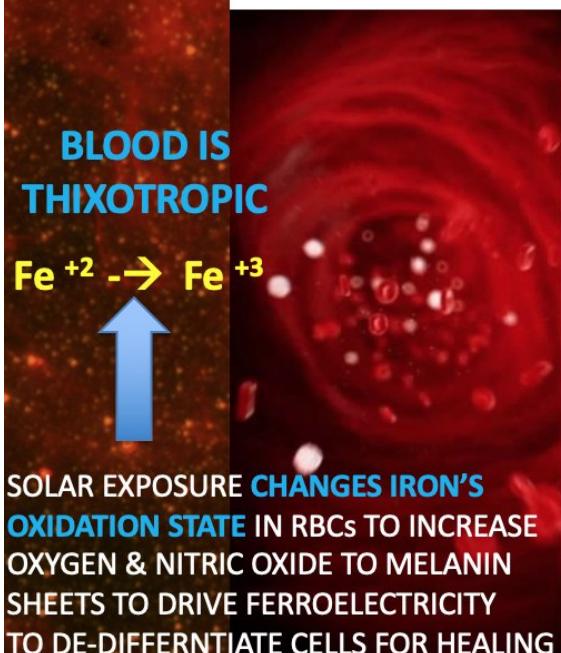


10. Because semiconductive proteins are embedded in the skin, what type of cholesterol and fatty acids matter to the functioning of VGCCs. Why? Because the lipid rafts are like Morse code for the Vitamin D system in the skin and Vitamin A signal in the opsin system. The rafts alter the functioning of voltage-gated channels that control the photoisomerization step of the conversion of cholesterol to 25D (OH). This chemical has to go to the kidney and/or liver for final conversion to act at target receptors in this system of the mitochondria.

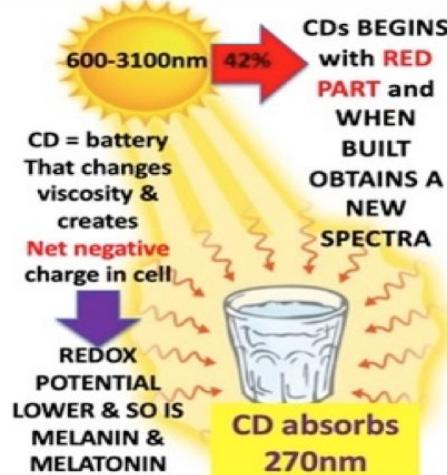
Sunlight increases NO and oxygen deliver to mitochondria to alter their function because sunlight controls the oxidation state of Fe and keeps it in the +3 state. This increases the sulfation of all things in the system and it makes them MORE WATER SOLUBLE. APOB and LpA drops and they cease to be an issue. It also thins the blood while lowering calcium flows in the mitochondria. Lowering calcium and raising NO both act to reduce mitochondrial power. What takes over when all this happens to create H<sup>+</sup> and oxygen and electrons to run the system? POMC creates melanin and melanin makes all three things massively. This is why NO slows mitochondrial metabolism and lowers BP. Centralized medicine does not understand this wiring diagram in 2023. Their longevity experts are still advocating the use of statins which completely ruin the fidelity of this system. Sulfate platelets and GAGs in the vessel wall are less sticky and there is better laminar flow. This is why we have an epidemic of patients on blood thinners. No one is going outside enough. As a result, clots cause both heart and brain damage. This is why PAD is linked to both diseases. [@Andrew D. Huberman, Ph.D.](#)

## BLOOD VISCOSITY DECREASES WITH SUN AND NITRIC OXIDE INCREASES

Blood is thicker than water. This is saying In the medical world, there is a disease in itself.

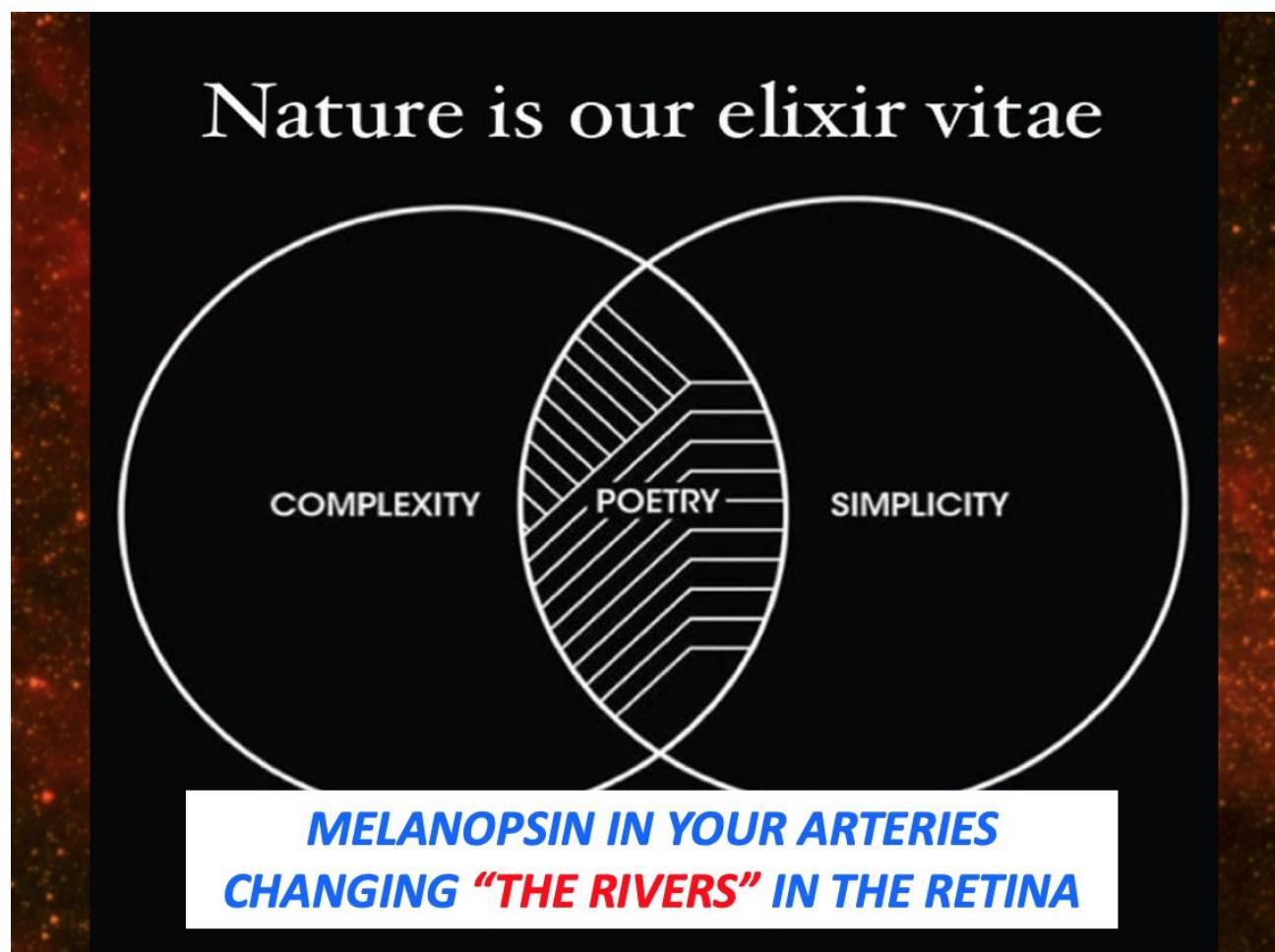


**Thick blood means trouble for your heart.**

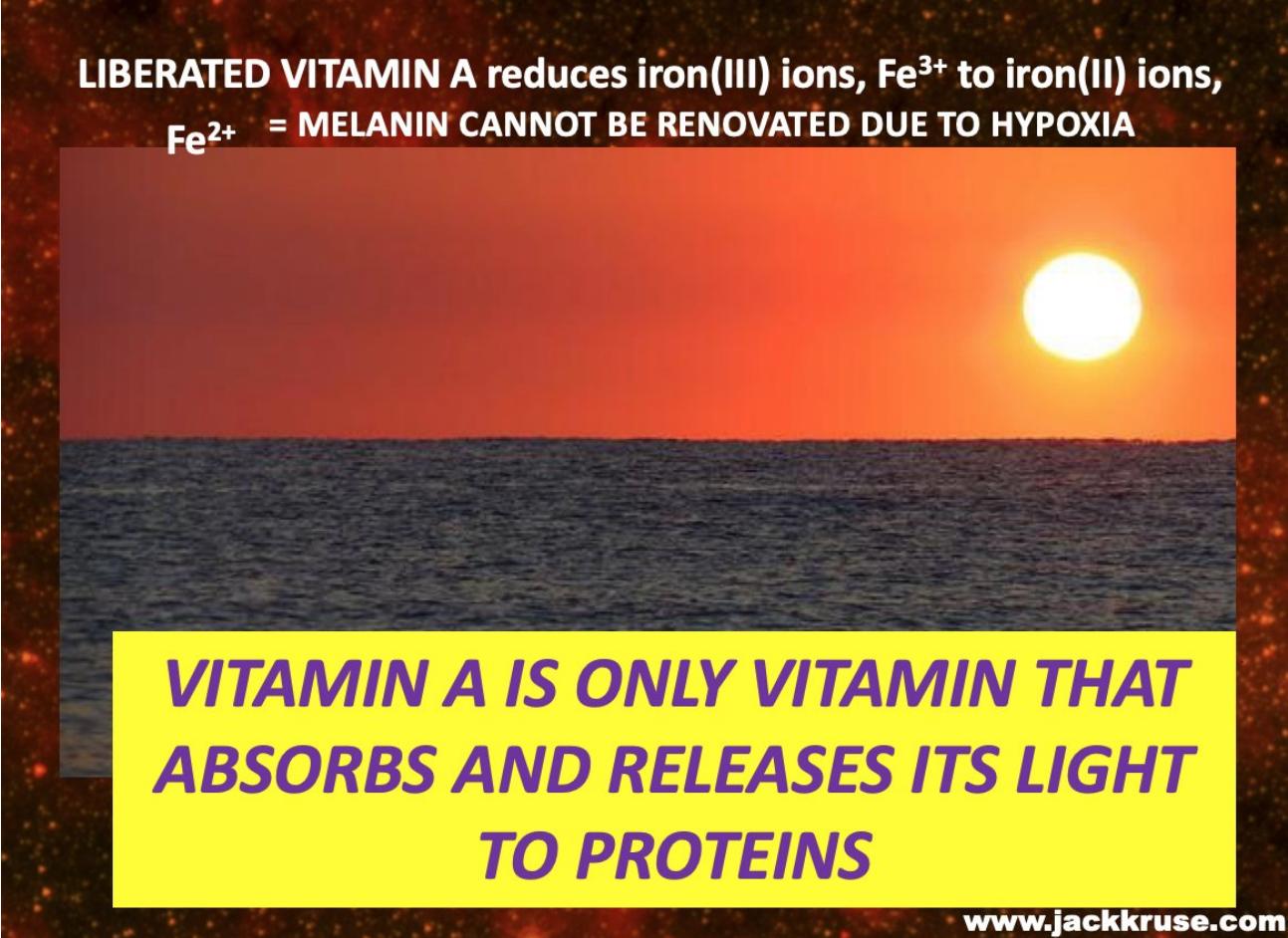


WITH SOLAR EXPOSURE UV-A INCREASES Nitric Oxide TO DILATE TO IMPROVE FLOW AND O<sub>2</sub> DELIVERY TO MITO MATRIX

11. When the electric charge is altered in the skin and the membranes inside of your tissues, your tissues begin to become a net collector of the heavier isotope of hydrogen called deuterium. This occurs in the skin and your liver. Blue light/nEMF NOT FOUND IN THE SUN CAUSES THIS ISSUES. Melanopsin is the blue light opsin of this nonvisual system. It has its highest density in the brain, arteries, and heart. All places are fed by the blood and why brain and heart diseases are always linked to PAD. This effect implies you cannot make D3 even with equatorial sun. All things centralized medicine is ignorant of.



**LIBERATED VITAMIN A reduces iron(III) ions,  $\text{Fe}^{3+}$  to iron(II) ions,  
 $\text{Fe}^{2+}$  = MELANIN CANNOT BE RENOVATED DUE TO HYPOXIA**



***VITAMIN A IS ONLY VITAMIN THAT  
ABSORBS AND RELEASES ITS LIGHT  
TO PROTEINS***

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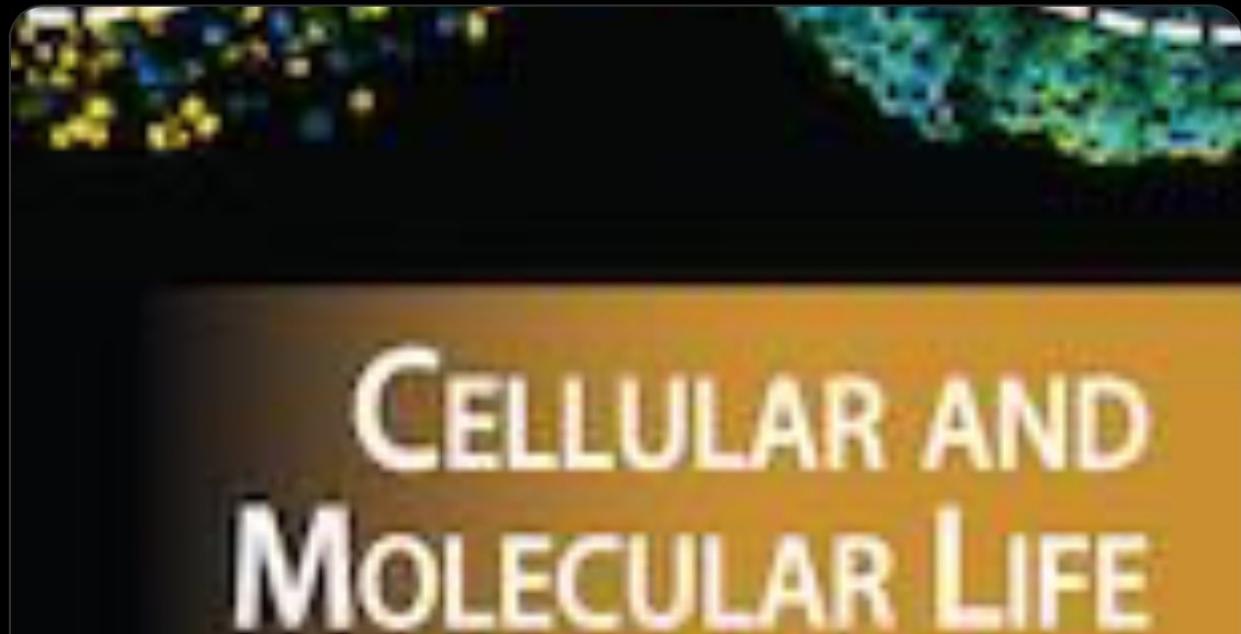
DO NOT  
COMPLY.

● Pleb Kruse = BTC foundationalist ■ ☀  
@DrJackKruse

...

If you have an arrhythmia you have a melanin problem. Your wide-band semiconductors aren't optimized. Melanopsin dysfxn liberates Vit A and that retinal changes Fe oxidation state from +3 to +2 causes hypoxia = problems with VUV-IRA emission [link.springer.com/article/10.100...](https://link.springer.com/article/10.100...)

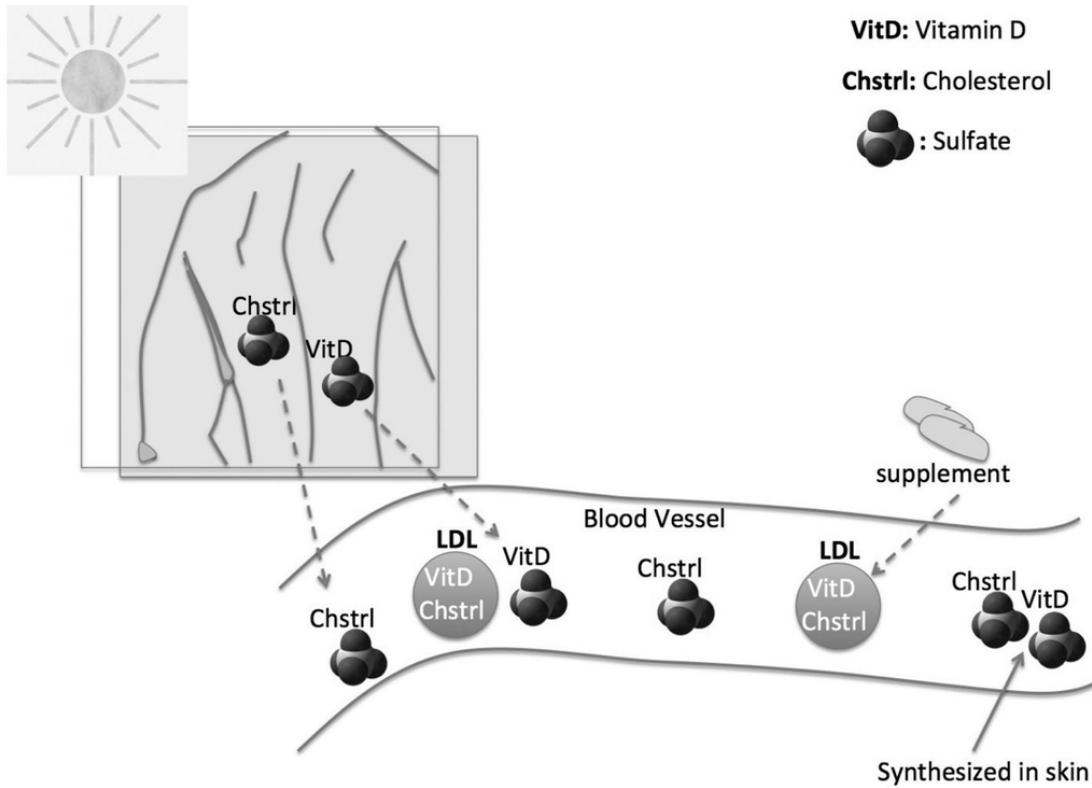
@RickRubin



[link.springer.com](https://link.springer.com)

Nerve-associated Schwann cell precursors contribute extracutaneous melan...

Cellular and Molecular Life Sciences - Melanocytes are pigmented cells residing mostly in the skin and hair follicles of vertebrates, where they ...



**FIGURE 1. Schematic of the differences between sunlight exposure and vitamin D supplements. Cholesterol sulfate and vitamin D sulfate, synthesized in the skin following sunlight exposure, can be transported freely in the blood, rather than requiring carrier lipid particles like LDL.**

12. Centralized healthcare's ignorance of the basics of this Tweet thread has led to incalculable errors for public health. I mentioned this to [@Rick Rubin](#) & [@Andrew D. Huberman, Ph.D.](#) when we spoke about Dr. Changs' belief it made 50% of what is in the textbooks obsolete. I am telling you 99.9% is hot garbage. Why? The number one opsin in mammals is MELANOPSIN and we no longer live under the sun. We live inside under LED light that destroys this non-visual photoreceptive circuit. People want to blame glucose and insulin yet, when you look at your blood you see this. Does Nature make mistakes or has centralized medicine ignored a lot of facts they should have been asking questions about? When deuterium is let into the matrix this is what redox shift all biochemical pathways the longevity experts THINK never change. This is why none of them understand mTOR and UCP-2. Those proteins embedded in the lipid rafts or connected to them by the tensegrity system change how they respond. Why does NO fall as we age? Because modern humans live under an alien light. Why do Apo proteins and LpA look like a problem to the PEter Attias of the world? Because none of his patients in

NYC or San Diego live in sunlight. If they did their LDL cholesterol would be low and their HDL would be high and he would not write a new book telling everyone to take a statin because it is a GOOD plan for longevity. This message is DEAD WRONG.

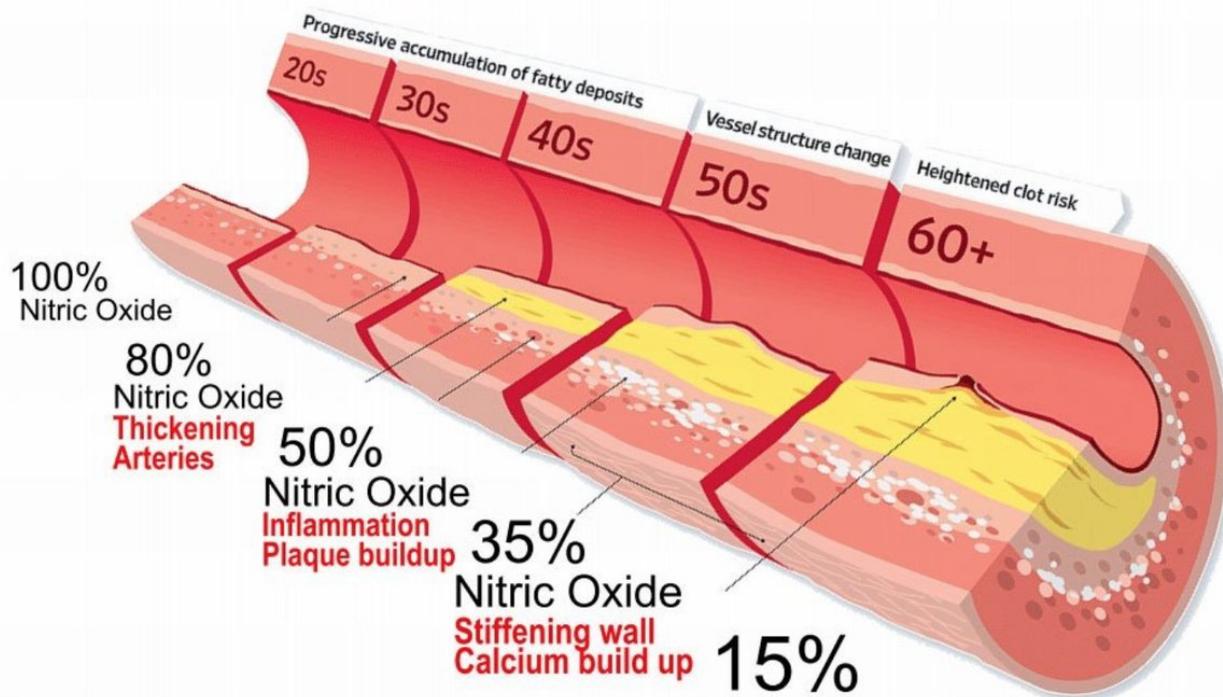
## Concentration of deuterium and some other vital elements and glucose in human serum

Deuterium	12–14 mmol/L (150 ppm)
Calcium	2.24–2.74 mmol/L
Magnesium	0.75–1.2 mmol/L
Potassium	3.5–5.1 mmol/L
Glucose	3.3–6.1 mmol/L

D IN OUR BLOOD IS NORMAL. IT IS  
NOT IN THE TCA & UREA CYCLE.



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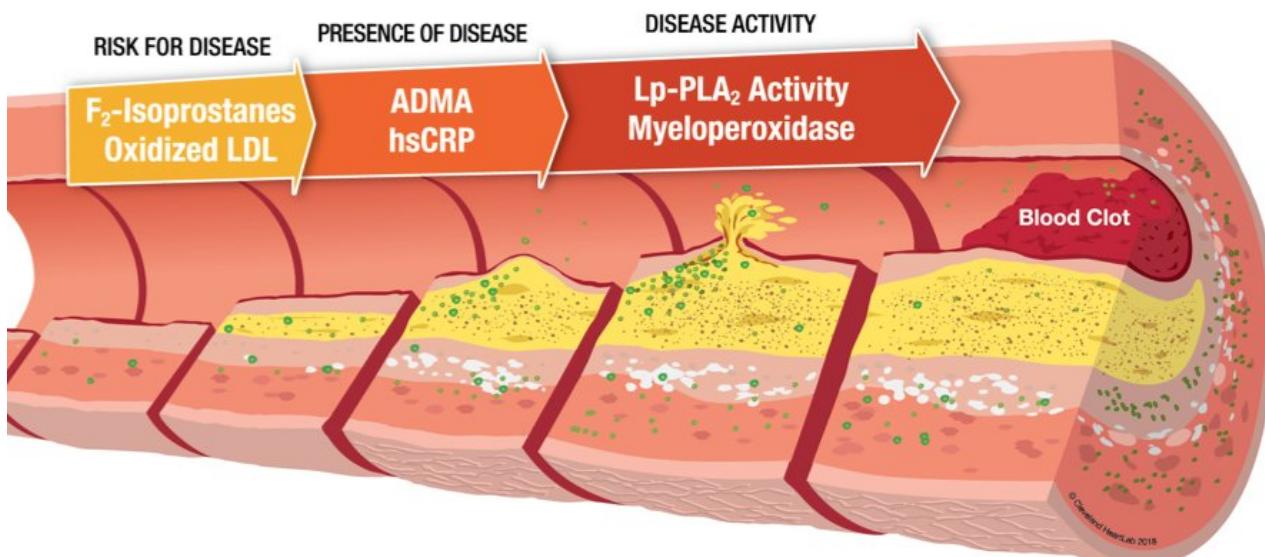


**As we age, we lose 85% of our ability to make Nitric Oxide.**

Based on average males  
Compilation of data from multiple published reports in humans  
Gerhardt et al Hypertension 1996  
Ceremajer et al JACC 1998  
Taddei et al Hypertension 2001  
Egashira et al Circulation 1993

**15%**  
**Nitric Oxide**  
**Rupture**  
(possible heart attack)

In your 60's and beyond, the aging process partly reflecting the arteries withstanding more than 100,000 heart beats a day, contributes to the attack on the lining of the arteries. Meantime, left ineffectively checked, plaques can rupture or erode, leading to blood clots that can cause heart attacks, while an overworked or scarred heart increases the risk of heart failure.



13. Because ideas like his are allowed to be considered expert opinion, that is why this information has been kept int he shadows by big pharma and big food. I promise you this is why all of you do not know it either. Cholesterol is another nonvisual photoreceptor of man that absorbs best in the UV range. When it is sulfated it's absorption spectra is in the 190-350nm range. When it's in its LDL it absorbs at 500-600nm (winter/blue light). For example, if you have the wrong type of cholesterol in your skin when the sun is strong you won't be able to make Vitamin D at all even at the equator. This explains why people who live indoors and work in offices all have high cholesterol. It also means they are all collecting deuterium in their systems instead of H+. Since your mito matric runs purely on H+ you might see the problem now why heart brain and PAD diseases are all linked. Cholesterol has to be sulfated and in the HDL format because those electrons are needed to absorb the 290-320 nm light. THIS IS THE REDUCED VERSION OF CHOLESTEROL mammals use in spring and summer. If your HDL is low it is because you LIVE MOSTLY IN BLUE LIGHT or nnEMF stress. REMEMBER LIGHT ONLY WORKS WITH ELECTRONS. LDL cholesterol is DEVOID of electrons and sulfur. when you have the wrong type of cholesterol in your skin, the lipid rafts change the voltage gate channel operation of proteins embedded in them to alter function to match the light. When the system is disordered, as it is in most people in California/NYC due to blue light and nnEMF, not even standing on the equator naked will raise your vitamin D level. It is Biophysics 101. Right now this is why people in California and NYC have record rates of LDL cholesterol levels, low vitamin D levels, metabolic syndrome in the liver, and higher rates of skin cancer, colon cancer, and melasma. It is fully explainable when you get how light controls mammals. Keep enjoying your tech and NYC/Cali and prep for a life filled with problems that centralized scheme will wallet biopsy with regularity.

**With time it will be proven surface  
chemistry of the EYE/skin is more important  
than biochemistry is for humans.**

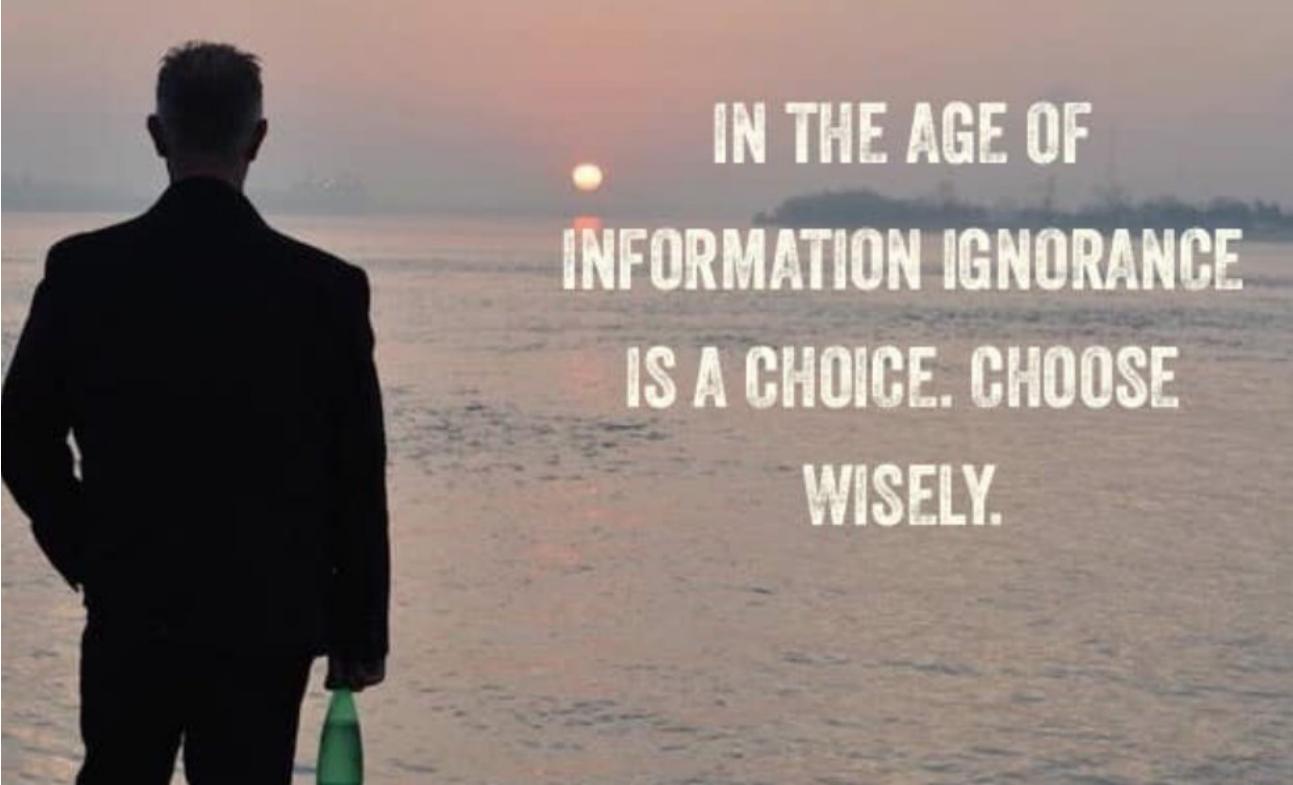
**TODAY YOU GET LESSON #1**

**BLUE LIGHT HAZARD IS THE  
ETIOLOGY OF MOST  
EYE DISEASES: AMD/CATARACTS**



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14. I mentioned metabolic syndrome and liver disease. My new young protege, [@Max Gulhane MD](#) is very concerned about fatty liver and is convinced that seed oils are behind it as most of the meat heads in carnivores seen are. Time to educate them.



IN THE AGE OF  
INFORMATION IGNORANCE  
IS A CHOICE. CHOOSE  
WISELY.

15. There is strong class one evidence of a significant relation of 25(OH)D levels with the degree of liver dysfunction, considering that an inverse correlation of 25(OH)D levels with both Child-Pugh score and Model for End-Stage Liver Disease has been reported in the GI literature. In addition, vitamin D deficiency has been shown to increase the risk for overall mortality and infections in patients with cirrhosis. Vitamin D deficiency has been also associated with advanced stages of hepatocellular carcinoma and poor prognosis. Finally, there are studies suggesting that patients with chronic hepatitis C and normal vitamin D levels have higher virological responses to treatment. The sun is always the answer for liver disease = decentralized wisdom 101. It is not the meat diet. That solution is 4 steps below the sun.

When well packaged half truths and lies has been sold to the public over generations, the truth will seem utterly preposterous to the masses and the speaker will seem crazy

*Mitochondriac Wisdom*



16. #1 is sunlight ALWAYS. This is why Vitamin D is converted into an active neurohormone in the body. Key proxies to look at for decentralized clinicians = look at blood glucose, LDL cholesterol levels, B12, and any surface skin or colon color changes (endoscopy). If any of them are abnormal your liver is getting pounded and the melanin sheets at the organ of Zuckerkandl are being degraded. Women with melasma and men with melanosis coli you are in trouble and you are collecting deuterium in your liver to grow a fatty liver. Note the date on the paper and ask yourself why is that every time the GI guy sticks the black snake in my rectum he has never told me this if the data is 30 years old? WHY?

> Z Gastroenterol. 1997 May;35(5):313-8.

## Melanosis coli--a harmless pigmentation or a precancerous condition?

G Nusko <sup>1</sup>, B Schneider, H Ernst, C Wittekind, E G Hahn

Affiliations + expand

PMID: 9188145

### Abstract

Melanosis coli has long been considered as a harmless pigmentation of the colorectum associated with the use of laxatives containing anthraquinone. Recent experimental and clinical studies, however, have provided some evidence of a possible association between melanosis coli/laxative use and colorectal cancer.

17. the organ of Zuckerlandl is a chromaffin body derived from the neural crest, loaded with melanin sheets that services the liver, intestines, stomach, pancreas, spleen, gallbladder, kidney, and adrenal medulla and is part of the melanin network that is located at the bifurcation of the aorta or at the origin of the inferior mesenteric artery. This nonvisual photoreceptive array connects with the enterochromaffin cells of the gut that contain massive stores of melanin and aromatic amino acids in the lumen of the gut and in the intestinal wall. Tryptophan is the key time crystal in the gut and the sympathetic nervous system allowing mammals to know precisely where the Earth is in relation to the sun during a revolution cycle on Earth. I wrote a blog on how that works on Patreon. Read it. This allows for the perfect planetary adaptation of the organism to change its skin and gut biology to absorb solar light PROPERLY.

## MELATONIN IS A SEASONAL SWITCH HITTER

*Tryptophan catabolism* in humans  
is complex

It can become acetoacetyl CoA, the  
precursor of ketones

It generates the glucogenic amino  
acid alanine

ACC

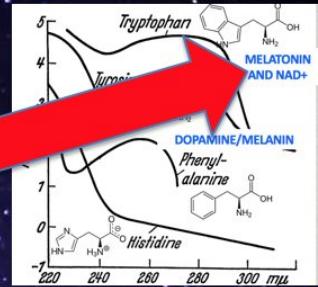


# FREE RETINAL (Vitamin A)

## DESTROYS ALL PHOTORECEPTORS

- 1. ALL HEME PROTEINS - Porphyrins
- 2. MITOCHONDRIAL CYTOCHROMES
- 3. CATALASE :  $H_2O_2 \rightarrow H_2O + O_2$
- 4. MELANIN IN THE RPE
- 4. NEUROPSIN  $\rightarrow 2009$
- 5. MELANOPSIN  $\rightarrow 1998, 2014, 2017$
- 6. MELATONIN/DOPAMINE  POOR SLEEP AND CRAZY BEHAVIOR
- 7. NITRIC OXIDE  $\rightarrow$  UVA VASODILATOR
- 8. B12 /folate  $\rightarrow$  HUMAN PHOTORECEPTORS

Rev-erb a and B are circadian heme nuclear receptors





i

## Physicists find signs of a time crystal

Yale physicists have uncovered hints of a time crystal—a form of matter that "ticks" when exposed to an electromagnetic pulse—in the last place they expected: a crystal you might find in a child's toy.

PHYS.ORG

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2014

## QT#14: METHIONINE AND TRYPTOPHAN ARE TIME CRYSTALS

### WHAT IS THE QUANTUM MECHANISM FOR EVERY AUTOIMMUNE CONDITION ON EARTH?

**Why did this blog start with a Tryptophan operon lecture?** Tryptophan and Methionine are the only two amino acids that have SINGLE codons in the human DNA code. This makes both of them unique compared to the other known 500 amino acids. Our DNA only codes from 20 amino acids. Methionine has to be obtained from the environment. This makes it more unique. What does methionine do in humans that make it UNIQUE? Our start codon to begin all protein synthesis always codes for methionine in HUMANS. This means the methionine cycles are a pretty big controller of something important. Have you ever wonder what they control and why they exist? What if I told you methionine and tryptophan were two-time crystals that tick everytime sunlight in a season interacts with us. One is essential and made only in the environment and the other is made by us and it forms one key chemical that controls our mitochondrial DNA.

**You think that might be important?**

**What do codons and ubiquitin marking have in common? What is a codon? It is the code for an amino acid to be translated when it is low or needed. After it is made it can be activated by light, electrons, or by protons.**

**Are all amino acid codons the same? No, they are not.**

**In fact, not all 64 codons of the genetic code specify a single amino acid during translation. In fact, one amino acid can be encoded by more than one mRNA codon-**

18. This directs the turnover of enterocytes to a 24-48 cycle designed to remove deuterium from the blood and lumen so the liver does not get fatty. This same organ of Zuckerkandl controls your adrenal medulla on the top of your kidney. The POMC gene cleavage releases ACTH. This ACTH allows for high-flux mitochondrial cholesterol trafficking in tissues where POMC is located in post-mitotic cells in adult mammals. It turns out that in the heavily melanated adrenal cortex, this is a specialized function in the mammalian clade. Chromaffin cells migrate to the area adjacent to the sympathetic ganglia with neural crest-derived POMC neurons via the somites migration plan to the adrenal medulla where they're the most abundant type of cells in mammals. The largest extra-adrenal cluster of chromaffin cells in mammals is the organ of Zuckerkandl. Sunlight expands this organ and the adrenal medulla to improve liver and kidney functioning. This is skin 25 D(OH) is converted in both organs to the active format of D3. That vitamin D3 then binds to the VDR in the matrix to slow ECT to stop the need for food to run the ATPase. The 43% of red light

in the solar spectrum can spin the ATPase and the liver becomes protected from the deuterium loads. If the load gets in because of bad mammalian ideas, the enterocytes can still slough off every day to protect the liver if the SCN clock is operational because the mammal is in the sun getting UV light. The 380 nm light hitting the RPE informs mTOR to be in its catabolic or anabolic state = which controls the flow of protons into mitochondria in the liver. That is the circle of control of the liver. NOTHING is better for liver diseases than the sun.





Dr. Jack Kruse is at Kruse Longevity Center.

October 15 · Slidell, LA · 🌎

...

B12 is a unique vitamin in humans because it is a human photoreceptor that absorbs light and does not emit it easily

until it donates its methyl group to things that need light.

What happens to the human brain that does not get enough of this light?

... See More

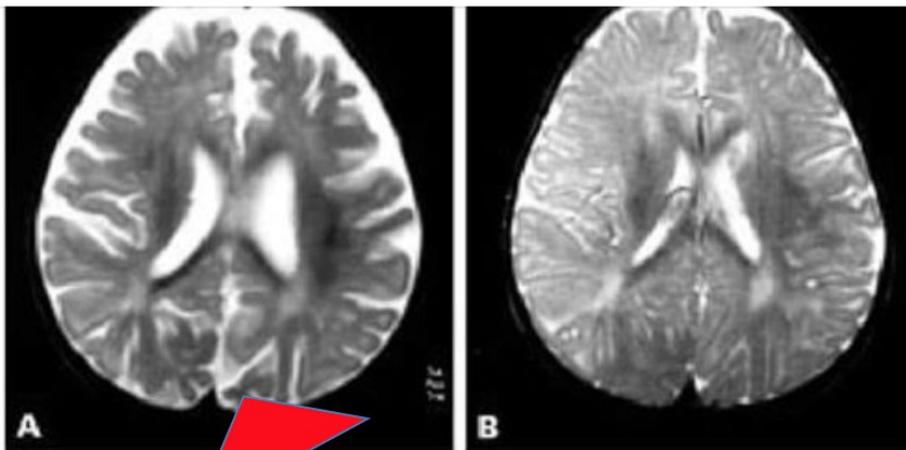


Figure 1 (A) Cranial MRI recording at the time of hospital admission shows severe frontal and frontoparietal cerebral atrophy, while myelinisation is considered normal for age,

NCBI.NLM.NIH.GOV

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) **5G RISK IS GREATER SANS MYELIN/MELANIN**

LOW B12 GIVES  
HUMANS A  
SHRINKING  
BRAIN.

WHY DOES IT  
SHRINK?

IT IS LESS  
MYELINATED  
&  
MELANINATED

THIS IS WHY  
PREGNANT  
WOMEN GET  
PUT ON B12 and  
FOLATE

WHOSE DIET IS  
ALWAYS LOW IN  
THEM  
NATURALLY?

A blue arrow points from the text above to the right side of image B, highlighting the normal brain.



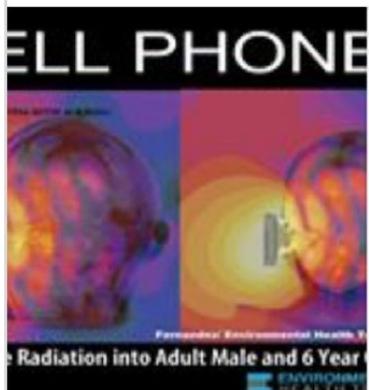
Dr. Jack Kruse is at Kruse Longevity Center.

October 24 · Slidell, LA ·

**YOU NEED B12 TO MYELINATE THE BRAIN**

...

So what is the current lie/belief of CTIA and Big tech and 5G networks? That only ionizing radiation or heat can harm humans in the spectrum. What is the current state of the evidence? Biophysicist have proven that parts of the spectrum outside the sun ruin calcium signaling in mitochondria and this changes the 3 biochemical pathways that mitochondria can use, it alters free radical signaling, and it alters oxygen levels. So the latest data show you the OLD paradigm belief... [See More](#)



**LESS MYELIN = HIGHER 5G RISK = KIDS**

YOUTUBE.COM

## Cell Phone Radiation Penetrates The Brain: Scientific Imaging

Learn more about cell phone radiation and what you can do to protect the ones you love. <https://ehtrus...>

**2018**

Dr. Jack Kruse is at Kruse Longevity Center.  
October 18 at 11:45 AM · Slidell, LA · 2

BLUE LIGHT HAZARD = melanopsin dissociates from retinal and free retinal destroys photoreceptors = destroys optical signaling. The lower your redox is the more retinal is released. Certain stimuli are more apt to...

Now that we know the human bond between melanopsin is a weak covalent bond we know that 1G-5G waveforms can also separate them. We've believed that melanopsin was only present in th... See More

PHYS.ORG

**Chemists discover how blue light speeds blindness**

Blue light from digital devices and the sun transforms vital molecules in...

**WWW.JACKKRUSE.COM**

## 19. THE END OF THE LESSON

# CLUE I WAS RIGHT 2014

## Melanopsin mediates light-dependent relaxation in blood vessels

Gautam Sikka<sup>a</sup>, G. Patrick Hussmann<sup>b</sup>, Deepesh Pandey<sup>a</sup>, Suyi Cao<sup>a</sup>, Daijiro Hori<sup>c</sup>, Jong Taek Park<sup>a</sup>, Jochen Steppan<sup>a</sup>, Jae Hyung Kim<sup>a</sup>, Viachaslau Barodka<sup>a</sup>, Allen C. Myers<sup>d</sup>, Lakshmi Santhanam<sup>a,e</sup>, Daniel Nyhan<sup>a</sup>, Marc K. Halushka<sup>f</sup>, Raymond C. Koehler<sup>a</sup>, Solomon H. Snyder<sup>f,1</sup>, Larissa A. Shimoda<sup>g</sup>, and Dan E. Berkowitz<sup>a,e,1</sup>

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Contributed by Solomon H. Snyder, October 24, 2014 (sent for review June 10, 2014)

Melanopsin (opsin4; Opn4), a non-image-forming opsin linked to a number of behavioral responses to light, including circadian photo-entrainment, light suppression of nocturnal animals, and alertness in diurnal animals. We show a physiological role for Opn4 in regulating blood vessel function, particularly in the context of photorelaxation. Using PCR, we

**I WARNED YOU APPROPRIATELY  
IN 2014**

**ABOUT THE UNSEEN COLLATERAL  
EFFECTS OF BLUE LIGHT & nnEMF  
BECAUSE I TOOK AN OATH**



[www.jackkruse.com](http://www.jackkruse.com)



**MY LEPTIN Rx PREDICTION FROM 2005**

20. If you read my Patreon work on tryptophan's role as a protein semiconductor and its seasonal role as a time crystal then understanding this post will be easy. Sunlight reduces inflammation by lowering the proton content in the cytosolic water and making sure protons stay inside the mitochondrial matrix. As a result negative charge density builds in the cytosolic regions of a cell. This high net negative charge is known as a high redox state. Persistent chronic inflammation slows the production of serotonin, steering it instead toward self-destructive quinolinic acid production.

This is thought to play a role in psychiatric symptoms associated with chronic inflammation and infections.

Without sunlight melanin is eventually degraded into quinolinic acid. This compound destroys charge density in a cell causing dielectric collapse. It mimics the effect of fluoride deposition in a cell. Sunlight exposure sets the metabolic efficiency of how the pathway operates. The image accurately represents the relative efficiency of the kynurenine

pathway when solar redox is optimized.

For instance, the serotonin “branch” flows at a less efficient rate compared to the kynurenine “branch” (~98% vs ~2%). It also points out why exogenous supplementation of melatonin upsets the charge density of tissues like the retina where melanin is located. Here is the key. A lack of sunlight or melanin degradation by any cause leads to a change in how the pathway operates in neuroectoderm in humans. Chronic inflammation results from a lack of sun. It can also happen via hypoxia caused by a myriad of things such as during an infection or an autoimmune disease. Light fundamentally changes the kynurenine pathway.

The part of the pathway that normally synthesizes beneficial molecules slows to a trickle while the floodgates open for the harmful part of the pathway. Why is this?

Well, inflammation:

- increases the catalytic activity of enzyme IDO

Making more kynurenine and less serotonin and melatonin

AND

- decreases the catalytic activity of KAT

Making less kynurenine acid (protective) and more quinolinic acid (harmful) from melanin degradation. A lack of sun causes melanin degradation via hypoxia. Non native EMF via liberation of Vitamin A from the loose covalent bond is todays major cause of disruptions in this pathway. How does this happen? A lack of sun changes the catalytic efficiency of an enzyme called IDO in the pathway. This changes cytokine signaling which in turn changes the biochemistry of the pathway. Note a lack of sun or excess nnEMF is the key stimuli.

A lack of sun increases these cytokines increase IDO activity:

- ★ IL-1b
- ★ INFg
- ★ IFNa
- ★ TNFa
- ★ IL-6
- ★ IL-12

While these cytokines decrease KAT activity:

- ★ IL-1b

★ INF-g

★ TNFa

This is how light changes disease phenotype. Hence, persistent chronic inflammation from a lack of sun or too much nnEMF slows the production of essential neurotransmitters, neurohormones, and neuroprotective substances, steering it instead toward self-destructive processes in neuroectodermal derivatives in mammals

In humans we have extra neuroectoderm to protect in our frontal lobes. That photonic switch is in the habenular nucleus. When melanin is degraded in this pathway all he'll breaks loose in executive function. These alterations eventually lead to the disruption of limbic and paralimbic brain circuits, compromising emotional functioning. This explains how light plays the leading role in the development of psychiatric symptoms associated with altered solar redox and many mitochondrial illnesses. It's no longer a mystery. You just need to read the literature and connect the dots to POMC biology and melanin production and degradation.



21. Please read the literature on BDNF. It is also increased by solar exposure and destroyed by nnEMF and build up of quinolinic acid from melanin degradation of the non visual photoreceptor system in neuroectodermal derivatives. Implications??

22. BDNF in humans is on chromosome 11.

BDNF: Brain-Derived Neurotrophic Factor

BDNF is paramount in the growth, development, and maintenance of neurons in the brain. It is linked to solar exposure via WNT signaling embryo logically. Recall that the Leptin melanocortin pathway controls fecundity and development in the human embryo. It works to help existing neurons survive and impacts the growth and differentiation of new neurons and synapses. One can only imagine the consequences. Just think about autism for a moment and why it's exploding since 1940 when humans began using light to communicate in tech gear.

Mutation or changes in expression could result in neurological, mood, and cognitive

disorders.

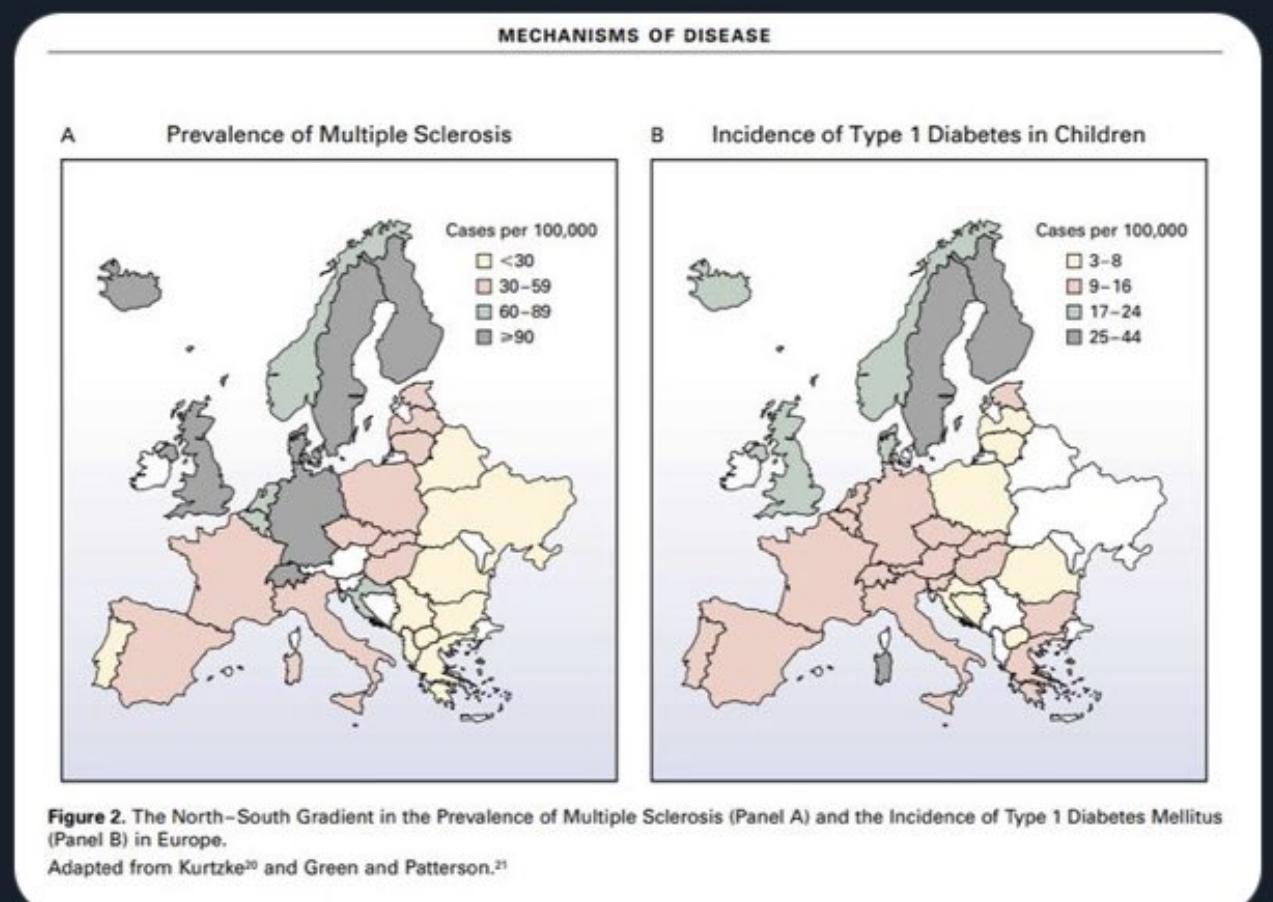
It would be a terrible thing if somehow this mechanism was mutated in some way, by say, the presence of DNA plasmid contamination, that also carries an SV40 promoter, poor solar exposure, alien light, or as found in other instances, gene expression might have been acted upon by the pure presence of linear DNA plasmid pieces; don't you think. Few are making these connections

\*\*\*\*\*

There are 8 BDNF promoters. Never forget sunlight increases all of them properly.

Just two so called auto-immune diseases on a map.

N Engl J Med, Vol. 347, No. 12 · September 19, 2002 · [nejm.org](http://nejm.org)



23. You might want to read this paper after you read my Quantum engineering #45 blog on the link to melanin melanopsin and melatonin to autism. Why was I warning my tribe about the mRNA technology before 2020? I laid that story out to RFK Jr and Rick Rubin in 2023 Tetragrammaton podcast. Now look at this paper. I've known about these links for thirty years. [link.springer.com/article/10.1007/s00115-002-0912-1](https://link.springer.com/article/10.1007/s00115-002-0912-1)...

24. Everything that needs to be said has already been said by me in the past (decentralized wisdom). But since too few of you were listening to me over the last 20

years (centralized fools), everything must be said again.

This is how you show centralized functional MDs they do not know shit about real decentralized health. Taking Vitamin D supplements is equivalent to going to the gym and asking a trainer to do push ups for you and you thinking you're getting the benefit from his work. Centralized psychosis is what Dr. Eric Berg shills. I teach people decentralized WISDOM and extinguish centralized ideas from medicine.

What do I sell people? Wisdom on how to maximize time. How much time can I reserve for you?

Your time and health are subject to how you value your decisions around light, water, and magnetism. That is what I am expert in teaching you. Nothing more, nothing less. I must govern you by using the lessons of the clock, and I must not allow you to be governed by man's light which ruins all your clocks.

**THE DECENTRALIZED TRUTH BOMB IS:** Your future is created by what you do right now with my wisdom, not tomorrow. For my students, most of who have been ruined by centralization, tomorrow is often their busiest day of the week.

This is why never execute my lessons. If you give me some time to solve your problem, I will spend most of this time sharpening my thoughts before delivering you, your bounty. Don't be fooled by life. There are only as many days in the year as you make use of. Centralized people only get a week's value out of a year while decentralized thinkers get a full year's value out of a week.

**280-320nm Ultraviolet B light exposure on the skin significantly increased Gut microbial diversity**

But..

Only in subjects who

## WERE NOT TAKING VITAMIN D SUPPLEMENTS

In a new clinical pilot study, researchers tested the effect of skin UVB exposure on the human gut microbiome.

Healthy female volunteers were given three, one-minute sessions of full-body UVB exposure in a single week.

Before and after treatment, stool samples were taken for analysis of gut bacteria - as well blood samples for vitamin D levels.

Skin UVB exposure significantly increased gut microbial diversity, but only in subjects who were not taking vitamin D supplements.



**Dr. Eric Berg** @dr\_ericberg · Feb 13

How can 20,000 IU of vitamin D3 be toxic if 40 minutes of exposure to the sun provides the same amount?

@Thread Reader App make a thread

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Source: <https://x.com/DrJackKruse/status/1659534650899853314>

Thread: <https://twitter-thread.com/t/1659534650899853314>