

# Natural Light Is an Essential Nutrient

By [A Midwestern Doctor](#)

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[Mercola](#)

Theme: [Environment](#), [Science and Medicine](#)

*Sunlight's hidden benefits — Sunlight is crucial for our health, dramatically cutting the risk of dying or getting cancer, yet we're always told to avoid it*

*Beyond vitamin D — While we recognize the importance of vitamin D, many other critical functions of light in plants, animals, and humans remain largely unknown and will be explored in this article*

*Modern light exposure — Our constant exposure to artificial light is mistakenly seen as harmless, but forgotten research shows it's a root cause of many modern physical and behavioral issues*

*Light and blood — Blood plays a key role in conducting light throughout our bodies. Disruptions in this process (e.g., from wearing glasses that block certain parts of the light spectrum) can lead to serious health problems*

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I've gradually become convinced that sunlight is one of the most vital nutrients for our bodies. For instance, as humans migrated north from Africa and experienced less sun exposure, their skin lightened, suggesting this adaptation likely ensured enough sunlight still entered the body.

Industries with vested interests lobby to hide true causes while diverting attention to easy scapegoats. Since sunlight isn't profitable, the narrative we hear only focuses on its dangers.

For example, dermatologists transformed themselves from an unwanted career to a coveted (and incredibly lucrative) specialty by branding themselves as cancer fighters, emphasizing the need for regular, often costly, skin cancer exams and expensive skin cancer removals. They portrayed benign cancers as deadly and blamed sunlight for skin cancer, concealing that lack of sunlight leads to fatal skin cancers.<sup>1</sup>

This fear mongering hasn't reduced skin cancer death rates<sup>2</sup> but has increased harmful diagnoses and treatments even as effective and affordable treatments are hidden from the public.<sup>3</sup> Many in turn have fallen victim to the Great Dermatology Scam<sup>4</sup> (detailed further [here](#)). Consider for instance Comedian Jimmy Dore's recent experience:<sup>5</sup>

Sunlight is free and profoundly beneficial, yet industries profiting from illness directly

oppose it. In this article, I'll explore forgotten knowledge of light's importance and the remarkable things it does within the body.

## The Overlooked Power of Sunlight

Prior to dermatology's disastrous war on the sun,<sup>6</sup> the value of sunlight was widely recognized in medicine. For example, in the early 1900s, heliotherapy (sunbathing) was used with great success for treating many (otherwise incurable) conditions, such as the 1918 influenza,<sup>7</sup> tuberculosis,<sup>8</sup> and many other diseases.<sup>9</sup> Sunlight offers immense benefits, yet it's often undervalued. Consider these points:

- Cancer prevention — Sunlight exposure dramatically reduces cancer risk. A large study found that high UVB exposure halved the risk of breast and prostate cancer.<sup>10</sup>
- Longevity — A meticulous 20-year study<sup>11</sup> of 29,518 women showed that avoiding the sun increased the likelihood of dying by 60%. Regular sun exposure significantly reduced heart disease deaths and other common illnesses.

*Note: That study<sup>12</sup> also found a variety of other common diseases were much less likely to affect those with adequate sun exposure.*

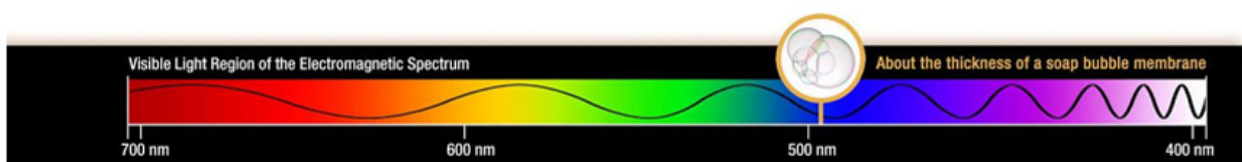
- Mental health — Sunlight is crucial for mental well-being, especially in preventing depression like seasonal affective disorder.<sup>13</sup> Many workers, particularly night shift employees, suffer from a lack of sunlight. For instance, a study of Chinese operating room nurses revealed worse mental health correlated with low sun exposure.<sup>14</sup>

*Note: During my medical internship, long night shifts under fluorescent lights led to clinical depression. After a month, I bathed in a full-spectrum light bulb<sup>15</sup> and felt better almost instantly.*

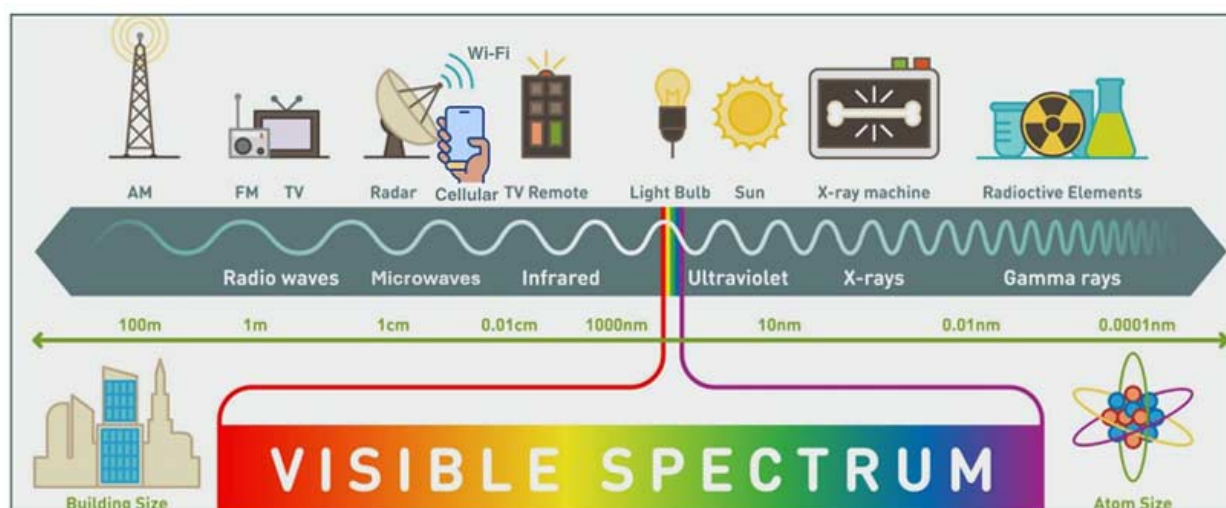
- Circadian rhythm — Sunlight helps regulate circadian rhythms, which are crucial for rest and repair. Modern insomnia is often linked to artificial light exposure, and one effective treatment is starting the day with a walk in the sunlight.

## What Is Light?

Light is a wave of energy (termed electromagnetic radiation or EMR) that travels through space at the speed of light. Depending on the length or frequency of that wave, its properties change significantly. For instance, when its length is between 380nm-700nm, it is visible to the naked eye and spans a wide range of colors, while outside this range other types of light emerge (e.g., infrared or ultraviolet [UV] light).



Note: Pioneering experiments have shown certain sensitive individuals can see wavelengths outside the visible light spectrum.<sup>16</sup>



As light (and other types of EMR) saturate our environment, they have many significant biological effects. Classically, those effects are seen as a product of how much energy they contain and if that energy is sufficient to ionize (break apart) the bonds that hold biological molecules apart, something seen with increasing frequency as one goes towards the gamma ray end of the spectrum.

However, this ignores that waves with much lower energy can also affect biological systems if their wavelength matches a biological structure and through resonance stores within it. For example, consider how radar microwaves affect aphids:

Note: Many individuals are hypersensitive to microwaves and thus radar, cell phones or Wi-Fi.

Likewise, the body requires many of the unique wavelengths found in natural light, which unfortunately are absent in artificial lighting. For example, different types of UV light exist (e.g., UV-A, UV-B, and UV-C), each with unique vital functions.

## Biophotons and Mitogenic Radiation

Biophysics reveals that cells emit faint ultraviolet photons to control growth and communicate. Disruptions in these biophoton transmissions can lead to disease, with abnormal emissions seen in conditions like cancer. For example, carcinogens significantly disrupt these biophotons, while non-carcinogens do not.<sup>17</sup>

In 1923, Alexander Gurwitsch<sup>18</sup> discovered that cells emit faint ultraviolet light, called mitogenic radiation (MGR), which induces neighboring cells to divide. This light is so faint that it wasn't detectable until decades later with advanced photomultiplier devices. Key insights from Gurwitsch's research include:

- Secondary emission — Cells exposed to MGR re-emit it, precisely matching the frequencies needed for optimal biological responses.
- Injury response — Injured or dying cells release a brief MGR flash.

- High emission areas — Brain tissue, corneas, the optic nerve, active muscles, and blood emit more MGR.
- Blood conductance — Blood vessels and energized tissues, influenced by the heart's charge, conduct MGR efficiently.
- Aging and healing — MGR emissions decrease with age, potentially affecting healing. Restoring MGR in older blood improved senility in early studies.

Despite its potential, MGR research has faded into obscurity. Interestingly, advanced meditators often report perceiving light within their bodies, which biophoton researchers have confirmed using sensitive instruments. This field hints at an unseen world of cellular communication and health diagnostics waiting to be explored. For example, I showed how MGR underlies many of the therapies now used in regenerative medicine [here](#).

## John Nash Ott

Plants grow so slowly that they can't typically be seen. Enter time-lapse photography: by speeding up these microscopic movements, we can see plants in action. John Ott, a pioneer in this field, started experimenting with time-lapse photography back in 1927 while still in high school.

Time-lapse photography was no easy task — it demanded consistent framing and lighting over months or even years. Ott, with his remarkable skills and patience, became a sought-after expert, delivering stunning results where others often failed. His work, such as the footage he created for Disney,<sup>19</sup> or this video<sup>20</sup> where he coaxed potted primroses to dance (and then bow) to a classic waltz, thus gained immense popularity.

Through his experiments, Ott realized that plants reacted to the light he used for filming, including specific light filters for different colors. This sensitivity to light extended beyond plants to animals and humans as well (e.g., Ott observed significant psychological disturbances result from wearing pink glasses). One key discovery was that essential UV light doesn't pass through glass, so Ott used special windows to let in natural light.

Ott's work opened up a fascinating world where the subtle responses of plants to light became visible, highlighting light's profound impact on all living things.

“No one in science has made a major breakthrough in science by conducting double-blind studies. Breakthroughs are made by careful observation.” — John Ott

Ott found himself in a unique position: his groundbreaking research faced resistance from mainstream institutions while gaining attention from the scientific community, particularly for his time-lapse photography. Despite some successes, like removing dangerous TVs from the market and promoting full-spectrum lighting, he encountered continual obstacles, often due to institutional reluctance to publish his findings. His work, however, found its way into natural medicine.

Key discoveries:

1. Plants — Cyclical natural light was essential for plant health, guiding their growth cycles, increasing their crop yields, and allowing them to recover from otherwise fatal infections.<sup>21</sup>

He also found minute cosmic rays or artificial x-rays (e.g., from cathode ray televisions or fluorescent lights) determined which directions plants grew in and also significantly affected humans (e.g., by causing nervousness or chronic fatigue).<sup>22</sup>

2. Eyes and light — Ott discovered that the eyes (the most transparent part of the body) play a crucial role in nourishing the body by allowing natural light to enter the body, affecting vital glands like the pituitary and pineal.<sup>23</sup> This insight suggests that proper light exposure is essential for maintaining hormonal health.<sup>24</sup>

3. Glasses — Standard glasses and contacts block essential wavelengths (e.g., UV radiation). Ott found many health issues improved once he brought natural light back to the eyes.<sup>25</sup>

4. Light-induced motion — Ott observed that natural light could induce spontaneous and orderly motion with plant or animal cells, while unnatural light froze that motion and cellular reproduction, indicating that light has a dynamic effect on biological systems.<sup>26</sup>

5. Sunlight deficiency — Ott and other scientists, particularly in Russia, believed that a widespread deficiency of sunlight was causing a chronic epidemic of severe health issues.<sup>27</sup>

6. Frequency sensitivity — Ott theorized that different body parts respond to specific light frequencies, and that photosensitizing drugs and pathogens might affect the body based on the light they absorb or reflect.<sup>28</sup> Subsequent research in color therapy confirmed many of his discoveries.<sup>29</sup>

7. Behavior — Ott regularly observed light influenced both animal and human behaviors (e.g., unnatural light made animals far more aggressive while healthy light made them more nurturing toward their offspring).<sup>30</sup> In humans Ott saw workplaces fall apart once pink lighting was introduced to “brighten the mood” and observed workers have exceptional health and behavior after UV backlights were introduced.<sup>31</sup>

Likewise, he discovered natural lighting significantly improved children’s behavior and academic performance at school.<sup>32</sup>

8. Reproduction — Ott discovered that lighting had a significant effect on both animal fertility (e.g., unnatural light could stop fish from laying eggs)<sup>33</sup> and the gender ratio of their offspring (e.g., under healthy light chinchillas gave birth to more females), to the point many farmers and breeders began implementing Ott’s suggestions.<sup>34</sup> Similarly, they found healthy lighting significantly increased agricultural yields (e.g., hens grew faster and laid more eggs).

9. Cancer — Unhealthy lighting was carcinogenic (e.g., Ott traced an “inexplicable” leukemia cluster to toxic classroom lighting and highlighted research showing it caused or exacerbated cancers in animals).<sup>35</sup> Conversely, Ott successfully treated numerous cancer patients by putting them on a healthy light program.<sup>36</sup>

10. Other illnesses — Ott found that healthy light prevented infections, and cavities,

increased the general survival of animals, and helped many other human chronic illnesses like diabetes, arthritis, allergies, or other autoimmune disorders.<sup>37</sup>

In summary, Ott highlighted that artificial light, with its specific concentrated wavelengths, due to resonance could disrupt biological processes, causing over-activation or under-activation of certain functions, and showed that even trace amounts of background radiation could have significant biological effects.

## Liquid Crystalline Motion

A major mystery in biology is how fluids are able to continually move throughout organisms without a pressure gradient (e.g., one created by a pump) existing to drive that flow. For example, once blood returns to the capillaries, it transitions from no blood pressure to a rapid flow within the veins. Observations like this in turn have led certain schools of medicine to believe the heart's primary function is not to pump blood through the body.<sup>38</sup>

Gerald Pollack provided an answer to this vexing question.<sup>39</sup> Many throughout history have observed that water often enters a state where it's neither a liquid or a solid. Pollack discovered that when water interacts with polar surfaces and an energy source, it forms a new state with unique properties:<sup>40</sup>

- Gel-like structure — It behaves like a gel or liquid crystal that continually stabilizes and protects the surface it coats (e.g., a blood vessel or the fascia).<sup>41</sup>
- Charge gradient — It has a built-in charge gradient that powers essential physiologic processes.<sup>42</sup>
- Spontaneous flow — When this gel like water coats a tube, the hydrogen ions it releases repel each, creating a spontaneous flow that acts as a natural fluid pump in plants, cells, and blood vessels.<sup>43</sup>

*Note: This spontaneous flow and its importance is discussed further [here](#).*

Sunlight plays a crucial role the body's circulation by:

- Fueling the creation of gel-state water and thus fluid motion.<sup>44</sup>
- Catalyzing Cholesterol Sulfate Synthesis, creating the polar surface gel-state water forms from.<sup>45</sup>
- It's UV light improving Zeta Potential, which disperses fluids<sup>46</sup> (e.g., eliminating microclots), hence eliminating the obstacles to fluid circulation.
- Enhancing nitric oxide production — Dilates blood vessels, improving circulation.<sup>47</sup>

This suggests that the body was designed to harness sunlight for maintaining fluid flow and cardiovascular health.

## Blood Conducts Light

Much of Ott's work revolved around getting the light we needed inside the body. Parallel to this, a variety of other innovators discovered that bringing light inside the body (e.g., with a laser)<sup>48</sup> yields a variety of meaningful benefits. Similarly, like Ott, they often found illness results from the body's inability to bring the light it needs into itself (e.g., consider the significant health issues Ott observed from glasses blocking essential wavelengths to the eyes).

One of the oldest approaches to bringing light inside the body was to extract blood from the body and then transfuse it back in, exposing it to light (typically ultraviolet) before it had entered the body and thereby bypassing the barriers skin created to light entering the body. Since 1928, [ultraviolet blood irradiation \(UVBI\) has consistently produced miraculous results](#), and is now widely used in countries where the practice of medicine has not been monopolized.

When I started using UVBI, I began noticing that I would often see rapid improvements occur which seemed to be occurring too quickly for it to simply have been a product of the irradiated blood circulating through the body and affecting whatever it came into direct contact with.

*Note: I have also observed this rapid change with a few other therapies (e.g., certain stem cell preparations), which also emit mitogenic radiation.*<sup>49</sup>

When experimenting, I found that turning the external UV light source on and off during treatment (after which the blood takes roughly 30 seconds to enter the circulation) triggered immediate systemic responses, suggesting that blood might conduct light. This means that illuminating one part of the blood could quickly affect the whole system. Presently, I believe this conductivity is due to:

1. Secondary UV emissions — Blood exposed to UV light can emit secondary UV radiation. This was confirmed by experiments where UV-exposed blood caused photographic paper to develop.<sup>50</sup>
2. Porphyrins and light transfer — Porphyrins,<sup>51</sup> like those in hemoglobin and chlorophyll, transfer light energy.<sup>52</sup> This helps convert sunlight into usable energy in our bodies.
3. Absorption of light — Blood cells absorb specific wavelengths of light,<sup>53</sup> which could explain how light exposure impacts health.
4. Other conductors — Nerves and the physical correlates of the acupuncture channels<sup>54</sup> also conduct light.

Assuming blood indeed conducts light, this provides an important context to many of the ideas outlined thus far. Understanding this helps clarify why localized light treatments can have such broad effects. Conversely, if you struggle with sunlight tolerance, it might be due:

1. Microcirculation issues — Poor zeta potential<sup>55</sup> can hinder the transference of UV-heated fluids into the body, allowing the light to concentrate in the skin, leading to sunburn from excessive light exposure.
2. Mitochondrial dysfunction — If mitochondria can't convert light energy into usable energy, which in turn creates both reductive stress<sup>56</sup> and potential damage from light exposure.

Improving these aspects can thus enhance sunlight tolerance. For instance, many find [correcting dietary issues](#) (e.g., seed oil consumption) or [restoring the physiologic zeta potential](#) boosts their ability to handle sunlight.

## Conclusion

One of the most controversial moments in Trump's presidency was his asking about a new COVID-19 treatment which put an ultraviolet light into the body and could disinfect the lungs within a minute.<sup>57</sup>

After Trump said this, the media and many politicians continually (to this day) repeated the false claim that Trump had advocated for injecting bleach into the body, and as a result, many of his supporters objected to how the media portrayed the incident. In my case, there were two reasons I had strong feelings about it.

First, it stigmatized using nasal disinfectants (e.g., iodine, hydrogen peroxide, or hypochlorous acid) to treat COVID-19. This was extremely unfortunate, as when used early in the illness, those disinfectants [were one of the safest, most effective and most widely available treatments for COVID-19](#) — to the point had this approach been widely publicized, it likely would have ended the pandemic.

Second, it stigmatized the idea of putting light inside the body, which in my eyes, is one of the most useful medical therapies ever developed. In the second half of this series (which can be read [here](#)), I discuss exactly how that is done, the remarkable results UVBI provides for a wide range of challenging conditions, and just how far the medical industry went to prevent this competing therapy from ever seeing the light of day.

It is hence my sincere hope that the work of pioneers in this field such as Dr. Mercola and readers like you will make the public aware that natural light is critical for cellular health and have the remarkable properties of light no longer a Forgotten Side of Medicine.

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*Author's note: This is an abbreviated version of a [full-length article](#) that takes a deeper look into the remarkable effects of light on living organisms. For the entire read with much more specific details and sources, please click [here](#).*



A *Midwestern Doctor (AMD)* is a board-certified physician in the Midwest and a longtime reader of [Mercola.com](#). I appreciate his exceptional insight on a wide range of topics and I'm grateful to share them. I also respect his desire to remain anonymous as he is still on the front lines treating patients. To find more of AMD's work, be sure to check out [The Forgotten Side of Medicine](#) on Substack.

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