

Light Therapy

“Light is a powerful therapeutic tool, and the more we understand its application, the greater our effectiveness as clinicians will be.”

Photobiomodulation is a term that you will hear a lot about in the very near future. Photo-meaning light. Bio-referring to life. Modulation as in modifying. It's the concept that light modifies, changes, and enhances life. My thanks to the Orthomolecular Society for sharing this exciting information. I know you may be familiar with many of the concepts, but this field is exploding, and if you can pick a few ways to motivate your clients, it will be worth your time. You can see a link to the right for a press release authored by Dr. Damien Downing on how to apply this principle with your patients. A second link brings you to an in-depth discussion on the quantum mechanics of why this therapy works.

Here's a general understanding of how light affects us. UV light from the sun hits electrons, which energizes them to shift to a new orbit around the nucleus of its atom. This shift in electrons causes a chemical reaction, which is the basis of life itself. But it has to be light of a specific wavelength to affect the shift, because the wavelength



determines the energy. You can think of it as resonance. The right amount of energy will make the electron move, just as the right note can shatter a wine glass or make a loud-speaker vibrate. Too much or too little, and it doesn't work.

Here's a list of conditions that Photobiomodulation, PBM for short, has been found effective. Dr. Downing admits the list is probably already out of date. Inflammation, Fibromyalgia, allergies, wound healing, scarring after injury, acute and chronic pain, radiation, toxic burden, snakebite, brain trauma, neurodegenerative diseases like Parkinson's even

Alzheimer's, autoimmune diseases like Alopecia, Hashimoto's or MS, aging, learning, attention, memory, cognitive decline, Type 2 diabetes, depression and anxiety, sub-fertility in females and males, menstrual problems, and athletic performance enhancement.

He mentions acute and chronic pain. Here's a personal example he shares. “We can get real energy from light. If everything is working well, we won't really notice it, but if something is wrong and light can fix it, you really will notice. We went for dinner to a friend's house. She's known for her excellent cooking, but

she was suffering from a bad back, and the cooking made it so much worse that she said she might have to go lie down and let us eat without her. I happened to have with me what we used to call the laser watch - it's neither a laser nor a watch, but what it does is shine light into the veins in the wrist where the blood can carry the energy round the whole body. I put it on her wrist without explaining or telling her what to expect, and within a minute, her back pain was significantly better. She kept it on for 30 minutes, then we all had dinner together, and the improvement lasted about 24 hours.”

Isn't that an interesting story? Examples like that open our minds to therapeutic interventions that we would never consider. Here's another one. My list included Hashimoto's. You can see a link to a 2023 study that showed that Hashimoto's thyroiditis was treated by shining a laser through the skin into the thyroid gland. Ultimately, this autoimmune disease makes the thyroid under-active. After a few weeks of this, the patients stopped all their thyroid hormone supplements, and about one third of them never restarted. The auto antibodies, a measure of autoimmune inflammation went down considerably, and these benefits lasted for at least nine months.

Who thinks of using light therapy to treat autoimmune conditions? I never have. Dr. Downing gives a list of clinical procedures that can be used in his press release. Everything from IV into veins to transdermal. He even

shares that oral PBM is used as an antimicrobial therapy and shown to be effective against Covid and malaria.

Here's another benefit from light, in this case sunlight. Obviously, the sun is the source of all light and should be encouraged for all our patients. Of course, a sun burn is ill-advised, but short periods of full body tanning should be encouraged. Most of us are familiar with the fact the UV rays from the sun stimulate the production of vitamin D. But did you know that near-infrared spectrum from regular sun exposure will trigger the generation of melatonin inside your mitochondria? 95% of our melatonin is made in our mitochondria and then stays in our mitochondria. Melatonin has anticancer, antiviral, and antioxidant effects on its own. But because it is a hormone, it signals or stimulates the synthesis of glutathione and other important antioxidants like superoxide dismutase and catalase.

The takeaway from this discussion is that light is a powerful therapeutic tool, and the more we understand its application, the greater our effectiveness as clinicians will be. We've just scratched the surface on this exciting topic. I encourage you to talk with your patients and motivate them to take advantage of the benefits of this powerful intervention.

Thanks for watching. I look forward to being with you again next Tuesday.