MODULE 4 AND 5

THE HUMAN BATTERY

WHY RED/NEAR-INFRARED LIGHT IS CRITICAL FOR OPTIMAL CELLULAR HEALTH AND ENERGY LEVELS

SUMMARY DOCUMENT

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The Wonders of Red and Near-Infrared Light

The most interesting and powerful of all the different wavelengths of light (in the context of human physiology) are the red wavelengths, or near infrared wavelengths of light.

This is a truly fascinating area of science because shockingly, there is actually a mountain of scientific evidence on this, yet, very few people in the world are even aware of it!

To give you an idea of the research that’s out there, red light has shown benefits in scientific studies for all of the following conditions...

The Effects of LLLT: Basically it makes whatever cells you shine it on, work better!
THE WONDERS OF RED AND NEAR-INFRARED LIGHT

RED AND NEAR - INFRARED LIGHT IS LINKED TO IMPROVED:

- Lowering inflammation
- Wound healing/Tissue growth and repair
- Slowing the progression of arthritis
- Candida
  - Eye issues like macular degeneration and retinitis pigmentosa
  - Enhancing muscle performance
  - Enhancing adaptations to exercise (fat loss and muscle gain)
  - Spinal cord injury
  - Tendonitis and tendinosis
  - Carpal Tunnel Syndrome
- Burns
  - Some migraines and headaches
  - Weight loss
  - Improving thyroid function in Hashimoto’s
  - Hair regrowth
  - Acne
  - Bone fracture healing
  - Skin conditions like psoriasis and eczema
  - Fibromyalgia and chronic fatigue
- Improving bone density
- Increasing testosterone
- Enhancing liver regeneration and protection
- Depression and anxiety
- Pain relief (back pain, neck pain, fibromyalgia etc.)

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MECHANISMS OF ACTION OF RED LIGHT:

- Increases ATP production
- Suppresses inflammation and inflammatory cytokines
- Increases internal antioxidants
- Decreases oxidative stress in the brain
- Increases stem cells
- Increases growth factors for cells NGF, BDNF, IGF-1
- Prevents neuronal death by greater membrane stability and resistance to depolarization, which has been shown to transiently reduce neuronal excitability
- Increases our body’s natural opioids
- Increases the number of mitochondria i.e. mitochondrial biogenesis
- Promotes the synthesis of DNA and RNA
- Increases blood flow and circulation
- Turns on cellular energy production (by activating a key enzyme involved in cellular energy production known as cytochrome c oxidase)
- Speeds up the metabolism
- Stimulates repair/regeneration of damaged cells
- Causes fat cells to release their stored fat into the blood stream so it can be burned
- Decreases stress hormones
- Increases youth hormones
- Acts as an antioxidant to neutralize the effects of free radicals on cells
- Dramatically reduces inflammation throughout the body
- Switches on genes that regenerate and repair cell and DNA damage, directly opposing and reversing the aging process! (Think anti-aging.)

If a drug company found a drug that could do all of that, it would immediately be hailed as a miracle drug—the most profoundly beneficial drug ever created.

And yet, we have this drug available to us, and the most amazing part about all this is that virtually no one even knows about it!

What makes red light’s effects on human cells even more remarkable is that there has been an enormous amount of scientific research done and the research shows absolutely incredible benefits for a huge range of aspects of health.

Yet, somehow the vast majority of people—including most people who are working in the health field—have absolutely no clue about anything related to red light and its effects on human physiology.

A MAJOR CAUSE OF NEOLITHIC DISEASE AND FATIGUE: STRESS ON THE MITOCHONDRIA

One of the major causes of fatigue and most modern diseases is poor mitochondrial function and inhibited respiration at the mitochondrial level.

When you are sick, injured, stressed, have a bad diet, get old, sedentary etc., mitochondrial function is inhibited.

The reason is that under stress, the mitochondria make nitric oxide. This nitric oxide acts to block oxygen (at cytochrome c oxidase) from being taken up and combined with NADH – which in turn, blocks the function of the ATP synthase pump.

In short, nitric oxide inhibits the mitochondria from producing ATP efficiently.
When this happens, it **blocks** the flow of electrons down in the mitochondria and that’s what cause the buildup of ROS (aka free radicals or “oxidants”), and that in turn, leaks out of the mitochondria and triggers inflammation, cell death, cancer, and **aging** generally.

**Stress** ➡️ **Increased NO** ➡️ **Blocks ATP creation**

The KEY: When you expose your cells to the right intensities of LIGHT, it flushes out NO from the mitochondria and allows oxygen to bind to cyt c oxidase and drive efficient ATP production in the cell.

**Stress** ➡️ **Increased NO** ➡️ **Blocks ATP creation**

Red/near-infrared light

In this way, it works to neutralize the effects of stress on our mitochondria.

To summarize all the research in this area would take 100 pages or more, so let me try to summarize the research very succinctly:

Red light affects any cells you expose it to by essentially shutting down all destructive, stressful cellular processes, and enhancing the constructive, health-promoting aspects of cell function.

**Simply put, Red Light Makes Your Cells Work Better**

To put it simply, it essentially works by making whatever cells you expose it to, work better:

- Expose your muscles to it, and your muscles become healthier and work better.
- Expose your eyes to it, and your eyes become healthier and work better.
- Expose your organs to it and your organs become healthier and work better.
• Expose sperm cells to it, and sperm cells become healthier, more fertile, and overall work better.
• Expose arthritic joints to it, or tendinitis and it will drastically decrease inflammation and speed healing.
• Expose your belly to it while you exercise, and you’ll greatly enhance fat loss.
• Expose skin cells to it and they become healthier and look better.
• Expose acne-ridden skin to it, and the acne starts to fade away.
• Expose it to wounds and damaged cells and they heal faster.
• Shine it on your head, and your brain works better. (Seriously, there is actual research that proves enhanced brain cell function, and cognitive improvement after red light exposure on the head.)

Whatever part of your body you want to name, if you shine red/near-infrared light on it, it will become a healthier, better functioning version of itself.

“How can red light possible have all these effects? It sounds like some kind of a panacea! I am skeptical!”

The science is very clear: Red/near-infrared light has the ability to dramatically increase cellular energy production. Now, you might be thinking: “So red light increases cellular energy production—so what? What does that really mean for me? Why is cellular energy production so important? I don’t even really know what ‘cellular energy production’ means anyway!”

In simple terms, cellular energy production is at the heart of everything when it comes to optimal cell function—it is the crux of staying healthy and free of disease, it is the key sustainable fat loss, and it is the secret of slowly and even to some extent, reversing the aging process. And of course, having high energy levels!

**CELLULAR ENERGY PRODUCTION IS THE CRUX OF METABOLIC HEALTH AND ENERGY**

<table>
<thead>
<tr>
<th>LOW CELLULAR ENERGY PRODUCTION</th>
<th>HIGH CELLULAR ENERGY PRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging</td>
<td>Youth</td>
</tr>
<tr>
<td>Degenerative Disease</td>
<td>Health</td>
</tr>
<tr>
<td>Fat gain</td>
<td>Leanness</td>
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<tr>
<td>Fatigue</td>
<td>High Energy</td>
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</tbody>
</table>
Cellular health, and the cells’ capacity to self-regenerate is dependent upon the cells’ self-regeneration machinery having adequate cellular energy to run properly.

This is why higher levels of cellular energy production are also strongly correlated with lifespan, and the faster the metabolism, the longer the animal lives, according to numerous animal experiments—it is because higher cellular energy production leads to more efficient cellular self-regeneration.

At first, red light seems to be like some sort of a panacea because it can help/cure such a huge range of conditions. Yet, the reason that it has such powerful benefits on so many aspects of cell function is not an accident—it is because red light is an essential nutrient for optimal cell function and most of us are not getting nearly enough of it.

It is a major factor responsible for activating cells to produce energy—and cellular energy is the lifeblood of sustaining optimal cell function, which in turn, is the crux of looking and feeling youthful and healthy.
**WHY RED LIGHT WORKS ALMOST LIKE A PANACEA—IT INCREASES CELLULAR ENERGY PRODUCTION**

This has been shown in many studies. (For example: [Evaluation of mitochondrial respiratory chain activity in muscle healing by low-level laser therapy](https://www.ncbi.nlm.nih.gov/pubmed/17625273) and [Ga-As (808 nm) laser irradiation enhances ATP production in human neuronal cells in culture](https://www.ncbi.nlm.nih.gov/pubmed/18313118).)

Key Point: Red Light Does not Just Work on The Mitochondria—It Also Builds EZ Water!

And a brand new [study](https://www.ncbi.nlm.nih.gov/pubmed/22316830) showing that the mechanism of red light is NOT solely to stimulate ATP production via cytochrome c (this is most people's understanding, but that's now been shown to be a pretty minimal contribution) but because of **how it affects viscosity and charge** (*i.e. the EZ layer*) inside our cells.

In other words, red light helps build the EZ layer (water battery) in our cells.

These two parts of the cellular battery are synergistic. When the water battery is charged with a big EZ layer, our **mitochondria** (*cellular engine*) work better to produce more energy!

*(For science geeks: If you are interested in the research on this, several studies have now verified the effects of red light on the EZ layer in our cells:)*


Red Light is a **required nutrient** for health (just like food and water).
As I mentioned before, it is not a mistake that our brains are wired to give us the sensation of pleasure when we expose ourselves to sunlight, just the same way it feels pleasure when we drink water when thirsty, or eat a dense source of fats and carbohydrates when hungry.

This is evolution’s way of making sure we go out and do the things that are necessary for optimal cell function.

You might be wondering then if all this talk of red light is a moot point, and if you know, we can get all these benefits from a little sun exposure every day.

Unfortunately, the answer to that is no. There is a discrepancy between the environment humans evolved to live in and the one we now live in, and this discrepancy results in severe deficiency of red light exposure.

Here is why...
### The Light Environment Humans Are Designed For

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waking up early with or just after sunrise</td>
<td>Sunrise light is mostly red and infrared light. Immediately going out of our shelter and into the sunlight.</td>
</tr>
<tr>
<td>Spending many hours outdoors during the day</td>
<td>Ample exposure to sunlight (UV, blue, red, near-infrared, and far-infrared light) on a large portion of our body.</td>
</tr>
<tr>
<td>Watching the sunset</td>
<td>Mostly red and infrared light again, with light entering our eyes and on our skin.</td>
</tr>
<tr>
<td>Sitting by a fire</td>
<td>Emitting mostly red light, for as long as you are awake after the sun goes down.</td>
</tr>
<tr>
<td>Sleeping in complete darkness</td>
<td></td>
</tr>
</tbody>
</table>

### The Modern World We Now Live In

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waking up</td>
<td>Typically wake up at a time that is not connected to sunrise, and we do not typically expose ourselves to sunlight first thing in the morning. Usually we turn on our home light bulbs and electronic devices (mostly blue light, and no red, UV, or infrared).</td>
</tr>
<tr>
<td>Going to work</td>
<td>Typically indoors and sit under blue-dominant fluorescent lights for most of the day, rather than being outdoors in sunlight. (We get almost no exposure to UV, near-infrared, far-infrared, and red light).</td>
</tr>
<tr>
<td>Missing the sunset</td>
<td>We miss the sunset while we’re indoors on fluorescent lights devoid of all beneficial frequencies.</td>
</tr>
<tr>
<td>Staying late</td>
<td>After sunset, instead of sitting in fire light, we typically stay up for many hours with lots of blue light (from fluorescent bulbs, and TV/phone/computer screens entering our eyes).</td>
</tr>
<tr>
<td>Going to sleep</td>
<td>Then we go to sleep, typically with sources of light (from street lights or electronics) still entering our rooms.</td>
</tr>
</tbody>
</table>

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If one was outdoors for many hours per day and living a life mostly in nature (like most animals, and hunter-gatherer humans), as well as sitting by a fire (which is mostly red light) at night for a few hours, it is true that we would not have really need for special red light technology.

But because modern life has become largely dissociated from the rise and fall of the sun, we are now getting:

- Excessive blue light exposure in general
- Excessive blue light exposure at the wrong times (after sunset)
- Lack of UV light throughout the day (early morning and midday especially)
- Lack of red, near-infrared, and far-infrared light exposure in general
- Lack of red, near-infrared, and far-infrared light when we are supposed to get it (morning sunrise, sunlight during the day, sunset, and fire light after sunset)

In general, we are deficient in the nutrients of red, near-infrared, UV, and far-infrared light, and toxic in the nutrient of blue light.

Generally speaking, this situation results in slower metabolisms, less youth hormones, more stress hormones, chronic lack of energy, and faster aging.

**DO YOU NEED TO BUY A RED LIGHT DEVICE?**

Are you spending lots of time out in the sun everyday (at least 30 minutes of morning sun, and 20-30 minutes of midday sun) with a large portion of your skin exposed to sunlight? You are doing well. You do not need to buy a red light device. But you can still do so if you want to use it for specific purposes (boosting hormones, healing injuries, speeding recovery from exercise, etc.)

If you are **not** doing at least 30 minutes of morning sun and 20-30 minutes of midday sun everyday, you need to start supplementing with light. Even if you are (like me), you can still benefit from using red light!
**DO YOU NEED SUPPLEMENTARY LIGHTS?**

**Cannot do AM sun at all due to work schedule?** Need to supplement with bright light in the morning, along with UVB lamp, red/infrared incandescent, and ideally red light LEDs. Ideally, you should also get a far-infrared sauna to do treatments at night 4-7 days a week.

**Cannot do AM sun on a large portion of your skin, but can in the eyes?** UVB lamp, red/infrared incandescent, and ideally red light LEDs done together either in the morning or midday.

**Can do AM sun (at least 20 minutes on a large portion of your body) but cannot do midday sun?** UVB lamp, red/infrared incandescent, and ideally red light LEDs done together either in the morning or midday.

**Overall daily sun exposure less than 1 hour?** Need to supplement with bright light in the morning, along with UVB lamp, red/infrared incandescent, and ideally red light LEDs. Ideally, you should also get a far-infrared sauna to do treatments at night 4-7 days a week.
PRACTICAL APPLICATIONS OF RED/NEAR-INFRARED LIGHT

How do you put all this information into practical action?

The key item is the Platinum LED grow light at 660nm (You could also add another one at 850nm if you want to make the ultimate device.

Optional for background light is the 250 Watt RubyLux Incandescent Bult (with Bayco hood)

For more information on how to get the right lights, please check my Recommended Products document in the bonus section for instructions on how to get the Platinum LED. You need a custom one that is all with red light LEDs at a specific wavelength. I have negotiated with the manufacturer to have these custom red lights made in bulk specifically for my members.)

Here are instructions for various uses of the lights:

**STRESS HORMONE BRACKETING**

The foundational thing to use red light technology for is to do something called "cortisol bracketing." In simple terms, what you are doing is mimicking the sunrise, and firelight exposure after sunset (for as long as you are awake before bedtime).

Basically, you want to bathe your body in red light photons right after awaking, and expose yourself to red light periodically after sunset (a simple red incandescent shining towards you in the room as you read in bed will do the trick, or even just a minute of red light bathing before hitting the sack will help).
This "brackets" cortisol--it confines the natural increase of stress hormones from darkness to a much smaller window, and thus can have powerful anti-aging and metabolism enhancing effects.

Installing one in your bathroom to shine on your naked body during showering and taking baths is a wonderful way to do this (and do it in a way that does not require any time beyond your normal routine).

**Healing Damaged Muscles/Tendons/Ligaments/Joints**

It is now used by physical therapists, physicians, chiropractors and many others (in the form of "cold laser" technology) which can dramatically accelerate healing of any damaged or inflamed tissue.

It typically accelerates healing by 200-400% and for chronic pains and tendinitis (shoulder, knee, bicep tendon etc), it is often the difference between having chronic pain for years vs. getting it healed in a month. (Or weeks vs. days). It is pretty remarkable.

**Anti-Aging For The Skin—Wrinkle And Cellulite Reduction, And Increasing Skin Health/Beauty**

It has a particularly powerful effect on rejuvenating the skin--getting rid of wrinkles, lines, cellulite, etc.

In dermatology and skincare clinics, they now charge massive amounts of money to allow someone to sit in front of a fancy red light for 30 minutes.

There are already many devices on the market for this purpose which you can find for hundreds of dollars on Amazon. The device I recommend is far more powerful.

It is actually the exact device used in many anti-aging and beauty spas around the country where they charge $100-$200 for a single treatment!

**Red Light For Organs and Glands**

To put it simply, whatever cells you shine it on get healthier/stronger. So many doctors are using this technology on specific organs and glands. Many doctors are now treating autoimmune conditions by using it on the gut, using it on the pancreas in type 1 diabetics, etc.

For people with hypothyroidism, shining the light on the thyroid can significantly improve thyroid function.

In fact, it is one of only a couple treatments that science has ever proven can actually reverse hypothyroidism. (And it is a virtual guarantee that your doctor has never even heard of this).
Several studies have shown profound benefits of red light for autoimmune hypothyroidism. This is one of the only treatments—if not the only treatment—that has been shown to partially reverse autoimmune hypothyroidism.

“Thus, one of the main questions is whether HT patients who suffer from impairment in quality of life and HT-related symptoms can find medical help. Evidence suggests that both levothyroxine replacement and selenium supplementation are associated with reductions in concentrations of thyroid peroxidase antibodies.

However, no improvements in thyroid function have been observed with these approaches. Thyroidectomy, on the other hand, will only lead to a relief of mechanical symptoms including a feeling of compression, voice problems and tightness in the neck.

Keeping in mind that the association between HT and other autoimmune diseases likely derives from a polyclonal autoimmune response against organ-specific autoantigens, thyroidectomy will not lead to improvements in a majority of associated conditions and, thus, will only have minor impact on overall quality of life.

Notably in HT patients, low-level laser therapy of the thymus, thyroid, and supraclavicular fossa induces systemic immunomodulation.

A recent randomized, placebo-controlled trial on the efficacy of low-level laser therapy in patients with HT-induced hypothyroidism demonstrated that thyroid function was improved and thyroid peroxidase antibody levels were reduced. This effect was also evident at the last follow-up examination nine months after treatment.”


Chronic autoimmune thyroiditis (CAT) is the most common cause of acquired hypothyroidism, which requires lifelong levothyroxine replacement therapy. Currently, no effective therapy is available for CAT.

Thus, the objective of this study was to evaluate the efficacy of low-level laser therapy (LLLT) in patients with CAT-induced hypothyroidism by testing thyroid function, thyroid peroxidase antibodies (TPOAb), thyroglobulin antibodies (TgAb), and ultrasonographic echogenicity.

A randomized, placebo-controlled trial with a 9-month follow-up was conducted from 2006 to 2009. The results showed a significant difference in the mean levothyroxine dose required to treat the hypothyroidism between the L group (38.59 ± 20.22 μg/day) and the P group (106.88 ± 22.90 μg/day, P<0.001). Lower TPOAb (P=0.043) and greater echogenicity (P<0.001) were also noted in the L group. No TgAb difference was observed.

These findings suggest that **LLLT was effective at improving thyroid function, promoting reduced TPOAb-mediated autoimmunity and increasing thyroid echogenicity in patients with CAT hypothyroidism.**
For those with thyroid problems, spending 10-20 shining intense red light directly onto the thyroid gland (the neck basically) can be powerful medicine in helping you to recover your metabolism and boost your energy levels.

**RED LIGHT FOR BOOSTING EXERCISE PERFORMANCE**

Several studies have shown improved exercise performance on a wide variety of types of exercise when red light is used prior to exercise.

- 5-10 minutes on the muscles you plan to work will be enough. Within 30 minutes of the workout.
- 5-10 minutes on the belly to irradiate the blood may provide systemic effects.

**RED LIGHT FOR MUSCLE RECOVERY AND MUSCLE GROWTH**

Several studies have shown improved skeletal muscle growth when red light is used on the worked muscles after resistance exercise.

- 10-12 minutes in the muscles you worked.
- Can be applied immediately, or several hours after your workout.

**RED LIGHT FOR FAT LOSS**

Fat cells respond to red light exposure by essentially dumping their fat contents into the bloodstream.

When they are energized, they release all their fat. That is why you have tons of clinics now using fancy and incredibly expensive "laser liposuction" devices and charging thousands for treatments, and why you have studies showing remarkable fat loss effects.

If you exercise at home, you may want to do this during the whole workout.
The fat cells will dump most of their fat contents out into the blood stream. If you go for a walk (or do another kind of exercise similar to that) after that, research indicates that it can accelerate fat loss dramatically (from a specific body area) compared to just doing the exercise alone.

Note: You do still have to be in a state of negative flux out of fat cells (i.e. be burning more calories/fat than you take in) for this to work.

If you are chronically overconsuming calories beyond your body’s needs, obviously getting fat loss in any area is not possible—even with red light. The fat will dump out into the blood and then just be put right back into the fat cells.

But in the context of doing your nutrition and exercise optimally, this can allow you to get targeted fat loss on a specific area (stomach, thighs, etc).

Please note that what this does is cause fat cells to dump out their fats into the blood stream. It does not cause them to be burned off too. It only causes a particular area of fat cells (whatever you shine the red light on) to release its fats.

If you want to actually burn off those fats, you should do slow gentle exercise immediately following this, like doing a yoga session or going for a walk.

To give you an idea, the study done on this used strong light bulbs (in the red spectrum) shining directly on fatty areas of the body during the actual workouts.

**LLLT FOR TREATMENT OF CELLULITE.**

“Cellulite is a condition observed in about 85% of post-pubertal women, posing a major cosmetic concern for such women, where affected individuals display a characteristic "orange peel" dimpling of the skin, most commonly in areas of the thighs and buttocks.

The underlying mechanism regarding the pathophysiology of cellulite is still under investigation, but it is suspected that the enlargement of adipocytes, weakening of connective tissue, and decrease in microcirculation are possible triggering factors, helping to initiate the condition (Gold et al., 2011).

Several devices and topical treatment agents are available for managing the condition, but are limited by their abilities to generate only temporary effects.

Considering the stimulatory effects of LLLT on circulation, collagen formation, and fat reduction; it may provide an alternative to current treatment modalities. In a study conducted with 83 subjects possessing mild to moderate cellulite, administration of a dual-wavelength (650 nm and 915 nm) laser, in combination with a massage device, was carried out to test the efficacy of LLLT on cellulite.

The results demonstrated an improvement in cellulite appearance, as well as a 71% reduction in the circumference of patient thighs that were treated…”

**LLLT IN FIBROMYALGIA**

“However, all other fibromyalgia symptoms showed significant improvements after LLLT compared to placebo.”

Low-level laser therapy to treat fibromyalgia. 
Ruaro JA, Fréz AR, Ruaro MB, Nicolau RA.

Author information

"Our study suggests that both amitriptyline and laser therapies are effective on clinical symptoms and QOL in fibromyalgia and that Ga-As laser therapy is a safe and effective treatment in cases with FM. Additionally, the present study suggests that the Ga-As laser therapy can be used as a monotherapy or as a supplementary treatment to other therapeutic procedures in FM."


"Our study suggests that laser therapy is effective on pain, muscle spasm, morning stiffness, and total tender point number in fibromyalgia and suggests that this therapy method is a safe and effective way of treatment in the cases with fibromyalgia."

Using a laser based program in patients diagnosed with fibromyalgia. Clinical Rheumatology.

In this study, the benefits of a program of treatment by laser were evaluated on the improvement of symptoms associated with fibromyalgia. A total of 31 participants took part in the study, all of them women, randomized into two groups: intervention with laser and placebo.

The main conclusions obtained from this study were: Red light was able to help with “sleeping difficulties” and “fatigue”


**RED LIGHT AND TESTOSTERONE**

The testicles have photoreceptors in them that also respond to red light, and the leydig cells in the testicles (the cells that produce testosterone) produce more testosterone when they are stimulated with red light.

Research also shows that it can enhance sperm motility and fertility.
Some research has shown that sunlight exposure directly on the testicles can dramatically raise testosterone by nearly 200%.

There is an excellent article on the subject [here](#).

**RED LIGHT FOR TREATING DEPRESSION OR OTHER NEUROLOGICAL CONDITIONS**


WHERE TO USE IT FOR THE BRAIN (IMPROVED MOOD, COGNITIVE FUNCTION, ENERGY LEVELS OR TREATING NEUROLOGICAL DISEASES OR CHRONIC FATIGUE/FIBROMYALGIA).

The following recommendations are from Joe Cohen at this article.

For increased cognitive function, use it on the forehead and on top of the forward part of your head. Michael Hamblin, PhD uses it on his forehead every morning for about 15 minutes. (from his interview with Joe Cohen, which I highly recommend, and you can watch here)

For enhancing creativity, upper side portions of the head.

If you have CFS or fibromyalgia, your goal is to reduce CNS and brain stem inflammation with the light, so you want to shine it on the back of the neck/brain stem area. There is evidence that these conditions are linked to brain stem inflammation.

For general fatigue/lack of energy, irradiating the brain (on the head itself, like the forehead) is ideal to target the hypothalamus (important in HPA axis function).

Also, the neck and spine are great to irradiate the cerebrospinal fluid and blood that directly feed into the brain.

HOW TO USE IT TO OVERCOME FATIGUE AND BOOST YOUR ENERGY

Use the Platinum LED (660nm) at night before bed 4-6 times per week.

- Sit the light on a chair, table, or the floor (if you want to lay next to it).
- Expose your belly to it for 5-10 minutes. Then do your back, spine and neck for another 5-10 minutes. You can also do another 5 minutes on the forehead or side of the head. (You want to decrease inflammation in the brain).

Total treatment time should be 15-25 minutes for the entire treatment. Note: When starting out, start with half or a quarter of those times.

HOW TO DO A GENERALIZED RED LIGHT TREATMENT

Ideal to use it in the evening.

- First, take off all your clothes and shine it diffusely on your entire body, back and front from head to toe, to suppress stress hormones, increase youth hormones, and wake up every cell in your body.
- Spend 3-5 minutes shining it on the neck and thyroid gland. There are studies already showing this improves thyroid function, which is critical to metabolic health in the entire body.
- Spend 3-5 minutes with the light targeted on any important area of your body that needs healing.
- Spend a few minutes minute on your sex organs if possible—as this will increase the health of those tissues and promote optimal hormonal function.
- Shine it on your face, butt or any other area that has wrinkles or unhealthy skin you want to fix.
- Use it on your belly and/or back for 10-15 minutes.
**BONUS RECOMMENDATIONS.**

You can also do a short 5 minute whole body treatment in the morning.

If you want to lose fat, shine it on any area that need targeted fat loss (e.g. stomach, thighs) should be exposed for 10 minutes to release the fat stores into the bloodstream where they can be burned. Do this prior to going on a morning walk, jog, or bike ride.

If you want to increase cognitive function, you can shine it on your forehead for 10-15 minutes in the morning.

IMPORTANT NOTE: You can also have one or two 250 watt incandescent light in the background at least 4 feet away from you.

You should not be so close to the heat lamp that it overheats your tissues and causes redness. Keep the lamp at least 1-2 feet away. You want the red light and a little heat, but not so much super-intense heat that causes the tissues to overheat and become very red.

In the evening, you can do more red light exposure. You can do another session like you did in the morning, or you can simply use the red light to light up the room you are in (you may want to get 2 or 3 of these red light setups to put them in different places in your house).

Shine it diffusely on your body from 5-10 feet away, rather than targeted intense exposure on a particular area of your body. You want to mimic sitting next to a fire.

**HOW TO USE THE P300, VIDEO.**

I have made a video for you, showing you how you can the P300. [Check it out here.](#)

**RED LIGHT WRAP UP**

There you have it, the comprehensive guide to everything you needed to know about this virtually unknown technology that has the potential to dramatically improve your health and quality of life.

Buy yourself some red light technology and get to rejuvenating your skin, enhancing your muscles, increasing fat loss, regenerating and healing chronic pains and injuries, decreasing stress hormones, enhancing your brain function, decreasing inflammation, speeding up your metabolism, slowing the aging process, and increasing your energy level.

**If you want to buy the P300, then go to the Recommended products file in this section. There I have outlined all the steps for you to get your own!**