The Ultimate Guide to Red and Near-Infrared Light Therapy

SUMMARY DOCUMENT

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The intention of this book is to provide information about the scientific research as it relates to red and near-infrared light therapy. We also have attempted to provide guidelines for using red and near-infrared light therapy devices safely. None of the information in this book, and none of the guidelines for safe usage of devices should ever be interpreted as claims of diagnosis, treatment, or cure of any medical condition.

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The Wonders of Red and Near-Infrared Light Therapy

If there were a pill that was proven to have powerful anti-aging effects on our skin, combat neurological disease, fight depression and anxiety, increase fat loss, speed recovery from exercise, increase strength and endurance, combat certain autoimmune conditions, fight hair loss, and speed healing from injury – all with little to no side effects – it would be a billion-dollar blockbuster drug. Hundreds of millions of people would be told to start taking it by their doctors every day. And doctors all over the world would call it a “miracle drug.”

Here’s the crazy part: That drug exists.

But it’s not a pill. It’s red and near-infrared light.

In this article, you’ll discover the incredible power of red and near-infrared light therapy and how it can help:

- Increase your energy
- Combat aging and make your skin healthier, reduce wrinkles, and help get rid of cellulite
- Speed up fat loss
- Improve muscle recovery and athletic performance
- Improve mood and cognitive function
- Speed healing from injury
- Improve metabolism and hormonal health

Sound too good to be true? Think again!

Red and near-infrared light have already been proven in over 3,000 scientific studies to do all that and more!
What Is Red And Near-Infrared Light Therapy?

But let’s back up for a moment: What exactly are red and near-infrared light?

Red and near-infrared light are part of the electromagnetic spectrum, and more specifically, part of the spectrum of light emitted by the sun (and also fire light). These wavelengths of light are “bioactive” in humans. That means that these types of light literally affect the function of our cells.

So what’s all this talk of “electromagnetic spectrum” and “spectrum of light”? Let’s take a look at the electromagnetic spectrum so I can show you more clearly what I’m talking about…

Electromagnetic waves range from 0.0001 nanometer (gamma rays and x-rays are very small waves) all the way to over centimeters and meters (radar and radio waves).
If you pass white light (like sunlight) through a prism, it will separate out the different colors based on their wavelengths. This is how we get rainbows as well, and you might remember this from school with the acronym ROY. G. BIV, which stands for red, orange, yellow, green, blue, indigo, violet.

A tiny part of this spectrum – from roughly 400nm to 700nm – is visible to the human eye.

At the highest end of the visible light spectrum is red light, which goes from a little over 600nm to approximately 700nm. Above the visible light spectrum is near-infrared, from about 700nm to a little over 1,100nm.

It is specifically the red and near-infrared wavelengths specifically that have these amazing effects on our bodies. (Interestingly, even within that range, not all the red and near-infrared wavelengths seem to be created equal. Specifically, most research showing benefits of red light and near-infrared light have used wavelengths in the narrow ranges of 630-680nm and 800-880nm. More on this later.)

There have now been literally thousands of studies conducted upon both animals and humans. Overall, red light has been repeatedly shown to have positive effects on cell function in animal and human studies and aid in improving a wide range of conditions, improving health in numerous ways. Near-infrared (NIR) and red light therapy devices have been FDA-approved for several purposes so far, including anti-aging, hair-loss reversal, acne treatment, pain relief, slow to heal wounds, fat loss, among other purposes. (This is worth noting because this proves the abundance of research showing benefits – the therapy has to be proven safe and effective in numerous trials to gain FDA approval.)

So why isn’t everyone already using this technology?

There have been a few of big barriers to the widespread adoption (or even just the awareness) of red and near-infrared light technologies:

1. Until recently, it was thought that you needed an expensive laser device to obtain these benefits. This technology has been in use in doctor’s offices for many years now and goes by the name of either “low-level laser therapy” (LLLT) or “cold laser.” These red/NIR light laser devices often cost $5,000-$30,000. This is precisely why this technology hasn’t gone mainstream and why most people still haven’t heard of it – because most people are under the impression that you can only get near-infrared and red light therapy from these incredibly expensive laser devices.
2. Red and near-infrared LED panels are also being used in anti-aging clinics, where people are being charged $75-$300 per single session to use these lights. This is one of the other barriers – most people believe not only that these lights cost many thousands of dollars, but also that they can only use them by paying hundreds of dollars for a single treatment in a fancy clinic.

Shockingly, new research has shown that it is not necessary to use these expensive laser devices, and most experts now agree that it’s possible to get the same benefits from near-infrared and red light therapy LED panels at a fraction of the cost.

Here’s what Harvard researcher Michael Hamblin, PhD (widely regarded as the world’s top authority on near-infrared and red light therapy) has to say on this subject:

“Most of the early work in this field was carried out with various kinds of lasers, and it was thought that laser light had some special characteristics not possessed by light from other light sources such as sunlight, fluorescent or incandescent lamps and now LEDs. However all the studies that have been done comparing lasers to equivalent light sources with similar wavelength and power density of their emission, have found essentially no difference between them.”

So you don’t need a $5,000-$30,000 medical laser device to get these amazing health benefits. You can get these effects with a device that costs just a few hundred dollars.

You don’t have to go to a clinic and pay $75-$300 per treatment. Once you buy one of these devices, you can do unlimited treatments at home for free (or just the cost of a few minutes of electricity)! **You can do light sessions at home with your own light and get all the same benefits while saving yourself the thousands of dollars you would spend at an anti-aging or medical clinic.**
The Five “Bioactive” Types of Light: Why Humans Need Sunlight to Be Healthy

Just as human cells need nutrients from food, light is also a necessary nutrient for our cells to function well. Certain wavelengths of light can help power up our cells, affect hormones and neurotransmitters, balance our mood, enhance physical performance, hasten recovery from stress, increase alertness, improve sleep, and positively affect the expression of our genes.

Most importantly, you need to grasp that the human body needs light to be healthy.

These are the five types of bioactive light in humans:

1. **Blue light** – sets the circadian rhythm in our brain, which in turn regulates numerous different neurotransmitters and hormones

2. **UV light** – allows us to synthesize vitamin D from the sun

3. **Far-infrared** – acts to heat up our cells (this is the part of the sun’s spectrum that you feel as heat) which stimulates changes in cell function, as well as circulation changes

4. **Red light** – acts on the mitochondria in our cells to stimulate increased cellular energy (ATP) production (among other mechanisms discussed in this book)

5. **Near-infrared (NIR)** – acts on the same pathways as red light – particularly in the mitochondria in our cells to stimulate increased cellular energy (ATP) production (among other mechanisms discussed in this book)
It turns out that *light* is in fact an essential nutrient for humans and our health depends on getting the right dose of these five types of light.

**The point is that modern humans are deficient in the benefits of all of these five wavelengths of light, and there are health consequences when we don’t get enough.**

What kind of health consequences?

The most common light-related health problems that most people are already familiar with are vitamin D deficiency (from too little UV light) and circadian rhythm disruption (from too little blue light in the morning, and too much artificial light at night). Just these two light-related health issues alone are responsible for a massive burden of disease in the modern world. These two issues caused by inadequate and improper light exposure are linked with dozens of types of cancer, as well as heart disease, obesity, diabetes, neurodegenerative disease, and multiple other conditions.

Just as the modern world of processed food leads to chronic malnutrition, our modern light environment (of too much of the wrong kinds of light and too little of the right kinds, and with poor timing) is called mal-illumination. The vast majority of people living in the modern world are suffering from chronic mal-illumination and don’t even realize it. And it has widespread effects on our brain and organ function, immune system, energy levels, mood, neurotransmitter balance, and hormone levels.

Sunlight and vitamin D deficiency (note: we are designed to get vitamin D primarily from sun exposure) has been linked with numerous diseases, such as:

- Neurodegenerative diseases like Alzheimer’s, dementia, Multiple Sclerosis, and Parkinson’s²,⁵,⁶,⁷,⁸
- Dozens of types of cancer⁹,¹⁰,¹¹,¹²
- Obesity¹³,¹⁴
- Diabetes¹⁵
- Metabolic syndrome¹⁶
- Heart disease¹⁷
There is even research that suggests that low levels of sun exposure are a risk factor for human health equivalent to that of being a cigarette smoker! A Swedish study looked at nearly 30,000 women for 20 years (note: studies with this many people that are this long-term are exceedingly rare) and found that women with the lowest sun exposure had a twofold higher rate of death compared to the women with the most sun exposure!

As another example of mal-illumination, artificial light exposure at night (from electronic devices like phones, TVs, computers, indoor lighting, etc.) have been linked with numerous diseases, like:

- Numerous types of cancer
- Depression
- Fat gain, obesity, diabetes and metabolic syndrome
- Insomnia and poor sleep
- Mood disorders

And this is just a few of the dozens of health problems linked to mal-illumination.

But what if I told you that there is another kind of light deficiency that most people are totally unaware of, and that is likely even more problematic?

Near-infrared (NIR) and red light deficiency.

While most other wavelengths of light (such as UV, blue, green, and yellow light, etc.) are mostly unable to penetrate into the body and stay in the layers of the skin, near-infrared light and red light are able to reach deep into the human body (several centimeters, and close to 2 inches, in some cases) and are able to directly penetrate into the cells, tissues, blood, nerves, rods and cones of the eyes, the brain, and into the bones.

Once in those deeper tissues, red light and near-infrared (NIR) light have incredible healing effects on the cells where they can increase energy production, modulate inflammation, relieve pain, help cells regenerate faster, and much more.

The key point is this: Red/NIR light are not some weird technology that benefits us for some random reason. These wavelengths of light come from the sun, and it turns out that our body has evolved over millions of years to be capable of utilizing red and near-infrared light from the sun to help power up our cells – literally enhancing the function of our mitochondria, our cellular energy generators – among many other beneficial effects.
How Does Red and Near-Infrared (NIR) Light Therapy Work?

While it’s possibly to get endlessly complex in terms of the dozens of different biochemical and cellular pathways that are modulated by red/NIR light therapy, I like to condense and simplify all the research into two central mechanisms in how it benefits cellular function and overall health:

1. **MITOCHONDRIAL ENERGY PRODUCTION:** The primary mechanism that red/NIR works through is stimulating ATP production in the mitochondria through interacting with a photoreceptor called cytochrome c oxidase. While the exact mechanisms are still debated, many researchers (including Dr. Michael Hamblin) believe that nitric oxide (NO) plays a central role. NO of course plays many vital roles in the body, but when we have too much of it, too much in the wrong place, or when our cells don’t have the antioxidant capacity to quell the buildup of NO, it can hinder ATP from being manufactured in the mitochondria. Red/NIR light kicks out the NO and allows oxygen into the mitochondria to allow the mitochondria to more efficiently produce energy.

2. **HORMESIS:** The second major mechanism of red/NIR light therapy is creating a temporary, low-dose metabolic stress (known as hormesis, which is also a primary mechanism of why exercise works) that ultimately builds up the anti-inflammatory, anti-oxidant and cell defense systems of the cell.
In particular, the transient increases in ROS (free radicals) from red/NIR light activates many of the same cell defense systems that exercise does. The transcription factor NF-kB is activated through exposure to free radicals generated by red and near-infrared light, which promotes a very low level inflammatory response. This then engages a mechanism called the NRF2 pathway and the Antioxidant Response Element (A.R.E.) – our internal cellular antioxidant defense system – which helps put out the fire by eliminating the inflammation and free radicals. In short, in much the same way that exercise builds your muscles stronger by temporarily stressing them, light does the same thing to our internal anti-oxidant and anti-inflammatory defense system. It helps make your cells more tolerant to stress, combats inflammation, helps prevent the buildup of free radicals, and ultimately makes your cells healthier, more energetic, and more resilient.

In essence, the basic principle is this: Whatever cells you shine it on – whether muscle, skin, gland, or brain – those cells will work better when the mitochondria in those cells are producing more energy.
The Top 17 Benefits of Near-Infrared and Red Light Therapy

Today, research into the power of red light to improve health and treat disease is really gaining momentum. We are learning that red and near-infrared light therapy can benefit virtually every system of the body and can even improve the way you look— it can help you to shed inches of fat, reduce the signs of aging, regrow hair, increase the results you get from your workouts, reduce pain, speed healing, boost hormonal health, and lower inflammation.

So now, let’s talk about the specific benefits of red and near-infrared light that have been shown in studies. Here are the major benefits that have been proven by scientific research for near-infrared and red light therapy:

Reverse Skin Aging and Get Youthful Skin with Red Light Therapy and Near-Infrared Light Therapy

A wealth of human studies is proving near-infrared and red light therapy can reverse the signs of aging, repair damage from UV rays, and reduce the appearance of lines, wrinkles, and even hard to remove scars.

Dozens of studies have shown that red and near-infrared light therapy can:

- Reduce the signs of damage, DNA damage, and aging from UV rays
- Reduce wrinkles
- Reduce color patches, hyperpigmentation, and skin discoloration
- Enhance collagen synthesis and collagen density (research has shown it can enhance production of collagen by 31%)
- Accelerate repair in the epithelial layer of skin
- Combat other skin conditions like acne, keloids, vitiligo, burns, herpes virus sores, and psoriasis
- Speed wound healing by enhancing skin tissue repair and growth of skin cells
Slow Hair Loss and Re-Grow Hair with Near-Infrared and Red Light Therapy

Near-infrared and red light therapy has proven to help women with alopecia to significantly regrow and thicken hair. Near-infrared and red light therapy has also proven to regrow hair in men with hair loss in several studies.

Reduce Cellulite with Near-Infrared and Red Light Therapy

One study found that when near-infrared and red light therapy is combined with massage, it led to an astounding 71% reduction in cellulite.

Another study that assessed the use of near-infrared and red light therapy on skin health found that “91% of subjects reported improved skin tone, and 82% reported enhanced smoothness of skin in the treatment area.”

Speed Up Wound Healing with Near-Infrared and Red Light Therapy

Near-infrared and red light therapy are fantastic for wound healing. Red/infrared light accomplishes this in several ways:

- Cleaning up dead and damaged cells in skin (phagocytosis)
- Increasing ATP in skin cells, giving cells more energy to heal themselves
- Increasing the production of fibroblasts
- Increasing blood flow, supplying the wound more oxygen and nutrients needed for repair
- Stimulating the production of collagen and the health of the extracellular matrix
- Stimulating lymph activity
- Stimulating the formation of new connective tissue and blood capillaries on the surface of the wound

Combat Fibromyalgia and Chronic Fatigue, and Increase Energy Levels with Near-Infrared and Red Light Therapy

Studies show that red light therapy is also effective at restoring energy and vitality in persons suffering with fibromyalgia. Multiple studies have found that near-infrared and red light therapy offers:

- Enhanced quality of life for fibromyalgia patients
- Decreased pain
- Decreased muscle spasm
- Decreased morning stiffness
- Decreased total tender point number in fibromyalgia cases

Research – including a very recent 2017 study – suggests that this therapy method is a safe and effective treatment for fibromyalgia.
Fight Hashimoto’s Hypothyroidism with Near-Infrared and Red Light Therapy

Several studies have shown profound benefits of near-infrared and red light therapy for autoimmune hypothyroidism.

- A recent 2013 randomized, placebo-controlled study in hypothyroid patients demonstrated that in people who got near-infrared light therapy, thyroid function dramatically improved, and remarkably, that thyroid antibody (TPOAb) levels were massively reduced. **Amazingly, 47% of patients were able to stop medication completely!**
- A 2010 study found that red light therapy helped 38% of study participants reduce their hypothyroid medication dose, with a **whopping 17% being able to stop taking the medication altogether!**
- A 1997 study done in Russia included some data on people with autoimmune hypothyroidism who underwent a thyroid surgery. They found that red/NIR light therapy improved thyroid hormone levels enough that they required, on average, roughly half as much thyroid hormone medication.
- A 2003 study done in the Ukraine showed that red light therapy can decrease thyroid medication needs by 50-75% in people with postsurgical hypothyroidism.
- A 2010 Russian dissertation study gave red light therapy on the thyroid gland to a group of people with hypothyroidism and found that 17% of people could completely get off thyroid medication and 38% could decrease the dose by 25-50µg.
- A 2014 study used the light therapy for 10 sessions with 347 women with subclinical hypothyroidism. At baseline, the average TSH (thyroid stimulating hormone) was 9.1 mIU/L. (Note: Higher TSH is a sign of hypothyroidism). After ten sessions of light therapy, the TSH was normalized in 337 (97%) of these women. Their TSH averaged at 2.2 mIU/L after just 10 light treatments.

Combat Inflammation (and Potentially Inflammation-Related Diseases) with Near-Infrared and Red Light Therapy

Red and near-infrared light therapy is highly effective in treating chronic inflammation. Since chronic inflammation is now being recognized as a major contributor to **most chronic diseases** from heart disease, depression, and cancer, to Alzheimer’s and chronic fatigue syndrome, this effect of red light therapy on inflammation is a very big deal. Many aging scientists now speak of “inflamm-aging” — the concept that the genes and pathways that control inflammation may very well be the key drivers of aging and disease.

Studies have even shown that red/NIR light therapy can have anti-inflammatory effects on par with non-steroidal anti-inflammatory drugs (NSAIDs), which are the anti-inflammatory drugs routinely prescribed and typically, the over-the-counter drugs people buy when in pain.

Combat Depression and Anxiety with Near-Infrared and Red Light Therapy

A 2009 study **took 10 patients with a history of major depression and anxiety** (including PTSD and drug abuse) and gave them four weeks of treatments to the forehead with red/NIR light. Remarkably, by the end of the four-week study, 6 out of 10 patients experienced a remission of their depression, and 7 out of 10 patients experienced a remission of their anxiety.

Though further research is needed, there have been 10 studies so far on the use of red and near-infrared light therapy to treat depression and anxiety related disorders with 9 of 10 studies yielding very positive results.
**Improve Cognitive Performance with Near-Infrared and Red Light Therapy**

In studies, researchers have found that transcranial near-infrared and red light therapy profoundly benefits the brain and cognitive performance.\(^{166}\) Research has also shown that transcranial near-infrared stimulation has been found to increase neurocognitive function in young healthy adults,\(^{167}\) finding that it improved sustained attention and short-term memory retrieval in young adults, and improved memory in older adults with significant memory impairment at risk for cognitive decline.\(^{168}\)

Another study found near-infrared and red light therapy also increased executive cognitive function in young healthy adults, providing hope that further studies find that near-infrared and red light therapy may provide a hopeful treatment in the fight against Alzheimer’s disease, as well as prevention.\(^{169}\)

**Help Tendonitis with Near-Infrared and Red Light Therapy**

One of the most common uses for red and near-infrared therapy in clinics is for injuries and tendonitis. Because red light stimulates collagen production, speeds wound healing, and is highly anti-inflammatory, it has been shown to bring great relief to people suffering from tendinopathy and tendonitis.\(^{170,171}\) A systematic review of the research concludes that near-infrared and red light therapy has proven highly effective in treating tendon disorders in all 12 studies conducted.\(^{172}\)

**Improve Joint Health and Combat Arthritis with Near-Infrared and Red Light Therapy**

Numerous studies have shown that near-infrared and red light therapy can profoundly help people with osteoarthritis (often called just “arthritis”).\(^{184,185,186,191}\)

**Improve Oral health with Near-Infrared and Red Light Therapy**

Red light therapy and near-infrared light therapy have proven to have numerous benefits for oral health and research in this area is booming right now. So far, studies indicate promising results for near-infrared and red light therapy, which has been shown to:

- Combat viral and bacterial infections of the mouth (tonsillitis, herpes, cold sores)\(^{200,201,202}\)
- Facilitate tooth growth/tooth movement and reduce pain for individuals with corrective braces\(^{204,205,206}\)
- Help diabetics with gum problems and periodontal disease\(^{207,208,209}\)
- Reduce mouth pain\(^{210}\)
- Reduce thrush (yeast in the mouth/candidiasis)\(^{211,212}\)
- Improve tooth sensitivity\(^{213,214}\)
- Fight gum disease and gingivitis\(^{215,216,217}\)
Decrease Pain with Near-Infrared and Red Light Therapy

Here are several conditions where red/NIR light has proven effective:

- Chronic neck pain
- Knee pain
- Fibromyalgia
- Low back pain
- Chronic pain in the elbow, wrist and fingers
- Chronic joint disorders
- Sacroiliac joint pain
- Chronic tooth pain
- Osteoarthritic pain
- Tendinitis and myofascial pain

In a recent systematic review, researchers concluded that red light therapy has proven “beneficial for many individuals suffering from pain, regardless of the condition that is causing it.”

Fall Asleep Faster and Improve Sleep Quality

Several studies in China have found that red/NIR light can increase melatonin and provide dramatic sleep benefits to people with insomnia.

- The first documented use of a similar intranasal light therapy device to directly observe melatonin level was conducted by Xu C et al in 2001. They treated 38 subjects that had insomnia with intranasal low level laser therapy once a day over 10 days. They found that serum melatonin had increased.
- The same group of researchers further treated another group of 128 patients with insomnia and found that the polysomnogram (sleep study that includes data on brain waves as electrical activity) data had improved.
- In 2006, Wang F et al reported that they had treated 50 patients with insomnia with intranasal low level laser therapy that is of similar specifications to Vielight’s laser device for 60 minutes per session. Each session was conducted once a day over between 10 to 14 days. They found that the condition had improved significantly in 41 (82%) of the cases, mild for 4 (8%) of the cases, and none for 5 (10%) of the cases.
- Traditional Chinese Medicine practitioners often prescribe herbs as remedy for insomnia. This seems to help somewhat. Chen YM et al tested 90 patients and found that the condition improved significantly for 40% of the cases, mild for 37.5% and none for 22.5% of the cases. In the group that added the extra element of the intranasal low level laser therapy, the improvement in the number of positive results were significantly more impressive. 78% of the patients experienced significant improvement, 20% mild and 2% none.

Improve Brain Health, and Slow Progression of Alzheimer’s and Parkinson’s Disease with Near-Infrared and Red Light Therapy

Recent studies have now found that near-infrared and red light therapy may significantly slow the progression of Alzheimer’s and Parkinson’s disease.

- Benefit cognitive performance and memory
- Improved mitochondrial function of brain cells
- Have a protective effect on neurons
- Improve cellular repair of neurons
- Increase brain-derived neurotrophic factor (BDNF) and nerve growth factor (NGF)
- Decrease brain inflammation (decreased pro-inflammatory cytokines and increased anti-inflammatory cytokines)

**Enhance Muscle Gain, Strength, Endurance, and Recovery with Near-Infrared and Red Light Therapy**

Red/NIR light with exercise makes a potent combination. Not only does red/NIR light help you recover faster, it seems to amplify everything that happens with exercise – increased muscle gain, fat loss, performance, strength, and endurance.

How does red and near-infrared light affect muscles – what is it actually doing to cause these benefits? It works through several important mechanisms in the body:

- Red and near-infrared light help promote the production of internal antioxidants by your cells, which prevents oxidative stress and damage to the muscle tissue (when light is applied before exercise).\(^{340,341}\)
- Red and near-infrared light help reduce inflammation that will lead to cellular damage (and fatigue) in the muscle tissue as well.\(^{342,343}\)
- Protect damaged muscles from secondary damage from further exercise.
- Pre-conditioning: By using the light prior to exercise, it creates a “pre-conditioning” effect where the muscle cells suffer less damage from the exercise, as well as display higher strength/stamina in subsequent exercise following the initial bout of exercise.
- Red and near-infrared light decrease lactic acid production by muscles.
- Red and near-infrared light improve mitochondrial function during exercise.
- Increases acetylcholine receptors on muscles (this is the neurotransmitter released from nerve cells that stimulates muscle contraction).
- Red and near-infrared light increase the production of specific types of heat shock proteins that protect cells from oxidative damage, stress, and apoptosis (early cell death).\(^{344}\)
- Red and near-infrared light also enhance muscle growth, as well as increasing strength significantly.\(^{345}\)
- Red and near-infrared light therapy promotes the development of muscle stem cells, myosatellite cells, which develop into specific varying types of muscles.
- Red and near-infrared light also have the profound benefit of increasing mitochondrial adaptations and mitochondrial biogenesis (the creation of new mitochondria) following exercise.\(^{346}\)

**Increase Fat Loss (And Burn Off Stubborn Fat) with Near-Infrared and Red Light Therapy**

In studies, near-infrared and red light therapy have *helped shave an entire 3.5 to 5.17 inches off waist and hip circumference by reducing the fat mass layer in just four weeks of use.*\(^{359,360}\)

In another study of 86 individuals using red light therapy at 635 nm for 20 minutes every other day for two weeks, study participants lost 2.99 inches across all body parts — yes, 3 inches — *in just 14 days* of red light therapy.\(^{362}\)

That said, I am not a strong advocate of trying to use red/NIR light therapy *alone* to cause fat loss. Where I believe red/NIR light therapy really shine (forgive the pun) is when combined with exercise.

*Some research shows that near-infrared light therapy can dramatically enhance — nearly *double* — fat loss from exercise, as compared to people doing just the exercise routine without the NIR light therapy.*\(^{363}\)
In addition, the group using the NIR light therapy in tandem with exercise saw nearly double the improvements in insulin resistance.\textsuperscript{364}

The above graph shows the differences in reductions in body weight, body fat, insulin levels, and insulin resistance (IR) from either NIR light therapy (ET-PHOTO) vs. sham/placebo light therapy (ET-SHAM). As you can see, exercising with NIR light nearly doubled the loss of body fat and nearly doubled the improvement in insulin resistance.
29 Health Benefits of Red Light Therapy

01 Reverse Skin Aging and Get Youthful Skin

02 Slow Hair Loss and Regrow Hair

03 Reduce Cellulite

04 Speed Up Wound Healing

05 Combat Fatigue and Chrono Fatigue, and Promote Energy Levels

06 Promote a Healthy Immune System

07 Potentially Combat Cancer Growth

08 Improve Bone Healing

09 Lower Inflammation and Potentially Inflammation-Related Diseases

10 Improve Eye Health

11 Combat Depression and Anxiety

12 Improve Cognitive Performance

13 Help Tendinitis

14 Increase Fertility

15 Improve Joint Health and Combat Arthritis

16 Decrease Diabetes Symptoms

17 Improve Oral Health

18 Improve Respiratory Health

19 Improve Heart Health

20 Improve Liver Function

21 Increase Brain Health

22 Decrease Pain

23 Improve Immunity

24 Help Heal Traumatic Brain Injury (TBI) and Spinal Cord Injury

25 Improve Stem Cell Therapy

26 Fatigue, Cancer, and Improve Sleep Quality

27 Improve Brain Health, and Slow Progression of Alzheimer’s and Parkinson’s Disease

28 Enhance Muscle Gain Strength, Endurance, and Recovery

29 Increase Fat Loss (Wear Burn Off Stubborn Fat)
IMPORTANT: The above recommendations are based on the lights I recommend. All these calculations change when you use lights that are less powerful than the ones I recommend. If you purchase a different light, you will need to measure the power density of that light at different distances and calculate doses for that specific light according to the guidelines in this book.
How to Choose The Best Red/NIR Light Therapy Device For Your Needs

When choosing the right near-infrared and red light therapy light device, you want to select a device that’s long-lasting, has a great warranty, is well-manufactured, and most importantly, one that offers the correct wavelengths at the right power density over a large area.

**HOW TO CHOOSE THE PERFECT NEAR-INFRARED AND RED LIGHT THERAPY LIGHT DEVICE**

1. **WAVELENGTH**
   - What wavelengths does the device offer? Do these have health benefits?
   - Are they in the proven ranges of 630-680 nm and 800 to 880nm?

2. **POWER DENSITY**
   - How much irradiance/power does the device deliver—what is the power density in mW/cm²?

3. **SIZE OF THE LIGHT AND TREATMENT AREA**
   - This is critically important — how big of an area will it treat? I.e. Is it a small light of less than 12” or a big light that can treat half of your body or your whole body all at once?

4. **WARRANTY**
   - How long does the warranty last? Will you have time to find out if it works?

5. **WHAT DO YOU WANT IT FOR?**
   - Depending on the specific purpose you have in mind to use it for, there are a few different devices you may want to consider.

I cannot emphasize this enough: When choosing a red light or near-infrared light device, you want to be extremely careful to choose wisely, based on the wavelength and power density levels of the device. Wavelength and intensity makes all the difference between incredible benefits and no benefits.

**You Want Therapeutic Wavelengths that Achieve Real Results**

Again, not all wavelengths are equal — nor all devices. Look for wavelengths in the *proven* therapeutic ranges.

Based on the bulk of the research, you want:

- 630-680nm (the optimal healing spectrum of red light)
- 800 to 880nm (the optimal healing spectrum of near-infrared)
- or a combination of both


**Why Power Density of The Light Matters**

Power density is also important because your cells need to receive a certain intensity of red light to benefit.

Remember, to know power density, you simply need to know the wattage of the light and the treatment area (as described in the guide to dosing section).

We want a sizable light that has a power density of at least 30mW/cm², and around 100mW/cm² from close range (e.g. 6” away).

That’s what will allow us to get up to the therapeutic levels that are used in the studies – especially for the deeper tissues.

**How Big is the Light and How Much of Your Body Can It Treat at Once**

Most near-infrared and red light therapy devices have a very small treatment area capability.

Most handheld devices and red lights sold online as skin improving/anti-aging devices offer about 10mW/cm² (and many of them offer far less than even that!) and only treat about a 5-10 square inch area, meaning you’d have to use the device for 30-60 minutes to cover a significant area of your body.

**But if you get a device with a high power output that also treats a large area at once, that’s where the magic is.**

Higher powered devices, like the lights I recommend, deliver close to 100mW/cm² at about 6” from the device and still have effective doses (roughly 20-30mW/cm²) even a full 24” away! This is a huge benefit, because now even a smaller light (say 15-20” long) can basically function as though it is a full human body-sized light! In other words, a powerful light that’s 15” long can be positioned 24” or even 36” away from your body, and since light spreads out the more you move away from the source, that light can now give an effective dose to nearly your entire front or back of your body at once! (Note: This way of using it is not ideal for deep tissues – it is ideal specifically for anti-aging and skin health purposes.)

So again, it can basically function the same as a light that is 3 times the physical size (i.e. a light that is the size of your entire body).

Having a high-power light that is also large enough in size allows you to treat large areas of your body at once in just a few minutes. You can treat an area like the face, the whole torso or legs, or even do multiple parts of the body and effectively, the entire body, in just a few minutes!
High-power lights are going to give you far more benefits in far less time, are more effective (especially for deep tissues), and have more flexibility in how you can use them. I strongly recommend getting a large panel light over a hand-held device. Most people who purchase the small devices end up never using them because it’s just too time consuming.

**What is the Warranty and How Long Will the Device Last?**

This one is very straightforward – buy from a company with a strong warranty who stand by their lights. Otherwise, you’ll likely be throwing money away and having to buy a replacement in 6 months to a year. With a high-quality red/NIR light therapy device from a reputable company, you will have it for many years without any problems whatsoever. And if there is a problem, they’ll replace it. If you’re going to spend hundreds of dollars on something, quality is key.

**What is Your Purpose Using Red Light Therapy?**

My general recommendation is that if you want to treat deeper tissues, prioritize near-infrared over red light. The more you want to treat skin issues, prioritize red light. That’s a general principle you can use to tailor your choice of a light to your unique needs keeping in mind that both types of light will work for most purposes.

For most purposes, a large mixed LED panel with a mix of 660nm and 850nm is the best choice.

But for specific issues, you may want to consider other options:

- For skin issues and hair loss, it is possible that red light at 660nm may be the most optimal. (Though near-infrared at 850nm will still have most of the same benefits. It’s just a question of what is most optimal.
- If you only want to treat deeper organ, gland, joint, or muscle/tendon issues (and NOT skin issues), then you may want to go with a pure 850nm light device.
- If you only want to treat your brain (e.g. for depression, anxiety, cognitive performance, or neurological disease), then near-infrared is best. (The VieLight Neuro is likely the best option for this specific purpose. See the information on this device in the “Recommended Devices” section later in this book.)
- But for most purposes and for most people, the best choice is a combination of the 660nm and 850nm LEDs in a large LED panel that will treat a large area of the body at once. This option is best because it works for basically any and all purposes you could possibly want it for. A combined near-infrared and red light therapy device offering both 660nm and 850nm will allow you to do anything you want on any given day – whether anti-aging treatments on your skin, or healing an injury or lower back pain, or muscle recovery and fat reduction.
My Recommended Lights for Red/NIR Light Therapy

I know all this information can feel overwhelming and confusing. So let me break it down for you very simply, by giving you my top choices for devices in each category from small to large.

Here are my top choices for the light devices I recommend:

**Best Medium Sized Red/NIR Light Devices**

These lights get into the optimal range for power output and size, so they can treat a large portion of your body at once with a sufficient dose.

These devices generally cost upwards of $450 and deliver upwards of 120-300 watts of power to large portion of your body (like large muscle groups and a large portion of the torso at once). This is a huge time-saver when compared with treating the same areas with a small device and will lead to better results. Also, since some of the effects of the light are from irradiating the blood and lowering inflammation, the larger lights will treat more of the blood at once and will have better body-wide effects.

My top choices in medium size devices are as follows:

1. **“Red Rush360” by RedTherapy.co.**
   - It’s 360 watts (significantly higher power output than the other lights in this category), and gives a solid power intensity of about 100mW/em² at 6” from the light. (That’s the actual light output, not the claimed power output.)
   - It’s 16.3” tall by about 10.6” wide (slightly larger than the other lights in this category).
   - It has 120 LEDs (twice as many as the Joovv).
   - It comes with a 50-50 split of 660nm and 850nm.
   - They’ve also made developed new technology to nearly completely eliminate EMF emission from their light device, making their device extremely safe to use even from very close distances.
   - Given that it has very high power output, the broadest coverage area, the most LEDs, a very competitive price, and the lowest EMFs, it is my top choice in this category.
   - The price is excellent at $449. (This is my overall top choice for a light under $500.)
2. The “BIO-300” by Platinum Therapy Lights

- It’s 300 watts (more than double the comparably sized Joovv, and almost as much as the Red Rush), and gives a great power intensity of about 100mW/cm² at 6” from the light (almost the same as the RedRush).
- It’s 19” tall by about 9” wide (slightly larger than the Joovv, and roughly the same size as the Red Rush, slightly longer just not as wide).
- It has 100 LEDs.
- It’s available in the same options as the Joovv light – 660nm, all in 850nm, or a 50-50 split of 660nm and 850nm.
- The prices are excellent:
  - All 660nm = $449
  - 50-50 split of 660 and 850nm = $449
  - All 850nm = $449

3. The Joovv Light “Mini” by Joovv (Joovv is the brand that has been around the longest and has a good reputation overall.)

- It’s 120 watts, which is considerably less than the two lights mentioned above. (Note: Their claimed power intensity is 110mW/cm² at 6” from the light but this is based on the calculated theoretical numbers on paper, not the actual measured light output. I’ve measured it right next to the Platinum BIO-300 and Red Rush360 and measurements show that it has significantly lower light output than the other devices – at far distances like 24” or 36” away, it has close to 50% less light output than the Red Rush360. Note that is for the 50-50 mix of red and near-infrared. A pure red device would be slightly lower than that, and a pure near-infrared device would be slightly higher. The differences in light output between devices get larger the further away you are from the light.)
- It’s 15” tall by about 8” wide (slightly smaller than the other 2 lights)
- It has 60 LEDs, so considerably less coverage area than the other two lights in this category.
- It’s available with all in 660nm, all in 850nm, or a 50-50 split of 660nm and 850nm. The 850nm options are more expensive:
  - All 660nm = $495
  - 50-50 split of 660 and 850nm = $595
  - All 850nm = $645
Best Half Body Red/NIR Light Devices

These units generally cost upwards of $700 to $2,500, with a couple great options of large, high power effective lights for under $1,000.

There are much more expensive options available and full body devices like tanning beds that can treat basically every inch of your body at once, but these are far more expensive and unnecessary for most people. There are a lot more expensive “luxury” red light options for those that want them, but in my opinion, there is really no need to go beyond the lights in this category. This is the category that provides you need to get great results at a very reasonable price. In my opinion, these half body devices are a fraction of the price, and essentially offer the same benefits.

Several of the devices in this category are much higher power (relative to the medium-sized lights), from about 300 watts on the low end to 600 watts.

This is a great thing, especially when combined with being able to shine light on a much larger area of your body at once, because this will dramatically increase the overall number of photons hitting your body and the dose you receive. Thus, the effects are stronger, and the benefits are greater – especially if you want to treat deeper tissues in larger areas of your body, for organ health, muscle gain, and fat loss, etc. And you can do less treatment time per session.

Plus, if you want to treat deep tissues in large areas of your body at once, it’s very time-efficient with sessions of just a few minutes, whereas with smaller devices, it can be more time consuming by having to treat multiple areas.

So if you're looking for a large high power device to do full body treatments, this is ideal.

Here are the large high power devices I recommend:

1. **The BIO-600 by Platinum Therapy Lights:**
   - It’s 600 watts (about double the power output of the comparably sized lights from the other manufacturers mentioned below) and gives a solid power intensity of over 100mW/cm2 at 6” from the light. (This is the same power density as the medium-sized lights from Red Rush and Platinum, but here you get it with a larger light that covers more of your body at once. So you can do full-body treatments from closer distances.)
   - It’s 36” tall by about 8” wide (essentially the same dimensions as the Joovv “Original” mentioned below).
   - You can also get this in all the same options as the Joovv Original Light – either in 660nm, all in 850nm, or a 50-50 split of 660nm and 850nm.
   - The prices are wonderful:
     - All 660nm = $749
     - 50-50 split of 660 and 850nm = $749
     - All 850nm = $749

2. **The “Joovv Original Light” by Joovv:**
   - It’s 300 watts (about half the power output of the option mentioned above), and gives a power intensity of over 70mW/cm2 at 6” from the light. (Note: Again, the actual measured power density is significantly lower than what is claimed.)
   - It’s roughly the same dimensions as the Platinum BIO-600.
   - You can also get this in all the same options as the Platinum light – either in 660nm, all in 850nm, or a 50-50 split of 660nm and 850nm.
   - The prices are considerably higher (about $50-$340 more, depending on the specific light wavelengths you want):
     - All 660nm = $795
     - 50-50 split of 660 and 850nm = $995
     - All 850nm = $1,095
3. The “Combo Bodylight 2.0” by Red Light Man:

- It’s 300 watts (half the power output of the comparably sized Platinum light and about the same as the Joovv light).
- It’s 4 feet long, so about a foot longer than the other lights.
- It uses red and near-infrared light at the wavelengths of 620nm, 670nm, 760nm and 830nm.
- You can also get this in all the same options as the Platinum light – either in 660nm, all in 850nm, or a 50-50 split of 660nm and 850nm.
- The price is $750
- Is a nice light, but from my perspective, has two drawbacks:
  - It’s not as high power as other options in this category (in particular the Platinum light).
  - Part of the light spectrum is at 760nm, which is not an ideal choice in my opinion, as research generally indicates that the wavelengths from 700nm-780nm are less effective. (That’s why very few studies ever use these wavelengths.)
- Overall, it can still be effective.

Note: With a larger light (around 36-48” long) that is this powerful, you can effectively treat the entire front or back of your body – even the deeper tissues – at once. So if that is something you’d like to do, this is a great investment in your health.

Full Body Red/NIR Light Therapy Options

There is also the option of doing a light setup that will shine on the full front or back of your body from head to toe.

- Joovv has a very large 960 watt device (the Joovv “Max”) that’s 4.5 feet tall by 16” wide. It comes with the same options of either pure 660nm, pure 850nm, or a 50-50 mix of the two. This is an excellent light, but far more expensive than the lights mentioned above – you’ll have to pay between $2,400-$3,000 to get it.
- My personal favorite setup is simply two of the Red Rush360s or Platinum BIO-300s (or one BIO-600 combined with a BIO-300 or RedRush360). I lay them on their side on the ground and then I lay down next to them and treat one full side of my body all at once in a laying position instead of a standing position (which I prefer anyway, because I find it more relaxing to use it in laying down compared to standing up). In contrast to the $2,400-$3,000 light setup mentioned above, this light setup can cost less than $1,000. So it’s a way to get a full body treatment for a very low cost.

Ultra Luxury High End Red/NIR Light Therapy Options

There are also a couple options for super high-end tanning bed-style red light therapy units.

These are generally priced in excess of $15,000 with one well-known brand selling their unit for upwards of $100,000!

I put these here in case you’re interested in very high-end devices (and you’re doing well enough financially to entertain such purchases), but to be honest, I really do not think such devices are necessary. **I do NOT believe that the benefits of these devices will be vastly superior to the other far cheaper lights I recommend.**

The main benefit here is being able to treat your entire body (front and back, from head to toe) all at once while in a laying position. And perhaps also that you have a pretty cool looking device in your home to impress friends (which may be a real consideration for some people.)

Below I have listed possible whole body options:
- Mitogen Red Light Bed. This consists of 10,000 LEDs that are a mix of 660nm and 850nm light (the same wavelengths as the RedRush, Platinum light and Joovv. The power output is 15mW/cm\(^2\). Treatment times will generally be about 10-25 minutes.
- NovoThor (a well-known manufacturer of laser devices) also offers a full-body tanning bed-style LED device. This one is a mix of 630nm, 660nm, and 850nm. It has a power density of 17mW/cm\(^2\). And it costs over $100K. This is most likely an option either for extremely wealthy people or a professional gym/spa/medical setting.

Note: These devices have relatively low power densities (below 20mW/cm\(^2\)) – probably because if they had high power densities and treated your entire body at once, it would quickly lead to too large of doses. Treatment times might have to be cut off at 30 or 60 seconds if that were the case. Also, research suggests that lower power densities are better for skin anti-aging effects, and I suspect they were likely wanting to optimize skin benefits and overall systemic effects through irradiating the bloodstream. In my opinion, these power densities are more ideal for skin anti-aging, but not necessarily for treating deep tissues.

**To be clear, I am in NO WAY implying or suggesting that you need to purchase these ultra-expensive devices.**

Nor am I even suggesting that they are the most optimal way of doing red/NIR light therapy. While I have heard positive things about these light beds, I believe you can get all the benefits of red and near-infrared light therapy with the previously recommended LED lights, which are a tiny fraction of the price of these tanning bed-style units.

I mention these purely for the sake of presenting all the options on the market, but again, this is not to be interpreted as me implying that you should purchase these luxury red/NIR devices. I believe that you can get all the benefits of red/NIR light therapy with the far less expensive LED panels recommended above.

**Sauna + Red/NIR Light Therapy Options**

There are a few sauna brands make far-infrared saunas that also add near-infrared light into their sauna. This allows you to get all the benefits of near-infrared light discussed in this book while also getting the benefits of the sauna heat (sweating, detoxification, mitochondrial benefits, etc.).

These are a great option, provided you have the money for it, as they are considerably more expensive than the pure red/NIR devices.

If you want something in this category, Sunlighten saunas make the top of the line, in my opinion. Their mPulse sauna line has both far-infrared and near-infrared built in to the unit. They have 1-4 person sauna options. With this type of premium sauna, you can get far-infrared + near-infrared saunas and enjoy all the benefits of both near-infrared therapy and a traditional far-infrared sauna.
ClearLight Saunas also offers an excellent line with both far-infrared and near-infrared that are extremely high quality.

SaunaSpace manufactures heat lamp saunas that use 4 incandescent heat lamp bulbs. These will have both far-infrared and near-infrared and red light. They come with a canvas tent (as opposed to a wooden room), and thus are considerably less expensive than the wooden saunas made by Sunlighten and Clearlight.

For those who can afford it, this is an excellent option. It’s also convenient as it allows you to get your near-infrared treatment while doing a sauna session.

**Top Light for Use on the Brain**

If you’re using light on the brain specifically – for either a brain health issue or to improve mood or cognitive function – it’s important to get a light with near-infrared, not just red light. Research has shown that near-infrared is more effective in penetrating the skull than red light (which has minimal to no penetration of the skull), so this is ideal for the brain.

The LED panel lights I recommend like the Red Rush360 and Platinum Lights have near-infrared (either pure near-infrared or mixed near-infrared with red), and are powerful enough to be used on the forehead and will likely be effective in penetrating the skull with some light.

Nevertheless, if your main goal is to treat the brain, the best option is the VieLight Neuro, which has multiple contact points on the head (that can be worked into contact the scalp to allow light to penetrate through the hair) and will likely have the best results for brain-specific issues. (Note: This device is designed specifically to be worn on the head and thus, won’t work well at all to treat other areas of the body.)

![Image of VieLight Neuro](image)

Please note that they also sell intranasal devices that claim to target the brain, but Michael Hamblin, PhD does not believe these devices actually do reach the brain directly\(^{385}\), therefore, I do not advocate those devices. Yet they do have some positive research. Hamblin believes that they don’t work by directly irradiating the brain, but that they work through irradiating the blood through the capillaries, which indirectly affects the brain (and other systems of the body). Assuming he is correct, it really does not make sense to use these low-power intranasal devices to treat the blood – it would be much better to use a high power (and much larger) LED device for that purpose.
Having said that, the VieLight Neuro has the head unit which likely does effectively target the brain. And the VieLight Neuro may very well be the best product for treating the brain specifically. We don’t know for sure, as there are no studies comparing it directly to LED lights, but there is research supporting the use of this product in treating dementia.³⁸⁶

Comparing the Top Red/NIR Devices

If all these stats are overwhelming for you, let me map it all out very simply. Below you can see most of the lights I just mentioned in descending order of their power output, along with their size, price, and warranty:

<table>
<thead>
<tr>
<th>Device</th>
<th>Power Output</th>
<th>Size</th>
<th>Price</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Light Man “Red Light Device”</td>
<td>100 watts</td>
<td>7” x 7”</td>
<td>$219</td>
<td>1 year</td>
</tr>
<tr>
<td>Joovv Mini</td>
<td>120 watts</td>
<td>15” x 9”</td>
<td>$495-$645</td>
<td>2 year</td>
</tr>
<tr>
<td>Joovv Original</td>
<td>300 watts</td>
<td>37.5” x 8.25”</td>
<td>$795-$1,095</td>
<td>2 year</td>
</tr>
<tr>
<td>Red Light Man Body Light 2.0</td>
<td>300 watts</td>
<td>45” x 7”</td>
<td>$750</td>
<td>1 year</td>
</tr>
<tr>
<td>Platinum BIO300</td>
<td>300 watts</td>
<td>19” x 9”</td>
<td>$489</td>
<td>5 year</td>
</tr>
<tr>
<td>RedTherapyCo Red Rush360</td>
<td>360 watts</td>
<td>16.3” x 10.6”</td>
<td>$449</td>
<td>2 year</td>
</tr>
<tr>
<td>Platinum BIO600</td>
<td>600 watts</td>
<td>36” x 8”</td>
<td>$789</td>
<td>5 year</td>
</tr>
<tr>
<td>Joovv Max</td>
<td>960 watts</td>
<td>53” x 16”</td>
<td>$2,395-$2,995</td>
<td>2 year</td>
</tr>
<tr>
<td>My personal setup: BIO600 + RedRush 360</td>
<td>960 watts</td>
<td>50.3” long width from 8-10.6”</td>
<td>$1,198</td>
<td>2 year on the Red Rush360</td>
</tr>
</tbody>
</table>

Note: I was able to arrange discount codes with some of the manufacturers. Pricing above is before discount. Info on these discounts are in the next section.

I also want to give specific recommendations for what I think are the top 5 best choices of light devices.
My Top 5 Overall Lights

Here are my personal recommendations for the lights that are the most powerful, cost-effective, and provide amazing bang for the buck:

1. **Red Rush360 - $449**
   You can get this light at: [https://redtherapy.co/products/redrush-360-light](https://redtherapy.co/products/redrush-360-light)
   For a light this large and powerful (360 watts) to be under $500 is just phenomenal. It’s nearly 3 times the wattage of the comparably sized Joovv, has much higher light output (especially at further distances away), and at the same time, it costs less. It has 120 LEDs (the most of any light around this size, and twice the number of LEDs as the Joovv). Overall, this light is probably ideal for most people’s needs. Also, because of its high power density, you can use this light from 18”, 24”, or even 36” away and still have high enough light output to do effective treatments – thus allowing you to treat a large area of your body at once. Basically, this allows it to function like a much larger light. Overall, a wonderful option for almost all purposes. I highly recommend it. In addition, they just came out with a line of ultra low-EMF lights! They are the only company on the market to do this. This makes them the clear top-choice in my opinion as they have the highest power, lowest cost, and lowest EMFs of any device in this size range.
   Discount Code: They will give a $25 discount to readers of this book bringing total cost down to $424. Just enter the discount code “energy blueprint” when checking out.

2. **Platinum Therapy Lights BIO-600 - $789**
   You can get this light at: [https://platinumtherapylights.com/products/bio-rlt](https://platinumtherapylights.com/products/bio-rlt)
   If you are in the market for an extra-large light to essentially treat the entire front or back of your body at once, this is the light for you. If you’re looking to go all out on a larger light without spending a ton of money, this is the way to go.
   Discount Code: They will give a $40 discount to readers of this book bringing total cost down to $749. Just enter the discount code “energy blueprint” when checking out.

3. **Platinum Therapy Lights BIO-300 - $489**
   You can get this light at: [https://platinumtherapylights.com/products/bio-rlt](https://platinumtherapylights.com/products/bio-rlt)
   This light has similar dimensions to the Red Rush360 and is almost as powerful. It’s slightly smaller, but still a wonderful choice relative to all the other competitors.
   Discount Code: They will give a $40 discount to readers of this book bringing total cost down to $449. Just enter the discount code “energy blueprint” when checking out.

4. **Joovv Original - $795-$1,095**
   This light has similar power output to the Red Rush360 and Platinum BIO-300 while being larger in size (close to the same dimensions as the BIO-600). It is also considerably more expensive, but overall, it’s a great light that will allow you to treat a large area of your body at once. Discount Code: They will give a $25 discount to readers of this book. Use the discount code “ENERGY BLUEPRINT” when checking out (note: this one is case sensitive, so you need to use all caps).

5. **Joovv Mini - $495-$645**
   This light has similar dimensions to the Red Rush360 and BIO-300, but has significantly lower light output (especially at further distances away). Overall, it’s a high quality light that can certainly provide therapeutic benefits, but is not as cost-effective as the above options. Discount Code: They will give a $25 discount to readers of this book. Use the discount code “ENERGY BLUEPRINT” when checking out (note: this one is case sensitive, so you need to use all caps).

(Disclosure: As you can see, I have arranged discounts for you with many of these manufacturers offering high quality devices. I was not able to arrange discounts with all of the manufacturers listed here, but I tried to do it with every manufacturer that was open to offering a discount to readers of this book. Please be aware that I do get a small commission on any of these lights or saunas that you purchase if you use my discount code. If you appreciate the work I’ve done in writing this book, I appreciate you using my discount code. That is how I get rewarded for this work. Please know that this is at no expense to you. In fact, I have negotiated directly with these manufacturers to get you discounts off the normal prices by letting them know that you were referred by this book. In short, everyone wins. But if you have any objection to this, feel free to order the lights without using the discount code. Please know that my
rankings of these devices are in no way influenced by this. I have no ownership in any of these companies or vested financial interest in promoting any one of them over another. My recommendations for which light devices you should get are exactly the same whether you choose to use the discount codes or not. Moreover, there are in fact many other devices I could promote that offer much more generous commissions, which I am actually not promoting because they do not offer high quality devices. I give you my word that all my rankings here are best on a purely objective analysis of the power output, quality, and bang-for-the-buck of all these devices. My #1 priority is making sure that you get the best device for your needs. I have done my best to negotiate the biggest discounts for you as possible with all of the manufacturers who were open to giving discounts.)

**Best Sauna + Near-Infrared Options:**

Sunlighten “mPulse” saunas, ClearLight “Sanctuary” sauna line, SaunaSpace, and SunStream Saunas (with the NIR LED panel in the sauna) all offer sauna options with both far-infrared and near-infrared. For someone looking to get a sauna as well (which also provides a wide variety of amazing health benefits) and a red/NIR light therapy unit, these are wonderful options.

These sauna options tend to be more limited in the ways that you can do the near-infrared light therapy (compared with the LED devices), but they compensate for that drawback by also giving you the benefits of far-infrared and sauna therapy (which you don’t get with red/NIR LED devices).

These “full spectrum infrared” saunas are great options for some people, but the price can be an obstacle for many. If you can afford them, they’re great.

Discount Code: I have also arranged discount codes for you to use with Sunlighten, ClearLight, and SaunaSpace – you can call any of these companies directly and use the discount code “energyblueprint.” I was not able to arrange a discount code with Sunstream, but they also make excellent far-infrared + near-infrared saunas.

Contact info for these companies are:

- Sunlighten: [www.sunlighten.com](http://www.sunlighten.com) and (877) 292-0020
- ClearLight: [www.infraredsauna.com](http://www.infraredsauna.com) and (877) 790-9368
- SaunaSpace: [www.saunaspace.com](http://www.saunaspace.com) and (844) 999-5858
- SunStream: [http://www.infraredsaunacanada.ca/](http://www.infraredsaunacanada.ca/) and (250) 477-2277

**Best Brain Device:**

VieLight Neuro Alpha or Neuro Gamma - $1,749 You can purchase through their website here: [https://vielight.com/neuro-alpha-gamma/](https://vielight.com/neuro-alpha-gamma/)

Discount code is “energy blueprint” which gets you 10% off, which equates to $175 off the regular price. Note: I recommend the Neuro Alpha over the Gamma.

**Summarizing The Top Devices**

The clear winners are the Red Rush360 and Platinum Therapy Lights LED panels, which simply offer far more power relative to other similar-sized lights, and therefore, have the added benefit of actually being lower cost than the comparable lights in those categories.
The full-spectrum saunas are also excellent, and the VieLight Neuro Alpha is wonderful for anyone looking for brain-specific treatment.

Overall, for an all-purpose red/NIR light, it’s hard to beat the Red Rush360 and Platinum lights in terms of the combination of overall power and the pricing. Either one of those lights is a great choice by itself — and will be perfectly adequate for most people — but if you want to go all out and get a larger light setup that will cover your full body, I suggest getting two of the smaller lights (i.e. two Red Rush360s or two BIO-300s), or one BIO-600. Or you can combine a BIO-600 with either a BIO-300 or Red Rush360. (This is what I personally use myself at my home.)

With these setups, you can get all the benefits of red and near-infrared light therapy (that a clinic might charge over $100 per session for!) in the comfort of your own home with unlimited sessions for less than $1,000 or even less than $500.

Final Words

If all of the complexity and science talk has you feeling overwhelmed, I want to end with some simplicity. I’ve tried to cover the nuances of the science on this topic in this book, but I don’t want you to get so caught up in all the details that you feel overwhelmed and confused on how to get started and actually do a red/NIR light therapy session. So let me summarize the practical aspects of all this in a very simple way:

1. Go get yourself one of the recommended light devices.
2. Switch the light on.
3. Put your chosen body area in front of it for a few minutes (following the dosing guidelines for different body areas and treatment goals).

Once you are comfortable with those basic three steps, then go through the details of my recommended dosing guidelines. Then make sure to go through the specific strategies, tips, and protocols I offer in the section titled “Practical Tips and Strategies for Specific Goals” (in the actual book, The Ultimate Guide to Red Light Therapy) to get more specific detailed guidance on using the light for specific goals you may have like brain enhancement, muscle/strength gain, overcoming fatigue, improving mood, fat loss, sleep, or anti-aging. **That’s it. It’s really that simple.**

After you get one of these lights, you can immediately start using it to:

- Increase your energy
- Make your skin healthier and get rid of cellulite
- Speed up fat loss
- Improve muscle recovery and athletic performance
- Improve mood and cognitive function
- Increase muscle size and strength
- Speed healing from injury
- Improve metabolic and hormonal health

You now know everything you need to know to start using this powerful technology. Now go start using it and taking your health, body and energy to new heights!
Ari Whitten is a #1 best-selling author and the creator of the Energy Blueprint system. He is an energy and fatigue specialist who focuses on taking an evidence-based approach to energy enhancement. He is also a nutrition and lifestyle expert with a Bachelor’s of Science from San Diego State University in Kinesiology. He holds two advanced certifications from the National Academy of Sports Medicine and recently completed coursework for his PhD in Clinical Psychology, an education which rounds out all aspects – nutrition, fitness, and psychology – of his approach to optimal health. Ari is a tireless researcher who has obsessively devoted the last two decades of his life to the pursuit of being on the cutting-edge of the science on health, fitness, and energy enhancement. For the last four years, he's been working with the most brilliant scientists and physicians on the planet to develop the most comprehensive program in the world on the science of overcoming fatigue and increasing energy -- The Energy Blueprint.

He also hosts The Energy Blueprint Podcast, where he does interviews with many world-renowned physicians, scientists and health practitioners to uncover secrets to overcoming fatigue, optimizing health, and increasing energy levels. His podcast is quickly becoming one of the most popular health podcasts on iTunes.

If you’re interested in overcoming chronic fatigue or just taking your energy levels to new heights, you can learn more about his work at [www.theenergyblueprint.com](http://www.theenergyblueprint.com). He offers a 60-day Energy Blueprint program designed specifically for people struggling with chronic fatigue and low energy to help them get their energy (and their life) back.

You can view testimonials from people on his Energy Blueprint program here: [https://www.theenergyblueprint.com/reviews/](https://www.theenergyblueprint.com/reviews/)

You can listen to or watch his weekly podcast here: [https://www.theenergyblueprint.com/category/podcast/](https://www.theenergyblueprint.com/category/podcast/)
(Make sure to enter your name and email when on the site so that you can receive notifications of new podcast releases each week.)

Finally, you can get access to his free “Double Your Energy Masterclass” training (value - $199) at [http://www.theenergyblueprint.com/virtual-training](http://www.theenergyblueprint.com/virtual-training)
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