

The Benefits of Red Light Therapy: Nourishing the Body and Mind

As research into red light therapy has progressed, it has become increasingly apparent that the treatment offers astonishing health benefits. Clinical studies are beginning to explore the diverse potential of red and near-infrared wavelengths for healing diverse physiological and mental conditions. Think of red light as food for your body; providing nutrient-dense nourishment that contributes to enhanced well-being.

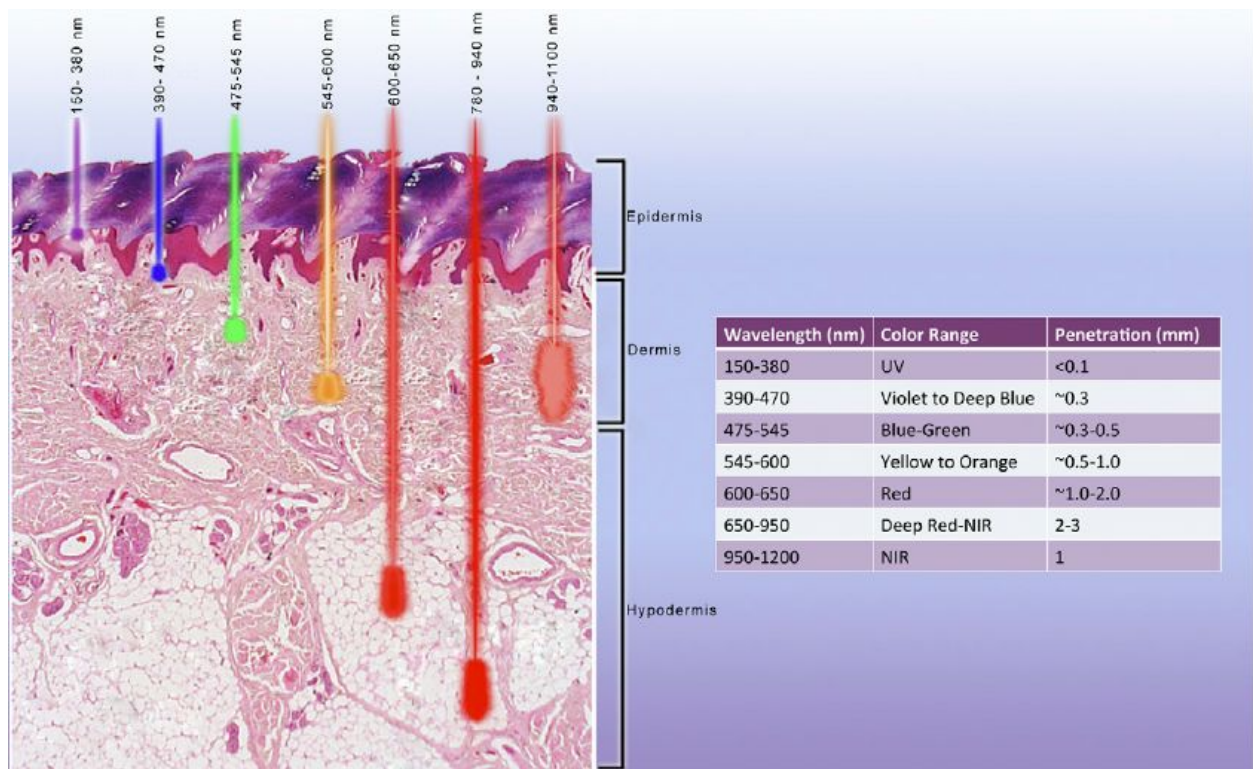
During a red light therapy treatment, red and near-infrared light wavelengths are emitted and absorbed by chromophores within the cells. The various cells and tissue types within the body possess their own unique light absorption characteristics, responding best to different wavelengths. Red light wavelengths and near-infrared wavelengths, therefore, work best delivered in tandem, delivering a greater range of benefits to the body's cells and tissues.

The benefits of red light wavelengths: Red light wavelengths measure between 630-700 nm. These are an ideal length to penetrate skin cells and sebaceous glands, offering benefits for skin texture and tone, smoothing fine wrinkles, promoting collagen production and generally rejuvenating the appearance of skin.

The benefits of near-infrared light wavelengths: Near-infrared light (NIR) wavelengths are longer than red light wavelengths, and measure between 700 nm and 1,100 nm. They penetrate deeper into the tissue to deliver energy to the body's cells and can pass through bone to assist with healing deep wounds, muscle aches, nerve injury or joint pain.

One recent study even demonstrated that when near-infrared light is delivered at the appropriate fluence or dose, the wavelengths can penetrate to a depth of 3cm to alleviate symptoms associated with traumatic brain injury, offering neuroregenerative benefits. Further clinical research found that NIR can help reduce headaches, anxiety, sleep disturbance and cognitive impairment.

In the diagram below, you can see that deep red and near-infrared light wavelengths between 650 and 950 nm penetrate deeper than any other wavelength on the spectrum.



When delivered together, red and near-infrared light wavelengths render positive effects on the skin, metabolic processes, nervous system, endocrine system, and general immune system. PlatinumLED red light therapy devices are available as combination units or in extremely advanced, 5 wavelength R+ | NIR+ based BIOMAX series of lights. For more information on our proprietary, patent pending R+|NIR+ spectral output please visit our blog entry found here: [R+|NIR+: The Most Advanced Therapy Light Spectrum](#)

First do no harm: The benefits of red light therapy as a safe and painless treatment

Red light therapy is distinctive to other light-based therapies because it promotes beneficial healing without inflicting damage on the body. IPL (intense pulsed light) or laser improves the appearance of the skin by causing controlled injury to the outer layer to stimulate collagen regeneration.

Red light and NIR wavelengths penetrate below the skin's surface, stimulating deep healing and cellular regeneration without harming the outer epidermis. Regular red light therapy sessions with PlatinumLED's top-quality devices revitalize the cells from the inside out. There is zero pain, heat, or sensation during the treatment itself. Also, red light therapy carries no known serious side effects.

Restored cellular health: the basis for all healing

The most significant benefit of red light therapy is the effect it has on the body's cells. When our cells are provided with support to operate at or close to their optimum efficiency, the benefits for health and well being are countless. One of the most critical

outcomes of red light therapy on cellular function is the stimulation of collagen production.

Collagen is the most common protein found in the body, constituting 70% of the proteins found in the skin (our largest organ) and 30% of the proteins found in the body. Collagen strengthens hair, is responsible for the health of connective tissue, and provides our skin with firmness and elasticity. As we age, collagen production decelerates, resulting in thinner, looser skin. The result is a more wrinkled appearance.

Since red light therapy restores cellular function, collagen production is also increased. As a consequence, individuals who regularly use red light therapy report that not only do they feel better and heal faster, but their appearance is more youthful and refreshed.

The benefits of red light therapy for diverse conditions

Just some of the scientifically proven results of red light therapy investigated thus far include:

Reduced inflammation

Near-infrared light reduces overall inflammation in the body by decreasing the presence of inflammatory markers. This reduction can help ease the symptoms associated with joint pain, sore muscles, autoimmune diseases, arthritis, traumatic brain injuries, and spinal cord injuries.

Reduced pain

In one clinical study, neuropathic pain caused by a spinal cord injury was dramatically reduced by the application of red light treatment. Scientists conducting the study referred to it as “an exciting prospect with significant clinical relevance.” Near-infrared light wavelengths reduce overall pain by easing joint stiffness and soreness, diminishing inflammation, easing muscle spasms and enhancing blood flow.

Reduced recovery times after training and injury

For high-performance athletes (and those who train like them) red light therapy can help accelerate muscle repair following fatigue and injury. Mitochondria within cells are particularly responsive to red light therapy, and muscle cells are exceptionally rich in mitochondria. Red light therapy may additionally stimulate stem cells, further assisting in muscle recovery.

Improved fertility and increased testosterone levels

Around the age of 30, male testosterone levels naturally start to decrease. Men hoping to achieve a natural boost to their sex drives, sexual satisfaction, fertility, and physical performance can reap benefits from red light therapy. Red and near-infrared wavelengths can stimulate photoreceptor proteins in the testes causing higher testosterone production. Other studies have theorized that low-level light therapy may affect the pineal gland in the brain, which bears a significant impact on reproduction.

Healthier, plumper-looking skin due to increased collagen production

Red light therapy can dramatically transform the skin. Red light wavelengths in particular target the mitochondrial chromophores within skin cells, generating the production of collagen proteins. Collagen stimulation yields more holistic and enduring benefits than simply resurfacing the outer layers of the skin.

Stem cells may also be activated, increasing tissue repair. The result is accelerated healing and wound repair, improved appearance in hypertrophic scars, a reduction in fine lines and wrinkles, and improved skin texture. Participants in one study experienced a clinically assessed improvement in skin complexion and collagen density.

The stimulation of hair growth

Alopecia, or hair loss, is a common disorder affecting 50% of males over the age of 40 and 75% of females over 65. There are few approved, effective treatments available. However, studies performed on men and women have shown that red light therapy can stimulate hair growth.

Red light wavelengths are believed to stimulate epidermal stem cells in the hair follicle, shifting the follicle into the anagen phase (this is the active growth stage). Research performed on mice with chemotherapy-induced alopecia showed similar responsiveness--the treatment encouraged hair growth.

Improved circulation (improved blood flow)

In many studies, red light therapy has been clinically proven to increase the diameter of blood vessels and to improve circulation. What's more, red light therapy also protects red blood cells against oxidative stress and limits platelet loss during surgical procedures.

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