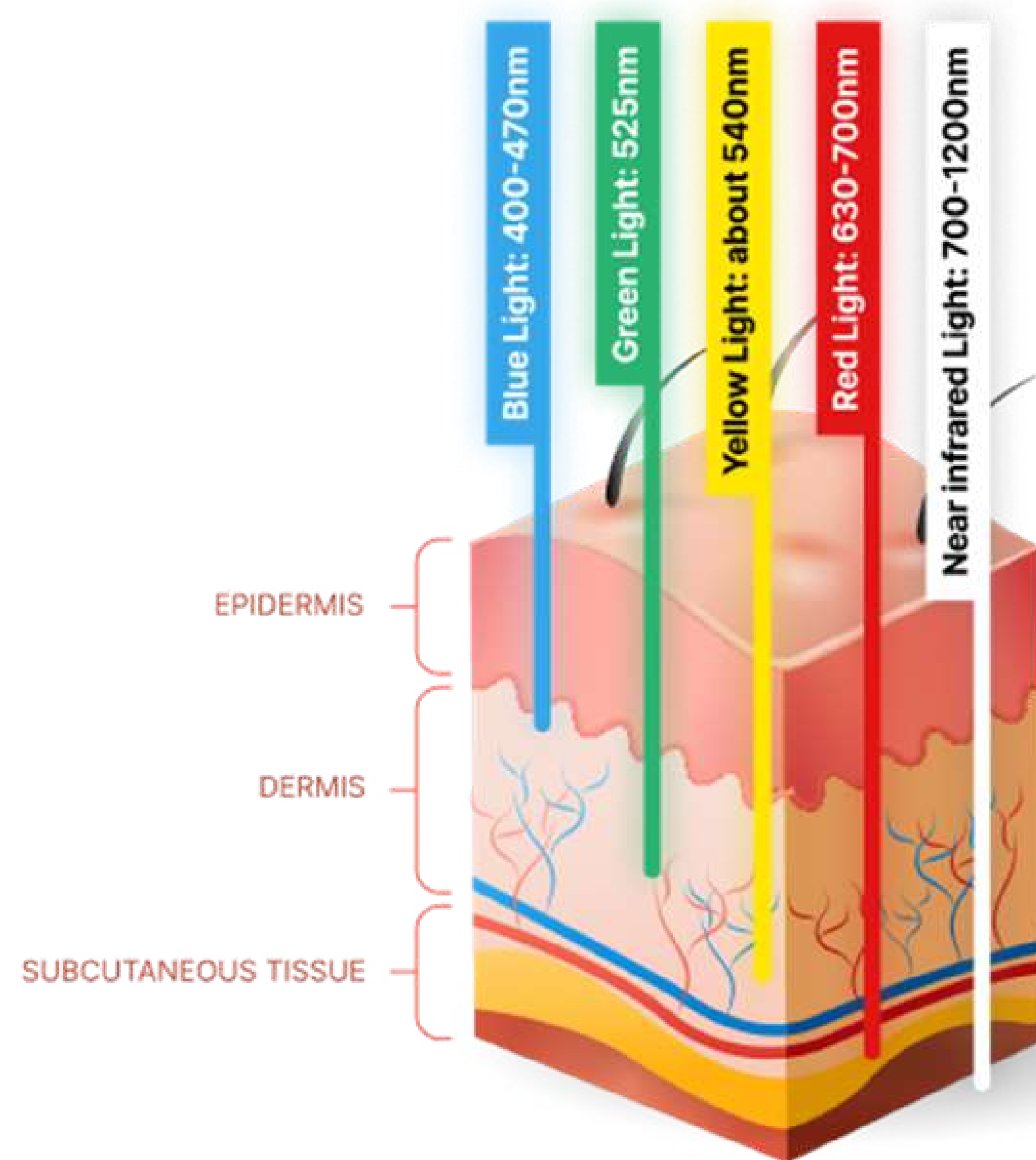


NEO | SCIENCE

NEO | LIGHT

NEO Light: Research



The use of light for health benefits has been known since ancient times, but research and applications have rapidly expanded in the last 2 decades. Photobiomodulation is one of the safest methods to improve healing, pain, skin health, performance, and sleep – just to mention a few. Different colors of light reach their corresponding depths inside the human body, where they create biological responses. Light therapy devices have been on the market for years, but none has combined multiple light frequencies and proven protocols into a single device.

Benefits of Photobiomodulation:

I. Medical Benefits:

- **Wound Healing:**
Accelerates tissue repair and cellular regeneration, aiding faster wound healing.
- **Pain Management:**
Reduces pain and inflammation, often used in conditions like arthritis and musculoskeletal disorders.
- **Neurological Benefits:**
Exhibits neuroprotective effects and may help in managing neurodegenerative conditions like Alzheimer's and Parkinson's disease.
- **Improved Circulation:**
Enhances blood flow, promoting better oxygen and nutrient supply to the cells.
- **Reduced Inflammation:**
Mitigates inflammation and is beneficial in managing inflammatory conditions like tendonitis and other soft tissue injuries.
- **Enhanced Immune Response:**
Boosts the immune response, potentially lowering susceptibility to infections.
- **Mood and Sleep Improvement:**
Has been used to help alleviate symptoms of mood disorders like depression and may improve sleep quality.
- **Bone Healing:**
Promotes bone regeneration and healing, especially beneficial in conditions like fractures.
- **Management of Chronic Conditions:**
Helpful in managing chronic conditions such as diabetes by aiding in the healing of associated complications like diabetic foot ulcers.
- **Reduction of Scar Tissue:**
Aids in reducing the formation of scar tissue and improves the appearance of existing scars.
- **Chronic Skin Conditions:**
Effective for skin conditions such as rosacea and psoriasis.



Benefits of Photobiomodulation:

II. Cosmetic Benefits:

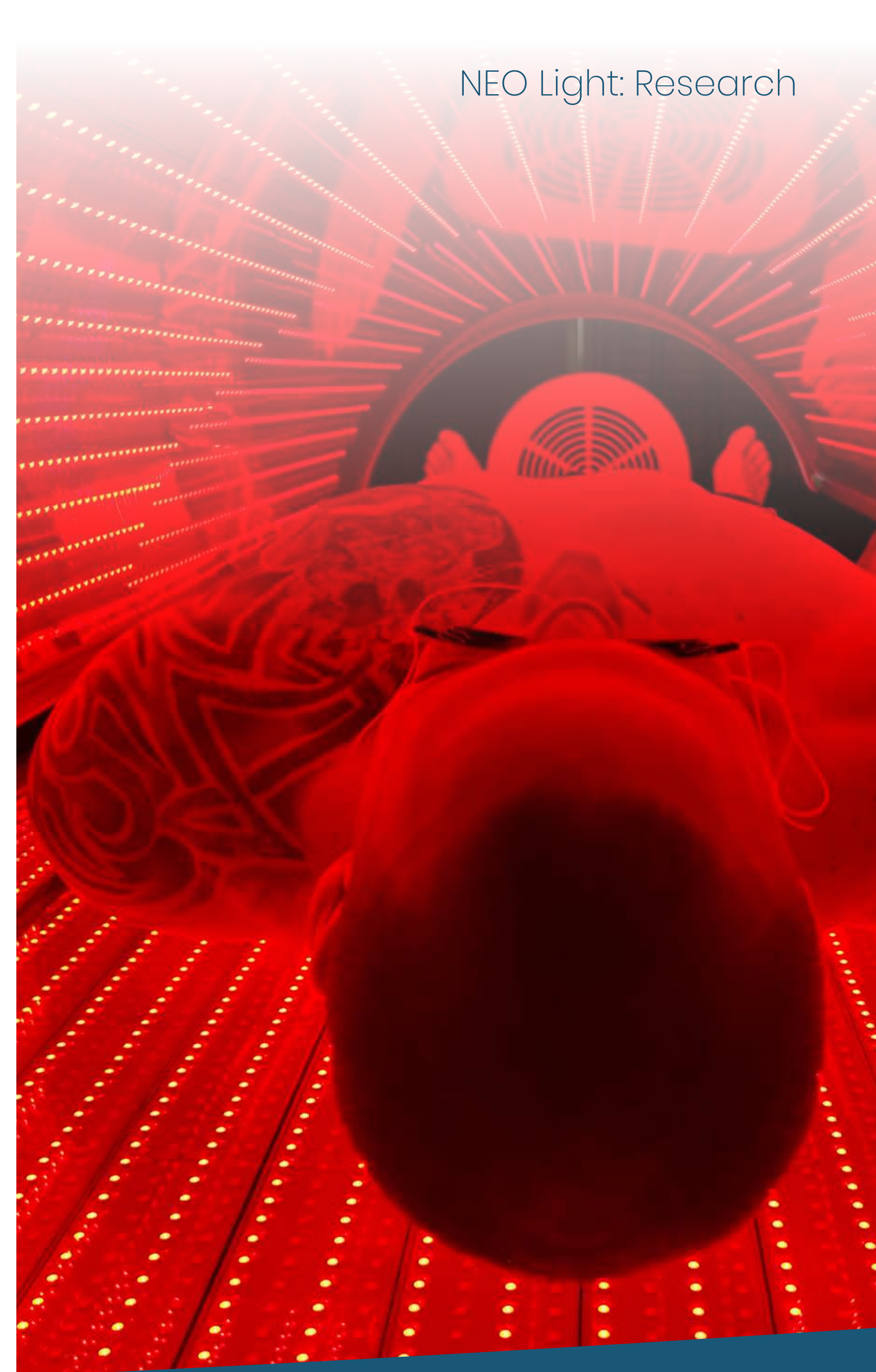
- **Skin Rejuvenation:**
Promotes collagen production, improving skin elasticity and reducing wrinkles.
- **Acne Treatment:**
Helps in managing acne by reducing inflammation and bacterial growth.
(→ see red + blue light below)
- **Hair Growth:**
Stimulates hair follicles, potentially reducing hair loss and promoting hair growth.
- **Reduction of Cellulite:**
Assists in reducing the appearance of cellulite by improving skin structure.
- **Hyperpigmentation:**
May reduce hyperpigmentation and even out skin tone. (→ see green light below)
- **Anti-Aging:**
Exhibits anti-aging properties by reducing the signs of aging like fine lines and wrinkles.



Benefits of Photobiomodulation:

III. Recovery (Athletic / Muscle):

- **Muscle Recovery:**
Accelerates muscle recovery after exercise or injury by reducing muscle fatigue and soreness.
- **Enhanced Athletic Performance:**
May boost performance by improving muscle endurance and strength.
- **Reduction of Exercise-Induced Muscle Damage:**
Minimizes damage and inflammation in muscles post-exercise.





NEO | LIGHT

**Simple.
With 4 preset
modes.**

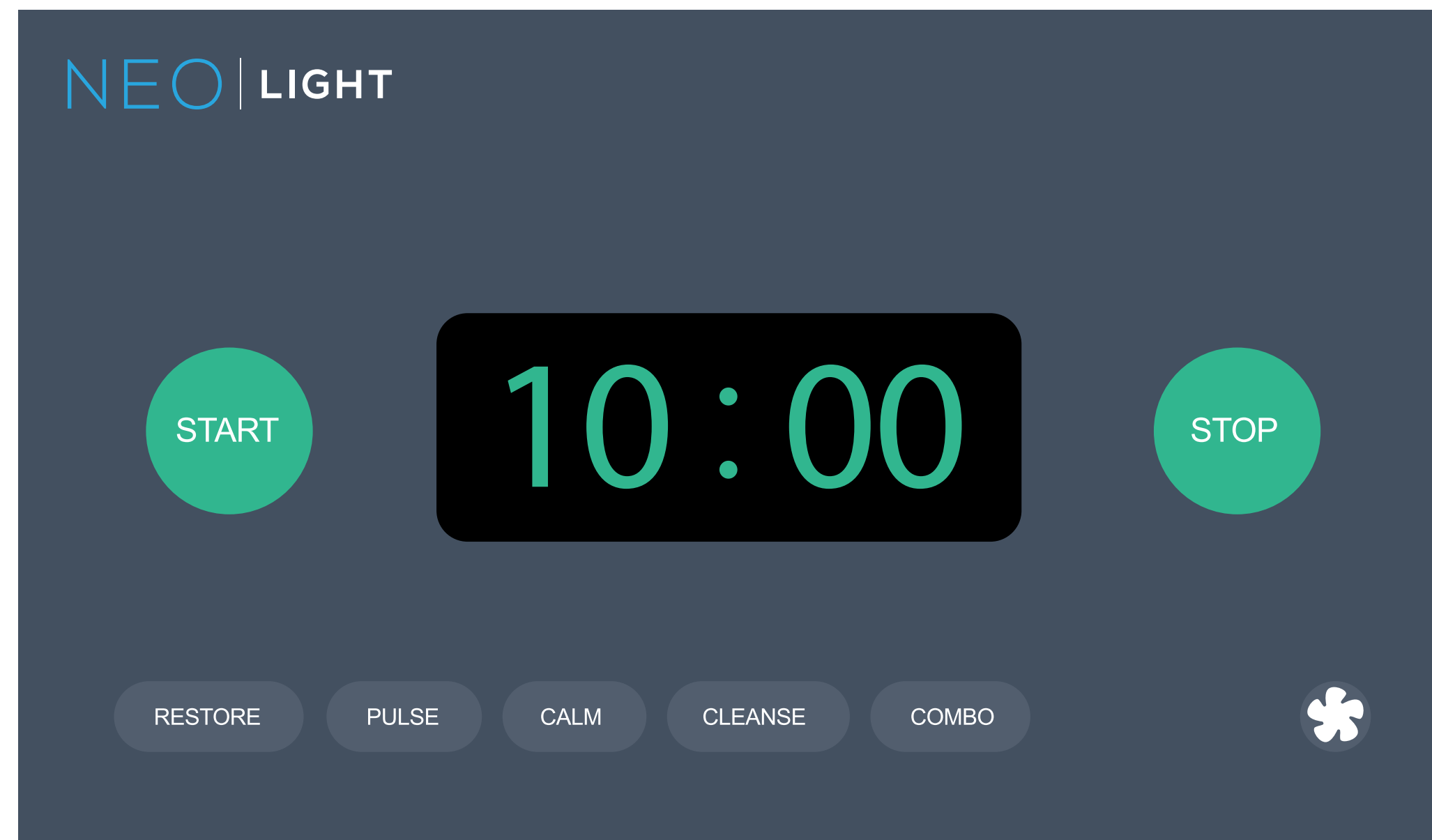
The following is a collection of studies, broken down into the 4 pre-set modes NEO Light offers.

RESTORE mode : RED + IR (633, 810, 850, 940)

PULSE mode : RED + IR (633, 810, 850, 940); IR frequencies pulsed

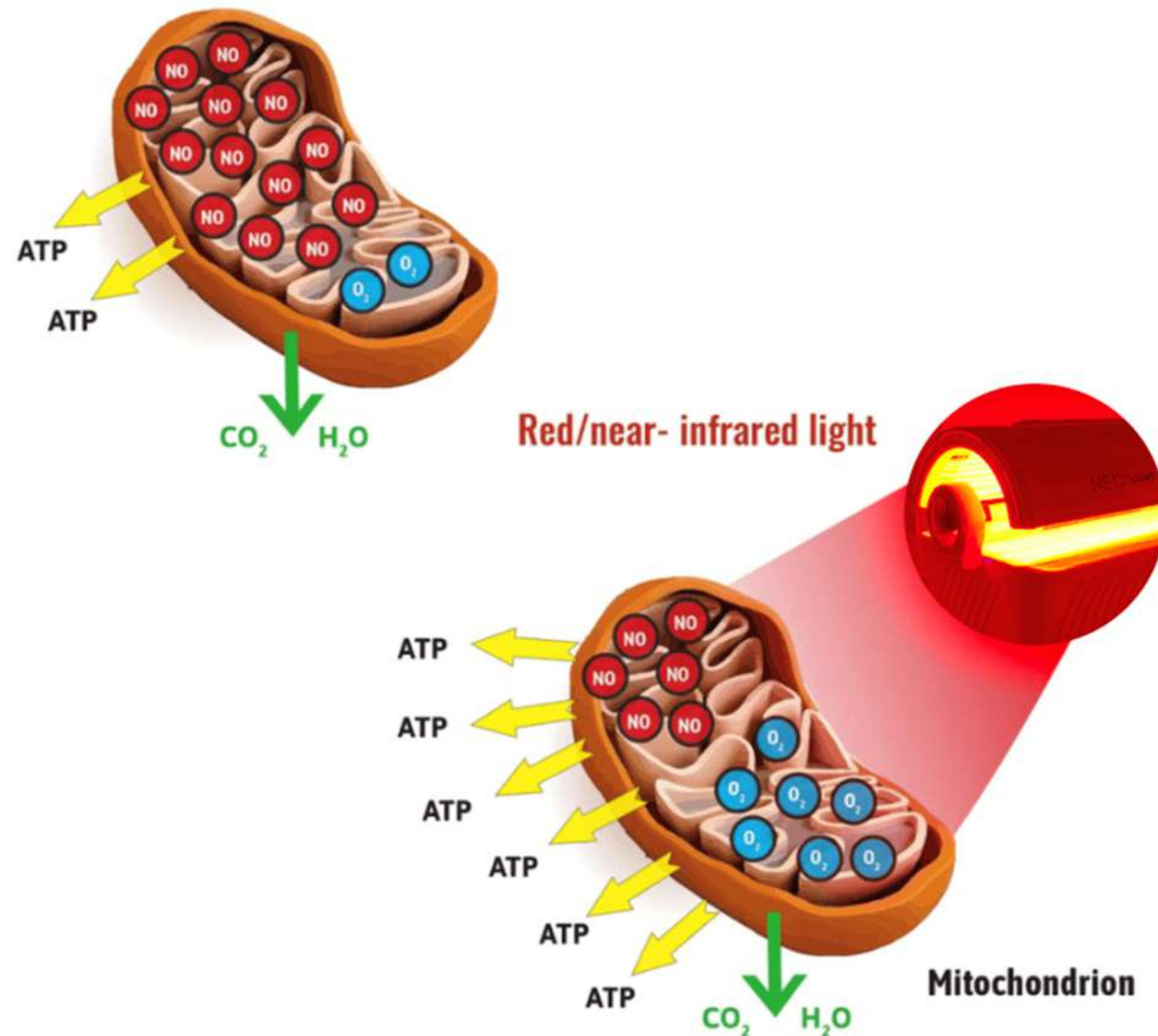
CALM mode : Green + IR (532, 810, 850, 940)

CLEANSE mode : Red + Blue (= pink to the observer): (611, 415)



Studies

RESTORE / PULSE (Red light and IR)



Low-intensity LASER and LED (photobiomodulation therapy) for pain control of the most common musculoskeletal conditions
<https://pubmed.ncbi.nlm.nih.gov/?term=BACK+PAIN+AND+PHOTOBIMODULATION&size=200>

Effects of low-power light therapy on wound healing
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4148276/>

Low-level laser (light) therapy (LLLT) in skin: stimulating, healing, restoring
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4126803/>

The Efficacy and Safety of 660 nm and 411 to 777 nm Light-Emitting Devices for Treating Wrinkles
<https://pubmed.ncbi.nlm.nih.gov/28195844/>

Studies

RESTORE / PULSE (Red light and IR)

- Low-level laser therapy in acute pain: a systematic review of possible mechanisms of action and clinical effects in randomized placebo-controlled trials

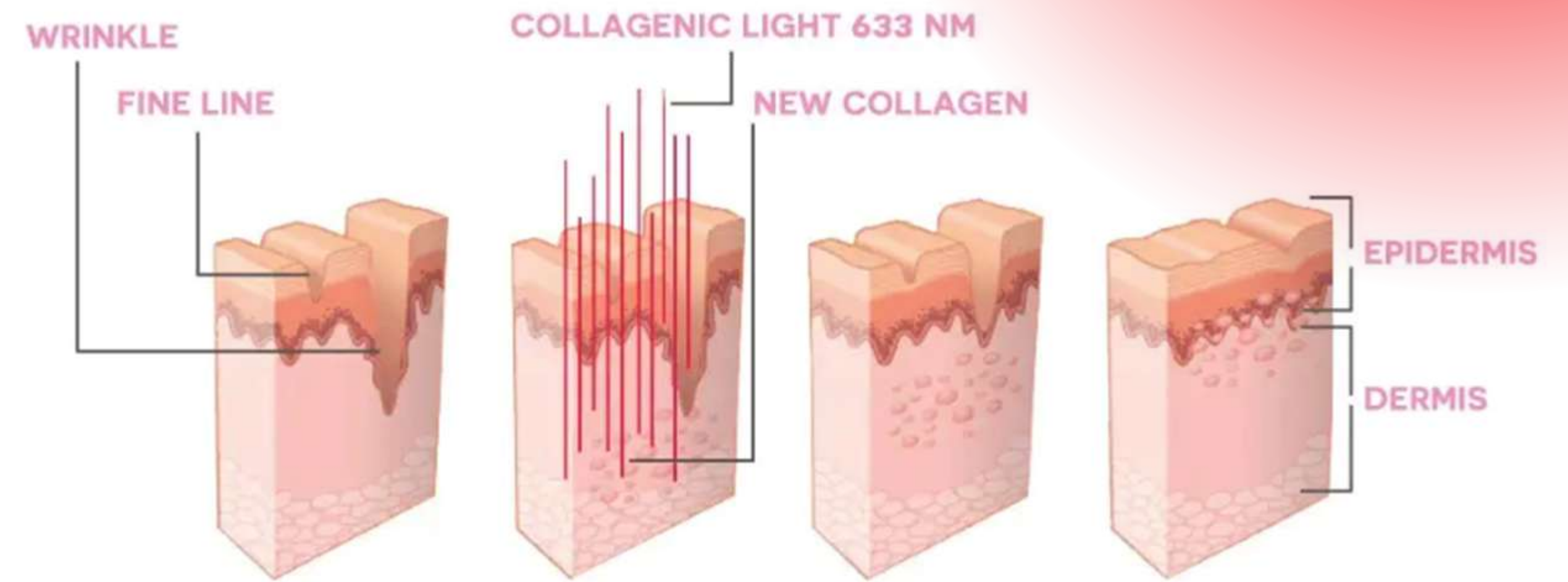
<https://pubmed.ncbi.nlm.nih.gov/16706694/>

- Red Light and the Sleep Quality and Endurance Performance

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3499892/>

- Improvement in Depression Scores After 1 Hour of Light Therapy Treatment in Patients With Seasonal Affective Disorder

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5336550/>



- Efficacy of low-level laser therapy for body contouring and spot fat reduction

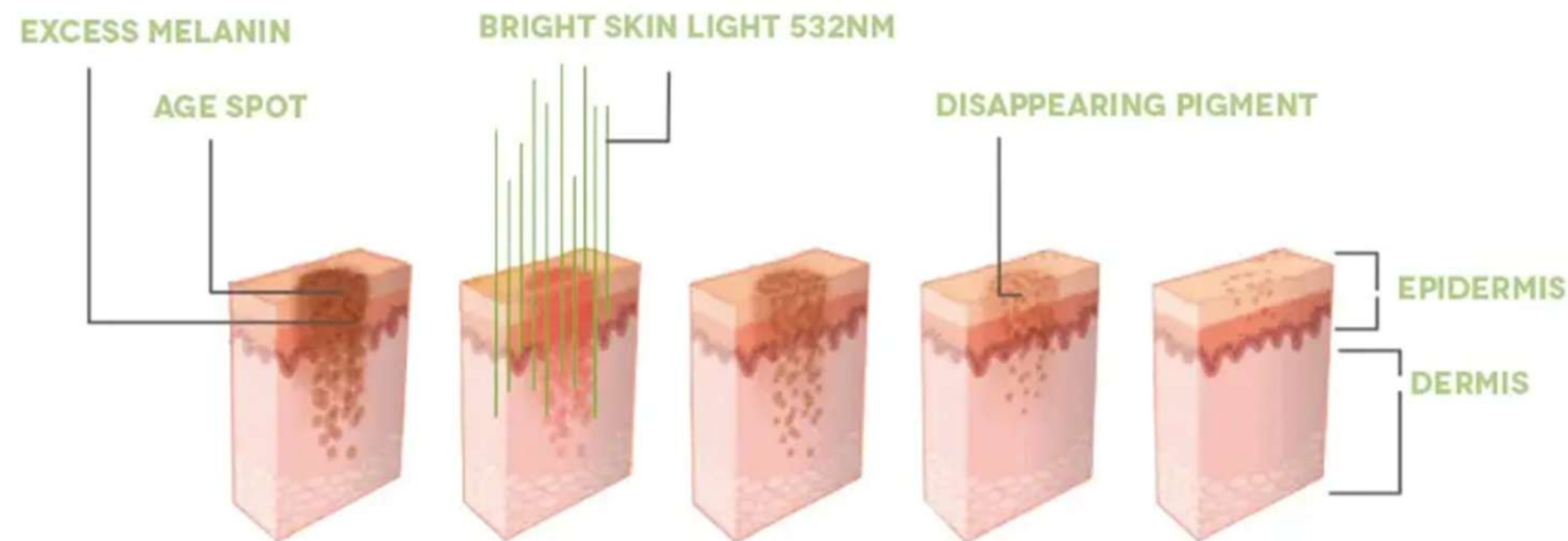
<https://pubmed.ncbi.nlm.nih.gov/20393809/>

- Photobiomodulation promotes repair following spinal cord injury by restoring neuronal mitochondrial bioenergetics

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9512226/>

Studies

CALM (Green light and IR)



Green light therapy is used in various dermatological procedures as well as in pain management. This unique light frequency is particularly beneficial for dark spots caused by melanin over-production (melasma).

Melasma is a skin disorder where the melanocytes (color-producing cells) in your skin produce extra pigment.

This is often noticed by women during pregnancy, which makes women post pregnancy a great target group for NEO Light's Calm mode.

Studies

CALM (Green light and IR)

-  Green Light Exposure Improves Pain and Quality of Life in Fibromyalgia Patients
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7861466/>
-  Migraine and other headaches: A study in the journal "Brain" suggests green light can reduce the severity of migraines and may have potential in treating other types of headaches (Nosedá et al., 2016).
<https://pubmed.ncbi.nlm.nih.gov/27190022/>
-  Green Light for Migraine Relief: A Harvard Medical School Study
<https://hms.harvard.edu/news/green-light-migraine-relief>
-  Combination 532-nm and 1064-nm lasers for noninvasive skin rejuvenation and toning
<https://pubmed.ncbi.nlm.nih.gov/14568830/>
-  Migraine photophobia originating in cone-driven retinal pathways
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4939697/>
-  Green light emitting diodes accelerate wound healing
<https://pubmed.ncbi.nlm.nih.gov/22380691/>
-  Exposure to green light may reduce pain
<https://www.tmc.edu/news/2020/02/exposure-to-green-light-may-reduce-pain/>
-  **NEW:** US Army Medical Research grant funds study of green light therapy for postsurgical pain
<https://healthsciences.arizona.edu/news/releases/us-army-medical-research-grant-funds-study-green-light-therapy-postsurgical-pain>

Studies

CLEANSE (Red + Blue = Pink)

When red and blue light are used in conjunction, they offer a comprehensive approach to acne management. The blue light targets and eliminates acne-causing bacteria and reduces inflammation, while the red light penetrates deeper to promote healing, reduce oil production, and diminish scars and inflammation. This combined therapy can result in clearer, smoother, and healthier-looking skin, with reduced acne and improved overall skin quality.



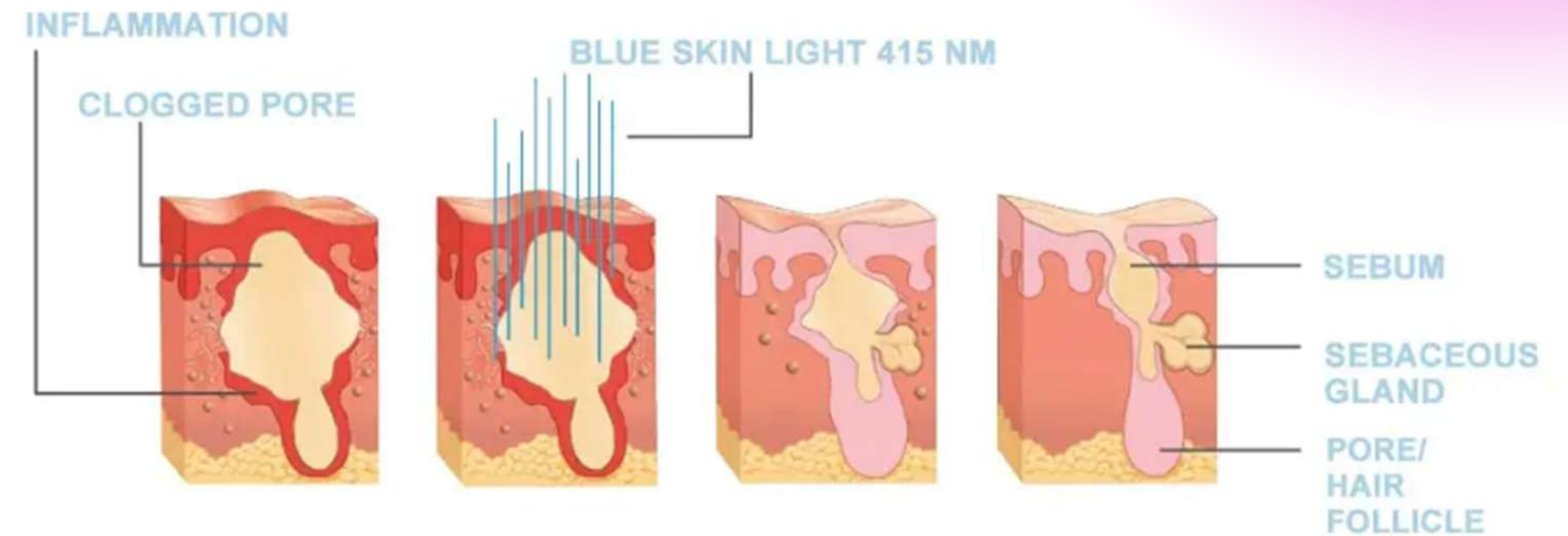
Studies

CLEANSE (Red + Blue = Pink)

Blue Light

Blue light operates primarily at a wavelength of around 415 nm. It has proven bactericidal effects, particularly against *Propionibacterium acnes*, the bacteria responsible for causing acne. By eliminating these bacteria, blue light helps in reducing acne breakouts.

Additionally, blue light has anti-inflammatory properties that help minimize redness and swelling associated with acne lesions, reducing the visibility of acne.



**Besides clearing up the skin, blue light may also be effective for seasonal affective disorder. Even more so that red light as a study suggests:

🔗 Light therapy for seasonal affective disorder with blue narrow-band light-emitting diodes (LEDs)

<https://pubmed.ncbi.nlm.nih.gov/16165105/>

Studies

CLEANSE (Red + Blue = Pink)

Red Light

Red light typically has a wavelength of around 630–660 nm. It penetrates deeper into the skin compared to blue light, reaching the sebaceous (oil) glands. By affecting these glands, red light helps in reducing oil production, a contributing factor to acne development.

Red light also promotes healing and cellular regeneration, reducing the appearance of acne scars and improving skin texture and tone. It aids in the reduction of inflammation and the enhancement of collagen production, which is crucial for maintaining healthy skin.

- Effect of Blue Light on Acne Vulgaris: A Systematic Review
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8537635/>
- Blue, red LED combo more effective for severe acne
<https://www.dermatologytimes.com/view/blue-red-led-combo-more-effective-severe-acne>
- Phototherapy with blue (415 nm) and red (660 nm) light in the treatment of acne vulgaris
<https://pubmed.ncbi.nlm.nih.gov/10809858/>
- Prospective 3-month study on the efficacy of UV-free blue light in mild psoriasis vulgaris treatment
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8330862/>

QUESTIONS?

Contact us to learn more about NEO Light
and how integrating light therapy can benefit
your clients and grow your business.

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