



lumiNIR

professional strength LED treatments from sunlighten

**Fight aging, relieve pain and heal
deep tissue in just a few minutes**



What is LED Light Therapy?

LED light therapy is a form of photo-biomodulation that utilizes non-ionizing light sources in the visible (400–700 nm) and near-infrared (700–1,100 nm) electromagnetic spectrum. There are multiple colours of LED light therapy that help the body. Each LED light colour penetrates the skin at different levels, assisting in different types of healing.

LED light has numerous health benefits, including skin rejuvenation, cellular turnover, tissue repair and pain relief.

What Are the Benefits of Near Infrared Light?

Infrared energy is part of the sun's invisible light spectrum and is necessary for all living things to grow and flourish. Near infrared (NIR) is the shortest infrared wavelength and penetrates as much as 6 mm beyond the surface of the skin.

Sunlighten has harnessed the specific spectrum of light needed to trigger a natural, photo-biochemical reaction. This recharges the cell's mitochondria and stimulates cellular turnover.¹ To achieve the maximum penetration, we used NASA research to develop a patented LED array that provides NIR at a singular wavelength with minimal variability and virtually undetectable heat and light.

The lumiNIR LED attachment emits 880 nm for the deepest tissue penetration. Several studies have shown similar results:²

- 155% increase in cell and tissue growth
- 36% decrease in wound size
- 50% reduction in cell death

What Are the Benefits of Red Light?

Red LED light therapy is the most common of the LED therapies with wavelengths ranging between 633-700 nm. The optimal wavelength is 660 nm for light absorption to reach a depth of 2.3 mm in the dermis.¹ Red LED is used to help reduce fine lines, wrinkles, redness and inflammation, and increase collagen and elastin production. Red LED light has been shown to enhance the detoxification process within the lymphatic system, helping reduce inflammation caused by extra fluid and waste stored in the skin. By reducing inflammation in the body, this also assists with the reduction of joint pain.

What Are the Benefits of Combining Red Light and Near Infrared Light?

By using a blend of red and NIR light, you can target two different levels of cells simultaneously. The red light wavelength at 660 nm combined with the near infrared wavelength at 880 nm promotes healing by increasing oxygen flow to the joints and muscles for natural pain relief.³

- Reduces Inflammation
- Eases Muscle and Joint Pain
- Promotes Cell Regeneration
- Stimulates Tissue Growth
- Increases Wound Healing



What Are the Benefits of Blue Light?

Blue LED light is a short wavelength (400-470 nm) and only penetrates the skin about 1 mm. However, it has been proven by the FDA to kill the bacteria associated with some forms of acne.⁴ Blue LED light therapy assists with the reduction of acne by increasing the porphyrin oxygen levels in the skin.

Acne is caused by the bacteria *Propionibacterium acnes* (P. acnes). This bacteria is found on the skin and in clogged hair follicles. For the most part, this bacteria can be relatively harmless; however, if follicles become plugged, the low oxygen levels and accumulating sebum create a prime environment for the growth of P. acnes.

The blue light from LED excites the porphyrins which causes them to release free radicals into the bacteria, killing them from the inside out.⁵ Since blue LED light therapy also increases blood circulation, it helps decrease inflammation and reduces the size of blemishes caused by acne.

REFERENCES:

- ¹ Daniel Barolet, M. (2008). Light-Emitting Diodes (LEDs) in Dermatology. *Seminars in Cutaneous Medicine and Surgery*, 228.
- ² Harry T. Whelan, Ellen V. Buchmann, Noel T. Whelan, Scott G. Turner, Vita Cevenini, Helen Stinson, Ron Ignatius, Todd Martin, Joan Cwiklinski, Glenn A. Meyer, Brian Hodgson Lisa Gould, Mary Kane, Gina Chen, James Caviness. *NASA Light Emitting Diode Medical Applications From Deep Space to Deep Sea*. CP552, Space Technology and Applications International Forum-2001, edited by M. S. El-Genk. Copyright 2001 American Institute of Physics 1-56396-980-7/01.
- ³ Whelan et al; Effect of NASA Light Emitting Diode Irradiation and Wound Healing. *Journal of Clinical Laser Medicine & Surgery*, Volume 19, Number 6, 2001, Mary Ann Liebert, Inc, pp. 305-314.
- ⁴ Blue light therapy for acne – *Medical News Today*." 3 Sep. 2017, Accessed 12 Oct. 2018
- ⁵ "IDI News » Porphyrins – The International Dermal Institute." Accessed 11 Oct. 2018.

How Do I Use the lumiNIR Wand?

TREATMENT STEPS:

1. Cleanse and dry skin.
2. Turn on device and select intensity level (see chart below) – treatment begins once the intensity level is set.
3. Place light directly on clean, dry skin.
4. Device will beep when treatment time ends.
5. Move on to your next treatment area.

NIR Intensity Options

The lumiNIR offers four intensity levels. Level 1 is considered one dose. This is the minimum amount needed for a treatment. You can increase the dosage based on your need. See the lumiNIR TREATMENT PROTOCOLS on the next page for more information.

INTENSITY LEVEL	LIGHT INDICATOR (the light on the device will change for each level)	TREATMENT TIME
LEVEL 1 (DEFAULT)	GREEN LIGHT	35 SECONDS
LEVEL 2	BLUE LIGHT	1:10 MINUTES
LEVEL 3	GREEN / RED LIGHT	1:45 MINUTES
LEVEL 4	RED LIGHT	2:20 MINUTES



How Do I Clean My lumiNIR?

Use a damp, soft, lint-free cloth and water or rubbing alcohol to clean the LED attachments. Makeup wipes also work well. Do not immerse in water at any time. The back of the LED heads must remain dry.

How Long Will Battery Charge and Last?

The lumiNIR wand uses a standard Micro USB charging cable. This can be combined with a wall plug attachment similar to that used by many mobile devices. The battery will be fully charged within two hours and will last three to five hours, or six to ten treatments.

Overcharging the wand (keep the wand on the charger past the indicator light turning green), will shorten the lifespan of the wand and require a replacement.

What Are the Treatment Protocols for lumiLED Attachments?

Each light spectrum targets a different level below the skin's surface.

Our protocols were developed based on scientific research to give the best result for each concern.

This treatment chart is meant to be a guide. **Dosage** can be adjusted up or down depending on the severity of the concern. **Time to results** will vary for each individual.

CONCERN	lumiLED	DOSE	# OF TREATMENTS	TIME TO RESULTS
Acne	lumiCLEAR	LEVEL 4	5x PER WEEK	2-4 WEEKS
Wound Healing (surface)	lumiSPORT	LEVEL 2	3x PER WEEK	2-4 WEEKS
Wound Healing (deep tissue)	lumiNIR	LEVEL 1	3x PER WEEK	2-4 WEEKS
Skin Inflammation (for conditions such as psoriasis)	lumiGLOW	LEVEL 1	3x PER WEEK	2-4 WEEKS
Photo-rejuvenation (sun damage, age spots, rosacea, pore reduction)	lumiGLOW	LEVEL 1	3x PER WEEK	2-4 WEEKS
Wrinkle Reduction, Skin Firmness	lumiGLOW	LEVEL 1	3x PER WEEK	2-4 WEEKS
Pain Relief, Joint and Muscle Inflammation	lumiNIR	LEVEL 2	DAILY AS NEEDED	1-4 WEEKS

Why Is There One Red Light on the lumiNIR Attachment?

Since near infrared is invisible light, we added one red light so you know the light is on and working.



lumiNIR
FOR CELL RENEWAL

Increase Cell Turnover
Reduce Inflammation
Relieve Pain
Fight Aging
Accelerate Wound Healing
Stimulate Collagen Production



lumiGLOW
FOR ANTI-AGING

Fight Aging
Stimulate Collagen Production
Reduce Appearance of Wrinkles
Improve Skin Tone and Firmness
Increase Circulation



lumiSPORT
FOR PAIN RELIEF

Accelerate Muscle Recovery
Reduce Inflammation
Relieve Muscle and Joint Pain
Stimulate Tissue Growth
Increase Wound Healing



lumiCLEAR
FOR CLEAR SKIN

Clear Stubborn Pimples
Minimize Future Breakouts
Reduce the Appearance of Acne Scars
Improve Skin Texture

For more information please click on the link below

sunlighten.com/products/luminir/

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