

EXPERIENCE PAIN RELIEF, INCREASED CIRCULATION AND MORE.

Our partners have decades of medical device and insurance industry experience working with healthcare products, services and other solutions. We have introduced dozens of products and services to the marketplace.

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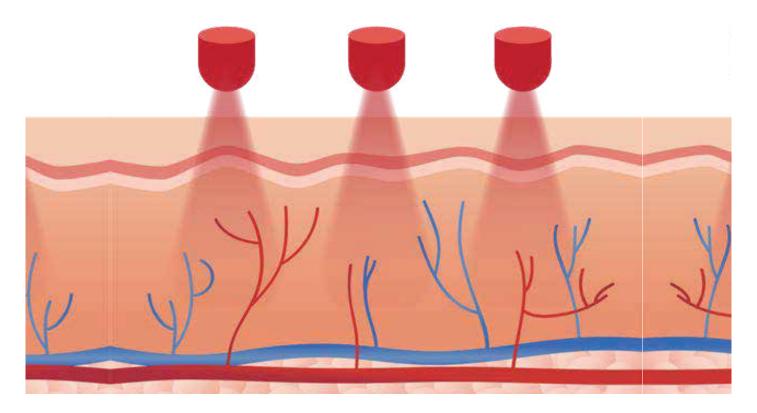
How Does Light Therapy Work? What Is Near Infrared Light (NIR) Used For? How Does Light Therapy Relieve Pain? How Does Light Therapy Increase Circulation? How Does Light Therapy Relieve Muscle Spasms, Aches, and Stiffness? Why Do We Use Different Wavelengths? How Can I Explain Light Therapy to Patients? Can I Use Multiple Modalities At The Same Time? Are There Any Side Effects To Light Therapy? What Makes Energia Medical Different? What Happens If My Pad Or Controller Breaks? **Light Therapy Pad Questions About The Author**

NOTE FROM THE AUTHOR

Light therapy is one of the fastest growing modalities. The eBook is a compilation of some of the most frequently asked questions and their answers. If you do not see your question here, please feel free to contact us.

HOW DOES LIGHT THERAPY WORK?

Light Therapy works by increasing ATP (adenosine triphosphate) synthesis in the mitochondria, activating the electron transport system, and many other biochemical and biophysical reactions in the tissue.



Decades of research have found that certain wavelengths of light within the red and infrared bands can be beneficial to living tissue.

- The light triggers the release of nitric oxide from blood vessels and red blood cells.
- Nitric oxide causes local vasodilation that lasts several hours after the therapy session has ended.
- Vasodilation significantly improves blood flow.
- Improving blood flow promotes positive change in patients, lessens pain and helps nerves to begin to carry sensations again.

WHAT IS NEAR INFRARED LIGHT (NIR) USED FOR?

- 1. Pain Relief
- 2. Increased Circulation
- 3. Relaxation of Muscles
- 4. Relief from Muscle Spasms
- 5. Aches/Stiffness Caused by Arthritis



HOW DOES LIGHT THERAPY RELIEVE PAIN?



Increased nitric oxide production

- 1. Nitric oxide has both a direct and indirect impact on pain sensation. As a neurotransmitter, it is essential for normal nerve cell action potential in impulse transmission activity.
- 2. Indirectly, the vasodilatation effect of nitric oxide enhances nerve cell perfusion and oxygenation.



Increase in beta-endorphins

The localized and systemic increase of endogenous peptides after Light Therapy irradiation has been clinically reported in multiple studies to promote pain reduction.



Decreased bradykinin levels

Bradykinins elicit pain by stimulating nociceptive afferents in the skin and viscera, mitigation of elevated levels through Light Therapy can result in pain reduction.



Ion channel normalization

Photobiomodulation promotes normalization in Ca++, NA+ and K+ concentrations, resulting in pain reduction as a result of these ion concentration shifts.

HOW DOES LIGHT THERAPY RELIEVE PAIN? CONTINUED



Increased nerve cell action potentials

- 1. Healthy nerve cells tend to operate at about -60mV, and fire at about -20 mV. Compromised cell membranes have a lowered threshold as their resting potentials average around the -40 mV range.
- 2. That means that normal non-noxious activities produce pain.
- 3. Light Therapy normalizes the body's electrical system and/or charging cells back to -60 mV range.



Blocked depolarization of C-fiber afferent nerves

- 1. Pain blocking effects of Light Therapy can be pronounced, particularly in low velocity neural pathways, such as non-myelinated afferent axons from nociceptors.
- 2. Light irradiation suppresses the excitation of these fibers in the afferent sensory pathway.



Increased release of acetylcholine

Increasing the available acetylcholine, Light Therapy helps in normalizing nerve signal transmission in the autonomic, somatic and sensory neural pathways.



Axonal sprouting and nerve cell regeneration

- 1. Several studies have documented the ability of Light Therapy to induce axonal sprouting and some nerve regeneration in damaged nerve tissues.
- 2. Where pain sensation is being magnified due to nerve structure damage, cell regeneration and sprouting may assist in reducing pain.

HOW DOES LIGHT THERAPY INCREASE CIRCULATION?



One of the most dramatic aspects of light therapy is its triggering of the release of nitric oxide. Nitric oxide is the body's natural vasodilator - it widens the blood vessels and capillaries.

After just 20 minutes of light therapy, blood flow is increased to nerves and other tissues, and this boost in local circulation lasts for several hours.

Nitric oxide is also a messenger molecule that triggers healing processes in the body. By increasing the production of nitric oxide, infrared and red Light Therapy increases circulation, speeds healing and relieves pain.

HOW DOES LIGHT THERAPY RELIEVE MUSCLE SPASMS, ACHES, & STIFFNESS?

Light Therapy dramatically stimulates muscle trigger points & acupuncture points non-invasively providing musculoskeletal pain relief.

After just 20 minutes of Light Therapy, patients experience relief from muscle spasms, aches, and stiffness.

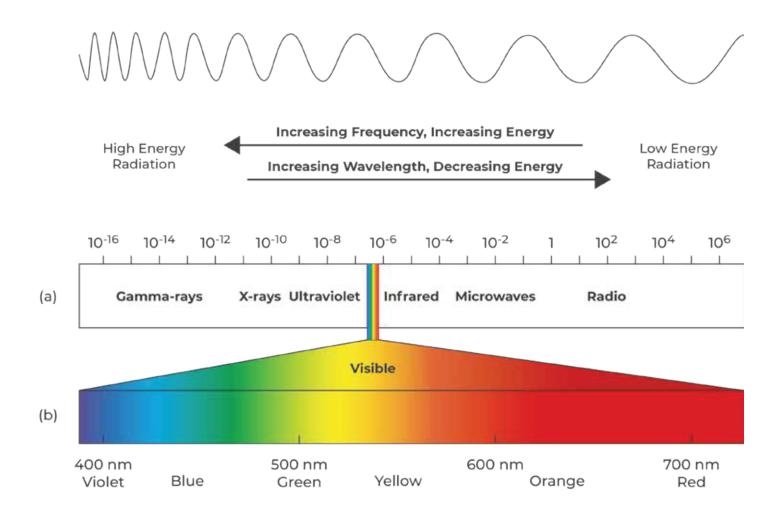


Generally, acute conditions will respond more quickly than chronic conditions.

For acute conditions: we get users starting to feel a difference in the first few treatments.

For chronic conditions: we find the level of maximum improvement is between 24-36 treatments. Ongoing maintenance treatments will be needed.

WHY DO WE USE DIFFERENT WAVELENGTHS?



Depth of penetration

• Different levels based upon wavelength

Different biological effects

- Anti-inflammation
- Anti-pain (Analgesic)
- · Accelerated tissue repair and cell growth
- Immunoregulation
- Improved nerve function

- Improved vascular activity
- Increased metabolic activity
- Reduced fibrous tissue formation
- Trigger and acupuncture points stimulation

HOW CAN I EXPLAIN LIGHT THERAPY TO PATIENTS?



- Treatment is a virtuous circle
- Repeated treatments reinforce each other
- Photons of light help the body naturally heal itself

CAN I USE MULTIPLE MODALITIES AT THE SAME TIME?

Yes, multiple modalities should provide a better and quicker resolution to patient complaint(s).



Physical therapy paired with Light Therapy can provide patients even greater success.

Qualified physical therapists give professional instruction and design the program to increase range of motion, strength, balance for a better overall quality of life.

Other modalities such as nutrition, vibration, chiropractic, massage, electrical stimulation, PEMF, and laser are sometimes combined with Light Therapy.

1. A Combined Treatment Protocol for Patients with Peripheral Neuropathy, Federal Practitioner September 2015 (p) 69-73.

ARE THERE ANY SIDE EFFECTS TO LIGHT THERAPY?

There are no known side effects. Light Therapy is painless and easy.

However, keep away from the thyroid and uterus if pregnant. Also, do not use to treat active cancer.

How long until my patients see results?

The answer depends on disease state and condition.

For acute conditions: we get users starting to feel a difference in the first few treatments.

For chronic conditions: we find the level of maximum improvement is between 24-36 treatments. Ongoing maintenance treatments will be needed.

WHAT MAKES ENERGIA MEDICAL DIFFERENT?

Our diodes produce more energy than many other pads on the market. That means we are getting more Joules/cm². The result is more healing energy to the tissues.

Our Product Features:

- Manufactured in an ISO certified factory
- Diodes are covered by silicone for easy cleaning
- Same pads can be utilized with 3 or 6 port controller or plugged into a power outlet
- 10 years of experience manufacturing light therapy
- Product lines include combinations of red, blue and infrared
- Pads can be applied directly to the body
- Flexible not rigid
- Daily use at home or multiple times per week in the office
- 20 minute treatment cycle
- One button control to run multi-frequency programs for increasing circulation, pain relief and a combination of both.
- Portable
- FDA listed







WHAT HAPPENS IF MY PAD OR CONTROLLER BREAKS?

The warranty is 2 years.

Obtain a RMA number from Customer Service. Simply mail in the pad or controller with a completed repair form. The repair form can be found on the Energia Medical website. We will repair at no cost all warranty claims and ship it back to the customer.

Once a pad or controller is out of warranty, prices will vary. You'll be given a quote.



LIGHT THERAPY PAD QUESTIONS

How frequently can the pads be used?

1-2 times per day, 2-3 hours apart, minimum of 3 times per week.

What do the Light Therapy pads feel like?

A slightly warm, comforting feeling. The pads operate near body temperature. There should be no discomfort.

How come some of the lights seem to be on?

You can see red lights, but you can't see infrared lights. It might not look like they are on, but they are actually on. If you took your cell phone and looked at the pads through the camera, you'll actually be able to see the infrared lights on.

Are some of the pads more flexible than others?

Our pads are made of fabric and silicone. Along the width of our pads, they are flexible. All the pads come with multiple Velcro straps to help fit the body.

How does Light Therapy impact Acne?

Shining blue light onto acne-prone skin can kill the bacteria and clear up blemishes.

How does Light Therapy reduce wrinkles in skin?

Red light acts on cells in the skin known as fibroblasts, which paly a role in production of collagen, a protein that makes up a large part of connective tissue and helps the skin to recover when it is harmed.

ABOUT THE AUTHOR

We are always happy to answer your questions or discuss how Light Therapy might help you.

ROB BERMAN

Rob is a Partner at Energia Medical, LLC whose mission is to bring new and innovative light therapy, laser, and other energy based products to healthcare practitioners and consumers in the United States. Rob has written more than 10 ebooks on light therapy and lasers. He has published over 25 articles in magazines about light therapy, lasers, and marketing/management. He has an MBA in Marketing from Boston University.

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