Introduction to Laser Therapy

LightForce® Therapy Lasers

Photobiomodulation Therapy (PBM)

You may have heard the terms "Cold Laser" or "Low-Level Laser Therapy (LLLT)" before. In general, such terms refer to "treatment using irradiation with light of low power intensity so that the effects are a response to the light and not due to heat."[1] Many of the terms used to commonly describe this process do not ideally reflect the mechanisms of action involved. They also don't adequately distinguish this type of therapy from the other laser-based therapies that rely on heating tissue to achieve an effect. This lack of clarity has led to significant confusion and a need for better nomenclature.

In September 2014, the North American Association for Light Therapy (NAALT) and the World Association for Laser Therapy (WALT) convened to discuss this issue, and as a result of their efforts, the term "Photobiomodulation Therapy" was added to the MeSH database. This term more accurately reflects the process and better distinguishes it "from the popular use of light-based devices for simple heating of tissues…or other applications of light energy that rely on thermal effects for all or part of their mechanism of action."[2]

Did You Know?

150+ That laser therapy is the modality of choice in professional and collegiate athletics? LightForce Therapy Lasers are utilized by over 150 professional and collegiate teams.

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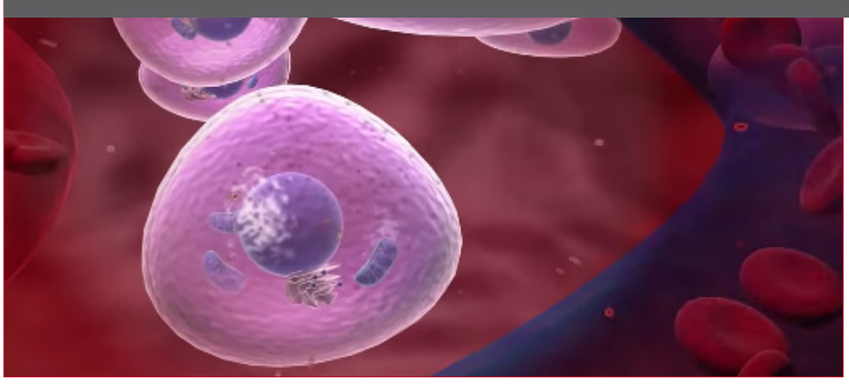
What is Photobiomodulation Therapy?

Photobiomodulation therapy is defined as a form of light therapy that utilizes non-ionizing light sources, including lasers, light emitting diodes, and/or broadband light, in the visible (400 – 700 nm) and near-infrared (700 – 1100 nm) electromagnetic spectrum. It is a nonthermal process involving endogenous chromophores eliciting photophysical (i.e., linear and nonlinear) and photochemical events at various biological scales. This process results in beneficial therapeutic outcomes including but not limited to the alleviation of pain or inflammation, immunomodulation, and promotion of wound healing and tissue regeneration.[1]
The term photobiomodulation (PBM) therapy is now being used by researchers and practitioners instead of terms such as low level laser therapy (LLLT), cold laser, or laser therapy.[2]

The fundamental principles that underpin photobiomodulation (PBM) therapy, as currently understood in the scientific literature, are relatively straightforward. There is consensus that the application of a therapeutic dose of light to impaired or dysfunctional tissue leads to a cellular response mediated by mitochondrial mechanisms that reduce pain and inflammation and speed healing.[3]

The primary target (chromophore) for the process is the cytochrome c complex which is found in the inner membrane of the cell mitochondria. Cytochrome c is a vital component of the electron transport chain that drives cellular metabolism. As light is absorbed, cytochrome c is stimulated, leading to increased production of adenosine triphosphate (ATP), the molecule that facilitates energy transfer within the cell. In addition to ATP, laser stimulation also produces free nitric oxide and reactive oxygen species. Nitric oxide is a powerful vasodilator and an important cellular signaling molecule involved in many physiological processes. Reactive oxygen species have been shown to affect many important physiological signaling pathways including the inflammatory response.
In concert, the production of these signaling molecules has been shown to induce growth factor production, to increase cell proliferation and motility, and to promote extracellular matrix deposition and pro-survival pathways. Outside the cell, nitric oxide signaling drives vasodilation which improves microcirculation in the damaged tissue, delivering oxygen, vital sugars, proteins, and salts while removing wastes.[4]

See Photobiomodulation in Action



Watch this short animation to see how laser therapy targets damaged areas located deep within tissue to accelerate healing on a cellular level.

http://www.LiteCureInfo.com/HowPBMWorks

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LASERS IN SURGERY AND MEDICINE
Volume 47, Issue S26, pp. 44-45

doi: 10.1002/lsm.22351
Presentation Abstract
LiteCure® Laser Used in Study

Lasers in Surgery and Medicine

Effects of Laser On Endurance of the Rotator Cuff Muscles

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Presented at Laser 2015, the annual meeting of ASLMS

Background: The purpose of this study was to measure the effects of therapeutic laser (TL) on endurance of the shoulder external rotator muscle group during isokinetic dynamometry.

Study: Twenty healthy subjects participated in a double blind, cross-over design study, approved by the University of Tennessee at Chattanooga IRB. Informed consent was obtained from all subjects meeting the inclusion criteria. Subjects were trained and tested using the BIODEX System 3 Pro isokinetic dynamometer. The protocol consisted of a 5 minute warm-up on an upper extremity ergometer, followed by testing. Subjects had their dominant arm positioned at 30 degrees of shoulder horizontal adduction and 45 degrees of shoulder abduction, and performed 21 repetitions of external rotation in each of 12 sets, at 60 degrees/second, with standardized rest between sets. Subjects were acclimated to the isokinetic testing to eliminate a possible training effect prior to being entered into the treatment portion of the study. In the last two sessions, subjects randomly received TL or placebo laser (PL). Laser, 810 nm and 980 nm with a combined output power of 10 watts, was applied immediately prior to testing to the infraspinatus and teres minor muscles at an average fluence of 10 J/cm^2 (1.8 W/cm^2).

Results: A factorial ANOVA was performed to compare TL to PL at all 12 sets for peak torque, peak torque normalized by body weight, average torque, total work, and power. In sets 1–9 there was no statistically significant difference (NSSD) between any of the variables. In set 10 results varied from NSSD to $p < 0.01$ depending on the variable. In sets 11 and 12 TL treated subjects displayed greater endurance for all variables ($p < 0.001$).

Conclusion: Laser increased endurance of the shoulder external rotators in the latter stages of endurance exercise.

SEOTERRA/THINKSTOCK

Laser focus

What to know about adding photobiomodulation therapy to your practice.

BY LUIS H. DE TABOADA, MSEE, AND WENDY S. FRYDRYCH, PHD

ARE YOU CONFUSED BY MANUFACTURERS' CLAIMS ABOUT the best laser therapy devices? Are you skeptical of light therapy as a treatment modality? Your confusion is understandable—there have been mixed messages and unrealized claims about various medical light therapy devices. A look at the research will help you better understand light therapy.

Photobiomodulation

Shortly after the laser was invented in 1960, Endre Mester noticed that applying laser light to the backs of shaven mice caused their hair to grow back more quickly than in mice not exposed to laser.[1] He also observed that skin incisions appeared to heal faster on laser-treated animals. These findings initiated research to understand the effects of light on living cells and the mechanisms involved.

Hundreds of scientific studies have been conducted *in vitro* to characterize the dosages needed to achieve a cellular response with light.[2] These studies give a baseline for the amount of laser energy needed to achieve results at the cellular level.

Over the past 30 years, researchers have come to accept the term "photobiomodulation" to describe the process by which light stimulates or inhibits cell function. Many terms have been used to describe the therapeutic use of light devices.[3] One of the more frequently used terms has been low-level laser therapy (LLLT); however, devices that use light-emitting diodes (LEDs) are not included in the term even though an LED-based device may be able to deliver an LLLT response.

There was reluctance to adopt the term photobiomodulation because it was not a MeSH (Medical Subject Heading) search term. MeSH is contained in the National Library of Medicine's controlled vocabulary, which consists of terms that are used to index articles in the world's leading biomedical journals.[4]

In 2014, a consensus nomenclature meeting was held and subsequently the term "photobiomodulation therapy" was chosen to be added to the MeSH database as an indexing term.[3,5] Photobiomodulation therapy is defined as the therapeutic use of light, absorbed by chromophores found in the body, to

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trigger nonthermal, non-harmful biological reactions that result in beneficial therapeutic outcomes.[5]

Protocols for use

Appropriate dose selection is critical to the safety and effectiveness of photobiomodulation therapy. To get clinical results, sufficient light must reach the target tissue. There are various parameters to consider when calculating dose, including power density or irradiance, treatment time, wavelength, pulsing, and application technique.[6]

The therapeutic dose is measured in joules (J) delivered per square inch of surface area.[3] Much of the research conducted in the field has involved cell or small animal studies in which low power and small beam size were sufficient to treat the cells or muscles.

A recent study published by Anders, et al., reported the successful translation of *in vitro* results obtained in the petri dish by using those parameters to treat surgically repaired peripheral nerves *in vivo*.[7] The researchers found an optimal dose for nerve repair *in vitro* to be 97.5 percent less than that required when delivered on the surface of the skin.

Power and density

The FDA regulates lasers for medical use. Unlike surgical medical lasers, which use precisely focused light to treat or remove tissue, therapy lasers do not focus light and do not harm tissue. Therapy lasers typically have a lower power density or irradiance (i.e., the power is spread out over a larger area). The FDA designates these lasers as biostimulation lasers.[8]

The FDA also classifies lasers by their output power. Early FDA-approved therapy lasers were Class 3b lasers (maximum 0.5 watts). In 2003, the FDA approved the first Class 4 laser (greater than 0.5 watts) for the relief of minor muscle and joint pain. The higher powered lasers make it possible to not only apply the benefits of photobiomodulation superficially, but also to treat a greatly expanded range of conditions by delivering a clinically effective dose to target areas below the skin (e.g., hamstring muscles), and in a shorter period of time.[9]

Optimal wavelength

For light to produce beneficial therapeutic outcomes, it must be delivered at an appropriate wavelength and of sufficient intensity to the target tissue. One range of wavelengths has been referred to as the "optical window" for photobiomodulation therapy, where there is minimal absorption from different substances (e.g., water, hemoglobin, and melanin).

The current understanding is that light in the visible range (600 to 800 nanometers) is absorbed more by hemoglobin and melanin, so these visible wavelengths are better suited for superficial areas. To effectively treat deeper musculoskeletal conditions, therapy lasers should be in the near-infrared range (800 to 1,000 nanometers).

Understanding pulsed laser

Photobiomodulation therapy can be delivered in either continuous wave (CW) or pulsed mode. Typically there are two types of pulsing used in therapy lasers—superpulsed or gated.[10]

Various claims suggest the ideal pulsing frequencies; however, there are no published reports on the advantages of pulsed light in reducing pain and inflammation in humans. A review by Hashmi, et al., that looked at CW versus pulsed light concluded that more evidence is needed.

When the laser is used in gated mode, it is cycling its CW power on and off and consequently delivering a lower average output power. In general, the use of pulsing decreases light delivered to the target. On the other hand, in instances where there is a concern about heating tissue, such as in treatment of the brain, pulsing can be used to further control the output power of the laser. In a recent paper that looked at human cadaver brain tissue, there were no differences observed in light penetration between pulsed and CW laser light.[11]

Implementation and application

As with any complicated technology, even if you don't understand exactly how it works, you should have a basic grasp of the mechanisms involved. If you are using a laser that has preprogrammed protocols, understand the differences between treatments when your patient's skin color is light or dark, or their body size is small or large. For example, if the laser has a mix of 980 and 810 nanometer light for treatment of light skin, it may switch to only 980 nanometer light to treat dark skin. Protocols for larger bodies will deliver a larger dose compared to treatment of a patient with a smaller build.

Additionally, a significant amount of light is lost when you operate in non-contact mode due to reflection from skin and hair surfaces. Therefore, it is advantageous to treat on contact, and it is especially helpful if you are able to compress the tissue (and blood) to deliver even more light to deeper tissues.

A bright future

Scientifically sound research is advancing in the field of photobiomodulation, and light-based devices can be used to address a variety of medical issues.[12] When a comprehensive treatment approach is used, laser therapy is an effective modality.[13-17] Lasers are being used with great success in chiropractic, veterinary medicine, professional sports, and rehabilitation clinics around the world.[18,19] CE

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TOP 7 Biological Effects of Laser Therapy

Pain Reduction

Photobomodulation has various mechanisms that promote pain relief[1]. Some of these include increasing serotonin levels which impact nerve transmission and mood[2], increased beta endorphins which decrease pain at receptor sites[3], and increased nitric oxide levels which normalize impulse transmission in nerve cells[4]. Pain inducing bradykinin levels are also reduced by laser therapy[5].

Anti-Inflammation

Generally, injured tissue responds to laser therapy by influencing mitochondrial metabolism and enhancing ATP production[11]. Specifically, it helps stimulate vasodilation[12] and improve temperature modulation[13] while enhancing lymphocyte responses[12] in the injured area. Other mechanisms include reduction of Interleukin-1 production which impacts the inflammatory cascade[13] and stabilization of the cellular membranes[14]. Additionally, free radicals are mitigated with enhanced levels of Superoxide Dismutase (SOD)[14]. These changes all contribute to improve the body's ability to move through the inflammatory phase of healing more quickly.

Accelerated Tissue Repair and Cell Growth

Wound healing has been the area where most traditional laser therapeutic studies have focused. Research supports that tissue repair is enhanced by laser's ability to enhance leukocyte Infiltration[15], increase macrophage activity[16], and increase neovascularization[17]. Photobiomodulation also increases fibroblast proliferation[18], keratinocyte proliferation[22], and early epithelialization[19]. While these factors help tissue repair, new tissue growth is aided by increased levels of growth factor[20] which leads to greater wound tensile strength[21]. The improved oxidative environment created by these changes helps improve the quality of scar tissue and reduces the number of adhesions[23].

Improved Vascular Activity

Laser light not only increases the perfusion of blood to injured tissue by increasing the amount of free NO in the area which causes vasodilatation and enhances oxygenation[24] but it also aides in the formation of new capillaries via Neovascularization[25]. This hastens the healing process and helps with rapid wound closure.

Analgesic Effect/ Trigger Points and Acupuncture Points

Laser therapy helps decrease pain at muscle trigger and acupuncture points. Same day reduction of pain from laser treatment can be related to laser's ability to block the depolarization of A delta and C-Fiber afferent nerves[26] which slows the afferent signal transmission from peripheral nociceptors[27]. Prolonged relief from photobiomodulation can be explained by normalizing resting membrane potentials in nerve cells. Injury or prolonged trauma can impair the resting potential of nerve cells leading to a lower threshold for pain. Laser treatment has shown to increase the resting potential closer to the norm of ~70Mv[28].

Improved Nerve Function/ Healing

Several factors can impact injured nerves ability to heal. Slow recovery of function to damaged nerve tissue may result in numbness and impaired sensation in the limbs. Laser therapy accelerates nerve cell regeneration via increased axonal sprouting and nerve cell regeneration[29]. Several studies have shown that laser's positive effects on nerve repair can have a dramatic effect on pain relief[29].

What Role Does Power Play in Dosing?

There are many different types veterinary laser therapy devices. Class IV, Class IIIB, Class III, and even Class II lasers may be used for therapy. One parameter that separates these lasers from one another is its available power. What role does power play in achieving clinical results for pet pain?

Power impacts the functional depth of penetration of the laser light. The combination of treatment time and power determines the therapeutic dose of energy that is received by tissues at depth. If a therapy laser has low power, the total number of Joules it can deliver to relevant depths for treating most musculoskeletal conditions in a realistic treatment time is very low.

For example, to treat the lumbar spine for arthritis with a treatment area of 300 cm^2, since it is a deep condition, an effective target dose of 10 Joules/cm^2 is 3,000 Joules (300cm^2 x 10 J/cm^2 = 3,000 J). Below is an example of how long it would take to deliver 3,000 J of therapeutic energy with 4 different lasers of varying power capabilities:

- 5mW Laser = 10,000 minutes (166.7 hours)
- 500mW Laser = 100 minutes (1 hour 40 min.)
- 3W Laser = 16.7 minutes
- 10W Laser = 5 minutes

Therefore, treating with a low-powered laser will deliver less than the identified therapeutic dose of 3,000 Joules simply because the treatment time is unrealistic. LightForce Therapy lasers enable you to deliver power from 500mW up to 15 Watts giving you the flexibility you need to give every condition the appropriate therapeutic dose. Understand the difference between class IV laser therapy and other therapy devices before you invest.

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8. Reduction in Interkeukin-1 (Albertini et al 2005)
9. Stabilization of the Cellular Membrane (Greco et al 2001)
10. Acceleration of Leukocytic Activity (Greguss et al 1978)
11. Increase Prostaglandin Synthesis (Abiko et al 2000; Harada et al 2004)
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Clinicians are using laser therapy more often than ever before to help reduce pain and inflammation related to many common conditions.

Thousands of doctors and patients have experienced the power of laser therapy and are familiar with its therapeutic effects, but for those who aren't, here are 5 things everyone should know about it:

1 It reduces pain and inflammation without side effects

Laser therapy uses a process called photobiomodulation. Photons enter the tissue and interact with the cytochrome c complex within mitochondria. This interaction triggers a biological cascade of events that leads to an increase in cellular metabolism and a decrease in both pain and inflammation.

Unlike medications, laser therapy reduces pain without undesirable side effects.

It is also important to point out that patients report long-lasting pain relief. While the number of treatments required may vary depending on the acuity of the condition, many patients experience lasting relief after only a couple treatments.

2 Can be used for acute and chronic conditions

When treating acute conditions with laser therapy, it is particularly effective when it is administered as soon as possible following injury (assuming there is no active hemorrhaging). The faster the inflammation is reduced and the healing process can begin, the better. In the case of acute injury, laser therapy helps restore the body to normal function quicker.

With chronic conditions, laser therapy is used most often to help combat persistent pain and inflammation. The new LightForce EXP 25-watt laser is being used by clinicians to quickly reduce inflammation in patients suffering from chronic pain. This therapy laser is especially well-suited for treating chronic conditions because it enables clinicians to treat a wider area of interest while still delivering therapeutically relevant dosages.

3 Treatments can be customized for each situation

Lasers that have larger power ranges offer versatile treatment options. A laser that can be set to operate from 0.5 W all the

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4. Hamblin MR, Demidova TN. Mechanisms of low level light therapy. Proc. of SPIE. 2006; 6140: 612001-1-12.

way up to 25 W, allows the clinician flexibility to treat low and slow or at maximum output.

The availability of multiple treatment heads offers additional flexibility for the clinician. The LightForce Empower™ Delivery System, for example, features 5 different treatment heads, each designed to facilitate optimal delivery in different scenarios. It is important to have several delivery options to ensure the delivery method is appropriately matched to the situation. For instance, when treating over bony prominences, an off-contact treatment method is advisable. However, when treating deep-tissue structures, such as a hamstring, an on-contact massage ball attachment is best to reduce reflection and scattering, and also encourage deeper penetration by displacing excess fluids. Different sized treatment heads can also be advantageous for administering treatments that require varying levels of precision.

Advanced software is another tool that helps with treatment customization. Influence Technology™ allows clinicians to build custom treatments by selecting body region, condition, and specific patient characteristics. Touchscreens and intuitive selection processes make delivering the right dose easy. For even more customization, clinicians can also formulate their own protocols by entering a couple key components with LightForce's newest software feature, Perfect Protocol™.

4 Treatments Feel Good

One common question related to laser therapy is, "What does it feel like?" Depending on the laser, it can create little to no sensation or it can create a gentle, soothing warmth. Many patients receiving LightForce Laser Therapy treatments report enjoying the experience, especially when a massage-ball treatment head is used to deliver what is often referred to as a "laser massage."

Patients receiving treatments with higher-power lasers also frequently report a rapid decrease in pain. For someone suffering from chronic pain, this effect can be particularly pronounced.

5 Treatments Are Fast

With LightForce lasers, treatments are quick, usually 5-10 minutes depending on the size, depth, and acuteness of the condition being treated. High-power lasers are able to deliver a lot of energy in a small amount of time, so therapeutic dosages are achieved quickly. For people with packed schedules, patients and clinicians alike, fast and effective treatments are a must.

"Throughout my clinical experience with basketball and other sports during over 25 years in the Olympic movement, the deep tissue benefits of the LightForce laser are unparalleled. It clearly is the best physical modality that I have used in the injury management of athletes."

Ed Ryan, ATC
Head Trainer 2008 USA Basketball
Former Director of Sports Medicine, US Olympic Committee

Webinar: Laser for Beginners

Introduction to Laser Therapy & Treating Common Conditions

In this 60-minute webinar, presented by Perry Nickelston, DC, NKT, FMS, SFMA, learn about the basics of laser therapy and common conditions that respond well.

Watch it now at: http://www.litecureinfo.com/IntroToLaserTherapyAndTreatingCommonConditions

The Keys To Therapeutic Success - It's Not a Class War

- **Minimize Light Loss Due to Reflection**
- **Select the Appropriate Wavelength**
- **Deliver Sufficient Power**
- **Minimize Absorption by Molecules not Involved in Photobiomodulation**

What do the laser classifications actually mean?

Class IIIb: IIIb lasers are hazardous to the eye when viewed directly. For visible and infrared devices, emission power is limited to 0.5W. Protective eyewear, key switches, and safety interlocks are required safety features.

Class IV: Class IV includes all lasers that emit powers in excess of the IIIB limitation of one half of one-watt. Eye protection is needed to limit both direct and diffuse reflected exposure. Key switches and safety interlocks are also required safety features. The majority of scientific, industrial, military, and surgical lasers are in this category.

Power: Class IIIb lasers are limited to a maximum power of a 0.5 Watt. LightForce therapy lasers enable the user to select from powers of 0.5W up to 25 Watts. Increased power enables the clinician to treat a larger area in a shorter period of time, thus allowing an efficient delivery of a therapeutic dose to target tissues.

Treatment Strategies: Due to their power differences, Class IIIb and Class IV laser treatment strategies vary. Class IIIb lasers are often used to treat single points or a group of small points and are held in one place for the duration of the treatment time at each point. When treating with a Class IV therapy laser, the clinician may treat a much larger area, (ex. 300 cm^2 for the anatomical area of an average lower back); the treatment head is moved throughout the duration of the treatment to ensure a therapeutic dose of energy is being delivered evenly to the entire target area and its associated tissues. Class IV laser therapy can also be administered using contact or non-contact treatment heads.

Dosing Strategies: Relative to Class IV lasers, Class IIIb lasers deliver a smaller dose of Joules to a smaller area of tissue. Typically treatments are confined to discrete points. A potential weakness of this technique is the variability of clinical results due to the exact placement of the treatment points. The foundation of Class IV laser therapy is based on the delivery of a therapeutic dose of Joules to a large area of target tissue, reducing variability in outcomes. For example, on the lumbar spine, to deliver an effective dose for arthritis of 10 Joules/cm^2, a Class IV therapy laser set at 10 Watts in continuous wave would deliver 6,000 Joules of energy in a 10 minute treatment session. It would take a 0.5 Watt Class IIIb laser 200 minutes to deliver the same dose.

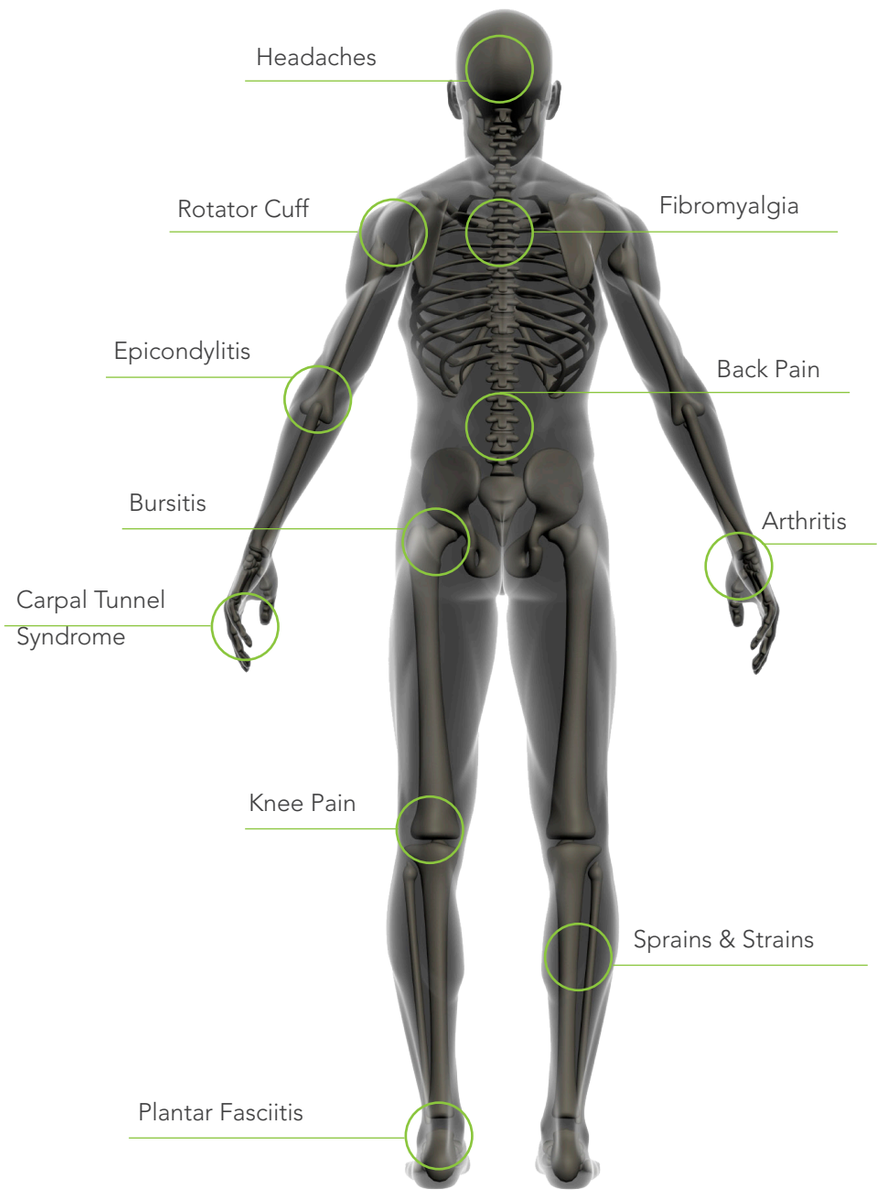
Wavelengths: Different therapeutic lasers often have different treatment wavelengths ranging from 700 nm to 980 nm. All wavelengths in this therapeutic window target the same photoactive chromophores. The main difference between wavelengths is the absorption of the light by tissue components such as water and melanin.

What Can Laser Therapy Treat?

Laser Therapy: A Powerful Adjunct

Due to the drug-free, non-invasive nature of laser therapy it is often used as a powerful adjunct to existing treatment protocols. It can be used before, during, or after surgical procedures, alongside pharmacological management of certain conditions, and in conjunction with rehabilitation programs. Since laser therapy has a broad spectrum of physiological effects, mainly surrounding the reduction of pain and inflammation and increasing the speed of healing, it is a versatile tool as part of a multi-modal approach to treating MANY common conditions in human medicine.

Common Conditons That Benefit from Laser Therapy



- Acute Pain
- Arthritis
- Bursitis
- Carpal Tunnel Syndrome
- Chronic Pain
- Edema
- Epicondylitis
- Fibromyalgia
- Fractures
- Geriatric Conditions
- Neuropathy
- Orthopedic Disorders
- Plantar Fasciitis
- Post Surgical Pain Relief
- Rotator Cuff
- Sports Medicine
- Sprains & Strains
- And More...

5 Things to Ask Before You Buy a Therapy Laser

If you are thinking of adding Class IV laser therapy to your practice there are a few questions you should ask before you make a purchase. You should be purchasing more than a laser for pain – but a total solution for your practice. Here are 5 questions you should ask a your sales representative before you buy:

1 Implementation: Many companies say they provide implementation solutions for your practice, but take the time to dig deeper to understand the details of the support materials they provide. Does the implementation program help educate the staff and clients alike? What components are really included in the program? Some companies offer comprehensive marketing toolkits that include both staff and patient education tools. The more comprehensive toolkits should include client education videos, presentations, ads, banners, training videos, promotional materials for the office, website resources and marketing tips.

2 Downtime: When adding any type of capital equipment to your practice there is always the possibility that the unit will require repair or maintenance. Ask your sales representative what happens if your laser therapy equipment experiences a failure. Will they send you a loaner unit? How long will it take to repair your unit? The answer you should get is that the company will deliver a loaner system to you overnight to ensure you don't go a day without your therapy laser.

3 On-Going Laser Therapy Education: Ask about what kind of educational opportunities are available after you purchase your laser therapy equipment. Some companies offer on-going seminars, webinars, users' conferences, and special CE events. Also ask if the company you plan to work with is engaged in scientific studies – is the company continuing to educate itself too? The strong companies are constantly striving to learn and teach.

4 Clinical Support: If a patient comes in and you are not sure how to approach their condition is there someone at the laser therapy company you can talk to? Clinical support is a must-have. Ask about who the clinical experts are on staff that will answer your questions – what are their credentials?

5 Customer Care: Is there a dedicated customer care department? How long does it take for them to get back to you? When you are having a problem the last thing you want to do is wait. Go with a company who prides itself on outstanding customer care after the sale.

Class IV laser therapy can have a real impact on your patients and your practice. Be sure you are selecting a company who will be your laser therapy partner for the long-term.

Did You Know?

LightForce Therapy Lasers are manufactured in the USA?

lightforce® therapy lasers

Why Choose LightForce?

Your Innovation Partner

Outcomes
Backed by scientific evidence and on-going research you can achieve the best results with a LightForce Therapy Laser. Achieve results on acute and chronic conditions alike.

Technology
Leverage the most advanced technology in laser therapy. Advanced dosing solutions, patented delivery system, and commitment to innovation.

Partnership
You don't just purchase a product with LightForce - you gain a clinical and business partner.

ROI
Realize ROI with the LightForce Compass implementation program.

Education
Attend live events or monthly webinars for the latest applications.

Customer Support
Never spend a day without your most versatile tool. Customer support and a loaner program ensures you are always up-and-running.

Ebook Provided Courtesy of

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therapy lasers

For more information about how a therapy laser can transform your clinic call 877-627-3858 to set up your in-office demonstration.

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