



Developing Chronic Pain Treatment Programs With NIR Therapy (Pt. 1)

ROB BERMAN, MBA

Whenever a person experiences prolonged pain for whatever reason, their immediate need is to seek medical care to get that pain crased or reduced as quickly as possible. So, it is not surprising that “[p]ain is the most common reason for physician consultation in the United States.”¹ But it is surprising that so many people across America experience chronic pain.

“In 2016, an estimated 20.4% of U.S. adults (50.0 million) had chronic pain and 8.0% of U.S. adults (19.6 million) had high-impact chronic pain, with higher prevalence associated with advancing age.”² An earlier Internet-based survey from 2010 found: “Primary chronic pain was most commonly attributed to lower back pain, followed by osteoarthritis pain.”³

Chronic pain continues to be a prevalent and expensive problem on a national level. A study done in 2011 found, “Chronic pain contributes to an estimated \$560 billion each year in direct medical costs, lost productivity, and disability programs.”⁴ In today’s dollars, that substantial figure would be even higher.

Not only is chronic pain having a large negative effect on the U.S. financially; it is also having a negative social impact. “Pain is a component of many chronic conditions, and chronic pain is emerging as a health concern on its own, with negative consequences to individual persons, their families, and society as a whole.”⁵ Chronic pain has been connected to “restrictions in mobility and daily activities, dependence on opioids, anxiety and depression, and poor perceived health or reduced quality of life.”⁶

A Great Opportunity for DCs

When it comes to treating chronic pain, specifically chronic musculoskeletal pain, modern medicine’s standard procedures are fraught with a wide spectrum of side effects, possible complications and overall risks. “Currently accepted therapies consist of non-steroidal anti-inflammatory drugs, steroid injections, opiate pain medications and surgery, each of which carries their own specific risk profiles.”⁷ But more and more people suffering from chronic musculoskeletal pain are becoming wary of these treatments advocated by allopathic medicine, especially taking opiates or

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undergoing surgery. They are opting instead for a more natural and non-invasive approach. And this presents a great opportunity for chiropractors to offer treatment programs for the chronic pain patient.

The Value of a Multi-disciplinary Approach

In order to stand out above the increasing competition, and at the same time provide faster and more effective pain relief to patients, more and more chiropractic clinics are taking a multidisciplinary, comprehensive approach to treating chronic pain, integrating several modalities into one program.

Many years ago, Mark Shelley, DC DACNB, founder and director of Olympic Spine and Sports Therapy in Edmonds, Wash., realized – during his search for effective treatment for his *own* injuries

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– that in order to recover to the fullest degree possible, he needed the expertise of several healing modalities. As a result of his success with this

approach, he developed one of the first multidisciplinary injury rehabilitation clinics in the greater Puget Sound area.

His clinic currently combines chiropractic care, spinal decompression, massage therapy, physical rehabilitation, laser therapy, and NIR (invisible near-infrared and visible red light) therapy to achieve faster and more complete results for his patients, most of whom have peripheral neuropathy and chronic spine conditions.

Brian McKay, DC, owner of Core Health in Darien, Conn., has a similar story. “I had a bad back for probably two years. Chiropractic alone was not enough to get it better. So I ended up seeking out other therapies. I learned about lasers; NIR therapy; EMS (electrical muscle stimulation); and ATM2 (Active Therapeutic Movement). I started to find what works. After a while, I did start getting better by using these additional therapies.”

Today, Dr. McKay’s clinic utilizes all of these therapies in addition to chiropractic care. His clinic also offers massage, physical therapy, and spinal decompression to give his patients “the most thorough non-surgical back pain program possible.”

NIR Light Therapy

Although you may not be able to – or wish – to put as many alternative healing modalities on your treatment menu as Dr. Shelley or Dr.

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McKay, there is one modality both doctors utilize that will serve as a strong foundation for any chronic pain program: NIR (near infra-

red /red light) therapy, also known as low-level light therapy ("LLLT"), both the laser and LED (light-emitting diode) variety. If

you had to choose only one alternative healing modality to introduce into your practice that would bring the fastest, most effective and most cost-effective results to your chronic pain patients, NIR therapy might be your best choice.

In short, LLLT "is a rapidly growing alternative approach to many medical conditions that require relief from pain and inflammation, stimulation of healing, and prevention of tissue death after injury or infarction."⁸

Dr. Shelley describes NIR/LLLT therapy as "a powerful tool" and "one of the treatments that I would say is most beneficial. If it's neuromusculoskeletal pain, then NIR is one of my go-to's." He is a firm believer in NIR therapy, revealing, "Almost every night I use NIR therapy for my own issues. I have my own unit at home, and it gets used all the time."

Strong Scientific Evidence

Dr. McKay brought NIR therapy into his clinic because "There's a lot of science behind it. And that is what attracted me. The science really made sense. It was easy to do, easy to explain, and easy to implement. It was a good part to add to my program."

According to clinical research, "For over forty



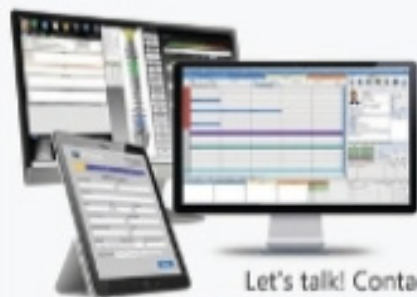
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years, low level laser (light) therapy (LLLT) and LED (light emitting diode) therapy (also known as photobiomodulation) has been

shown to reduce inflammation and edema, induce analgesia, and promote healing in a range of musculoskeletal pathologies.”⁹

And furthermore, “According to the more than 4,000 studies on pub.med.gov, it can be concluded that the majority of laboratory and clinical studies have demonstrated that LLLT has a positive effect on acute and chronic musculoskeletal pain.”¹⁰

Medical-grade NIR therapy devices have received FDA-clearances for temporarily increasing local circulation; and for the temporary relief of pain, stiffness and muscle spasms.

Triggers Beneficial Chemical Changes

NIR therapy produces a beneficial photochemical reaction within the cells of the body in a process called “photobiomodulation,” or “PBM” for short. Simply put, the light induces a cascade of biochemical changes within the cells, similar to how photosynthesis operates in plants.

“Although the exact mechanism of its effect is still unknown, it seems beyond dispute that LLLT induces a variety of stimulating processes at the cellular level affecting cell repair mechanisms, the vascular system and lymphatic system.”¹¹

Like chiropractic, NIR therapy supports the body’s innate healing abilities. “Low doses of light have demonstrated the ability to heal skin, nerves, tendons, cartilage and bones.”¹²



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But in order to be effective, NIR therapy devices must generate light that has a very specific range of intensity and wavelengths. "The

wavelengths of light used for LLLT fall into an 'optical window' at red and NIR wavelengths (600–1070 nm)."¹³ This is because

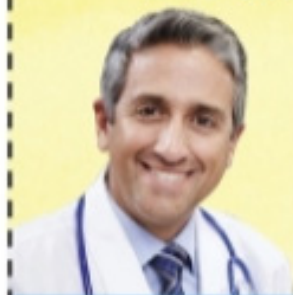
penetration of skin and soft and hard tissues is maximized in this range.

NIR therapy can be used on every external area of the body except the eyes, has no known negative side effects, and generally no contraindications, except for use over a developing fetus or an active cancer. However, under a doctor's supervision, LLLT can provide palliative relief for cancer patients. ■

EDITOR'S NOTE: Part 2 of this article discusses NIR therapy for pain, acute and chronic conditions, and tips for maximizing its therapeutic and practice-boosting value. [Click here](#) for complete references supporting the citations in Pt. 1.

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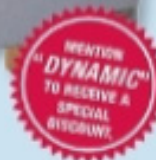
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Developing Chronic Pain Treatment Programs With NIR Therapy (Pt. 2)

By Rob Berman

Editor's Note: [Part 1 of this article](#) appeared as a digital exclusive in the September issue.

NIR Therapy for Pain

A 2015 study by Michael R. Hamblin and James Carroll (two pioneers in low-level laser therapy and photobiomodulation research), with co-authors Roberta T. Chow and Howard B. Cotler, concluded: "LLLT is beneficial for pain relief and can accelerate the body's ability to heal itself. LLLT has a long history and strong basic science evidence, which supports its use in pain management."¹⁴ More specifically, they determined that laser therapy can effectively treat all causes of musculoskeletal pain:

"The overall positive short term clinical studies in addition to strong laboratory studies should give the clinical confidence that LLLT may be beneficial for many individuals suffering from musculoskeletal pain, regardless of the cause."¹⁵

Like any effective therapy, NIR / LLLT can produce benefits that are short, medium and long-term. In the short-term, pain relief may occur within minutes of applying NIR therapy, while in the medium-term, there can be a decrease in inflammation and a reduction of pain within hours to days.

Results can last far longer: "The long term effects of LLLT occur within a week or two and can last for months and sometimes years as a result of improved tissue healing."¹⁶ For example, "A review of 16 randomized clinical trials including a total of 820 patients found that LLLT reduces acute neck pain immediately after treatment, and up to 22 weeks after completion of treatment in patients with chronic neck pain." Dr. Shelley [introduced in Pt. 1] reports that the majority of his patients realize improvement within the first two weeks.¹⁷

NIR Therapy for Acute and Chronic Conditions

Although they recommended that further randomized, controlled studies be completed to confirm their positive assessment, a German study published in November 2017 concluded: "LLLT shows potential as an effective, noninvasive, safe and cost-efficient means to treat and prevent a variety of acute and chronic musculoskeletal conditions."¹⁸

An extensive list of chronic and acute conditions respond well to NIR therapy, allowing your practice to extend into niche market areas, such as peripheral neuropathy, fibromyalgia, carpal tunnel syndrome, and plantar fasciitis:

"Acute orthopedic conditions such as sprains, strains, post-surgical pain, a whiplash injury, muscular back pain, cervical or lumbar radiculopathy, tendinitis, and chronic conditions such as osteoarthritis, rheumatoid arthritis, frozen shoulder, neck and back pain, epicondylitis, carpal tunnel syndrome, tendinopathy, fibromyalgia, plantar fasciitis, post tibial fracture surgery and chronic regional pain syndrome are amenable to LLLT ... Neuropathic pain conditions can also be treated, such as post herpetic neuralgia, trigeminal neuralgia, and diabetic neuropathy."¹⁹

Multiple pain issues can be treated simultaneously using several pads during a single treatment session. With

its ability to effectively reduce pain and discomfort in so many conditions, NIR therapy should be considered an essential part of any chronic pain program.

Keys to Success

1. *Tailor Your Program:* When it comes to treating chronic pain, treatment should always be based on individual patient need. "We tailor the therapy to what is most beneficial for the patient," says Dr. Shelley. "We get a feel for what they are looking for and what they want."

2. *Create a Corresponding In-Home Program:* Dr. McKay [also introduced in Pt. 1] brought NIR therapy into his clinic specifically to give his patients a way at home to advance their healing progress between office visits. Patients self-administer NIR therapy daily using systems purchased from Dr. McKay for in-home use. They also have an exercise routine.

He has found that "homework" helps his patients take a vested interest in their own healing. In-clinic, he will explain NIR therapy and instruct patients on how to use their system, but clinic visits are for adjustments and other therapies. Dr. McKay feels that NIR therapy preps the body for chiropractic adjustment, explaining that "if the patient's body is prepped, then I can do more for them during each clinic visit."

3. *Make Systems Easily Available for Purchase:* Drs. McKay and Shelley both sell NIR therapy systems to their patients. Although it is not standard procedure at Dr. Shelley's clinic, "In a percentage of cases I will recommend in-home purchase of an NIR Therapy system when it looks like the patient needs more than just in-clinic treatment." Make it easy and convenient for patients to acquire their own systems. This will not only benefit your patients, but provide an extra source of revenue for your clinic, as most manufacturers allow chiropractors to purchase systems at wholesale to resell to patients at a profit.

4. *Create a Streamlined Option for Lower- or Fixed-Income Patients:* When a patient cannot go forward with the prescribed therapy plan due to financial reasons, offer them a partial package option. Allow them to buy their own NIR therapy system, as well as receive guidance on diet and exercise, at a lower price point, with in-clinic adjustments if covered under their insurance.

Practice Pearls

NIR therapy has the potential to not only bring quick and effective pain relief to your chronic pain patients, but also substantial benefits to all your patients, while offering a fast ROI. You can start out with only a few NIR therapy pads and a controller for a modest purchase price that will make a big difference in your clinic.

The addition of NIR therapy to your treatment menu may allow you to greatly extend the list of conditions you treat, attract a greater range of patients, and provide more accelerated, enhanced and effective pain relief for acute and chronic conditions – a win-win for both you and your patients. Dr. Shelley reports that NIR therapy "has allowed us to expand and treat peripheral neuropathy effectively. And it has been really pivotal also in getting results for our difficult chronic spine cases." Dr. McKay succinctly sums it all up by stating that NIR therapy has brought "better results; happier patients."

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