



Revolutionizing Chiropractic Healing

Embracing Shockwave Technology in Pain Management

by Matt Diduro, DC

IN THE SHADOW OF THE OPIOID EPIDEMIC, we are tasked with reevaluating our approach to pain management. The good news? Shockwave technology is emerging as a beacon of hope, offering a method that is both effective and congruent with our body's innate healing processes: healing from above-down and inside-out.

Evolving Beyond Traditional Pain Solutions

The familiar avenues of medications, injections, and surgeries, while reliable, have their downsides, including the potential for addiction and unwanted side effects. As we have seen, opioids have become a national crisis. The CDC identified that a staggering 75.4% of drug overdose deaths in 2021 involved opioids, a tenfold increase from reported rates in 1999. While less addictive, injections and surgeries present their risks: potential complications, extended recovery times, and overwhelming medical costs. Moreover, they often provide only temporary relief without addressing the root causes, merely masking the pain while underlying issues persist. In this setting, shockwave technology enters the arena as a holistic and revolutionary approach.

The Potential of Shockwave Therapy in Practice

Initially devised for kidney stones, shockwave therapy has evolved. It

is a non-invasive way to jumpstart the body's repair mechanisms that administer energy waves into the body, initiating a biological process called mechanotransduction.

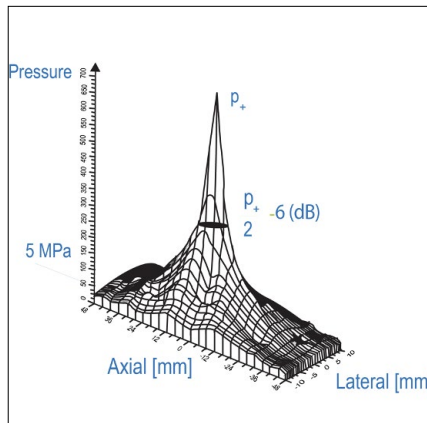


Figure 1

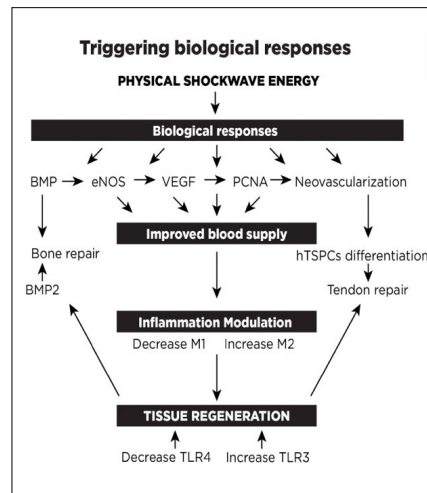


Figure 2

This method sparks the body's inherent repair systems — boosting blood flow,

speeding up cellular rejuvenation, activating and recruiting resident stem cells, and fostering new blood vessel growth — and also aids in modulating inflammation, a frequent pain source.

Addressing Inflammation Intel- ligently

As chiropractors, we recognize that while inflammation is a natural defensive response, it can become a barrier to healing if it persists. Effective inflammation management is thus crucial to facilitate the body's recovery and sustainably reduce pain.

Understanding the Spectrum of Shockwave Technology

It is essential to discern between the types of shockwave technologies— electrohydraulic, electromagnetic, and piezoelectric. Each has distinct benefits and applications, from broad coverage to focused treatment areas, which can significantly impact clinical outcomes.

Clarifying Misconceptions in Shockwave Therapy

True shockwave devices generate a high-pressure pulse, distinguishing them from radial devices that produce lower-intensity waves. As we consider integrating these technologies into our practice, making informed choices based on accurate information is critical.

Kinds of shockwave technology

1. Electrohydraulic shockwaves: Generated using an electric spark in water. For decades, this was used

Shockwave is used to treat a variety of conditions, including:

- Plantar Fasciitis
- Tendonitis
- Calcific Tendonitis
- Myofascial Pain Syndromes
- Scar Tissue
- Spinal Decompression
- Muscle Strains and Sprains
- Chronic Neck Pain
- Jumper's Knee (Patellar Tendonitis)
- Shin Splints
- Frozen Shoulder (Adhesive Capsulitis)

for conditions like kidney stones but has been effectively reimaged for musculoskeletal issues, especially as a manufacturer has modified their devices to treat both with a focused and unfocused or low-intensity wave. When researching, ask about the width and depth of coverage, as one boasts a coverage area of 7cm x 12cm to ensure the injured cells receive treatment.

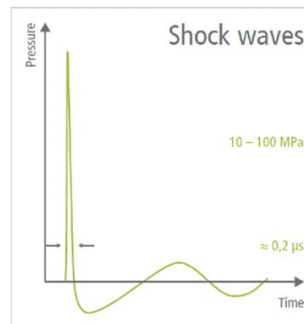
2. Electromagnetic shockwave: Produced by a rapidly changing magnetic field, they have broad applications in pain management. These typically deliver small amounts of energy to a small focal area.

3. Piezoelectric shockwaves: Originating from the piezoelectric effect, these shockwaves are created

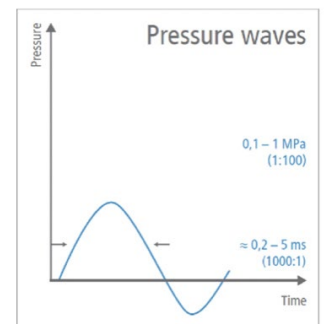
when voltage is applied to crystals through the expansion and contraction of the crystals.

Beware of confusion

For a device to produce a true shockwave, it is characterized by a single, mostly positive pressure pulse followed by a comparatively small tensile wave. This characterization is important because radial devices often call themselves shockwave devices. This is misleading. Radial devices produce low-intensity pressure waves. They differ from a true shockwave as they are acoustic pneumatic pulses with a low steeping effect and slow rise time with comparatively large negative pressure (tensile wave).



Shockwaves are acoustic pulses with high positive pressure, fast and steep rise time followed by comparatively small negative pressure (tensile wave).



Radial pressure waves are acoustic pneumatic pulses with a low steeping effect, slow rise time with comparatively large negative pressure (tensile wave).



Flexible elastic membrane adapts optimally to the treatment area

Radial devices deliver a pressure wave NOT a shockwave

Do your research on true shockwave devices as well. Look for reputable companies involved with research who are registered and ideally have FDA clearances and approvals.

Patented Advancements and Clinical Relevance

The recent patent granted for a dual-function shockwave device underscores the dual benefits of managing pain effectively and reducing reliance on opioids. This stride forward aligns with our commitment to patient care and holistic health.

Expanding Chiropractic Treatment Horizons

Shockwave therapy complements the foundational chiropractic belief in the body's ability to heal from within. Stud-

ies, such as those focusing on plantar fasciitis, demonstrate significant pain reduction, supporting the therapy’s potential to address chronic conditions effectively. In one study, patients with chronic plantar fasciitis were treated with shockwave. After 12 weeks, they had data on more than 98% of the patients. At the end of the study, the median reduction in pain was 69% in the extracorporeal shock wave therapy group and 34.5% in the placebo group.²

The Role of Integrated Care

Shockwave therapy is not a panacea but a powerful tool that enhances our existing chiropractic techniques. Integrating this technology into a comprehensive treatment strategy can amplify our ability to provide relief and recovery for our patients.

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Embracing a Future of Holistic Healing

The trend in healthcare is moving towards non-invasive, drug-free treatments, and shockwave technology is at the forefront of this shift. It is not just about alleviating pain. It is about offering patients a path to faster and more complete recovery.

The ongoing research and clinical trials sponsored by credible shockwave companies testify to the technology’s effectiveness. This research guides our practices and provides the safest and most effective treatments. It is important to note that credible shockwave companies are actively sponsoring studies to demonstrate the effectiveness and safety compared to using opioids. In addition, the research is out there, and recent studies are opening minds to new ways.¹

As we look to the future, this inno-

vation represents a significant step in pain management—one that manages symptoms, promotes overall well-being, and adheres to our principle of doing no harm. It is time for us to embrace this change and lead our patients toward a new era of chiropractic care. Are you ready to ride the wave?



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References

1. Schroder A, et. al. Extracorporeal Shockwave Therapy in the Management of Sports Medicine Injuries. 2021;20(6):298-305. PubMed website. <https://pubmed.ncbi.nlm.nih.gov/34099607/>. Accessed Nov. 8, 2023.
2. Henry C. Barry, MD, MS. Focused Extracorporeal Shock Wave Therapy Better Than Placebo to Relieve Pain in Patients with Chronic Plantar Fasciitis. 2015;92(7):635

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