

Magnets and Orthotics: An Attractive Combination

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The field of magnetic orthotics offers chiropractors another therapy with which to improve the comfort and overall health and well-being of patients. While research into magnetic therapy is just beginning to supply positive data,¹⁻⁴ the volume of demonstrated, positive clinical effects is worthy of professional consideration now.

The Magnetic Therapy Principle

Magnetic therapy is based on a simple scientific principle: The Earth, and all things on it - including people - generate magnetic fields.⁵ Incorporating this information into health care and therapeutic treatment starts with the assumption that a person's magnetic fields, on either a specific or systemic basis, can be altered beneficially by the use of therapeutic magnets. Magnets have been used for centuries throughout the world as health care devices, with broad applications and attributed benefits, the most common being the reduction of pain and the stimulation or acceleration of healing.

There are many theories as to how magnetic therapy reduces pain and enhances the healing environment. Primary among these theories is the notion that magnets stimulate an increase in circulation to an inflamed, injured or ischemic region. It is speculated that vasodilation is induced magnetically, thereby increasing blood flow.⁶ This vascular expansion results from the combined responses of blood ions to a magnetic field. Additionally, it is thought that the introduction of the therapeutic magnet's field increases the blood flow by neutralizing negative charges that naturally accumulate on a capillary wall and impede movement.⁷

Increased blood flow is beneficial on two levels: The blood components and nutrients brought to the area of injury or inflammation accelerate healing and repair, and the additional blood volume flushes the chemicals responsible for stimulating the sensation of pain and the propagation of the pain-spasm-pain cycle.⁷ The pain circuit is cut, and healing is enhanced.

Other theories as to the method in which magnets increase health and healing suggest that iron in the red blood cells responds to magnetism;^{5,7} that injuries generate a positive magnetic field that can be altered by the use of a negative magnetic field to speed healing;^{5,7} and that the therapeutic placement of magnets can reduce pain by causing direct, electrical stimulation of the neurons transmitting pain signals to the brain.^{5,7}

Clinical Research

Studies have been conducted for years in Europe, Canada and Asia, where magnetic therapy is routinely included in treatment plans for numerous illnesses and health complaints.⁸ In the U.S., medical science has long recognized that wound healing is stimulated by electrical impulses.

Orthopedic surgeons currently utilize techniques such as pulse electromagnetic therapy to heal certain bone fractures.⁹ However, only recently have scientists and the health care community begun to seriously research and study this promising area of therapeutic treatment.

In 1997, Drs. Vallbona, Hazlewood and Jurida of the Baylor College of Medicine conducted a double-blind, controlled study of the effects of magnetic therapy on pain reduction. They studied 50 patients who suffered from postpolio pain syndrome. Of these participants, 76 percent treated with a real magnet reported a significant and rapid decrease in pain.^{4,10,11} Vallbona, et al., concluded that the "delivery of static magnetic fields through a magnetized device directly applied to a pain trigger point or to a localized painful area results in significant pain relief within a short period of time (less than 45 minutes in our study) and with no apparent side-effects."⁴

Dr. Michael Weintraub, a neurologist at New York Medical College, demonstrated in 1999 that magnetic inserts have a positive effect on diabetic-related sensory-motor distal neuropathy: "Despite the uncertainty regarding the precise mechanism of this novel approach, the results are impressive and suggest that a legitimacy exists for magnetotherapy as a safe and unique therapy in neuropathic diabetic foot pain."³

Testimonial Reports

While clinical research on the therapeutic potential of magnetic therapy continues, the majority of current evidence supporting the use of magnets comes from personal accounts. Chronic neck and back pain sufferers; athletes; arthritis sufferers; and people simply desiring an increase in energy or an aid to healing injuries, are among the hundreds of testimonials attributing beneficial results to magnets.^{5,7,9,12} Practitioners from varied disciplines across the country are incorporating magnetic devices based on this abundant and encouraging evidence.

Magnet Orthotics

An encouraging treatment option available to chiropractors is the use of magnet orthotics. This product offers a dual benefit: the therapeutic advantages of magnets combined with the undisputed and clinically proven biomechanical principles of postural support offered by a custom-made orthotic insert.^{13,14} Keep in mind, however, that magnet orthotics are contraindicated if your patient is pregnant or wears a pacemaker or electrical implant of any kind.

A Force for Change

Exactly how magnets stimulate healing and reduce pain is a current topic of debate and study in the health care community. It remains for clinical documentation and research to substantiate the masses of testimonial evidence. Weighing the benefits of various treatment options is a constant facet of practicing health care, and puts us at the forefront of common and standard practice within our fields.

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