Clinical Practice Guideline: **Magnet Therapy – Static**

Date of Implementation: **February 9, 2006**

Product: **Specialty**

GUIDELINES

American Specialty Health – Specialty (ASH) considers static magnet therapy unproven because scientific evidence does not support its use for pain relief. Magnet therapy also poses a health and safety risk through substitution harm and may not be safe for some people, such as those who use pacemakers or insulin pumps, as magnets may interfere with these devices.

For more information, see the ASH *Techniques and Procedures Not Widely Supported as Evidence Based (CPG 133 – S)* clinical practice guideline.

Patients must be informed verbally and in writing of the nature of any procedure or treatment technique that is considered experimental/investigational or unproven, poses a significant health and safety risk, and/or is scientifically implausible. If the patient decides to receive such services, they must sign a *Member Billing Acknowledgment Form (*for Medicare use *Advance Beneficiary Notice of Non-Coverage form*) indicating they understand they are assuming financial responsibility for any service-related fees. Further, the patient must sign an attestation indicating that they understand what is known and unknown about, and the possible risks associated with such techniques prior to receiving these services. All procedures, including those considered here, must be documented in the medical record. Finally, prior to using experimental/investigational or unproven procedures, those that pose a significant health and safety risk, and/or those considered scientifically implausible, it is incumbent on the practitioner to confirm that their professional liability insurance covers the use of these techniques or procedures in the event of an adverse outcome.

DESCRIPTION/BACKGROUND

Magnet therapy, also known as magnetotherapy, refers to the use of static magnets placed directly on the body, usually over regions of pain. The vast majority of magnets marketed to consumers to treat pain are static magnets whose resulting magnetic fields are permanent, unchanging.

The other magnets used for health purposes are called electromagnets, because they generate magnetic fields only when electrical current flows through them. These fluctuating magnetic fields use an electrical charge produced by units similar to those used

in hospitals to reduce fracture healing time. Static magnets do not use an electrical energy supply to fluctuate their magnetic fields.

Proponents of static magnet therapy purport that magnetic fields emanating from fixed magnets placed close to the body can cause bones to heal faster, and pain to be relieved, as well as other forms of healing. It is most commonly recommended by practitioners as a cure for joint disorders and painful back conditions.

Static magnets are either attached to the body by tape or placed in specially designed products such as belts, wraps, or mattress pads. Magnets are typically kept in place over the area of pain for varying lengths of time, usually from 1-3 hours a day, but may be maintained continuously. Magnets may be recommended to remain in place until two (2) days after the pain has been relieved.

The U.S. Food and Drug Administration (FDA) has not approved the marketing of magnets with claims of benefits to health (such as "relieves arthritis pain"). The FDA and the Federal Trade Commission (FTC) have taken action against many manufacturers, distributors, and Web sites that make claims not supported scientifically about the health benefits of magnets.

EVIDENCE REVIEW

Clinical trials of static magnet therapy have produced conflicting results. Many concerns exist regarding the quality and rigor of the studies conducted to date, leading to a call for additional, higher quality, and larger studies. Thus far, scientific research does not firmly support a conclusion that use of static magnets is effective in the management of neuromusculoskeletal pain.

In a double-blind placebo-controlled randomized clinical trial, the use of a magnet for reducing pain attributed to carpal tunnel syndrome was no more effective than use of the placebo device (Carter et al., 2002).

A study of the use of magnet therapy for low back pain conducted at an ambulatory care physical medicine and rehabilitation clinic at a Veterans Affairs hospital showed no statistically significant difference in the effect between real and sham magnets (Collacott et al., 2000).

A systematic review of trials regarding the effectiveness and duration of benefit from non-surgical treatments, apart from local steroid injection, for carpal tunnel syndrome revealed that non-surgical treatments, including magnet therapy, do not produce significant benefit (O'Connor et al., 2002). More trials are needed to compare treatments and ascertain the duration of benefit.

One review found that static magnetic therapy may work for certain conditions but that there is not adequate scientific support to justify its use (Ratterman et al., 2002). Another review looked at two randomized controlled trials (RCTs) of static magnets (Vallbona et al., 1999). One reported significant pain relief in subjects using magnets, but the other did not. The remaining review found no studies on magnets for neck pain and stated that rigorous studies are much needed (Swenson, 2003). It is important to note that the reviews pointed out problems with the rigor of most research on magnets for pain (Vallbona et al., 1999). Thus, the results of many trials may not be truly meaningful. Most reviews stated that more and better-quality research is needed before the effectiveness of magnets can be adequately judged.

Four of the 9 static magnet trials analyzed found no significant difference in pain relief from using a magnet as compared with sham treatment or usual medical care (Winemiller et al., 2003; Collacott et al., 2000; Carter et al., 2002; Caselli et al., 1997). Four trials did find a significant difference, with greater benefit seen from magnets (Weintraub et al., 2003; Hinman et al., 2002; Alfano et al., 2001; Wolsko et al., 2004). The remaining trial compared only a weaker magnet to a stronger magnet and found benefit from both for management of rheumatoid arthritis (there was no difference between groups in degree of benefit) (Segal et al., 2001). Macfarlane et al. (2012) and Richmond et al. (2013) concluded that magnet therapy was not effective in the management of rheumatoid arthritis. Richmond et al. (2009) also determined that magnet therapy was not effective in the management of osteoarthritis. In a Cochrane Review, Kroeling et al. (2013) determined that permanent magnets (necklace) were no more effective than placebo for neck pain.

Fan et al. (2021) analyzed 28 studies of static magnetic fields and their analgesic effects. 64% of human studies showed analgesic effects from the magnets. Effects were related to the intensity of the magnetic field, treatment times and pain types. Higher magnetic intensities and longer treatment times may provide more effective pain relief. The authors recommended further study to evaluate static magnetic field parameters, their associated molecular mechanisms and pain relief effects on various types of pain conditions.

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