[Altern Ther Health Med.](http://www.ncbi.nlm.nih.gov/pubmed/15055092?dopt=Abstract" \o "Alternative therapies in health and medicine.) 2004 Mar-Apr;10(2):36-43.

**Double-blind placebo-controlled trial of static magnets for the treatment of osteoarthritis of the knee: results of a pilot study.**

[Wolsko PM](http://www.ncbi.nlm.nih.gov/pubmed?term=Wolsko%20PM%5BAuthor%5D&cauthor=true&cauthor_uid=15055092)1, [Eisenberg DM](http://www.ncbi.nlm.nih.gov/pubmed?term=Eisenberg%20DM%5BAuthor%5D&cauthor=true&cauthor_uid=15055092), [Simon LS](http://www.ncbi.nlm.nih.gov/pubmed?term=Simon%20LS%5BAuthor%5D&cauthor=true&cauthor_uid=15055092), [Davis RB](http://www.ncbi.nlm.nih.gov/pubmed?term=Davis%20RB%5BAuthor%5D&cauthor=true&cauthor_uid=15055092), [Walleczek J](http://www.ncbi.nlm.nih.gov/pubmed?term=Walleczek%20J%5BAuthor%5D&cauthor=true&cauthor_uid=15055092), [Mayo-Smith M](http://www.ncbi.nlm.nih.gov/pubmed?term=Mayo-Smith%20M%5BAuthor%5D&cauthor=true&cauthor_uid=15055092), [Kaptchuk TJ](http://www.ncbi.nlm.nih.gov/pubmed?term=Kaptchuk%20TJ%5BAuthor%5D&cauthor=true&cauthor_uid=15055092), [Phillips RS](http://www.ncbi.nlm.nih.gov/pubmed?term=Phillips%20RS%5BAuthor%5D&cauthor=true&cauthor_uid=15055092).

[**Author information**](http://www.ncbi.nlm.nih.gov/pubmed/15055092?dopt=Abstract)

**Abstract**

**CONTEXT:**

Outpatient clinical studies of magnet therapy, a complementary therapy commonly used to treat osteoarthritis (OA), have been limited by the absence of a credible placebo control.

**OBJECTIVE:**

Our objective was to assess the feasibility and promise of studying static magnetic therapy for knee OA and determine the ability of a new placebo-magnet device to provide concealment of group assignment.

**DESIGN:**

Randomized, double-blind, placebo-controlled clinical trial.

**SETTING:**

Academic teaching hospital in Boston.

**PARTICIPANTS:**

We enrolled 29 subjects with idiopathic or post-traumatic OA of the knee.

**INTERVENTIONS:**

Subjects received either high-strength magnetic (active) or placebo-magnetic (placebo) knee sleeve treatment for 4 hours in a monitored setting and self-treatment 6 hours daily for 6 weeks.

**MAIN OUTCOME MEASURES:**

Primary outcomes were change in knee pain as measured by the WOMAC Osteoarthritis Index Pain Subscale at 6 weeks and extent of group concealment at study end.

**RESULTS:**

At 4 hours, VAS pain scores (+/- SE) on a 5-item scale (0-500, 500 worst) decreased 79 +/- 18 mm in the active group and 10 +/- 21 mm in the placebo group (P < 0.05). There were no significant differences in any primary or secondary measure of efficacy between the treatment groups at 6 weeks. Despite widespread testing for magnetic properties, at study end, 69% of the active group and 77% of the placebo group (P > 0.2) believed that they had been assigned to the active treatment group.

**CONCLUSION:**

Despite our small sample size, magnets showed statistically significant efficacy compared to placebo after 4 hours under rigorously controlled conditions. The sustained efficacy of magnetic therapy for knee osteoarthritis could be assessed in an adequately powered trial utilizing an appropriate control such our new placebo-magnet device.

PMID:15055092

[PubMed - indexed for MEDLINE]

[Acta Med Austriaca.](http://www.ncbi.nlm.nih.gov/pubmed/10897384?dopt=Abstract) 2000;27(3):61-8.

**[Clinical effectiveness of magnetic field therapy--a review of the literature].**

[Article in German]

[Quittan M](http://www.ncbi.nlm.nih.gov/pubmed?term=Quittan%20M%5BAuthor%5D&cauthor=true&cauthor_uid=10897384)1, [Schuhfried O](http://www.ncbi.nlm.nih.gov/pubmed?term=Schuhfried%20O%5BAuthor%5D&cauthor=true&cauthor_uid=10897384), [Wiesinger GF](http://www.ncbi.nlm.nih.gov/pubmed?term=Wiesinger%20GF%5BAuthor%5D&cauthor=true&cauthor_uid=10897384), [Fialka-Moser V](http://www.ncbi.nlm.nih.gov/pubmed?term=Fialka-Moser%20V%5BAuthor%5D&cauthor=true&cauthor_uid=10897384).

[**Author information**](http://www.ncbi.nlm.nih.gov/pubmed/10897384?dopt=Abstract)

**Abstract**

To verify the efficacy of electromagnetic fields on various diseases we conducted a computer-assisted search of the pertinent literature. The search was performed with the aid of the Medline and Embase database (1966-1998) and reference lists. Clinical trials with at least one control group were selected. The selection criteria were met by 31 clinical studies. 20 trials were designed double-blind, randomised and placebo-controlled. The studies were categorised by indications. Electromagnetic fields were applied to promote bone-healing, to treat osteoarthritis and inflammatory diseases of the musculoskeletal system, to alleviate pain, to enhance healing of ulcers and to reduce spasticity. The action on bone healing and pain alleviation of electromagnetic fields was confirmed in most of the trials. In the treatment of other disorders the results are contradictory. Application times varied between 15 minutes and 24 hours per day for three weeks up to eighteen months. There seems to be a relationship between longer daily application time and positive effects particular in bone-healing. Patients were treated with electromagnetic fields of 2 to 100 G (0.2 mT to 10 mT) with a frequency between 12 and 100 Hz. Optimal dosimetry for therapy with electromagnetic fields is yet not established.

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10897384

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[Arch Phys Med Rehabil.](http://www.ncbi.nlm.nih.gov/pubmed/15759245?dopt=Abstract) 2005 Mar;86(3):565-70.

**Static magnetic fields neither prevent nor diminish symptoms and signs of delayed onset muscle soreness.**

[Reeser JC](http://www.ncbi.nlm.nih.gov/pubmed?term=Reeser%20JC%5BAuthor%5D&cauthor=true&cauthor_uid=15759245)1, [Smith DT](http://www.ncbi.nlm.nih.gov/pubmed?term=Smith%20DT%5BAuthor%5D&cauthor=true&cauthor_uid=15759245), [Fischer V](http://www.ncbi.nlm.nih.gov/pubmed?term=Fischer%20V%5BAuthor%5D&cauthor=true&cauthor_uid=15759245), [Berg R](http://www.ncbi.nlm.nih.gov/pubmed?term=Berg%20R%5BAuthor%5D&cauthor=true&cauthor_uid=15759245), [Liu K](http://www.ncbi.nlm.nih.gov/pubmed?term=Liu%20K%5BAuthor%5D&cauthor=true&cauthor_uid=15759245), [Untiedt C](http://www.ncbi.nlm.nih.gov/pubmed?term=Untiedt%20C%5BAuthor%5D&cauthor=true&cauthor_uid=15759245), [Kubista M](http://www.ncbi.nlm.nih.gov/pubmed?term=Kubista%20M%5BAuthor%5D&cauthor=true&cauthor_uid=15759245).

[**Author information**](http://www.ncbi.nlm.nih.gov/pubmed/15759245?dopt=Abstract)

**Abstract**

**OBJECTIVE:**

To determine whether application of a commercially available static magnetic field would alter the signs and/or symptoms of delayed onset muscle soreness (DOMS) produced by exhaustive eccentric exercise.

**DESIGN:**

A double-blinded, randomized, and placebo-controlled study, with subjects serving as their own controls.

**SETTING:**

An outpatient physical therapy and performance center.

**PARTICIPANTS:**

Twenty-three healthy volunteers (18 women; mean age, 30 y; range, 18-40 y; 5 men; mean age, 29 y; range, 19-39 y).

**INTERVENTION:**

After exhaustive eccentric exercise of both the right and left elbow flexor muscle groups, subjects received daily treatment with either a 350G magnet or a placebo device for 5 consecutive days.

**MAIN OUTCOME MEASURES:**

Outcome variables, including anthropometric measurements, perceived discomfort, and muscle force production, were compared using linear mixed models.

**RESULTS:**

Arm circumference, relaxed elbow flexion angle, and pain increased, whereas active elbow flexion angle and maximal isometric torque decreased transiently before returning to near baseline. No significant difference in outcome variables existed between the treated and control arms. Participants reported less pain in both treated and control arms after each session, suggesting a placebo effect.

**CONCLUSIONS:**

Static magnetic fields were no more effective than placebo in preventing DOMS.

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 [PubMed - indexed for MEDLINE]

[J Altern Complement Med.](http://www.ncbi.nlm.nih.gov/pubmed/15992236?dopt=Abstract" \o "Journal of alternative and complementary medicine (New York, N.Y.).) 2005 Jun;11(3):495-509.

**A critical review of randomized controlled trials of static magnets for pain relief.**

[Eccles NK](http://www.ncbi.nlm.nih.gov/pubmed?term=Eccles%20NK%5BAuthor%5D&cauthor=true&cauthor_uid=15992236).

[**Author information**](http://www.ncbi.nlm.nih.gov/pubmed/15992236?dopt=Abstract)

**Abstract**

**OBJECTIVE:**

The aim of this review was to establish whether there is evidence for or against the efficacy of static magnets to produce analgesia.

**METHODS:**

A systematic literature review was undertaken of studies that compared the use of static magnets with an appropriate control for the treatment of pain. Study methods, their quality, and outcome were also reviewed.

**RESULTS:**

Overall, 13 of the 21 studies reported a significant analgesic effect due to static magnets. Of the 18 better quality studies with 3 points or more on the quality assessment, 11 were positive and six were negative, and in one there was a non-significant trend towards a positive analgesic effect. In two of the negative studies, there are concerns over adequacy of magnet power for the type of pain, and in the other study of duration of exposure to the magnetic field. If these two studies are excluded on the grounds of inadequate treatment, then 11 out of 15 (73.3%) of the better quality studies demonstrated a positive effect of static magnets in achieving analgesia across a broad range of different types of pain (neuropathic, inflammatory, musculoskeletal, fibromyalgic, rheumatic, and postsurgical).

**CONCLUSIONS:**

The weight of evidence from published, well-conducted controlled trials suggests that static magnetic fields are able to induce analgesia.

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