An introduction to magnetic therapy

Health & Medicine

An Introduction to Magnetic Therapy An Introduction to Magnetic Therapy Magnetic Therapy has risen greatly in popularity in the last three decades. As part in the general attention given to alternative medicine and drug-free palliative care, Magnet therapy (or magnotherapy) has blossomed into an industry worth an estimated five billion US dollars in 1999.[1] It is safe to assume that with the advent of Internet shopping, this figure has risen exponentially ever since. Magnetic products can be roughly divided into static, permanent magnetic devices and pulsating magnetic fields. The former fills the vast majority of the magnet therapy market share, with products as diverse as magnetic bracelets, insoles, shoulder supports, hairbrushes and magnetic water cups. These static magnets promote varying strengths of the magnets (gauss/ mTesla) as well as varying shapes, sizes and polarities. Pulsating magnetic fields have come to the fore in recent years, with low-frequency pulsed electromagnetic fields (PEMF) being used in the NHS and in hospitals across the Far East. Recently, media attention has been drawn to the Transcranial Magnetic Stimulation (TMS) device that has proved highly effective in initial studies in reducing the symptoms of aura-related migraines.[2] Both static and pulsating magnetic treatments have been marketed across a wide range of medical conditions, but widely advertise products as a non-invasive treatment for chronic pain. In particular, Osteoarthritis[3], Fibromyalgia[4] and chronic back pain[5] feature widely in studies and marketing campaigns based around magnet therapy. Promoted heavily by celebrity sportspeople, notably PGA golfers[6], magnetic muscle supports and bracelets have become increasingly commonplace in professional circles. Indeed, popularity of magnetic devices is not limited to the humans, with both pulsating and static magnets being marketed towards

our four-legged friends. Notably, magnetic horse jackets and PEMF devices have received publicity having been used on premier racehorses in the belief that magnets promote circulation, muscle-oxygen content and reduce the chance of injury.[7] With such bold beneficial claims, the question remains as to whether this expensive form of alternative therapy is bolstered by scientific fact. This study will aim to outline research conducted into magnetic therapy (those available with English translation). In the absence of a firm scientific explanation as to the biochemical (or biophysical) pathways of magnetic treatment, the majority of research has been conducted as a randomised, double blind, placebo-controlled study into a sample groups. Many of these studies have revealed positive results of stronger gauss magnetic devices when compared to sham or low-strength magnets.[8] However, as will be discussed further into this study, there are serious misgivings about the ability for a fully blinded study to exist where magnets are concerned.[9] Whilst the effect of placebo on pain cannot be fully discounted, it remains that there is compelling evidence to suggest that magnetic therapy can be an effective part of a therapy regime. There is much still to be investigated before magnet therapy becomes accepted into the scientific fold. For one, conflicting and nonsensical theory as to the mechanisms of magnetic therapy has done much to muddy the water (for instance the assertion that magnets act upon iron in the blood). As such, further investigation is needed into the effect of varying magnetic fields have on the body; whether application site is important and whether pulsating field therapy deserves greater use in the rehabilitation of injury (FDA approved for use on fractures). As such, this discussion shall demonstrate that magnetic therapy, despite its long pedigree, is greatly under-

investigated. The phrase “ alternative therapy" seems somewhat of a misnomer, as it is apparent that magnetic therapy is best used as part of conventional medical treatment rather than as a replacement. Such a misnomer has implied that magnetic therapy in itself has the power to cure cancer, autism or other serious diseases, leading to the therapy being largely discredited as dangerous quackery. The current evidence suggests tentatively that magnets could effectively be used in conjunction with modern science to alleviate symptoms of specific conditions. Reference Barrett S. Magnet therapy: a skeptical view. June 2008. Accessed at http://www. quackwatch. org/04ConsumerEducation/QA/magnet. html on May 2, 2012. Carpenter JS, Wells N, Lambert B, et al. A pilot study of magnetic therapy for hot flashes after breast cancer. Cancer Nurs. 2002 Apr; 25(2): 104-109. Cepeda MS, Carr DB, Sarquis T, et al. Static magnetic therapy does not decrease pain or opioid requirements: a randomized double-blind trial. Anesth Analg. 2007; 104: 290-294. Finegold L, Flamm BL. Magnet therapy. BMJ. 2006; 332: 4. National Center for Complementary and Alternative Medicine Web site. Get the Facts: Magnets for Pain. Feb 2012. Accessed at http://nccam. nih. gov/health/magnet/magnetsforpain. htm on May 2, 2012. Ratterman R, Secrest J, Norwood B, Ch'ien AP. Magnet therapy: what's the attraction? J Am Acad Nurse Pract. 2002; 14: 347-353. Vallbona C, Hazlewood CF, Jurida G. Response of pain to static magnetic fields in postpolio patients: a double-blind pilot study. Arch Phys Med Rehabil. 1997 Nov; 78(11): 1200-1203. How is it promoted for use? Many claims about magnetic therapy are based on the fact that some cells and tissues in the human body give off electromagnetic impulses. Some practitioners think the presence of illness or injury disrupts these fields. Magnets produce energy

fields of different strengths, which proponents believe can penetrate the human body, correcting disturbances and restoring health to the afflicted systems, organs, and cells. Most magnets marketed to consumers are static magnets, also called constant magnets, because the magnetic field doesn’t change. They are usually made of magnetized metal or lodestone. Static magnets are different from electromagnets, which only have an energy field while electricity is passing through them (see our document, Electromagnetic Therapy). Proponents claim magnetic therapy can relieve pain caused by arthritis, headaches, migraine headaches, and stress, and can also heal broken bones, improve circulation, reverse degenerative diseases, and cure cancer. They also claim that placing magnets over areas of pain or disease strengthens the body's healing ability. Some believe that magnetic fields increase blood flow, alter nerve impulses, increase the flow of oxygen to cells, decrease fatty deposits on artery walls, and realign thought patterns to improve emotional well-being. Proponents of magnetic therapy assert that magnetic fields produced from the negative pole of the magnet have healing powers. Negative magnetic fields are thought to stimulate metabolism, increase the amount of oxygen available to cells, and create a less acidic environment within the body. Because many people who use magnets believe cancer cells cannot thrive when acid is low, they claim that the effects of negative magnetic fields can halt or reverse the spread of tumors by decreasing acidity. For the same reasons, they believe that negative magnetic fields speed the healing of cuts, broken bones, and infections, and that they counter the effects of toxic chemicals, addictive drugs, and other harmful substances. What does it involve? Magnetic therapy involves the use of thin metal magnets placed on or near the skin,

alone or in groups. They are sometimes mounted on bracelets and necklaces, or attached to adhesive patches that hold them in place. Some magnets are placed in bands or belts that can be wrapped around the wrist, elbow, knee, ankle, foot, waist, or lower back. There are even magnetic insoles, seat covers, blankets, and slumber pads. These magnets may be worn for just a few minutes or for weeks, depending on the condition being treated and the practitioner. What is the history behind it? Interest in magnets as a source of healing dates back many centuries. A 16th century physician, Paracelsus, thought that because magnets attract iron they might attract and eliminate diseases from the body. In the Middle Ages, doctors used magnets to treat gout, arthritis, poisoning, and baldness. The modern version of magnet therapy reportedly began in the 1970s, when researcher Albert Roy Davis, PhD, noticed that positive and negative magnetic charges had different effects on human biological systems. He claimed that magnets could kill cancer cells in animals and could also cure arthritis pain, glaucoma, infertility, and other conditions. Magnetic therapy has become a large industry in the United States and Europe and has been used widely in Japan and China for many years. What is the evidence? Magnetic therapy has undergone some study. Most of the success stories have come from a few isolated sources that have not provided proof that the treatment actually works. One small but well-publicized 1997 randomized clinical trial conducted at the Baylor College of Medicine reported that small magnets reduced pain in people who had recovered from polio. However, several problems in the study's methods were observed (for example, the patients in the two groups differed in ways that might influence their susceptibility to placebo effects). In addition, the study only looked at very short-term results

and was intended to be a pilot study. Pilot studies are done only to decide whether it is worthwhile to do larger studies. To date, large studies have not been done. To test the claim of improved blood flow, one study compared magnets and otherwise identical nonmagnetic disks on the arms of healthy volunteers. The researchers measured blood flow and found no difference between the real and fake magnets. Clinical trials of static magnets for pain relief have generally had mixed results. One review noted that about half the studies found that magnets improved pain, and the other half did not. However, it has been difficult to conduct studies that can account for the placebo effect when using magnets. Patients are generally able to tell whether their bracelet or patch is magnetic, as real magnets attract metal objects like paper clips. The National Center for Complementary and Alternative Medicine has also reviewed the data and stated that scientific evidence does not support use of magnets for pain relief. Studies of electromagnets, which have stronger magnetic fields, appear to be more promising (see our document, Electromagnetic Therapy). We are not aware of any published clinical studies involving magnets as an anti-cancer treatment and know of only one study specifically involving cancer survivors. Researchers from the Vanderbilt University School of Nursing placed either magnets or nonmagnetic (placebo) objects at six acupressure points of breast cancer survivors suffering from hot flashes. The magnets were no more effective in reducing hot flash severity and turned out to be less effective than the fake magnets in decreasing hot-flash frequency, bother, interference with daily activities, and overall quality of life. The FDA has not approved the marketing of magnets with claims of health benefits. In fact, the FDA and the Federal Trade Commission have taken action against

several makers and sellers of magnets because they were making health claims that had not been proven. However, principles of magnetism have been applied very successfully in conventional medicine to magnetic resonance imaging (MRI), which uses magnetic fields to produce detailed pictures of the body without the use of x-rays. Researchers are working on additional medical uses based on magnetism, such as attaching anti-cancer drugs to the surface of microscopic magnetic particles that can be guided to a tumor by strong magnets outside the body. Another possibility is particles that generate enough heat to kill cancer cells in the presence of some kinds of magnetic field. | advantages The Magnetotherapy or Magnetic Therapy has various advantages. Magnetotherapy does not stop to take any other medicine when being treated by this. Magnetotherapy is a natural treatment, based on natural laws and works in conformity with the nature and is an aid to natural processes of healing. Therefore, it has no harmful effects, which could endanger the life of a patient. The Magnetotherapy can be taken alone or along with any othe r treatment. It does not hamper any medical treatment but helps to accelerate the action of all medicines, which have the effect of restoring the ailing body to its normal state in a natural way. In Magnetotherapy, the body comes continuously in contact with magnets, which generates warmth in body, activates the whole working system and accelerates blood circulation. Thus it provides strength and tones up the body as a whole. Magnetotherapy helps in faster recovery from ailments, removes, tiredness, weakness, proves beneficial in recovery periods. It also reduces pains and swellings of every part of the body. Magnetotherapy is beneficial for light conditions as well as for serious diseases. It also helps those who are not mentally satisfied with their lives. The depressed persons

can also get advantage by using Magnetotherapy. It is very advantageous for the hurried, tense business executive, the worried nervous housewife, the career women unable to find mental peace and the child who is enraged by continued temper tantrums. One can enjoy a better and peaceful life after using the magnets. Magnetotherapy has also cured numerous cases of serious sickness, which were considered incurable by efficient doctors. Many patients were also recovered by Magnetotherapy from many incurable diseases like cancer, chronic arthritis, eczema, high blood pressure, poliomyelitis, prostate enlargement, rheumatism, sleeplessness, etc. The treatment by using magnets is so simple that it can be given or taken at any time, at any place and at any part of the body. Person of any age or sex or age can take the Magnetotherapy treatment. It gives quick and lasting relief in some diseases, especially in toothache, sprains, etc. Sometimes only one sitting with magnet is sufficient and even a second sitting is not required. In the process of Magnetotherapy, one does not need to take any preparation to give or take this treatment. It can be done only by touching the magnets for some time. Only 10 minutes use once a day is enough so it does not consume much time also. The magnet can be taken to the workplaces or in long journeys also and can be used there. This treatment does not require water, tea or milk as in it no medicine is needed to take internally. In the Magnetotherapy treatment, several patients can use the same magnets, each day, without washing, cleaning or disinfecting them. The same magnets can also be used for all complaints, if the size, shape, design and power of the magnets are suitable for the parts of the body where they are to be applied and for the diseases. The Magnetotherapy treatment is not habit forming. If the person using the magnets does not use them for some days

or weeks, he does feel anything wanting or any urge for using them. The users of the magnets remain fresh, energetic and youthful. The magnet used in the Magnetotherapy has a special property of improving and removing pain from any cause. The treatment with magnets does not result any shock or irritation as is sometimes observed in some other systems of treatment. The permanent magnets used in the Magnetotherapy treatment, retain their power for several years. They can be recharged to regain their lost magnetism if they lose their power in due course of time. conclusion “ Magnetic therapy is a safe, non-invasive method of applying magnetic fields to the body for therapeutic purposes. " (http://www. healiohealth. com/tek9. asp? pg= products&grp= 82). In other words, magnetic therapy is the use of specific magnets to encourage the parts of the body that are injured to heal faster by increasing the magnetic fields around them. Supporters believe that the blood is magnetic and that these magnets will attract healthier blood to the problem. Also, it is thought that magnets would improve other areas of your life by allowing you to sleep better and have all of these benefits without any unfavorable side effects. Ancient civilizations were known to have used magnets to treat illnesses. Hippocrates, a fourth century Greek physician, recorded that magnets were used in his day; as well as, Ancient Egyptian priests. There were some, like 15th century Swiss physician and chemist Paracelsus, which believed that magnets “ attracted diseases out of the body. " Even in today’s medicine, magnets are used in magnetic resonance imaging (MRI) and other medical procedures. (http://www. intelihealth. com/IH/ihtIH? d= dmtContent&c= 358833&p=~br, IHW|~st, 8513|~r, WSIHW000|~b,*). Magnets of all shapes and sizes are used in magnetic therapy. In ancient times, the magnets that were used were so

large that they were hard to maneuver. However, today’s magnets are smaller and stronger and can be put anywhere on the body. (http://www. healiohealth. com/tek9. asp? pg= products&grp= 82). There are two main types of magnets used to treat pain, static magnets and electromagnets. Static magnets are usually made from iron, steel, rare-earth elements or alloys. Usually, the magnets are put directly on the skin or inside clothes. Static magnets can be unipolar or bipolar. Unipolar static magnets have only one pole facing or touching the skin, whereas, bipolar magnets have both poles facing or touching the skin. Electromagnets are used in clinical trials and experiments because the FDA has not approved them for public use. The trials that are being done are trying to see if electromagnets can be used in the healing of fractures that are taking a long time to heal. Also, they are being studied for how they alleviate pain in conditions such as osteoarthritis, chronic pelvic pain, and migraine headaches. (http://nccam. nih. gov/health/magnet/magnet. htm#electromag). The magnetic therapy business is so large that over 120 million people all around the world are using some type of magnetic therapy product. (http://www. healiohealth. com/tek9. asp? pg= products&grp= 82). Magnets can be worn in many different styles. The most popular styles are forms of jewelry, like bracelets, watches, necklaces, anklets, and rings. TABLE OF CONTENTS 1. Introduction 2. Statement of the Problem 3. Definition of Terms 4. Significance of the Study 5. Sope and Delimitation 6. Purpose of the Study 7. Body of the Research a. b. c. d. e. 8. Recommendation 9. Conclusion 10. Acknowledgement 11. Bibliography