



Magnetic Therapy as an Aid to Pain Relief

On 12th January 2022, Magnotherapist Alan Cooke delivered an interesting talk about how magnet therapy can aid and help all kinds of ailments. We learned that Magnet Therapy is often condemned by conventional medicine because of the lack of published studies. However, if the simple application of a magnet can control a pain condition, it removes the need for usual drug-based pain medication. With the cost of health care spiralling and our population steadily ageing, it is an indisputable fact that people are beginning to explore alternative therapies seriously. Magnet Therapy offers promising results for a relatively inexpensive outlay.

The speaker explained that:

- Magnets are believed to maintain the natural balance of the body. The outer surface of each nerve cell carries a positive charge, while the internal cell has a negative charge. When pain strikes, the positively charged cell is supplied with more potassium by the blood, which increases the positive charge. In turn, this puts a powerful current through the cerebral neurons, which trigger pain.
- Magnets are believed to maintain positive well being. A static magnetic field is an energy field powered by the movement of electrons. A negative magnetic field spins electrons to the left (anticlockwise), and the positive field moves electrons to the right (clockwise). Electron movement is the source of energy.
- Magnetic therapy is an alternative medical practice that uses static magnets to alleviate pain and other health concerns. Therapeutic magnets are typically integrated into bracelets, rings, or shoe inserts. In addition, therapeutic magnetic mattresses and clothing are also on the market.



Picture Credit: "File: Patients undergoing magnetic therapy. Etching by J. Barlow, Wellcome M0006351.jpg" is licensed under CC BY 4.0

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Talk: Magnetic Therapy

Delivered on: 12th January 2022

Haywards Heath & District Probus Club

Given by: Alan Cooke

Most experts agree that there are no adverse side effects of magnetic therapy. The World Health Organisation published a study in 1987 concluding that magnets in the strengths commonly used for therapeutic uses have no detrimental effect on the human body.

We were told that the advantages of magnetic therapy are numerous: some are listed below:

- Safe and effective.
- Re-usable time and time again.
- Drug-free.
- Non-invasive and relatively affordable.
- Painless to administer.
- Free from side effects.
- Used by over 200 million people worldwide.
- Accepted by doctors, clinics and physiotherapists.
- The easiest way to combat modern living.

WARNINGS:

You should remove all magnets before having an X-ray or getting an MRI. While it's generally safe for most people to wear low-intensity static magnets, it's not a good idea to have magnetic field therapy for:

- Anyone with a pacemaker, defibrillator or mechanical shunt is advised not to use magnetic therapy because magnets could adversely affect batteries.
- Expectant mothers and young children.
- People with diabetes with an insulin pump.
- Magnets should never be placed over an open wound.

Magnetic therapy should never be used as a replacement for traditional medical care. Instead, it's a good idea to discuss magnetic therapy with your doctor or medical consultant as an addition to your treatment.

History

The ancient Greeks and Chinese discovered that certain rare stones (called lodestones) were naturally magnetised. These stones could attract small pieces of iron in what seemed to be a magical way and were found to consistently point in the same direction when allowed to swing freely, suspended by a piece of string, or floating on water. Early navigators used these magnets as compasses to help them determine their direction while at sea.

Around 4,000 BC, Hindus refer to treatment of disease with lodestones. In 2,000 BC, Chinese physicians developed written protocols for using lodestones on acupuncture points, as described in "*The Yellow Emperor's Book of Internal Medicine*".¹ There is some evidence that Egyptian physicians used lodestones with some regularity and that Cleopatra herself wore a small magnet to preserve her youth. In ancient Greece, Hippocrates was reported to use magnets for pain and even had people in his healing centres lay their heads on lodestones to alleviate their headaches.²

It was not until the 18th century that the first man-made magnets were created. Magnets can be made by placing a magnetic material, such as iron or steel, in a strong magnetic field. Permanent, temporary, and electromagnets can be produced in this manner.

The word "magnet" comes from Magnesia, a district in Thessaly, Greece where it is believed that the first lodestone was mined.³

¹ The Huangdi Neijing (given the title The Yellow Emperor's Classic of Medicine in one of the latest translations) is an ancient treatise on health and disease said to have been written by the famous Chinese emperor Huangdi around 2,600 BC. See [HERE](#).

² Source: <https://www.drpawluk.com/education/magnetic-science/history-magnetic-field-therapy/>

³ Source: <https://www.intemag.com/magnetic-frequently-asked-questions>

Magnetic Therapy and Biomagnetic Therapy ⁴

- **Biomagnetic therapy** is a natural therapy used to reestablish the normal internal cellular environment by using pairs of magnets of medium intensity that seek to equalise the organism's pH level. The therapy is carried out by a biomagnetism practitioner during sessions of between 1 and 2 hours.
- **Magnetic therapy** applies a magnetic field through permanent static magnets or electromagnetic devices on certain parts of the body to relieve pain. The only similarity between biomagnetic therapy and magnetic therapy is that they both use magnets to change a condition in the biological system.

Magnetic therapy is a therapy for stimulating blood flow through veins, arteries and capillaries, and electromagnetic flow through the nervous system, whilst biomagnetic therapy alters the terrain where pathogens are disturbing equilibrium.⁵

Magnetic field therapy uses different kinds of magnets on the body to help boost your overall health. It may also help treat certain conditions. There are several types of therapy, including:

- **Static magnetic field therapy:** In this, you touch a magnet to your **skin** somehow. You might wear a magnetic bracelet or other magnetised jewellery. It could be a bandage with a magnet inside it, or you may wear a magnet as a shoe insole. You could also **sleep** on a special mattress pad with a magnet in it.
- **Electrically charged magnetic therapy (electromagnetic therapy):** The magnets you use here have an electric charge. Treatment with electromagnetic therapy usually comes through an electric pulse.
- **Magnetic therapy with acupuncture:** Magnets go on the same sections of your skin that an acupuncturist would probably focus on in an **acupuncture** session. You may hear these areas called *energy pathways* or *channels*.

The human body naturally has magnetic and electric fields. All your molecules have a small amount of magnetic energy in them. The idea behind magnetic field therapy is that certain problems happen because your magnetic fields are out of balance. If you put a magnetic field near your body, it's believed things will go back to normal.

Ions like calcium and potassium help your cells send signals. In tests, scientists have seen magnets change how these ions act. However, so far, there is no evidence that magnets have the same effect on human body cells.

Most magnetic field therapy is a treatment option for different **types of pain**, like in your **feet** and back. Scientists have specifically studied its use for:

- **Arthritis pain**
- **Healing wounds**
- **Insomnia**
- **Headaches**
- **Fibromyalgia pain**

What type of Magnet can be used?

There are typically four categories of permanent magnets: neodymium iron boron (NdFeB), samarium cobalt (SmCo), alnico, and ceramic or ferrite magnets. Thomas.net explain that not all magnets are composed of the same elements and thus can be broken down into categories based on their composition and source of magnetism. Permanent magnets are magnets that retain their magnetism once magnetised. Temporary magnets are materials magnets that perform like permanent magnets when in the presence of a magnetic field but lose magnetism when not in a magnetic field.⁶

There are two kinds of magnets: permanent and pulsating. Permanent magnets provide a consistent and steady magnetic field and are the type used to combat pain in magnet therapy. Pulsating magnets don't provide a steady magnetic field, although they have been used to stimulate growth in broken bones.

⁴ Source from and attributed to: WebMD - <https://www.webmd.com/pain-management/magnetic-field-therapy-overview>

⁵ Source: <https://www.bioflow.com/uk/about-bioflow/magnetic-therapy-guide/about-magnetic-therapy/>

⁶ Source: Thomas.net, [HERE](#).

Chronic low back pain is one of the most prevalent and costly medical conditions. Permanent magnets have become a popular treatment for various musculoskeletal conditions, including low back pain, although there has been little scientific support for therapeutic benefit.⁷

Gauss Measurement (Rating)

The force (magnetic field of energy) from a magnet is measured by something called gauss strength. Magnets used for pain relief and healing typically measure between 300 and 1000 gauss. 10,000 gauss is called a tesla. To give you some idea of what this means, a refrigerator magnet is around 50 gauss. Therapeutic magnets measure anywhere from 300 to 5,000 gauss.

Pulsed Electrical Magnetic Frequency (PEMF)

The incidence of type 2 diabetes has increased strikingly in the last several decades. Accompanying this development has been an increase in the incidence of **diabetic neuropathy**, leading to progressive pain, loss of sensation (primarily in the feet), weakness, and disability. Conventional therapy has consisted mainly of attempts to control the diabetes and to moderate the pain. **Pulsed Electromagnetic Field (PEMF)** therapy is a safe and non-invasive way to reduce pain and inflammation. It can be used to supplement and enhance currently existing healthcare modalities. The PEMF apparatus includes various devices, including full-body mats, localised pad applicators, and pinpointed probe or "spot" applicators. Read more, [HERE](#).

More about Magnets

The following are some 'headings' (for which there were PowerPoint slides) shown by the speaker (I managed to capture a few slides - shown later in this paper). I have added an explanation for each based on my subsequent research:

The Earth's Gravitational Force

Gravity is a pretty awesome fundamental force. If it were not for the Earth's comfortable 1g, which causes objects to fall towards the Earth at a speed of 9.8 m/s², we'd all float off into space. And without it, all us terrestrial species would slowly wither and die as our muscles degenerated, our bones became brittle and weak, and our organs ceased to function properly.⁸

Chi

Everything in creation is made up of energy vibrating at different frequencies. In living beings, energy flows not only from physical nourishment, but through the body in pathways known as meridians and in energy centres called chakras. Chi, (Qi or Ki) is the energy of life itself, a balance of Yin and Yang, positive and negative, electromagnetic energy which flows through everything in creation. So Chi can possibly be described as an electromagnetic phenomenon, as a form of light energy, as a form of bio-electromagnetic energy or electricity.⁹

Magnetic Energy

A magnetic is a piece of metal that can attract iron, nickel, cobalt, or certain specific other kinds of metal. Every magnet contains two distinct regions, one known as the north pole and one, the south pole. As with electrical charges, unlike poles attract each other and like poles repel each other.

A study of magnets allows the introduction of a new concept in energy, the concept of a field. An energy field is a region in space in which a magnetic, electrical, or some other kind of force can be experienced.¹⁰

⁷ Source: <https://pubmed.ncbi.nlm.nih.gov/10714732/>

⁸ Source: <https://www.universetoday.com/26775/gravity-of-the-earth/>

⁹ Source: <https://universalenergyarts.com/chi/>

¹⁰ Source: <https://science.jrank.org/pages/2489/Energy-Magnetic-energy.html>

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Two locations were mentioned by the speaker as having powerful magnetic energy – Sedona and Lourdes. I researched information about Sedona and found:

- **Sedona** (Arizona, US) vortexes are natural geomagnetic points that create a swirling energy centre radiating from the Earth's surface. Many people have reported feeling inspired by these beneficial spiritual energy sources, which are also said to facilitate balance, prayer, healing, and intuitiveness.¹¹ Interesting to note is that normal water has a pH level of about 7. But when magnetised, it has been proven to destroy cancer cells. Cancer is practically unknown among Hopi Indians of Arizona because they drink water that is naturally rich in rubidium and potassium. Salts of these minerals react against the dangerous acidity lifting body pH.¹²

The Greek Scholars

The Science of Magnetism was born in Ancient Greece. Tradition has it that the first ancient Greek scholar ever to discuss the magnet was Thales (c. 624–546 b.c.) of Miletus, a flourishing port city in Ionia on the Aegean Sea. None of Thales's writings was preserved, so whatever is claimed to be known about him has come from scholars of later generations.

About two hundred years after the time of Thales, for example, Aristotle (384– 322 b.c.) noted in *On the Soul* that Thales, too, to judge from what is recorded about him, seems to have held soul to be a motive force, since he said that the magnet has a soul in it because *it moves the iron*.¹³

Claudius Galen, Ali Abbas and Paracelus

I came across a paper written by Dr E H Frei (the Benjamin Abrams Professor of Electronics and Head of the Weizmann Institute's Department of Electronics) who said that:

*"... even in archaic [ancient] medicine, magnetism was used to treat various diseases. As far back as 200 BC, Greek physician [Claudius] Galen describes the magnet as a purgative in the 9th book of his 'De Simplicium Medicamentorum Facultatibus'. The Arabian physician and philosopher Avicenna used magnets to treat [the] liver about 1000 AD. Ali Abbas, a famous Persian physician in the 10th century, writes in his 'Perfect Book of the Art of Medicine that magnetism will cure gout and spasms. In the early 1500s, the Swiss physician and alchemist [Theophrastus von Hohenheim] Paracelsus used magnets to treat hernia, dropsy and jaundice among other diseases'.*¹⁴

Chinese Compass



The compass was invented more than 2000 years ago. Sometime before the 4th century BC, the Chinese noticed that certain minerals, properly prepared, always pointed to the South. The mineral was magnetite, commonly called lodestone, and it was made into what the Chinese called a "south pointer." For many centuries, these were used primarily for mystical purposes. By the 11th century AD, the Chinese had turned their south pointer into a magnetic compass, and a century later, this device spread to both Europe and the Islamic world. The magnetic compass would eventually find its most significant use as an aide to naval navigation during the late Middle Ages.¹⁵

Picture Credit: "squared circle Chinese compass part" by zen is licensed under CC BY-NC-SA 2.0

¹¹ Source: <https://detoursamericanwest.com/where-to-find-an-energy-vortex-in-sedona/>

¹² Source: <http://www.belmag.rs/uncategorized/magnetic-phenomena>

¹³ Source: https://www.worldscientific.com/doi/pdf/10.1142/9789813223776_0001

¹⁴ Source: Medical Applications of Magnetism, <https://www.tandfonline.com/doi/abs/10.1080/00963402.1972.11457968?journalCode=rbul20>

¹⁵ Source: <https://www.encyclopedia.com/science/encyclopedias-almanacs-transcripts-and-maps/chinese-invent-magnetic-compass>

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Sleeping North/South

According to *Times of India*, it is usually said that you must avoid sleeping with your head pointing North at any cost. The *Times* article says Earth and the human body both have magnetic fields of their own. Magnetic fields on the Earth are concentrated in the North and the South Pole. When you sleep with your head pointing North, your body's magnetic field interferes with that of the Earth. This can fluctuate your blood pressure and can even cause heart problems. Your heart needs to work harder to overcome this. Suppose you are elderly or already a heart patient. In that case, you might be at a higher risk of getting a haemorrhage or paralytic stroke. Another reason is that our blood contains a lot of iron. When we sleep facing North, the magnetic pull of the direction attracts iron, which gets accumulated in the brain. This is why many people complain of getting a headache when they wake up. Sleeping with your head pointing North can also disrupt your blood circulation and lead to disturbed sleep. Basically, it is better to avoid sleeping with your head facing North - East and South directions are the best directions for sleeping. Sleeping with your head facing South reverses the negative effects of North direction and thus, protects you from several health problems. It keeps your blood pressure under check and also maintains a steady blood circulation. While sleeping, you must always prefer lying down on your left side. Sleeping on the left side helps reduce heartburn and promotes a night of better sleep.¹⁶

Dr William Gilbert (Physician to Queen Elizabeth I)

Dr Gilbert's primary scientific work was *De Magnete, Magneticisque Corporibus, et de Magno Magnete Tellure* (on the Magnet and Magnetic Bodies, and on the Great Magnet the Earth), published in 1600. He described his experiments (with his model Earth called the *terrella*), from which he concluded that the Earth was itself magnetic and that this was why compasses point North¹⁷. He was the first to argue, correctly, that the centre of the Earth was iron, and he considered an important and related property of magnets was that they can be cut, each forming a new magnet with the North and South Poles.¹⁸

Dr Gilbert served as the physician to Queen Elizabeth I in the last few years of her reign. His 'De Magnete' work was published in 1600 and was quickly accepted as the standard work on electrical and magnetic phenomena throughout Europe. Gilbert's findings suggested that magnetism was the soul of the Earth and that a perfectly spherical lodestone, when aligned with the Earth's poles, would spin on its axis, just as the Earth spins on its axis over 24 hours.¹⁹

Samuel Hahnemann

Hahnemann, a German (1755-1843), is regarded as the father of the 'pseudoscientific' system of alternative medicine called Homoeopathy. The speaker mentioned his name, but his connection with magnetic therapy is unclear, although there is some reference to it [HERE](#).

Michael Faraday

Faraday changed everything when he discovered electromagnetic induction in 1831. Through his innovative experiments, he found that placing a conductor in a changing magnetic field would produce a voltage across the conductor.

Dr Giovanni Aldini

As nephew and assistant of Galvani, Dr Aldini actively participated in a series of crucial experiments with frog's muscles that led to the idea that electricity was the long-sought vital force coursing from the brain to muscles. Aldini became professor of experimental physics at the University of Bologna in 1798.²⁰

¹⁶ Source: <https://timesofindia.indiatimes.com/life-style/health-fitness/de-stress/why-you-should-never-sleep-with-your-head-facing-north/articleshow/75347715.cms>

¹⁷ Previously, some believed that it was the pole star (Polaris) or a large magnetic island on the North Pole that attracted the compass.

¹⁸ Source: [https://en.wikipedia.org/wiki/William_Gilbert_\(physician\)](https://en.wikipedia.org/wiki/William_Gilbert_(physician))

¹⁹ Source: https://www.bbc.co.uk/history/historic_figures/gilbert_william.shtml

²⁰ Source: <https://pubmed.ncbi.nlm.nih.gov/15595271/>

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MRI Scanners

MRI scanners use strong magnetic fields, magnetic field gradients, and radio waves to generate images of the organs in the body. MRI²¹ does not involve X-rays or ionizing radiation, distinguishing it from CT²² and PET scans.²³

How Magnets are made

There are several processes for making magnets, but the most common method is called Powder Metallurgy. Suitable raw materials are melted under a vacuum or inert gas in an induction melting furnace. The molten alloy is either poured into a mould onto a chill plate or processed in a strip caster – a device that forms a thin, continuous metal strip. These cured metal “chunks” are crushed and pulverized to form a fine powder ranging from 3 to 7 microns in diameter. This very fine powder is chemically reactive, capable of igniting spontaneously in air and therefore must be protected from exposure to oxygen. These magnets are most often called sintered magnets.²⁴

The Magnetic Body

Human magnetism is a popular name for the alleged ability of some people to attract objects to their skin²⁵. People who claim such an ability are often called human magnets. Although metal objects are the most popular, some claim ability to stick to other types of materials²⁶. However, none of the recorded claims of human magnetism corresponds with the physics of magnetism.

'We are all magnetic in nature.'

Here's an interesting question: *Do human beings have a natural magnetic sense?* According to an article on *The Conversation*²⁷, **biologists know** that **other animals** do and think it helps creatures including bees, turtles and birds to navigate their way through the world. Scientists have tried to investigate whether humans belong on the list of magnetically sensitive organisms. For decades, there's been a back-and-forth between positive reports and failures to demonstrate the trait in people, with seemingly endless controversy. A research group – including a geophysical biologist, a cognitive neuroscientist and a neuro-engineer – took another approach. What they found arguably provides the first concrete neuroscientific **evidence that humans do have a geomagnetic sense**.

Electricity harvested from trees

The speaker mentioned this topic: harvesting electricity from trees. Whilst it's an exciting idea, it's hard to see the connection with magnets. But, what if the wind blowing on leaves could be harnessed for generating "green" electricity? That certainly doesn't happen every day. But soon it might: researchers in Italy have managed to turn living plants into "green" power sources with a single leaf of them generating more than 150 Volts, or enough electricity to power 100 LED light bulbs. Fabian Meder, Barbara Mazzolai and a team of roboticists and biologists at the Istituto Italiano di Tecnologia have developed a hybrid Nerium oleander tree with natural and artificial leaves that can act as an innovative "green" electrical generator by converting wind into electricity. In a recent study, the research team demonstrated that certain leaf structures can convert mechanical forces into electrical energy from a leaf's surface.²⁸

²¹ Magnetic Resonance Imaging (MRI) provides precise details of body parts, especially soft tissues, with the help of magnetic fields and radio waves.

²² A computed tomography scan — also called a CT or CAT scan — is an imaging test that lets doctors see inside a person's body.

²³ Positron Emission Tomography (PET) is an imaging test that uses radiotracers to assess organ and tissue functions.

²⁴ Source: <https://www.arnoldmagnetics.com/resources/magnet-manufacturing-process/>

²⁵ Source: https://en.wikipedia.org/wiki/Human_magnetism

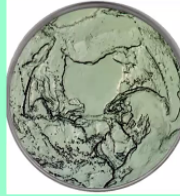
²⁶ Such as glass, porcelain, wood or plastic as well as metals with no ferromagnetic properties such as brass and aluminium. Source: **Are There Really Magnetic People?**, *Science-Based Life*. 14th March 2012.

²⁷ See [HERE](#).

²⁸ Source: [HERE](#).

Slides from the Talk

Magnetise your water with a coaster



The Norstar coaster comes with 9 neodymium magnets strategically placed around the circular disc. A glass of water can be magnetized in about 10 minutes whilst a jug full will take around 30 minutes

North Pole water Place your glass or jug on to the globe surface of the coaster, wait the required time and enjoy

South Pole water Place your glass or jug on to the south pole surface of the coaster, wait the required time and enjoy

Bi-Polar water Take an equal amount of both north and south pole water, mix together and enjoy

Pets and Animals

The placebo effect does not exist in the non-human animal world, thus adding scientific credibility and validity to PEMF's health enhancing impact on the small animals tested.

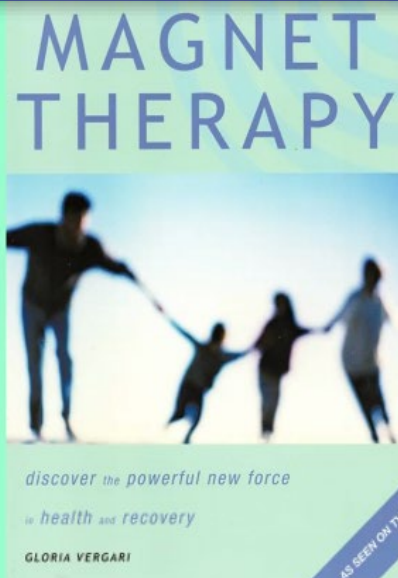
The scientifically established health benefits of PEMF Therapy commonly produced in all animals are:

- Accelerates Healing
- Reduces Pain & Inflammation
- Improves Energy (ATP) Production Adenosine Tri Phosphate
- Improves Sleep
- Improves Circulation
- Improves Immunity
- Increases Cellular Regeneration
- Increases Cellular Detoxification

Want to learn more?

Download the book for **free**

https://gallery.mailchimp.com/334296ce4383c05f29d952673/files/Understanding_Magnet_Therapy.pdf



About the Speaker



Alan has over 35 years of experience working as a trainer in his own business and others, including the aviation industry. He is known for delivering his own induction and training programmes for new recruits and being an effective Amazon seller. Before leaving the employ of Gatwick Airport, he built a base for his two businesses to grow by working to lay the foundation on his days off.

He is a specialist in bespoke courses, coaching and talks in very specific topics – his *Selling on Amazon* course and *Magnet Therapy & Wellbeing* training have been crafted from his experience of over 35 years in business.

Alan is a qualified Magnet Therapist and runs a successful business (**Norstar Magnetics**). Bringing this experience together with many years of training and coaching, he now offers courses in Magnet Therapy and 5-a-day nutrition.

See course details for **Magnet Therapy** [here](#) and for **5-a-day** by clicking the red links.

Alan is a former member of the Royal Society of Medicine. He is currently a member of the College of Integrated Health and the International Practitioners of Holistic Medicine. He qualified as a Magnotherapist in 2003 and regularly addresses conferences, public and private events on the topics in his area of expertise and experience. He is also the founder of UK Radiation, an internet-based website resource for people looking at more information on electromagnetic fields and possible health risks from wireless technology.

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