



Magnetic Therapy Article

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All life forms on earth have evolved with the earth's magnetic fields. For thousands of years, people of various cultures have been aware of and used magnets for healing. Although, well documented in physics and commercial uses, magnets today are being rediscovered for use in healing various life forms. Although direct application of magnets can have beneficial results, inexperienced people should not apply magnets if they are unfamiliar with the strength and nature of the magnets. Magnets can "burn" the skin if left on too long or are too strong. Magnets can also change the polarity of the body and cause discomfort if too strong or left in a static position too long. Low level magnetic fields of 5 to 1000 gauss are usually safest and seem to have the best healing effects on most life forms. The safest products allow the magnets to create a "field" and move with the body.

Using any magnetic field on or near an animal or person can affect the body.

Magnetic research indicates that magnets can affect:

- Blood flow by increasing the oxygen carrying potential.
- Changes in migration of calcium ions, thus assisting in moving calcium ions to broken bones or removing ions from painful arthritic joints.
- The pH balance of various body fluids which are often out of balance when ill.
- Hormone production from the endocrine glands which can be increased or decreased by magnetic stimulation.
- Enzyme activity and other bio-chemical processes.

Documented examples of specific effects created when a magnetic field is applied to the body are:

- Electricity is generated in blood vessels.
- Ionized particles increase in the blood.
- Autonomic nerves are excited.
- Circulation is improved.

Magnetic fields can also be used to balance the negative effects of low-level electromagnetic fields caused from such things as power lines and micro-waves, as well as noxious earth energies. Imbalanced earth energies can weaken the immune system and cause general weakness in people and animals.

Types of Magnetic Fields

Basically, there are two common types of magnetic field products on the market today;

- 1) a magnetic field pulse system which generates an electromagnetic field using electricity and coils and
- 2) magnetic products which use various types of magnets to generate a magnetic field. There are several manufacturers of pulsed electromagnetic field systems today. These systems may operate off batteries or direct electricity using direct or alternating currents. Magnetic products may use ceramic magnets or

various forms of flexible magnets. Their strength will vary from roughly 300-400 gauss to about 1000 gauss. Most magnets have a South (+) positive pole and a North or negative (-) pole. Positive poles usually stimulate and negative poles usually sedate when used directly on an acu-point on the body. When alternating poles are used, a magnetic field of "attraction" is created. If single poles are used, a magnetic field of "repelling" is created. Bi-pole magnets are made with alternating strips of positive and negative poles in various patterns from crisscrossing to concentric circles. In general, alternating fields are the safest and most commonly used, although all forms of magnetic field therapy has its specific application.

In general, magnetic therapy is a safe non-invasive modality that works subtly with the body's energy to bring about balance. Magnetic therapy can be used as preventative therapy to help keep the body in balance. However, the advice of your veterinarian or health care professional should be sought before using magnetic therapies in the treatment of any serious disorder.

How does Magnetic Therapy Work?

Magnetism and electricity are closely related and regarded as two expressions of the same electromagnetic force that is a property of all matter. Whether it be in the earth, your body, or your horse's body, all cells and tissues generate electromagnetic fields. but interaction of these fields with external magnets depends on the quality and type of magnets used, and the "lines of flux" created by their field patterns.

Scientific Evidence of Therapeutic Effect

Only recently have we had equipment sufficiently sophisticated to actually measure the impact of electromagnetic flux in physical healing and preventive therapy; and research continues into its effect on oxygen flow and circulation. while the body's blood circulation and other systems do constitute a "chemical" process, it is equally accurate to describe their functioning as "electrical"; and studies indicate that electromagnetic fields alter cellular activity and may improve circulation by increasing ionized particles in the blood.

Proper magnetic therapy activates ions. These two illustrations show the effects of magnetic stimulation, moving tissue salts from a state of stagnation to a place of order within the cells. When this happens, fluids flow again, waste products are removed, and edema and congestion are regulated. Cell metabolism reverts to normal balance.

Pulsed Magnetic Field Therapy

The therapy with pulsating magnetic fields (PEMF) is a relatively new and very effective form of physical therapy. The use of PEMF is a very efficient and simple therapy method. By influencing the animal either generally or locally with a magnetic field packed in impulse bundles. the cellular functions can be improved considerably. Cells have a basic (or rest) potential that is necessary for normal cellular metabolism. Diseased or damaged cells have an altered rest potential. If the ions (electrically charged particles surrounding the cells) move into the area of pulsating magnetic fields, they will be influenced by the rhythm of the pulsation. The rest potential of the cell is proportional to the ion exchange occurring at the cell membrane. The ion exchange is also responsible for the oxygen utilization of the cell.

Pulsating magnetic fields can dramatically influence the ion exchange at the cellular level and thereby greatly improve the oxygen utilization of diseased or damaged tissues. The deterioration of the oxygen utilization is known to be a problem in several medical branches, especially delayed healing and arthritis of joints.

Thus the wide range of uses are:

1. Arthritis, rheumatology, after-treatment of complicated and simple fractures, wound treatment, burns, and degenerative diseases of the apparatus of support and locomotion.
2. Coronary and circulatory diseases;
3. Disorders of the neurological system.

From bibliography and clinical experiments, we know that pulsating magnetic fields are able to reduce pain sensations almost immediately. This is due in part to the increase in the oxygen partial pressure in the terminal tissue and the increase in the local perfusion and velocity of the capillary blood flow alleviating the accumulation of metabolites due to small vascularization and blood flow (transmitted by the sympathetic nervous system).

The therapeutic effect of such treatments lasts for approximately six to eight hours.

So with the number of different types of magnetic products available on the market, what does this mean for us as horse owners? In order to buy the best magnetic product for your horse you need to look at the type of magnet used, it's gauss, where the magnets are situated, and the quality of the fastenings. Then you are able to make an educated guess on which one will suit your needs best.