

Science behind the Magnetic Field Therapy

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Abstract : *Magnetic therapy is the use of magnets to relieve pain in various areas of the body. It is the simplest, cheapest and entirely painless system of treatment with no side effects. In present article, discussion of fundamental aspect about the application of magnetic field (Natural and artificial) and how it apply to the human body with suggestions. Magnetic field is produce by magnet or electromagnetic generating devices are able to penetrate the human body because human body is magnetic hence magnetic field affect the functioning of human body. Suggestions are, High blood pressure person sleep with foots towards west and vice-versa. Instrument of magnetic field therapy must be in magnetic meridian. Current passing in coil must be in clockwise direction. Move the magnetic field from head towards foot. Give ten ml tonic contains sodium, potassium, calcium, phosphate and minerals, to the patient. Don't apply electromagnetic field (i.e. magnetic therapy) for any particular part of the body.*

Keywords: *Magnetic field, Natural magnetic field Electromagnetic field, electrolytes Red blood cells, white blood cells.*

Introduction: Magnetic therapy is the use of magnets to relieve pain in various areas of the body. It is the simplest, cheapest and entirely painless system of treatment with no side effects. In present article, discussion of fundamental aspect about the application of magnetic field (Natural and artificial) and how it apply to the human body with suggestions. Magnetic field is produce by magnet or electromagnetic generating devices.

Human body can not be alive without blood; blood is a living tissue that circulates in the body through heart, arteries, veins, and capillaries electrolytes, hormones, vitamins, antibodies, heat and oxygen to the body tissues. Blood contains cells and plasma.

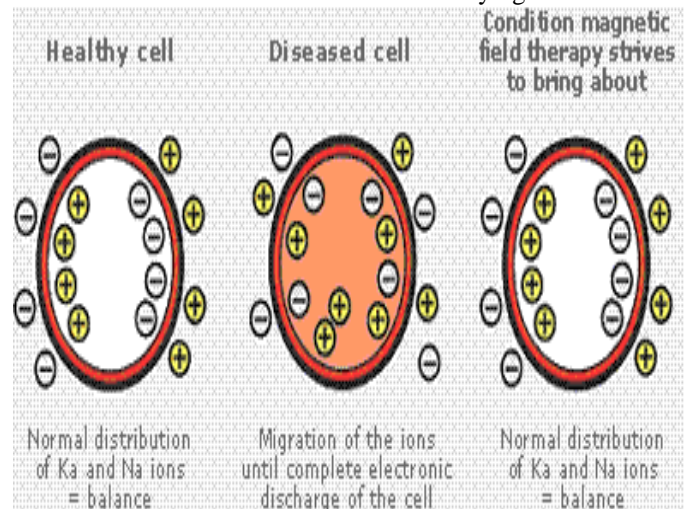
Cells contain Red blood cells, white blood cells. Red blood cells Contain hemoglobin. White blood cells protects the body from invasion of foreign substances such as bacteria fungi, and viruses, and plasma is the liquid portion of the blood and contains nutrients proteins, hormones, it serves maintaining a blood pressure, immunity, sodium, potassium, helping to maintain a proper balance in the body.

Plasma contains electrolytes such as Sodium(Na^+), Potassium(K^+), Chloride(Cl^-), Bicarbonate (HCO_3^-), Calcium (Ca^{+2}), Magnesium (Mg^{+2}). These chemicals are essential in bodily functions such as fluid balance, nerve conduction, muscle contraction, blood clotting and pH balance. The other key role of electrolytes is to carry charge and therefore information from one cell to another around the body.

Working of cell:

In a normal healthy cell, the ions are distributed around the cell with all of the positive ions on one side and the negative ions on the opposing side. The ions which live outside of the cell in the tissues will align with those inside of the cell so that opposing poles are together with the cell membrane between them (see diagram of healthy cell below). This allows fluid, oxygen and nutrients (fluid exchange) to move freely in and out of the cell, while maintaining the natural balance within the cell (homeostasis).

In a diseased (injured) cell, the positive and negative ions do not stay on opposing sides of the cell. They are disrupted and scatter randomly around the cell. At the same time the ions on the outside of the cell membrane also become scattered as they try to find their opposing pole, this results in cellular imbalance. Extra fluid from the tissues outside the cell is able to penetrate the cell which in turn pushes vital nutrients, hormones and electrolytes (salts) out of the cell. The cell's ability to function is greatly reduced and cellular degeneration begins which if not corrected will lead to the cell dying.



When a static (fixed in place) magnetic field is applied over an injured (diseased) area, the magnetism penetrates into the tissues and surrounds the damaged cell. The magnetic field that is created around the outside of the cell will pull the ions, both inside and outside, back into alignment. The result is that the ions once again return to their correct position within the cell. The extra fluid that has penetrated the cell is pushed out (via osmosis and diffusion) and returned to the surrounding tissues. The cell regains its natural healthy balance and any damage is repaired over a period of days (see diagram of a cell with a magnetic field).

Body is a tiny magnet? :

In this regard there is no doubt; because, science defines tiny magnet as, "a spinning electron". If you make that charge rotate around some axis, its different parts will move in circles, each acting like small current, and the result would be that the electron is magnetized along its rotation axis and has a magnetic moment. In our body, blood is molten metal and it is flowing in clockwise direction (right side to left side) with charge particles (as mention above) and as it spins, electric currents are create within these metals, hence it produce magnetic field and its direction is from head to foot.

It support from, "As the Earth's core is molten metal and as it spins electric currents are create within these metals it produces a magnetic field".

Working of magnetic field

(I) Natural magnetic field: -

(1) Sleep or take rest lying foots towards East, so that magnetic field of body is in perpendicular positions to the natural magnetic field. In this position magnetic forces will be maximum and in upward direction. Which is requires at the rest time, in the rest time the heart beats become slow means rate of blood flow becomes slow. Your right ventricle pumps blood to your lungs and your left ventricle pumps blood all around your body. The muscular walls of the left ventricle are thicker than those of the right ventricle, making it a much more powerful pump, to maintain the constant blood flow, when external force is apply by natural magnetic field. High blood pressure person sleep, foots towards west so that natural magnetic field reduces the blood pressure.

(2) Don't sleep or take rest lying foots towards South; because from magnetic properties, when line of induction passes through hollow space they are diverted, (Body have at least seven holes, e.g. Nose, Ear, Mouth, Eyes...) diverted magnetic line of induction produces turbulent blood flow, hence it exerts blood pressure, disturbed sleep, babies and children fret and don't sleep well, restlessness, general tiredness headaches, hyperactivity.

Sleep on thin cotton cloth. Cotton cloth is in direct contact to the surface of the Earth, and head towards west. House should not be more than ten meter height.

(II) Electromagnetic field:

In electromagnetic theory, current is passing in coil, magnetic field is produced. We know that when randomly oriented magnetic lines of inductions are, kept in externally strong magnetic field they get aligned along strong magnetic field and strength of magnetic field is increases. Which produces steady blood flow, hence above maintained symptoms are minimize.

Method of electromagnetic treatment:

Instrument of magnetic therapy must be in magnetic meridian. Current passing in coil must be in clockwise direction, so that

produced electromagnetic field (minimize eddy effects) is at the center of the coil and parallel to the Earth's magnetic field which gives more effect. Body of the patient must be in straight position (no inclination) on the bench. Bench must be steady only coil (i.e. electromagnetic field can move along the bench (i.e. along the body). Thin white cotton cloth is cover on the body. Pass the current in coil and move the coil from head towards foot. Off the current (i.e. electromagnetic field), and move the coil towards head, again pass the current (i.e. electromagnetic field), and move the electromagnetic field from head towards foot. Repeat this procedure at least three times. Invert the body of the patient, and repeat the above mentions procedure. For fast relief before electromagnetic treatment, give ten ml tonic contains sodium, potassium, calcium, phosphate and minerals, to the patient. Don't apply electromagnetic field (i.e. magnetic therapy) for any particular part of the body



Conclusion/ Suggestion:

(1) High blood pressure person sleep, foots towards west and vice-versa. (2) Don't sleep or take rest lying foots towards South. (3) Instrument of magnetic therapy must be in magnetic meridian. (4) Current passing in coil must be in clockwise direction. (5) Body of the patient must be in straight position (no inclination). (6) Move the magnetic field coil from head towards foot. (7) Give ten ml tonic contains sodium, potassium, calcium, phosphate and minerals, to the patient. (8) Don't apply electromagnetic field (i.e. magnetic therapy) for any particular part of the body.

References:

- i. Mathie A, Kennard LE, Veale EL (2003). "Neuronal ion channels and their sensitivity to extremely low frequency weak electric field effects". *Radiation Protection Dosimetry* 106 (4): 311-6. PMID 14690272.
- ii. Gorczyńska E, Wegrzynowicz R (1986). "Effect of chronic exposure to static magnetic field upon the K⁺, Na⁺ and chlorides concentrations in the serum of guinea pigs". *Journal of Hygiene*,

Epidemiology, Microbiology, and Immunology 30 (2): 121–6. PMID 3722807.

iii. Lange K (October 2000). "Microvillar ion channels: cytoskeletal modulation of ion fluxes". *Journal of Theoretical Biology* 206 (4): 561–84. doi:10.1006/jtbi.2000.2146. PMID 11013115.

iv. Singh Birla, Ghanshyam; Hemlin, Colette (1999). *Magnet Therapy: The Gentle and Effective Way to Balance Body Systems*. Rochester, VT Healing Arts Press. pp. 42-43 ISBN 0-89281-841-7.

v. Philpott, William H; Kalita, Dwight K; Goldberg, Burton (2000). [www.alternativemedicine.com Magnet Therapy: Alternative Medicine.com Definitive Guide]. Tiburon, California: alternative Medicine.com Books. pp. 24-25. ISBN 1-887299-21-1.

vi. Pittler, Max H. (2008-03). "Static magnets for reducing pain". *Focus on Alternative and Complementary Therapies* 13 (1): 5. doi:10.1211/fact.13.1.0003. Retrieved 2009-08-18.

vii. Skalak TC; Morris CE (2008). "Acute exposure to a moderate strength static magnetic field reduces edema formation in rats.". *American Journal of Physiology: Heart and Circulatory Physiology* 294 (1): H50-7. PMID 17982018

viii. NicoleJules
,<http://healthpsych.psy.vanderbilt.edu/MAGNETICTHERAPY.htm>