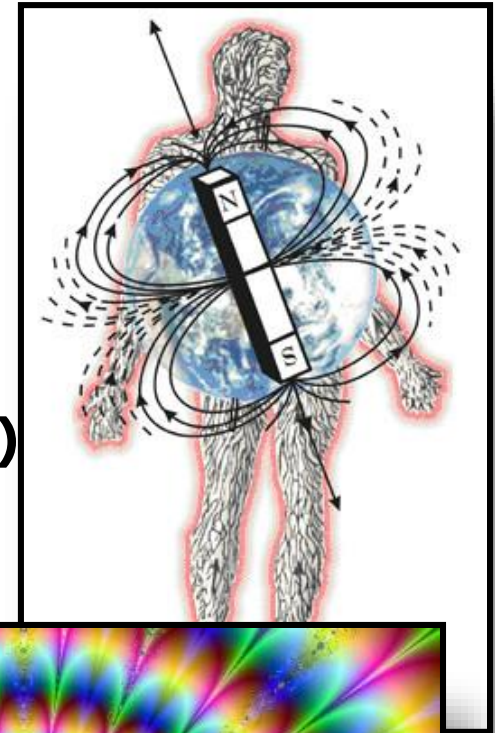


Complementary and Alternative medicine

PHG 332

*(Other Treatments and Applications **II**)*



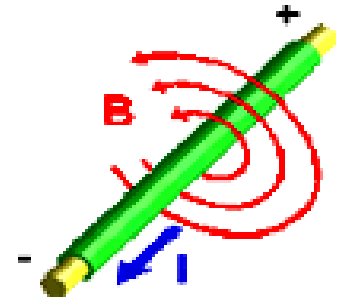
Complementary and Alternative Medicine (Cont.)

Other Treatments and Applications

- I) **Mind–Body Interventions (BMI)**
- II) **Bioelectromagnetic (BEM) Applications**
- III) **Pharmaco-Biological Treatment**
- IV) **Miscellaneous Diagnostic & Treatment Methods**

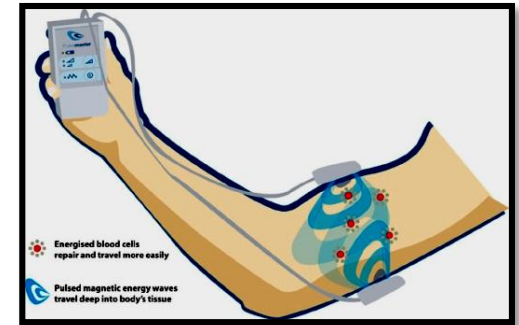
II) Bio-electromagnetic (BEM) Applications

- BEM therapy is the application of **electromagnetic** fields to **treat** and **prevent** disease and to **promote** health.
- Whenever **current** (I) passes through a **wire**, it induces a **magnetic field** (B).
- Although **electricity** itself remains **confined** within a wire, the magnetic field induced **moves** outside.
- Since all **chemical** and **biological** interactions are fundamentally **electromagnetic** → an **externally applied** electromagnetic fields might be expected to have **biological** effects at many levels.



Some proven effects of electromagnetic fields include:

- Bone healing
- Vasodilatation / increased blood flow
- Reduced inflammation and edema
- Relaxation of muscles



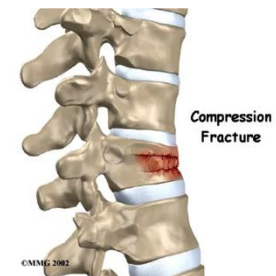
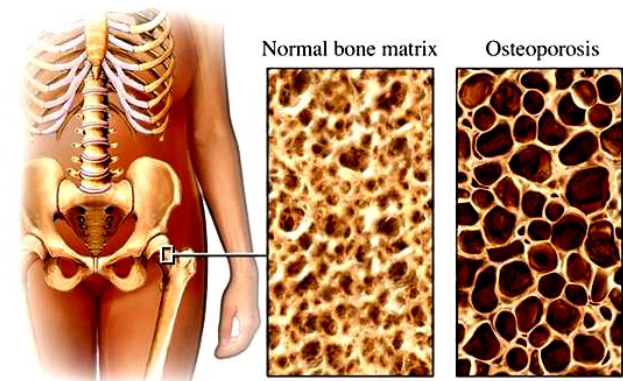
Uses of electromagnetic fields include:

- Vasodilatation / blood flow
- Reduced inflammation & edema
- Relaxation of muscles
- Reduction in platelets adhesion
- Improved nerve function & sleep
- Reduced stress, better mood and
- Depression, Schizophrenia
- Kidney disorders and stones
- Muscle rehabilitation, neck pain
- Psoriasis, wounds and burns
- Chronic venous insufficiency
- Wrinkles

➤ **BEM applications have been proven effective in:**

1. Osteoporosis and bone problems:

- BEM helps healing **fractures** and **stimulates new bone** formation
- In **osteoporosis:** a significant **increases** in bone **density** have been **documented** in a **short** time, which is beneficial in protection against “compression fracture”
- In one study, bone **density** **increased** by 5.1 % in **three months**.
- BME also has been reported to **Alleviate pain,** **Heal existing fractures** and **Prevent future breaks**



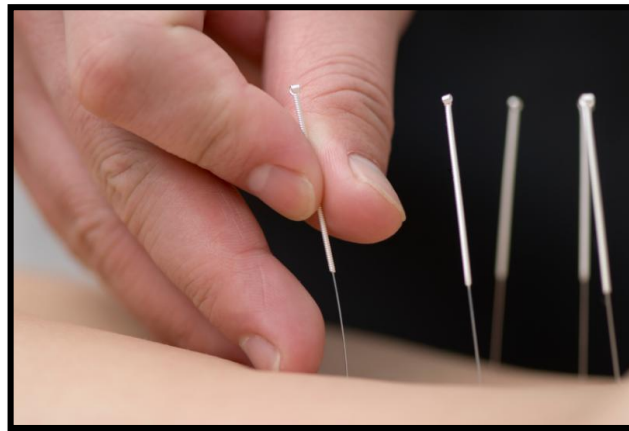
2. Disorders affecting central and peripheral nervous system, including Parkinson's disease and Alzheimer's diseases:

A 74 year old female, was diagnosed with Parkinson's disease. She was also diabetic, hypertensive, and had muscle weakness, poor coordination, back pain, low energy, stress and depression

- When treated with daily BEM therapy (35 days) and weekly acupuncture and laser therapy, improvement was reported:
 - Dramatic increases in energy
 - Better muscular control
 - Improved mood
 - Lower blood pressures and sugars level
 - Her gait (walk) became steady and rapid

N.B.

- BEM applications may be given as a stand **alone** treatment or **in combination** with many other methods:



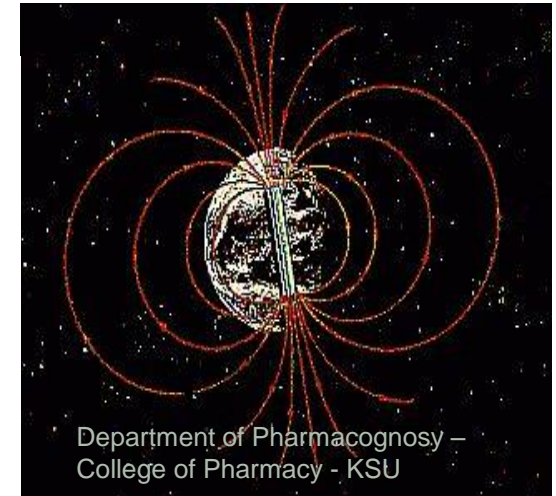
- In combination with **acupuncture** → BEM therapy may **improve outcomes** by **Relaxing** muscles and **Reducing** stress **before** a needle is inserted

Safety

- BEM applications seem to be quite **safe**, since **many millions** have been treated successfully **without harm**.
- Side effects are **rare**, the most common is **hypotension**.
- Some few individuals are also **sensitive** to **electric fields**.
- Absolute contraindications:
 - **Pacemaker** / other **implanted** or **external** medical devices
 - **Pregnancy**
 - **Organ Transplant**
- Relative contraindications/Caution:
 - **Active bleeding**
 - **Hypotension**

Related issue: Magnet Therapy (Magnotherapy)

- **Magnetic Energy is one of the strongest natural force in the universe. Our Earth is a giant magnet and all life is developed under the influence of the earth's magnetic field.**
- **Magnetic Energy permeates to each microscopic cell in our body and our body is an electromagnetic system.**
- **Magnotherapy is a form of alternative medicine involving use of magnetic fields produced by permanent magnets.**
- **Proponents claim that exposing certain parts of body to doses of magnetic fields has a beneficial effect.**
- **Several magnetic-based products for 'healing' purposes become available e.g. **magnetic bracelets** and jewelry; magnetic straps for wrists, ankles and the back; shoe insoles, mattresses and magnetic blankets (blankets with magnets woven into the material).**



The Leading Causes of Magnetic Deficiency and Symptoms

- Indoor Living and Working Conditions Insulate us from the Earth's magnetic Field.
- Driving around in steel cars with rubber tires is a further insulating factor.
- The earth's magnetic field is a direct current (DC) at a frequency of 7.96 cps and this is a healthy frequency for our bodies. By contrast, man-made electrical current is alternating (AC) and operates at 60 cps.
- The harmful electromagnetic fields created by AC current and other electromagnetic contaminations interfere with the earth's magnetic field and adversely affects our biological functions.

N.B. Lack of magnetism may cause stress, mental disorders, headaches, arthritis, muscle pain, chronic fatigue, allergies, insomnia, inflammation, bowel disorders and many other degenerative diseases afflicting people today.

❑ Pain Relief:

up to 90% of people experience **pain relief** when magnet therapy of the correct strength and polarity is applied.

The pain relief may be due to:

- a) Increased release of beta-endorphins
- b) blocking of pain messages to the brain
- c) relaxing tense muscles, and/or
- d) increased circulation.

❑ Improved Circulation:

Magnet Therapy can **increase blood flow** through capillaries by as much as 400%, resulting in:

- a) improved oxygenation of the body,
- b) more efficient elimination of toxins
- c) stabilize blood pressure
- d) helps prevent arterial sclerosis.

❑ **Optimum Energy:**

A constant, sufficient supply of Magnetic Energy is essential for re-energizing the cells. This results in:

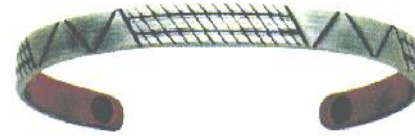
- a) Increased energy
- b) Optimum body strength
- c) Increased stamina
- d) Sense of well-being.

❑ **Deep, Rejuvenating Sleep:**

Sleeping on a magnetic mattress pad can be highly beneficial in improving the quality of sleep.

❑ **Relief from Stress and Anxiety:**

Magnet Therapy helps to keep our body in polarity balance, preventing the symptoms of stress and anxiety.



1- Magnetic Bracelets (for pain management in hands, wrist, elbow, arm – helps relieve motion sickness)



2- Magnetic Necklaces (for pain management in neck, shoulder, and upper back, prevent headache, and reduce migraine)



3- Magnetic Supports & Insoles (relieve pain and swelling, accelerate healing and recovery from injury)



4- Magnetic mattress & Cushions (Induce deep restorative sleep and re-energized re-balanced wake up, pain relief from most chronic conditions including arthritis, and improves circulation throughout the body).



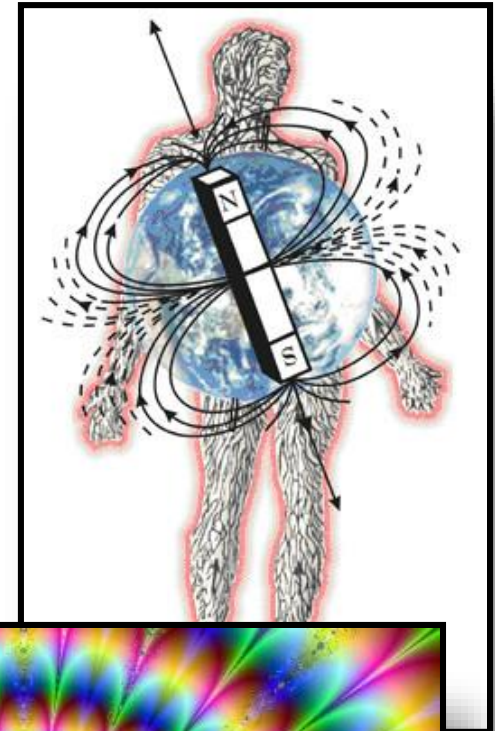
5- Magnetic Masks (Helps relieve most eye conditions, promotes deep restorative sleep, relieve/prevent headaches/migraines, and Helps relieve sinus congestion)

2. Light Therapy (revise the previous lecture):

Complementary and Alternative medicine

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(*Other Treatments and Applications III*)



III) Pharmacological and biological treatments:

- The alternative pharmacological and biological treatments are a **collection** of **drugs** and **vaccines** that have **not yet** been accepted by **conventional medicine**.
- **Why are they not yet included in conventional medicine?**
 - **High expense** of trials necessary to meet FDA approval.
 - Lack of **sponsorship**: (Although they are **available** and **inexpensive**, drug companies **lack interest** in investing the enormous sums required for full trials)
 - Hundreds of **other drugs** and **vaccines** are available.
- The ones that were chosen **because of** their **therapeutic promise** (have some evidences to be effective) and **wide use**

- Despite their **diversity**, the alternative pharmacological approaches **share** some/all of following **characters**:
 - They are believed to be **nontoxic**.
 - Many are **not** used to **eradicate** a specific disease but they **stimulate** the **patient's immune system** to fight a pathological condition or an organism.
- Data indicate that they **may be** useful in the “**treatment**” of **Cancer**, **AIDS**, **Heart diseases**, **Hepatitis** and other major health problems

➤ **Examples include:**

1. **Cartilage products**: derived from **Cattle**, Sheep,

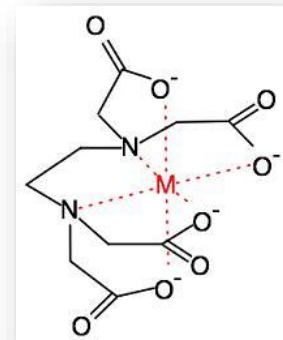
Sharks, Chicken, etc. Some are **repeatedly** powdered and **cleaned**.



- Reported effects of **cartilage preparations** include:
 - ✓ Accelerating wound **healing**
 - ✓ Topical **anti-inflammatory** capability
 - ✓ Alleviate **psoriasis**
 - ✓ Relief **swollen & tender** joints of patients with **rheumatoid arthritis**
 - ✓ **Anticancer** effect

2. **EDTA (Ethylenediaminetetraacetic acid) Chelation Therapy:**

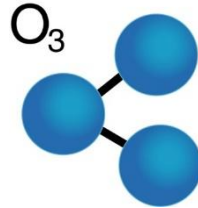
- ✓ EDTA readily **binds** (chelate) to metal ions.
- ✓ **Chelation** is the major form of alternative therapy for **cardiovascular** diseases



- ✓ Several mechanisms are proposed for its **therapeutic** action:

Since EDTA is known to **incorporate** a metal ion (M^+) into its own ring\structure, it may **maintain** cellular **health** by **removing** those ions that cause harmful effects → → EDTA is believed to **remove calcium** particles **deposited** in the arterial wall.

- ✓ EDTA is used in **heart diseases** and **circulatory problems** e.g: **Atherosclerosis, Angina pectoris, and hypertension.**
- ✓ Chelation therapy is suggested to have a potential effect in:
 - Treatment for **rheumatoid arthritis**
 - **Prevention** of cancer



3. Ozone therapy:

It is a therapy that are supposed to **release oxygen in the body**

- **Extra oxygen** is believed to **increase** the body's ability to **destroy** disease-causing cells.
- The most common compounds used in **oxygen therapy** are:
 - Hydrogen peroxide
 - **Ozone**
- Ozone is also excellent for **topical** treatment of:
 - **Infected** wounds
 - **Ulcers** and burns, especially those that are **difficult** to heal.

- Ozone could be administered by several methods:
 - a. **Autohemotherapy:** By **removing** a part of **blood** from the patient, **adding** ozone and **oxygen** to the blood, and then **infusing** blood **back** to the patient.
 - b. **Ozone sauna**
 - c. **Colorectal** administration of ozone/oxygen, much like an **enema**, has been used to treat **colon cancer**.



Autohemotherapy



Ozone sauna

4. Apitherapy:

- It is the **medicinal** use of the various products of common **honeybee** (*Apis mellifera*) which include:

- Raw honey
- Royal jelly
- Propolis (bee glue)
- Wax



- Honey: various studies attribute the following effects :

- **Antifungal**
- **Antibacterial**
- **Anti-inflammatory**
- **Antiproliferative**
- **Cancer-drug-potentiating** properties

- In China, raw honey is applied to **burns** as an **antiseptic** and a **painkiller**.
- **Royal jelly** consists of the **milky fluid** produced by the **salivary glands** of the **worker bees**. It is used as essential **nourishment** for the development of the queen bee **larvae**.
- Fresh royal jelly is **unstable** and requires:
 - **Refrigeration**
 - **Freeze-drying**
 - **Stabilized in form of gelatin capsules**



- **Constituents** of royal jelly :

- Mixture of amino acids
- **Vitamins** (including vitamin B complex & vitamin C)
- Minerals
- Lipids and **fatty acids**
- **Carbohydrates**

- **Uses:**

Royal jelly is an **expensive** dietary supplement recommended for **reducing** the **bad effects of aging**, **depression**, and other conditions.