

Brownian Motor Theory Applied To Imprinted Metal **by** **Gordon Pedersen Ph.D.**

Abstract

Imprinted metal were used to test ten randomly selected human subjects for strength and balance using a double-blind, placebo controlled, crossover experiment. 100% of subjects tested declared there was a noticeable difference in strength and balance when they used the imprinted metal energy as compared to baseline measurements.

Introduction

Protein based molecular motors within a human cell appear to be modulated by wearing a permanently imprinted metal and may ultimately function as Brownian Motors, resulting in improvements in strength and balance. Molecular motors (mitochondria) inside the cell convert chemical energy present in ATP into mechanical energy which is used by the body for energy (1). Imprinted metal worn against the skin demonstrate biophysical changes because a mineral subjected to a body of water will translocate its electrical potential to the entire body of water (Albert Einstein). These changes in electrical potential can result in a greater diffusion of particles (electrons), into the mitochondria, promoting a net motion that is strongly biased in one direction (6). This fulfills the definition of Albert Einstein's Brownian Motor, and when put into motion by an energy source (imprinted metal), which requires no additional or supplemental energy, the activity can be identified as an intercellular, perpetual motion Brownian Motor. This increase in cellular potential is immediately distributed to the entire body (which is approx 70% water) and can, in part explain the increase in strength and cellular communication resulting in improved balance and coordination.

Literature Review

The use of an energized metal and it's affect on the human body, fits Albert Einstein's statement that: A mineral holding a magnetic charge, can be subjected to a body of water resulting in the transfer of the magnetic/electrical energy to the entire body of water (5). Since the human body consists of approximately 70% water, when the imprinted metal comes in contact with the body (water), the magnetic/electrical potential from the metal can be immediately transferred to the entire human body. Because this influence takes place at the atomic or cellular level, one would look to the mitochondria of the cell when searching for the source of this Brownian Motor. With that principle in mind mitochondria are sub-cellular and are the power plant of the human cell wherein cellular energy is regulated (1). These tiny cellular engines operate in an environment where viscosity dominates inertia, and where thermal noise makes moving in a specific direction as difficult as walking upstream against a moving river current. But the forces

directing the actions of these motors toward a desired direction are miniscule in comparison with the random forces exerted by the environment (10).

The current human research using imprinted metal, demonstrate remarkable biomechanical responses in strength, balance and coordination. These responses are without question a result of the metal coming in contact with the human body. This energy appears to have significant affect on the energy and communications of the brain and body as a whole.

Experimental Design

Ten human subjects were used to perform a double blind, placebo controlled, crossover experiment that tests the imprinted metal ability to promote a noticeable change in strength and or balance.

Materials

The Imprinted Metal consists of a silver, stainless steel or dichroic metal (NASA). These metals were imprinted with an electrical charge using positive and negative electrodes placed in proximal contact with the metal. The energy imprinter was used to send a continuous charge through the metal for a period of not less than 14 hours resulting in a permanent electrical and magnetic energy potential capable of miniscule potentials recognized by the human body when contact is made. Identical metals were numbered and used. Metals numbered #1 were imprinted, while an identical metal numbered #2 were placebos and received no imprinting.

Methods

Ten Human subjects were randomly selected and asked to performed strength and balance experiments to determine a baseline strength and balance. This same test was then performed with metal #1 and again repeated with metal #2. The administrators and the human test subjects were both blinded from knowing which metal contained imprinting.

Strength Test:

- *Subject was asked to stand with feet together.
- *Subject was asked to hold dominant hand and arm straight down at their side with hand in cupping position (to accept the administrators fist).
- *Administrator stands four inches away from the subject's feet, places fist in subjects cupped hand and leans down using body pressure to produce and continuously increasing weight sufficient to displace subject.
- *Administrator then says that is a baseline strength test.
- *Administrator then gives subject metal #1 and repeats the test.
- *Administrator asks subject if there was a noticeable difference in strength and records answer.
- *Administrator then gives subject metal #2 and repeats the strength test.
- *Administrator asks subject if there was a noticeable difference in strength and records answer.

Answers were totaled and averaged.

Balance Test:

- *Subject was asked to stand with feet together.
- *Subject was asked to hold arms out horizontally and resist pressure from the administrator.
- *Subject was then asked to stand on one foot.
- *Administrator applies intermittent pressure to the arm, at the elbow, in order to push subject off balance for a baseline determination of balance.
- *Administrator gives subject metal #1 and has subject stand on one foot.
- *Administrator applies intermittent pressure to subjects arm.
- *Administrator asks if there is a noticeable difference in balance as compared to baseline test, and records answer.
- *Administrator then gives subject metal #2 and instructs subject to stand on one foot.
- *Administrator applies intermittent pressure to subjects arm.
- *Administrator asks if there is a noticeable difference in balance as compared to baseline test, and records answer.

Answers were totaled and averaged.

Results

**Table #1
Strength Test Results:**

Subject #	baseline	metal #1	metal #
1	Yes	Yes	No
2	Yes	Yes	No
3	Yes	Yes	No
4	Yes	Yes	No
5	Yes	Yes	No
6	Yes	Yes	No
7	Yes	Yes	No
8	Yes	Yes	No
9	Yes	Yes	No
10	Yes	Yes	No

Average:

100% of subjects said there was a noticeable difference in strength using metal #1 when compared to baseline strength test.

100% of subjects said there was no noticeable difference in strength using metal #2 when compared to baseline strength test.

Table #2
Balance Test Results:

Subject #	baseline	metal #1	metal #2
1	Yes	Yes	No
2	Yes	Yes	No
3	Yes	Yes	No
4	Yes	Yes	No
5	Yes	Yes	No
6	Yes	Yes	No
7	Yes	Yes	No
8	Yes	Yes	No
9	Yes	Yes	No
10	Yes	Yes	No

Average:

100% of subjects said there was a noticeable difference in balance using metal #1 when compared to baseline balance test.

100% of subjects said there was no noticeable difference in balance using metal #2 when compared to baseline balance test.

Discussion

These rudimentary tests demonstrate biomechanical improvements in strength and balance. The improvements are immediate and are visible throughout the entire body supporting the hypothesis that this is a miniscule potential being transferred to the entire body of water (human body). The fact that the body appears to be more coordinated would help explain the improvements in strength. This also suggests that this improvement in strength and balance comes from improved cellular communication resulting in improved coordination probably due to improved mitochondrial function which incorporates greater inter-cellular communication. These tests support a doctor Frey publication in the Biophysics Journal, where he demonstrates that a miniscule potential can have a significant impact on mitochondrial function and do so without thermal change (9).

It is suggested that this miniscule potential found in the imprinted metal significantly improves strength and balance through improved diffusion of electrons into the electron transport chain resulting in the cytochrome delivering increased protons to the mitochondria where a perpetual flow of increased energy is available to the mitochondria. This Brownian Motor serves as the source of increased mitochondrial function which

means that the cells containing the highest number of mitochondria would have the greatest potential to do work.

Increases in energy, strength and balance originate at the sub-cellular level where the mitochondria produce and regulate energy resulting in the ability to perform work, communicate between cells and body systems (4). The mitochondria produce energy in the form of ATP where ATPase would hydrolyze ATP to generate fluctuating anisotropic energetic potentials (3). Along this pathway, the anisotropic potentials would bias the motion of a particle or particles (ions, or polypeptides) in a continuous fashion. This would result in the diffusion of a particle whose net motion is strongly biased in one direction, with the translocation of the particle being loosely coupled to the hydrolysis of ATP. With this increased diffusion of electrons through the porins, the cytochrome produces more protons. Together this improves the mitochondrial capabilities enabling the power plant of the cell to fulfill energy demands with greater efficiency, in the same way that an internal combustion engine would produce more horsepower if it were given a larger exhaust and supplied with more fuel. According to Dr. Astumian, this Brownian Motion can be generated externally without thermal gradients, a net force such as gravity, or a macroscopic electrical field (8).

Mitochondria are membrane-enclosed organelles that are described as the power plant of a cell because they generate most of the cell's supply of Adenosine triphosphate (ATP), which is used as a source of chemical energy (1). In addition to supplying cellular energy, mitochondria are involved in a range of other processes such as cell signaling, cellular differentiation, apoptosis, as well as the control of the cell cycle and cell growth (2). Some cells contain few mitochondria while others contain several thousand mitochondria (3,4). If the imprinted metal has impact on the mitochondria its effects would be seen in a greater capacity in cells that contain a greater number of mitochondria such as the heart, brain and nerves.

Porins act as pores (channels) through a cellular membrane by which molecules can diffuse (7). They are large enough to allow passive diffusion of sugar ions, ions and amino acids into the cell and mitochondria (7). Plasma cell membranes are influenced by the tiniest of electrical fields. External source electrical impulses as tiny as 10 microvolts, have been shown to enter plasma cells, penetrating the cellular membrane producing a significant influence on every organelle, including the mitochondria where the membranes of mitochondria contain porin sheets that are polar and respond to miniscule electrical impulses (9). Mitochondria contain two cell membranes and sandwiched between the two are where cytochromes reside. Cytochromes are found in the inner membranes of the mitochondria and are hemoproteins that contain a heme (iron) group which carry out electron transport (4). The iron interconverts between Fe^{2+} (reduced) and Fe^{3+} (oxidized) states (electron transfer process). During the process of oxidative phosphorylation, protons (H^+) are transported across mitochondrial inner membranes resulting in a trans-membrane proton gradient called a protonmotive force which is used to generate ATP. ATP is the universal chemical energy of life and its production is readily influenced by electrical as well as chemical sources (2).

Porins can be influenced by miniscule electrical impulses to promote an increase in diffused ions that cause an increase in mitochondrial activity and function (7). The heme (iron portion of the cytochrome) readily responds to minuscule electrical or magnetic charges and can respond to the imprinted metal because of its polar nature. When the porins increase the diffusion of ions into the mitochondria, and at the same time the cytochrome increases the flow of protons (H^+), the mitochondria will produce a limited but consistent increase in ATP. This means the individual cells would function with less resistance and improved ATP production, resulting in improved cellular communication, cell signaling, improved tissue, and systemic functions. This increased ATP production and activity would result in the body's ability to function at a higher level physically, mentally and do so in proportion to the number of mitochondria per cell. An example of the differences in mitochondrial activity is observed with the comparison of anaerobic and aerobic respiration where the heme (iron) translocates oxygen in aerobic respiration resulting in a 13 fold increase in the production of ATP as compared to anaerobic respiration (6). This demonstrates how sensitive and responsive energy production can be and how miniscule changes can significantly influence the overall function of the entire body.

The brain and heart cells have the highest concentration of mitochondria per cell and these seem to be where the body demonstrates the most significant improvement in human performance and function when the metal is in contact with the human body.

Summary

The Strength test resulted in 100% of the subjects declaring there was a noticeable difference in strength. The balance test resulted in 100% of the subjects declaring there was a noticeable difference in balance. When an imprinted metal comes in contact with a body of water (human body), the energy from the metal is readily spread (diffused) throughout the human body where miniscule improvements in mitochondrial activity result. This improvement in electron transport and protonmotive forces within the ATP energy pathway serves to promote a perpetual motion in cellular energy potentials identified as a Brownian Motor. This Brownian Motion within the mitochondria have immediate and long term influence on cellular communication, tissues, systems and functions of the body which helps explain the immediate improvements observed in human strength, balance and coordination. The heart, brain and nerves contain the most mitochondria per cell and appear to respond proportionately.

Definitions

Imprinted Metal	Metal which has been exposed to a 12 hour long imprinting process that yields a permanent imprint, and demonstrates remarkable human Bio-mechanical responses to strength and balance.
Brownian Motor	Nano scale or molecular devices by which thermally/magnetically activated processes are controlled and used to generate directed motion in space and to do mechanical or electrical work.

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