

# **EFFECT OF DIMENSIONAL DESIGN TECHNOLOGY TO PREVENT POWER LINE RADIATION DAMAGE**

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## **INTRODUCTION**

Power lines emit an electromagnetic field with a frequency of 60Hz which turns out to be harmful to the body. After Microwave ovens, power line radiation has been most studied in regards to its detrimental effects on the body. Power line radiation appears to have a universal effect on nearly all biological systems tested to date. It also appears that many basic biological systems are inhibited including the cardiovascular system (Bezdolnaia, 1990), the immune system (Robert, 1993), increased incidence of brain tumors (Li, 2003) and leukemia (Bianchi, 2000) and birth defects (Robert, 1993). In some cases the mechanism of action is also known down to the individual biomolecules that mediate the damaging effects (Simko, 2004).

The public safety aspect of electro-pollution is now recognized on a global level (Hardell, 2008). Several commercially available products exist which claim to reduce electro-pollution by protecting the body from power line radiation. Most studies, however, lack rigorous scientific testing. When studies have been conducted they typically demonstrate the reversal of a biological damaging effect measured in-vitro (Farrell, 1998; Goodman, 2002; Syldona, 2007). In some cases a reduction in the intensity of the emitted radiation is reduced by the neutralizing technology (Syldona, 2007).

The purpose of this study was to evaluate the Dimensional Design Products (DDP) technology in protecting the body from electro-pollution. DDP technology involves the use of conscious intention stored in geometric patterns. Previous scientific research indicates the ability of various carriers (water, electronic circuits, crystals) to store information (Rein, 1992; Dibble & Tiller, 1999) associated with intentional states of consciousness in a similar manner to holographic information storage in crystals (Mok, 1991).

## **METHODS**

### **Experimental Approach**

In these experiments the biological system being influenced by the EM fields from power lines is purified human DNA suspended in an aqueous solution. Using this in-vitro model system, the electrical properties of DNA were measured.

It is well known that DNA conducts electricity and its electrical conductivity has been previously described (Cohen, 2005). The electrical properties of DNA and other large biomolecules can be measured using standardized methods involving application of a weak current at various frequencies and measuring the induced voltage (Nielsen, 1962). Voltage changes are due to the transfer of electrical charges either along the outside surface of the DNA molecule or through and across the individual strands which make up its helical structure. This charge transport phenomenon occurs via three different mechanisms:

1. ordinary electrical conductivity
2. semi-conductivity
3. quantum coherence

Electrical conductivity of biomolecules is dependent on a large number of experimental variables including frequency and temperature (Kutnjak, 2005). These electrical properties are also dependent on the presence of structured water which immediately surrounds all charged biomolecules (Van Zandt, 1987). Using a different method, Smith confirmed the requirement for water because no electrical measurements could be obtained from dry (dead) biomolecules (Smith, 1999).

In the present study, the standard methods described above were used to measure the electrical properties of human DNA. Using this procedure measurements were taken on DNA exposed to ambient EM fields in the environment, DNA exposed to two types of power strips and DNA exposed to power strips with DDP patches either placed on the power strip or on the wiring from the pole on the outside of the house.

### **Detailed Experimental Methods**

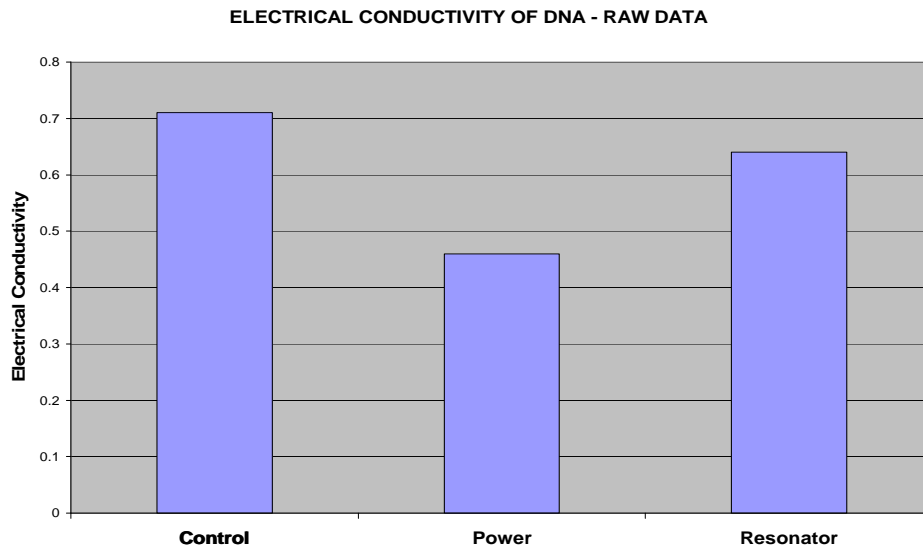
The specific protocol that was followed involved making a stock solution (3mg/ml) of human placental DNA (Sigma Chemical Co., St. Louis) in deionized water. The stock solution was diluted to 1 mg/ml in deionized water for all experiments. In the first series of experiments, electrical properties were measured after the DNA solution had been sitting on the lab bench for three hours exposed only to ambient EM fields in the environment. For EM field exposure a second diluted DNA sample in a small glass vial was placed adjacent to one of the sockets on top of the power strip plugged directly into a wall socket for three hours. This procedure was also followed with a third DNA sample placed on the second type of power strip. To evaluate the efficacy of the DDP patches to reverse the effects of the power strips. In all treatment and control experiments the exact same procedure was followed. Control experiments were done first since it was unknown how long the protective effect of the DDP patches might last.

The electrical properties of DNA were measured using a standard potentiostat (Gamry Instruments, Philadelphia, PA) which generated a 1 mamp current modulated at 20 and 29kHz which was fed into the input of a gold electrode system. The output voltage was detected by the second (receiving) electrode, where the two electrodes were separated by a distance of 2mm. Voltage measurements were taken every 10 seconds for three

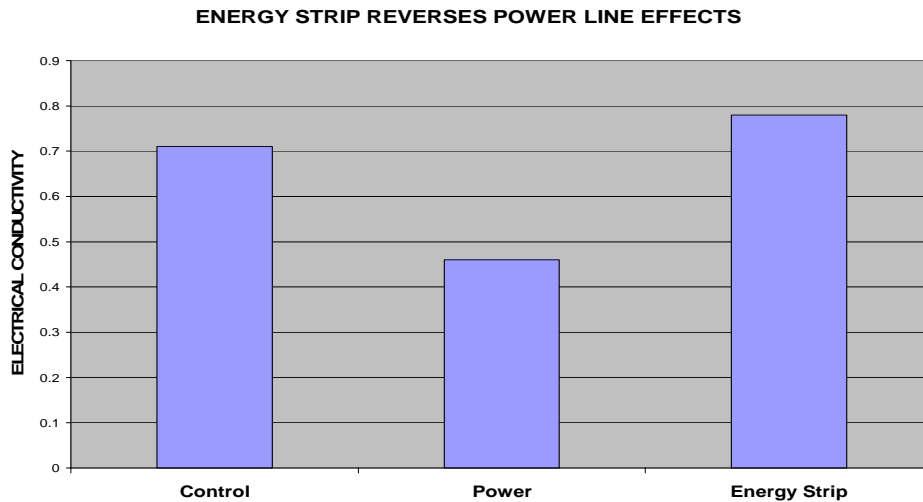
minutes. These kinetic measurement values were then plotted in the Excel software to obtain calculated slope values. For each experiment ten sequential measurements were made on ten individual aliquots of the treated samples and average values were calculated. Percent inhibition values presented in the various figures were calculated with respect to untreated controls.

## RESULTS

**FIGURE 1**  
**THE ABILITY OF THE RESONATOR TO REVERSE POWER LINE DAMAGE**



**FIGURE 2**  
**THE ABILITY OF THE ENERGY STRIP TO REVERSE POWER LINE DAMAGE**



The results of the present study can be summarized accordingly.

1. EM radiation from a power strip inhibits the electrical properties of DNA
2. The Resonator and the Energy Strip effectively reduce power line bio-effects.
3. The Energy Strip is more effective than the Resonator when applied directly to the offending source of power line energy
4. Used in this way the Energy Strip produced a “greater than normal” effect meaning that not only did the system return to baseline values (untreated control levels) but enhanced the electrical properties beyond baseline levels.
5. The efficacy of the Energy Strip is reduced when used in combination with the Resonator (data not shown).
6. No additional improvement was obtained when the Energy Strip is placed on outside wires compared to using it indoors on the source of the power line energy (data not shown).
7. Placing the Energy Strip on plastic tubing around outside wires has a partial blocking effect on power line energy (data not shown).
8. Placing the Energy Strip on the outside wires as well as on the plastic tubing is highly effective at blocking the effect of power line energy producing a greater than normal effect (data not shown).

## **DISCUSSION**

The results of this study demonstrate a statistically significant effect of power line radiation to inhibit the electrical properties of DNA. This is the first report of the ability of EM fields associated with power lines to inhibit the electrical conductivity of DNA *in-vitro*. A power strip plugged into the wall socket was used as a source of power line radiation. Power line radiation inhibited the electrical conductivity of DNA by 40%.

As a result of these experiments, it is reasonable to assume that external EM fields could affect the intrinsic electrical properties of DNA. Since bio-electricity has been equated with the life force itself, it is reasonable to conclude that inhibiting electrical conductivity of DNA can be considered a detrimental effect on the body.

After obtaining the appropriate experimental conditions to demonstrate the detrimental effects of power line radiation on DNA, these same conditions were used to determine the ability of DDP technology to reverse these effects. Both the Resonator and the Safe Space Energy Strip were tested by placing them at various locations on the power strip or on the outside electrical wires leading from the pole into the house. The results from the present study demonstrate the efficacy of both the Resonator and the Energy Strip to partially or completely reverse the detrimental effects of power line radiation on the electrical properties of DNA.

In these experiments the Resonator was placed on the chord near the power strip. The Resonator nearly completely (90%) reversed the detrimental effect of power line radiation (Figure 1). This effect is likely to be mediated by two mechanisms. Either the subtle energy emitted from the Resonator interacts with the electrical circuits in the power strip to make them less damaging or the energy from Resonator influences the

DNA itself to make it less susceptible to the radiation from the power strip. The former mechanism is consistent with marketing claims of DDP which state a “neutralization of the negative effects of chaotic energy”. Power line radiation can be considered incoherent in nature and it is feasible that the subtle energy radiating from the Resonator is coherent. Previous published studies demonstrate that biological effects of EM radiation are dependent on the ratio of coherent to incoherent energies (Farrell, 1998).

The results also indicate that the Energy Strip more than completely (110%) reversed the damaging effects from power line radiation (Figure 2). Thus, not only did the Energy Strip bring the biological system back to normal values (control values before exposure to power line radiation), but the conductivity values were enhanced above normal. This over-compensation effect has been observed before by the Quantum Biology Research Lab when testing other subtle energy technologies to reverse detrimental effects of EM fields. From these previous studies it was concluded that this effect occurs when there is a strong resonance between two energetic systems. In this case there is the subtle energy radiating from the patch and the EM energy from the power strip. Therefore we can conclude that under the experimental conditions used in the present study the Energy Strip is likely to be interacting with the electrical circuit of the power strip and that it is highly effective at reducing damage from power lines. We can conclude that the Energy Strip is more effective than the Resonator in reducing the power line effects. This is not surprising considering the former was specifically designed to work on electrical energy.

The results from additional experiments (data not shown) are described below. The combination of the Energy Strip and the Resonator is less effective (80%) than the Energy Strip by itself, at least when both patches are used on the same power strip. Thus, although the two technologies are designed for different applications their neutralizing effects are not synergistic when combined – at least with regard to electrical energy.

Placing additional Energy Strips on the electrical wiring on the outside of a house only adds a small (6%) additional protective effect. As previously observed with other subtle energy devices, more is not necessarily better. Application of the Energy Strip only to the outside of the house effectively (by 78%) reverses the damaging effects of power line radiation. This is somewhat surprising considering that in this experiment the patch was placed on the plastic tubing surround the wires coming from the pole. This result confirms the previous hypothesis that the Energy Strip radiates an energy field which can travel through the air and interact with the electrical current in the wires. When two additional Energy Strips were placed on the wires themselves (coming from the pole) an over-compensation effect was seen as previously described. Thus placement of the Energy Strip on the plastic tubing is not optimally effective and requires additional strips on the actual wires. Unfortunately a single Energy Strip on one of the outside wires was not tested in these experiments and it is not clear whether this would produce optimal protective effects. These experiments erred on the cautious side so experiments were designed to make sure the technology works.

In general, the results of this study clearly demonstrate the efficacy of both the Resonator and the Safe Space Energy Strip to reduce the damaging effects of power line radiation and are consistent with and confirm some of the marketing claims made by DDP.

## References

Bezdol'naia IS "Functional status of workers engaged in connecting high-voltage electric power lines" *Gig Sanit.* 1990;:59-61

Bianchi N. "Overhead electricity power lines and childhood leukemia: a registry-based, case-control study." *Tumori.* 2000;86:195-8.

Cohen H. et al. "Direct measurement of electric transport through single DNA molecules." *Proc Nat Acad Sci* 2005;102:11589-593.

Dibble WE, Tiller WA. "Electronic Device-Mediated pH Changes in Water." *J. Sci. Explor.*13: 2-10, 1999

Farrell JM et al. "The superposition of a temporally incoherent magnetic field inhibits 60 Hz-induced changes in the ODC activity of developing chick embryos." *Bioelectromagnetics.* 1998;19:53-6.

Goodman, R., Lin, H., Ye, L., Weisbrot D. EM field-induced markers of delineators of interaction mechanism. *Proceedings of the Bioelectromagnetics Society.* Quebec City, Canada. June, 2002.

Hardell L Biological effects from electromagnetic field exposure and public exposure standards. *Biomed Pharmacother.* 2008;62:104-9.

Kutnak Z et al "Electrical conduction in macroscopically oriented deoxyribonucleic acid" *Physical Rev E* 2005; 71:041901-1 to 041901-8

Li CY. "Elevated residential exposure to power frequency magnetic field associated with greater average age at diagnosis for patients with brain tumors." *Bioelectromagnetics.* 2003;24:218-21

Mok FH, Tackitt MC, Stoll, HM (1991) Storage of 500 high-resolution holograms in a LiNbO<sub>3</sub> crystal. *Optics Letters* 16: 605-607.

Nielsen JZ "Basic methods for measurement of current, voltage and impedance." *Acta Anaesthesiol Scand Suppl.* 1962;11:41-4

Rein G. "Storage on non-Hertzian Frequency Information in Water" In: *Proc. Internat. Tesla Soc.* Elswick S. (ed), Tesla Soc Pub., Colorado Springs;, CO., 1992

Robert E. "Birth defects and high voltage power lines: an exploratory study based on registry data." *Reprod Toxicol.* 1993;7:283-7.

Simko M. "Induction of cell activation processes by low frequency electromagnetic fields." *ScientificWorldJournal.* 2004;4(Suppl 2):4-22

Smith CW. "Physicks and physics." *J Altern Comp Med* 1999;5:191-193.

Syldona M. "Reducing the in-vitro electromagnetic field effect of cellular phones on human DNA and the intensity of their emitted radiation." *Acupunct Electrother Res.* 2007;32:1-14.

Van Zandt LL. "Why structured water causes sharp absorption by DNA at microwave frequencies." *J Biomol Struct Dyn.* 1987;4:569-82