Pico Tesla range magnetic fields tested in four site, double blind clinical study for treatment of osteoarthritic knees

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BACKGROUND

Osteoarthritis (OA) occurs in virtually all vertebrates, earlier investigators had thought bone to be piezoelectric, that is, capable of converting electromagnetic oscillations to mechanical vibrations and vice versa.

For this study, it was hypothesized that renormalization of magnetic profiles could restructure or remodel biological matter and thus restore function while reducing pain and crepitus from stiffness, instability and pressure.

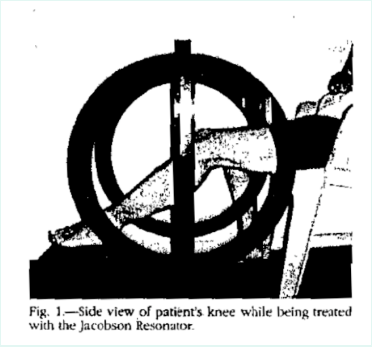


Fig. 1.—Side view of patient's knee while being treated with the Jacobson Resonator.

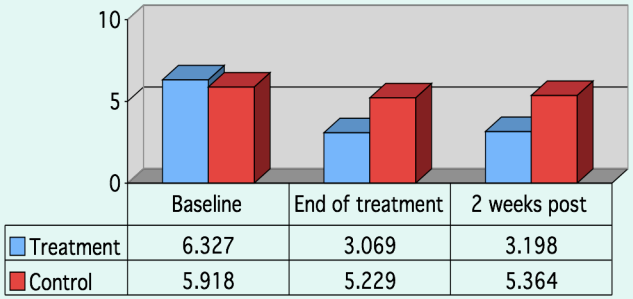
OBJECTIVE

To determine the efficacy of Pico-Tesla Resonance Electro-Magnetic Fields (EMF) on human subjects suffering with knee pain secondary to osteoarthritis

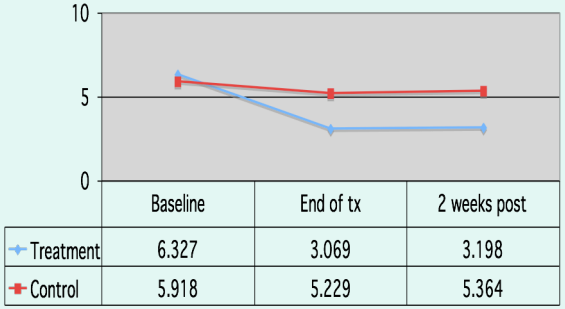
METHODS

* 176 subjects completed study
* Randomized, double blind, placebo controlled
* Painful, Osteoarthritis of knees
* 4 Sites
* Intervention: 8 sessions over a 2 week period
* Subjects did not consume pain medication, use topical analgesics or other methods of pain treatment while in the study.

Each subject rated his or her pain level from one (minimal) to ten (maximal) before and after each treatment session on three separate instances; before treatment trials, during the treatment trials and two weeks after treatment had terminated.



	Baseline	End of treatment	2 weeks post
Treatment	6.327	3.069	3.198
Control	5.918	5.229	5.364



	Baseline	End of tx	2 weeks post
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Control	5.918	5.229	5.364

RESULTS

The treatment group perceived a 46% reduction in pain while the placebo group perceived an 8% reduction in pain after treatment. A 2 way ANOVA (GLM) of the treatment and session showed that the reduction in pain was significantly greater in the treated group ($p<0.001$) than the placebo group.

No treatment related adverse events reported.

CONCLUSIONS

This study has demonstrated that picoTesla magnetic fields are a safe and effective modality by which to palliate chronic pain secondary to osteoarthritis of the knees.