Published Studies in Electromedicine

Appendix D of the

The Rife Handbook of Frequency Therapy and Holistic Health

an integrated approach for cancer and other diseases

5th Edition

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Appendix D

Published Studies in Electromedicine

Don't worry about people stealing an idea.
If it's original, you will have to ram it down their throats.
—Howard Aiken, American computer pioneer and physicist (1900–1973)

There are thousands of articles in medical and scientific journals on the use of electromagnetic fields, electric fields, electrical current, static magnetic fields, pulsed magnetic fields, frequency-induced diathermy (heat) and more, to treat all kinds of conditions, ranging from bone fractures and muscle sprains to Parkinson's and cancer.

Special mention should be made of treating cancer with hyperthermia: a simple, safe, and effective method. During hyperthermia, most of the body or selected smaller areas are safely subjected to high temperatures. The cancerous tissue is either killed directly by the heat, or it becomes so permeable that only minute amounts of locally injected chemicals are needed to destroy it (thus avoiding the chemical poisoning of the entire system). The clinical use of hyperthermia is not new. It was routinely employed seven thousand years ago in Egypt, and has been used by Western physicians for about 200 years. Yet despite the article "Hyperthermia, still experimental, may win place in cancer therapy"—which appeared in a 1981 issue of the *Journal of the American Medical Association*—few people with cancer today are given the option of receiving heat treatments.

My very small sample lists titles of articles from the most recent back to the 1970s, as well as titles of entire books on electromedical modalities that were published over one hundred years ago. Of the journal articles, I include peer reviewed titles that for the most part are in English. The therapeutic effects of various EM fields is emphasized, as my purpose here is to cite articles examining the *healing potential of electromagnetic therapies that use frequencies in beneficial ranges and amounts*. For literature on the harm of EM fields—such as from cell phone radiation and high tension wires—see Appendix I, "Recent Studies on the Dangers of Harmful Electromagnetic Fields (EMFs)."

The majority of authors write about the practical applications of frequencies to treat disease conditions that include bone breaks, cancer, neurological degeneration, and infections. Other authors discuss how to evaluate or improve the equipment used to disseminate the therapies, while still others address the effects of different frequencies on specific biological functions, such as enzyme and immune cell production. In a few instances, I mention which frequencies were used in the clinical trials. Some are well known to rifers.

Many of the articles describe Rife's technology without using his name or referring to his research or clinical trials. For example, the abstract of a 2009 paper, "Amplitude-modulated electromagnetic fields for the treatment of cancer: Discovery of tumor-specific frequencies and assessment of a novel therapeutic approach," states in part:

> Because *in vitro* studies suggest that low levels of electromagnetic fields may modify cancer cell growth, we hypothesized that systemic delivery of a combination of tumor-specific frequencies may have a therapeutic effect. We undertook this study to identify tumor-specific frequencies and test the feasibility of administering such frequencies to patients with advanced cancer. . . . Cancer-related frequencies appear to be tumor-specific and treatment with tumor-specific frequencies is feasible, well tolerated and may have biological efficacy in patients with advanced cancer." [1]

The article also mentions that two of the authors have filed a patent on the use of electromagnetic fields for the diagnosis and treatment of cancer—in other words, Rife's technology!

Despite the fact that Royal Rife is conspicuously absent in medical literature citations, one very recent article does specifically mention the Rife-Bare device as the equipment used in modern experiments: "Is Victory over Pancreatic Cancer Possible, with the Help of Tuned Non-Invasive Physiotherapy? A Case Study Says Yes." Appearing in a 2014 issue of the *Journal of Cancer Therapy*, the abstract states in part:

> Could the conventional treatment of pancreatic cancer effectively be supplemented by a low level and non-invasive bio-electromagnetic treatment? A case study, based on the regular exposure of a patient to an electromagnetic field, EMF, emitted by a Rife-Bare technology device, suggests so. The plasma confined in a tube of this apparatus emitted radiofrequency solitons. [A *soliton* is a wave or pulse that maintains its shape while transmitting at a constant velocity.] These low level emissions were modulated by an "audio" frequency generator, pre-programmed for the treatment of this disease. After less than two months of exposure to these EMFs, the tumor completely disappeared in approximately two weeks. . . . [The biological mechanism of how the machine operates] is characterized by a critical resonance frequency leading the "unicellular" tumoral cell to adopt a self-destructive behavior. On the other hand, EMFs with low level solitons have no effect on the tissues of complex multicellular organisms.] [2]

Most of the following articles, and thousands more, are at www.emf-portal.org, which links to other sites that display the entire articles or their abstracts.

Note that some of the books are from the 19th century, before antibiotics were invented and became profitable.

2018

"Underlying Signaling Pathways and Therapeutic Applications of Pulsed Electromagnetic Fields in Bone Repair." Yuan J, Xin F, Jiang W. *Cellular Physiology and Biochemistry* 2018; 46(4):1581–1594.

"Electrochemotherapy in the treatment of melanoma." Wichtowski M, Murawa D. *Contemporary Oncology*; 22(1):8–13.

"Effects of pulsed electromagnetic field therapy at different frequencies and durations on rotator cuff tendon-to-bone healing in a rat model." Hochsprung A, Escudero-Uribe S, Ibáñez-Vera AJ, Izquierdo-Ayuso G. *Journal of Shoulder and Elbow Surgery*, March 2018; 27(3):553–560.

"Effectiveness of monopolar dielectric transmission of pulsed electromagnetic fields for multiple sclerosis-related pain: A pilot study." Hochsprung A, Escudero-Uribe S, Ibáñez-Vera AJ, Izquierdo-Ayuso G, *Neurologia*, May 8, 2018

2017

"Role of pulsed electromagnetic fields (PEMF) on tenocytes and myoblasts-potential application for treating rotator cuff tears." Liu M, Lee C, Laron D, Zhang N, Waldorff EI, Ryaby JT, Feeley B, Liu X. *Journal of Orthopedic Research*, May 2017; 35(5):956–964.

"Pulsed electromagnetic field therapy improves tendon-to-bone healing in a rat rotator cuff repair model." Tucker JJ, Cirone JM, Morris TR, Nuss CA, Huegel J, Waldorff EI, Zhang N, Ryaby JT, Soslowsky LJ. *Journal of Orthopedic Research*, April 2017; 35(4):902–909.

"Effects of pulsed electromagnetic fields on postmenopausal osteoporosis." Zhu S, He H, Zhang C, Wang H, Gao C, Yu X, He C. *Bioelectromagnetics*, September 2017; 38(6):406–424.

"Pulsed magnetic field enhances therapeutic efficiency of mesenchymal stem cells in chronic neuropathic pain model." Mert T, Hakan Kurt A, Altun I, Celik A, Baran F, Gunay I. *Bioelectromagnetics*, May 2017; 38(4):255–264.

"Pulsed magnetic field treatment as antineuropathic pain therapy." Mert T, *Reviews in the Neurosciences*, October 26, 2017; 28(7):751–758.

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2016

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"Electrical stimulation enhances the acetylcholine receptors available for neuromuscular junction formation." Lozano R, Gilmore KJ, Thompson BC, Stewart EM, Waters AM, Romero-Ortega M, Wallace GG. *Acta Biomaterialia*, November 2016; 45:328–339.

"Efficacy and Safety of Treating Glioblastoma With Tumor-Treating Fields Therapy." Saria MG, Kesari S. *Clinical Journal of Oncology Nursing*, October 1, 2016;20(5 Suppl):S9–S13.

[*From Abstract:* "Nonbiochemical and nonablative, TTFields use frequency-specific, low-intensity, alternating electric fields to disrupt structures within the cancer cell during mitosis [cell division], leading to apoptosis [cell death]. Specifically, TTFields technology takes advantage of the special characteristics, geometric shape, and the rate of dividing cancer cells, which make them susceptible to the effects of TTFields. TTFields alter tumor cell polarity at an intermediate frequency (100–300 kHz). The frequency used for TTFields is specific to the target cell type (e.g., 200 kHz for gliomas)."]

2015

"Frequency-dependent effects of sequenced pulsed magnetic field on experimental diabetic neuropathy." Mert T, Gisi G, Celik A, Baran F, Mehdi Uremis M, Gunay I. *International Journal of Radiation Biology*, 91(10):833–842.

"Modulation of cytokine levels in ameliorative effects of pulsed magnetic field on an experimental model of Chronic Constriction Injury." Mert T, Altun I, Celik A, Sürer T, Gunay I. *International Journal of Radiation Biology*, July 2015; 91(7):596–602.

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[The authors discuss a number of different electromedical modalities: Low Level Laser Therapy (LLLT), therapeutic ultrasound, pulsed electromagnetic fields (PEMF), continuous short wave diathermy, Iodex phonophoresis, Iodex iontophoresis, continuous short wave diathermy, and transcutaneous electrical nerve stimulation (TENS).]

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2010

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Note: For this next section, all of which are books, detailed descriptions are included to give readers an idea of the scope of electromedical therapies offered (in both clinics and hospitals), and the medical community's openness to electromedicine. In most cases, the title pages contained a great deal of text, a some of which is reproduced here. Due to the amount of text, it was sometimes difficult to discern between the actual titles and the explanatory subtitling.

Thousands of titles were available in the 1880s and some were published even earlier in the 1700s. For historical interest, the degrees of the authors are included where applicable. All of these books are available in eBook form online, without charge.

1946

Richard Kovaçs, M.D. *Electrotherapy and Light Therapy, 5th Ed.* (Philadelphia: Lea & Febiger, 1946).

[Subtitled: *with the Essentials of Hydrotherapy and Mechanotherapy.* This is a major work in the field. Topics include electrophysics; generation, measurement and transfer of electrical charges; effects of currents, injury vs. harm, and passage through all parts of the body; electrodiagnosis; galvanic current and ion transfer; low-frequency current and apparatus; high-frequency current and apparatus; medical diathermy; hyperthermy; electrosurgery; electrical injuries; physics of radiant energy; infrared, ultraviolet and luminous radiation; helio or sun therapy; hydrotherapy; massage; exercise; physical therapies. There are also lengthy chapters on treating, with electromedicine, afflictions of the respiratory tract; central and peripheral nervous system; bones, joints, muscles and tendons; genital tract; urinary tract; cardiovascular system; ear, nose and throat; eyes; and gastrointestinal tract (which includes metabolic conditions). Arthritis and fibrosis (fibromyalgia) are also addressed. The author gives detailed instructions on what electromedical equipment to use for what ailment.]

1920

F. Miramond de Laroquette, M.D. *Atlas for Electro-Diagnosis and Therapeutics* (London: Bailliere, Tindall and Cox, 1920).

George Knapp Abbott, A.B., M.D. *Essentials of Medical Electricity for Medical Students and Nurses* (Philadelphia and London: W.B. Saunders Company, 1920).

1910

J. H. Kellogg, M.D. Light Therapeutics: *A Practical Manual of Phototherapy for the Student and the Practitioner, with Special Reference to the Incandescent Electric-Light Bath* (Battle Creek, Mich.: The Good Health Publishing Co.).

[The author is none other than John Harvey Kellogg, who headed a world-famous sanitarium or "health spa" that hosted a range of clients, some of them famous (the Roosevelts, Charles Lindburgh, Mary Todd Lincoln, Sojourner Truth, and Amelia Earhart). Kellogg was later known for creating a breakfast food, corn flakes, and starting a cereal company. His "incandescent electric-light bath" was the first far infrared sauna, which used special light bulbs created by Kellogg's friend Thomas Edison. The title page lists his credentials as follows: "Author of "Rational Hydrotherapy," "The Art of Massage," etc. Member of the British Gynaecological Society, the International Periodical Congress of Gynaecology and Obstetrics, American and British Associations for the Advancement of Science, the Société d'Hygiéne of France, American Society of Microscopists, American Climatological Society, American Medical Association, Michigan State Medical Society, Superintendent of the Battle Creek (Mich.) Sanitarium."]

1904

Toby Cohen ("nerve specialist, Berlin") and Francis A. Scratchley, M.D. *Electro-Diagnosis and Electro-Therapeutics: A Guide for Practitioners and Students* (New York and London: Funk & Wagnalls Company, 1904).

Margaret A Cleaves, M.D. *Light Energy: Its Physics, Physiological Action and Therapeutic Applications* (New York and London: Rebman Company and Rebman Limited, 1904).

[The author's credentials and affiliations are given on the title page as follows: "Fellow of the New York Academy of Medicine; Fellow of the American Electro-Therapeutic Association; Member of the New York County Medical Society; Fellow of the Societe Francaise d'Electrotherapie; Fellow of the American Electro-Chemical Society; Member of the Society of American Authors; Member of the New York Electrical Society; Professor of Light Energy in the New York School of Physical Therapeutics; Late Instructor in Electro-Therapeutics in the New York Post-Graduate Medical School."]

1902

W.F. Brady, M.D. et al. *A System of Electrotherapeutics, Volume 6: Electrotherapy* (Scranton: International Textbook Company, 1902).

Dr. Wilhelm Winternitz (Professor of Clinical Medicine in the University of Vienna; Director of the General Polyclinic in Vienna), assisted by Dr. Alois Strasser (Instructor in Clinical Medicine at the University of Vienna) and Dr. B. Buxbaum (Chief Physician of the Hydrotherapeutic Institute in Vienna) and Dr. E. Heinrich Kisch (Professor in the University of Prague; Physician at Marienbad Spa). *Hydrotherapy, Thermotherapy, Heliotherapy, and Phototherapy, Volume IX. A System of Physiologic Therapeutics: A Practical Exposition of the Methods, Other than Drug-Giving, Useful in the Prevention of Disease and in the treatment of the Sick*.

S.H. Monell, M.D. *X-Ray Methods and Medical Uses of Light, Hot-Air, Vibration and High-Frequency Currents*. (New York: E.R. Pelton, 1902)

William Benham Snow, M.D. (Editor). *The Journal of Advanced Therapeutics, Volume XXI* (A.L. Chatterton & Co., 1902).

[Many medical professionals contributed to Snow's journals, which included information on all types of diseases and their treatment with phototherapy, thermotherapy, hydrotherapy, diet, therapeutic exercise, psychotherapy, and "mechanical vibration therapy." Volume XXI was published in 1902 and Volume XXXI (also available online) was published in 1913, one volume per year. Therefore, we can guess that the first volume of *Journal of Advanced Therapeutics* was probably published in 1882.]

1886

Elizabeth J. French. *A New Path in Electrical Therapeutics* (Philadelphia: J.B. Lippincott Company, 1886).

[Also appearing on title page: Electrical Therapeutics: An Account of the Author's Great Discovery of Electrical Cranial Diagnosis, and the Scientific Application of Different Currents of Electricity to the Cure of Disease. A Brief Treatise on Anatomy and Physiology. An Historical Account of the Discoveries in Magnetism and Electricity, the Progress of Medical Science, and Brief Sketches of the Lives of Eminent Practitioners, from the Earliest Ages to the Present Century; Also a Thorough System of Hygiene; to which are Added Plain Directions for the Treatment of Disease by the Author's System of Electrical Applications.]

1883

Dr. Wilhelm Erb, professor in the University of Leipzig; Translated by L. Putzel, M.D. (Neurologist to Randall's Island Hospital, and Physician to the Clinic for Nervous Diseases, Bellevue Out-Door Department, etc.). *Handbook of Electro-Therapeutics* (New York: William Wood & Company, 1883).

[Contains an extensive chapter outline on many topics: electronics, physiology, physical examination, electro-diagnosis, general electro-therapeutics, diseases, and conditions of the urinary tract, sexual organs, nervous system, muscles, glands, digestive system, and more.

1878

Edwin D. Babbitt. *The Principles of Light and Color* (New York: Babbitt & Co., 1878).

John Butler, M.D., L.R.C.P.E., L.R.C.S.I. *Electro-Therapeutics and Electro-Surgery* (New York and Philadelphia: Boericke & Tafel, 1878).

1877

Gen. A.J. Pleasonton and Others. *The Influence of the Blue Ray of the Sunlight and of the Blue Colour of the Sky, in developing animal and vegetable life: in arresting disease, and in restoring health in acute and chronic disorders to human and domestic animals* (Philadelphia: Claxton, Remsen & Haffelfinger, 1877).

Herbert Tibbits, M.D., F.R.C.P.E. *How To Use a Galvanic Battery in Medicine and Surgery, 2nd Ed*.

ENDNOTES

Appendix D

SELECTED PUBLISHED STUDIES IN ELECTROMEDICINE

1 A. Barbault, F.P. Costa, B. Bottger, R.F. Munden, F. Bomholt, N. Kuster, and B. Pasche, "Amplitude-modulated electromagnetic fields for the treatment of cancer: Discovery of tumor-specific frequencies and assessment of a novel therapeutic approach." *Journal of Experimental and Clinical Cancer Research*, April 14, 2009; 28:51. Abstract at www.ncbi.nlm.nih.gov/pubmed/19366446 (November 3, 2010).

2 Pierre Le Chapellier and Badri Matta, "Is Victory over Pancreatic Cancer Possible, with the Help of Tuned Non-Invasive Physiotherapy? A Case Study Says Yes." *Journal of Cancer Therapy* 2014, Volume 5, Number 5, 460.