

The Electrotherapeutic Society was formed in 1890 and electrotherapy quickly grew in popularity. Colleges and private schools teaching electrotherapy were established and medical health devices based on the magnetic fields from the patented "Tesla Coil" became extremely popular.

In 1898, Tesla published a paper that he presented at the eighth annual meeting of the American Electro-Therapeutic Association in Buffalo, NY entitled, "High Frequency Oscillators for Electro-Therapeutic and Other Purposes." He stated that, "One of the early observed and remarkable features of the high frequency currents, and one which was chiefly of interest to the physician, was their apparent harmlessness which made it possible to pass relatively great amounts of electrical energy through the body of a person without causing pain or serious discomfort." Coils up to three feet in diameter were used to treat the body without contact, producing ten to a hundred thousand volts.

Tesla described the use of oscillating alternating electromagnetic fields at various frequencies using a Tesla coil. Tesla also stated that the after-effect from his coil treatment was long-term beneficial for many health conditions. This was the beginning of numerous electromagnetic frequency devices including pulsating magnetic field therapy (PEMF) that has only recently (after 100 years!) become mainstream in such areas of medicine as orthopedics and pain management.

Electrotherapy treatments fall into different frequency ranges. Frequency is a measure in cycles per second, also known as Hertz or Hz. Galvanic treatment is the slowest; in fact, it has a frequency of zero, since it produces a constant current and does not cycle at all. Galvanic Electrotherapy is mostly used in the beauty industry to renew old or damaged skin. Faradic, also known as EMS, has a frequency range of 50 – 100 Hz. EMS is mostly used for muscular therapy and muscle toning. It's not necessarily a pain relief device, though it can be if you're experiencing muscle soreness. Microcurrent therapy can be the next highest frequency. It has the ability to range from slow to high frequencies, from .1 – 680 Hz. Microcurrents affect tissues on a cellular level and promote your body's natural healing response.

High-Frequency electrotherapy offers the highest frequencies available. Tesla extensively developed this type of therapy. Frequencies generally fall into the range of 100,000 – 250,000 Hz. High-frequency treatment uses low-current high-frequency alternating currents, delivered via a glass electrode. Because the high frequency current converts some of the oxygen in the air into ozone,

the treatment has a germicidal action, and is also drying and warming.

Consequently, high-frequency electrotherapy is used to aid healing and also to help desquamation (the skin's natural exfoliation) and stimulate sweat and sebaceous glands. At up to 250,000 Hz frequency, the hollow glass electrode behaves like a glow discharge tube and is sometimes called a "violet ray" or "violet wand" (though the color depends on the gas in the glass). Two electrodes are not required and sparking may occur when the electrode is close to the skin.

In 1932, at a seminar presented by the American Congress of Physical Therapy, held in New York, Dr. Gustave Kolischer announced, "Tesla's high-frequency electrical currents are bringing about highly beneficial results in dealing with cancer, surpassing anything that could be accomplished with ordinary surgery."

The Developm ent of High Frequency Oscillators for Electrother apy



“ If you want to find the

secrets of the universe, ”
think in terms of energy,
frequency and vibration.

– Nikola Tesla