

Bob Beck's Legacy

HARMONIC FREQUENCIES TO BALANCE THE BRAIN

CRANIAL ELECTRICAL STIMULATION (CES) TECHNOLOGY

The desire for a good nights sleep seems to have been the original motivation for modern-day research using frequencies to balance the brain. The technology called electrosleep was imported from Russia and Europe to the United States where it eventually became known as Cranial Electrical Stimulation (CES). Research to balance brain chemistry has been conducted extensively in other countries as well—Hong Kong, Japan, and the UK. Bob Beck based his Brain Tuner on a broad spectrum of research.

Studies show that Cranial Electrical Stimulation technology helps with addictions, attention deficit disorder (ADD), aggression, multiple sclerosis, pain and insomnia. In the USA, the Food and Drug Administration (FDA), allows the use of approved units for the relief of anxiety, depression and insomnia. While Bob Beck's Brain Tuner was at one point approved by the FDA as a CES type unit, it has not been used in the published research studies.

THE BRAIN AS A MESSAGING CENTER

When healing frequencies are applied to the head, healing is sometimes reported in other areas of the body. As one researcher put it, the technology has "global effects."¹

The brain is one of the main command centers for much of the body's communication with its concentration of nerve cells. The nerve pathways branch out to affect the whole body. Reliable delivery of messages from one nerve cell to the next depends on chemicals called neurotransmitters. Neurotransmitters expedite communication from nerve cell to nerve cell. When neurotransmitters are in balance, the nervous system passes messages smoothly and accurately to help keep the brain and the body healthy.



As with all chemical reactions in the body, it is the natural flow of electricity that sparks the chemicals into action. The production of neurotransmitters in the brain also

depends on the body's natural electricity. Research over the past several decades is showing how the use of Cranial Electrical Stimulation (CES)—the application of specific healing frequencies—provides the ignition to help balance brain chemicals to restore healthy nerve transmission for brain function.

Information that occasionally surfaces in the mainstream media leads us to believe that the use of electricity and frequencies for health, including brain function, will eventually gain widespread acceptance.

One such article, for example, appeared in *The Globe and Mail*, a leading Canadian newspaper. After describing a medical procedure to insert electrodes into the brain, one of the researchers was quoted: "I constantly have to remind people that the brain is basically an electrical device," said Dr. Montgomery. "It processes and stores information electrically, and we therefore should be able to affect brain function—and malfunction—electrically."²

HEALING HARMONIC FREQUENCIES

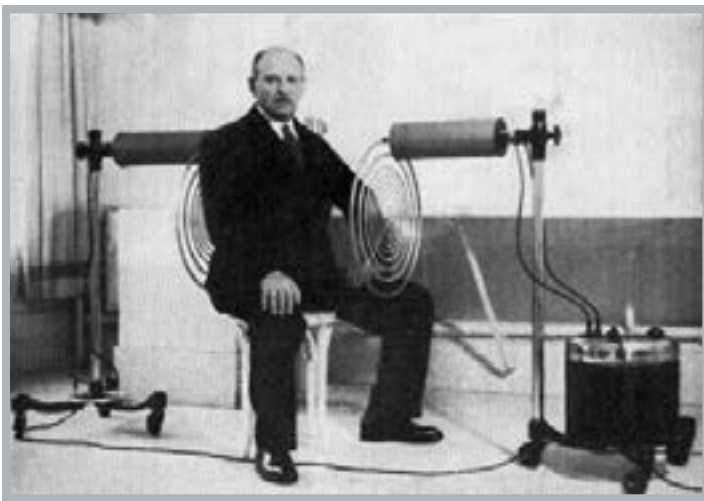
Bob Beck's Brain Tuner applies a broad range of harmonic frequencies. Georges Lakhovsky was one of the pioneers to research the application of harmonic frequencies for healing. Early in the 20th century, his Multiple Wave Oscillator (MWO) using harmonic frequencies gained recognition as a healing device. He had the cooperation of a hospital in the eastern USA to apply frequencies to help heal specific diseases. While Lakhovsky was not working with CES technology, he based his work on the principle of giving the living cells a broad range of healing frequencies so they would be

able to restore their healthy vibrations. The cell is then better able to repel disease-producing microbes. "The main thing," Lakhovsky reported, "is to produce the greatest number of harmonics possible."³

It is interesting to note that Bob Beck had a direct role in reviving the Multiple Wave Oscillator in the United States for a time. In 1963, after discovering an original MWO, he designed a portable multiple wave oscillator to make the technology available once again.

As with the Multiple Wave Oscillator, Cranial Electrical Stimulation technology, creates a broad range of harmonic frequencies allowing the body

to use the frequencies it needs to help improve its communication system. Since the nerve networks in the brain spread throughout the body, applying Cranial Electrical Stimulation spreads the benefits throughout the body.



A PIVOTAL TIME IN CES DEVELOPMENT

In North America, 1983 could have been dubbed the “Year of Brain Tuning.” At least three publications launched the year heralding the benefits of using frequencies to balance the brain:

Drug Addiction

In January, the cover of *Omni* magazine announced a promising treatment: “The Black Box: Secret Drug Treatment of Rock Superstars.” The Black Box was a device developed by Dr. Margaret Patterson in the UK. After overcoming his drug addiction, rock star, Pete Townshend, said:

In retrospect, I realize that the treatment is an education in itself. ... in the process you learn something about your human potential. You come to realize that somewhere within you is the power to deal with crises, tensions, and frustrations. So the treatment reaffirms one's faith in the self-healing process.

Anxiety and Depression

Focus, a publication of the U.S. Journal of Drug and Alcohol Dependence, Inc. highlighted CES technology early in the year as well. The January/February 1983 issue stated:

CES reduces anxiety and depression. ... Studies have shown that both physiological and psychological changes toward homeostasis, i.e., the normal or relaxed state, take place following CES treatments. Variations of CES have been in use in Europe and Russia for more than 30 years.

Relief from Pain

“The Quiet Revolution: Pain Control and Electromedicine” headlined an article by Dr. Fred N. Lerner published in the April/May 1983 *California Health Review*. In addition to describing the benefits of transcutaneous electrical nerve stimulation (TENS) for pain, the article also outlined the research and benefits of transcranial electro therapy—later to be called CES:

... exciting methods have evolved that are painless, non-invasive and have little or no side effects. ... There is little doubt that the doctor of the future will utilize electromedicine as a mainstay in everyday practice.



One of the earliest pioneers in researching Cranial Electrical Stimulation in the United States was Ray Smith. He said Cranial Electrical Stimulation:

*showed remarkable improvements in memory, learning and other cognitive and psychophysiological functions. The CES, that is, not only improved cognitive functioning but seemed to reverse the brain damage that caused it!*⁴

When asked about using CES technology for Parkinson's, Smith replied: "In almost every tremor condition we've seen in hospitals, CES always reduces it somewhat."⁵

Help with anxiety and depression, overcoming addictions and relief from pain. Those are major challenges from which many suffer. Why then, in the 21st Century, is the application of harmonic frequencies or CES technology still not a household word, or at least, the treatment of choice among health professionals?

KEEPING CES ALIVE IN NORTH AMERICA

We'll touch on key players who have kept this technology alive and available in North America.

Ray Gilmer formed Neuro Systems Inc. to market a CES device in the USA in the early 1970s. At that time, he adopted the name used on the other side of the Atlantic, electrosleep, to describe the technology. In 1978, working with the FDA, Gilmer's device led the way to formally dub the technology Cranial Electro Stimulation (CES). He suggested cranial electro therapy (CET) but the FDA apparently did not want to call the technology a therapy. CES was the compromise.⁶

It was also during the 1970s that Dr. Margaret Patterson, in the UK, had developed a device based on her experience working in Hong Kong with Dr. H.L. Wen. Dr. Wen had made an 'accidental' discovery that the electro-acupuncture he was using as an anaesthetic helped patients addicted to drugs. Patients reported they no longer craved drugs and had not experienced severe withdrawal symptoms. Dr. Patterson later moved to the USA to work with a consortium of investors to develop a unit based on her Neuroelectric Therapy (NET) device. During her lifetime, she was not able to bring her technology to the public.

As Bob Beck delved into the research about Cranial Electro Stimulation and with his years of research into the mysteries of brain frequencies, he decided to design a CES unit himself. Having developed sensitive instrumentation to measure both brain and earth frequencies, Bob designed a simple-to-use handheld unit. Bob acknowledged both Gilmer and Patterson as pioneers in bringing CES technology to the USA.⁷

Bob noted the history of the use of frequencies to balance brain function:

*When I was experimenting and documenting and doing the informational searches on Cranial Electrical Stimulation. I, for one, was blown away that the very first patent that I could find on this was in 1893.*⁸



HOW TO BRING THE BRAIN TUNER TO THE WORLD?

Bob wondered how best to make the benefits of the Brain Tuner known. He was concerned about the FDA approval process. He mused, “*Now, what to do with this? ... I like to stay out of jail like the rest of you electronic medical people.*” Bob’s work with instrumentation had for several years involved government contracts. As a result, he knew officials in several government departments, including the FDA. Bob continued:

I called a friend of mine in Washington and said, ‘Hey, I’m going to build some Brain Tuners.’ And he said, ‘Oh, oh. I better get back to you. I’m going to call downtown.’

Downtown meant the FDA office. Bob continued:

A couple days later we heard from him. He said, ‘Bob, I’ve got some good news and bad news. The good news is you can build all the Brain Tuners you want to. The bad news is you can never, ever, ever sell one.’

Bob sensed there was more. He waited and his friend continued:

On the other hand, why don’t you sell rare Bugs Bunny comic books for \$300 and then give them one of those devices as an absolutely free bonus. ... He said, by the way, none of these will ever, ever be approved by the Food and Drug Administration.⁷

ROLE OF THE FDA

Despite what his friend in government predicted, at a later time, Bob’s Brain Tuner was approved by the FDA. The lengthy process and the limits put on the availability of his unit, however, made him eventually decide to offer his Brain Tuner directly to the people. At times during the 1980s, Bob lectured about the benefits of harmonic frequencies and the Brain Tuner at conferences and health shows. Bob Beck was especially known among his peers for two things: One was his ability to simplify existing technologies and build simple-to-use devices, and the second was his desire to bring the benefits of technology directly to the public.⁹

The words of his friend in government did foreshadow, however, an eventual fight for survival—even for FDA approved devices that were already on the market. A few devices were on the market under the 1976 FDA Device Amendment Act. The intent of the act was to review and evaluate all existing devices. Because this was not immediately possible, the devices were ‘grandfathered’ in order to remain available. During the 1980s and early 1990s, several CES devices were registered with the FDA. Daniel Kirsch, PhD, was among those marketing an approved CES unit.

In the early 1990s, the FDA exerted increasing pressure to curb the availability of CES devices. The

result? In 1997, when the costly legal battles cleared, the only company able to survive with an FDA approved device was that of Daniel Kirsch. Despite the pressure from the FDA, Kirsch predicted, *“The day is rapidly approaching when CES will no longer be the best kept secret in American medicine.”*¹⁰

That prediction still has an uphill battle to become true. In the USA the sale of CES units is limited to a prescription only basis. The FDA continues to put road blocks on the CES technology—despite the fact CES has been safely used in the USA for more than three decades.

SUMMING UP

Early studies indicated CES was effective for treating addictions and improving memory. The FDA approved the technology for the relief of anxiety, depression and insomnia. Later studies show CES devices have provided relief from fibromyalgia, multiple sclerosis and pain. With such a variety of indications for use, providing the brain with balancing frequencies does appear to have “global effects.”¹¹

Bob Beck developed the Brain Tuner, known today as the Bio Tuner, to help supply those global healing effects.

EXCERPTS IN BOOKS ABOUT BOB BECK'S BRAIN RESEARCH

Bob Beck's Brain Tuner was cited in three books and his research on the brain in another. Excerpts from each of the three books follows:

Super-Learning 2000

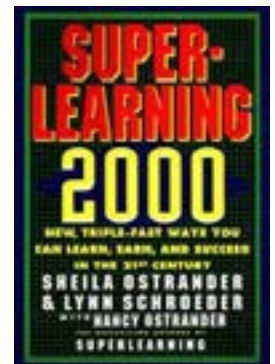
Sheila Ostrander & Lynn Schroeder with Nancy Ostrander

We have new technology for enhancing consciousness, rapidly, safely, right now, with no side effects,” our old friend, physicist Dr. Robert Beck, told us. ...

*Dr. Beck, who, as a consultant to the U.S. Defense Department, was in on part of the behind-the-scenes intrigue that led to some of these unusual devices, calls it “one of the most fascinating psycho-political stories ever to emerge.”*¹¹

and

The implications of this work are stunning,” said physicist Bob Beck ... Working with spectrum analyzers and sophisticated equipment, he came up with a device: the Brain Tuner 5+, which broadcasts the frequencies of the three ‘magic’ ranges of neurotransmitters—enkephalins, catecholamines, and betaendorphins. He set up the frequencies in bundles. Instead of sounding one for each neurotransmitter separately, he put 256 frequencies together like a



resonating chord of music. His device, smaller than a Walkman, runs on a 9-volt battery and is safe. ... You wear the device just twenty minutes a day. ...

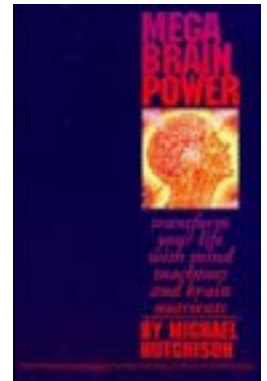
Users report the BT 5+ reduces stress, improves short and long term memory, helps learning, increases energy, improves concentration and reduces pain, anxiety, depression, and sleep requirements. ...

Both the BT 5+ and electroacupuncture could prove powerful new ways to open fabulous new dimensions of mind as well as overcome disabilities and addictions. Now the latest model, the BT 6, has just made its debut.¹²

Mega Brain Power

Michael Hutchison

Beth was given anesthesia when she gave birth to her first baby and later found that she had lost part of her memory. She was forced to give up her job in an aerospace plant. Years later a friend gave her a small cranial electrostimulation (CES) device and she began using it. "Almost overnight," she said, "all my memories started coming back, including everyone's telephone extensions at the plant. It was uncanny—all these old extension numbers of people I hadn't thought of in years."



This story, told to me by researcher Bob Beck, Ph.D., provides graphic evidence of a key fact: We have electric-powered brains. Each of the billions of neurons in our brains is a tiny electrical generator, as complex as a small computer, firing an electrical signal that triggers the release of various neurochemicals and links it with thousands of other neurons.¹³

and

The Brain Tuner (BT-6) was devised by Dr. Bob Beck. It uses a complex waveform that, according to Beck, produces over 250 frequency harmonics simultaneously—"all known beneficial frequencies for the natural stimulation of the brain's neurotransmitters." ...¹⁴

and

Since addiction, withdrawal, and anhedonia are the result of insufficient levels of certain brain chemicals, or undeveloped pleasure centers and pleasure pathways, the most direct way of eliminating them is to restore optimal levels of the brain chemicals, to stimulate the pleasure centers and pleasure pathways. One of the most exciting breakthroughs in the treatment of addiction has been the discovery that stimulating the brain with a minuscule electrical current (cranial electrostimulation, or CES) can cause the brain quickly to pour out large quantities of the neurochemicals that have been suppressed by addictive substances.

As electrotherapy researcher Bob Beck described it to me, this was originally discovered when scientists analyzed the brains of rats that had been addicted to opiates:

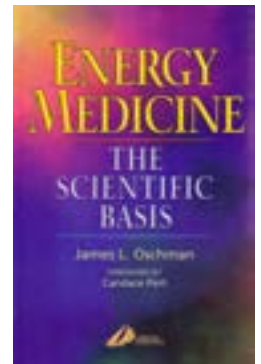
The rats that were addicted had been getting so much opiate that the little endorphin factories in the brain would shut down and say, "Look, our body's got too much of this. Quit manufacturing it." And it would take anywhere from a week to three weeks before their rats' brains would begin manufacturing beta-endorphin again. Whereas in the brains of the control rats that had never been addicted, you would find the normal, expected levels of beta-endorphin. And then they would take a third group of addicted rats, cold turkey cut them off of the heroin, clip little electrodes to their ears, and within 20 minutes of electrical stimulation ... the rat brain would start showing that the endorphin production had started up again. So, those rats wouldn't go through withdrawal symptoms!

This evidence quickly led to the use of CES in the treatment of humans.¹⁵

Energy Medicine, The Scientific Basis

James L. Oschman

If the therapist relaxes into the state of consciousness typical of those who practice meditation, therapeutic touch and QiGong, and other methods, it is likely that his or her brain waves will, from time to time, become entrained with the micropulsations of the earth's field. If the patient is also relaxed, both therapist and patient may become entrained with the earth's field.



There is remarkable documentation for this concept. In 1969, Robert C. Beck began a decade of research on the brain wave activity of 'healers' from a wide variety of subcultures around the world (Beck 1986). Beck recorded their electrical brain waves with an electroencephalograph (EEG). All the healers produced similar brain wave patterns when they were in their 'altered state' and performing a 'healing'. Whatever their beliefs and customs were, all healers registered brain wave activity averaging about 7.8–8.0 cycles/second while they were in their 'healing' state. Beck studied exceptional individuals who were famous or who had developed reputations as healers, psychics, shamans or dowsers. ...

Beck performed additional studies on some of the subjects and found that during the healing moments their brain waves became phase and frequency synchronized with the earth's geoelectric micropulsations—the Schumann resonance. (Reference: Beck R 1986 Mood modification with ELF magnetic fields: a preliminary exploration. Archaeus 4:48)¹⁶

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