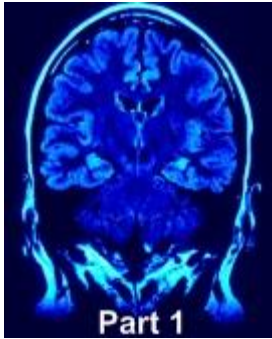


The Behavioral Medicine Report: What Is Cranial Electrotherapy Stimulation? (Part 1)

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Categories: Meta-Analyses, Commentaries and Review Articles



Cranial Electrotherapy Stimulation (CES), also known as Cranial Electrical Stimulation, falls under the branch of alternative medicine called Electromedicine, which treats physical and psychological conditions with varying levels of electrical current (Kirsch, 2006). CES is the application of a very low level alternating electrical current generated from a 9-volt battery to the brain via clips placed on the ears. In this review, I focus on a particular brand of CES: Alpha-Stim. I do not intend to advocate one brand over another; however, I select Alpha-Stim because I have been trained and conducted research at the doctoral level with this device, as well as received continuing education training specific to this brand. Additionally, Alpha-Stim has a great deal of published research available for discussion and analysis.

Alpha-Stim brand CES from Electromedical Products International, Inc. is a medical device registered with the Food and Drug Administration (FDA) for the treatment of depression, anxiety, and insomnia that uses a propriety and patented wave form. Thus, a licensed healthcare provider must a prescription and oversee treatment. A typical treatment involves 100 microamperes to 4 miliamperes of electricity administered for 20-60 minutes daily or every other day (Kirsch, 2006b). At my training facility, I often started with a daily treatment using a very low level current for 60 minutes that is increased slowly for the first week or two to determine tolerance and then switched to every other day treatments for 20 minutes thereafter. Patients may also undergo CES treatment on an “as needed basis” during periods of unusual duress or symptom flare-up. Of course, clinicians should evaluate their patient to determine the specific protocol relevant to the patient’s needs. People who use Alpha-Stim report a variety of positive feelings after therapy that includes a sense of calm and deep relaxation, decreased feelings of anxiety or sadness, or feeling mentally alert yet physically calm. Some people report alternating periods of feeling lighter or heavier during treatment (Kirsch, 2002b).

Previous research shows Alpha-Stim’s adverse effects to be mild and time-limited (Thaxton & Patel, 2007). These include dizziness (.15%), skin irritation/electrode burns (.12%), and headaches (.22%) – notice these are all less than 1%. Dizziness or nausea may occur in situations when a higher than necessary current is utilized, and hyperexcited states, increased anxiety, and sleep disturbances may occur as paradoxical reactions (Electromedical Products International, Inc., 1998). Participants with PTSD may experience vivid dreams that may be perceived as disturbing (Kirsch, 2007e). Studies have shown that Alpha-Stim has been used safely in combination with a wide variety of psychotropic medications (Childs & Price, 2007) and with closed head injury patients receiving anti-seizure medication (Smith, Tiber, & Marshal, 1994).

An interesting phenomena is that the word “electrical,” as in Cranial Electrical Therapy, seems to conjure up frightening images that sometimes lead to a mistaken recollection of electroconvulsive therapy (ECT) – an intense and controversial electricity-based therapy used to treat severe depression. CES and ECT share little in common other than the use of electricity to treat various psychological conditions. Notice too that CES generates its energy from one 9-volt battery so the risks associated with CES are quite different from ECT.

In the soon-to-be released part 2 of this series, I review Alpha Stim’s proposed mechanisms of action, as well as current research on Alpha-Stim’s effectiveness to treat depression, anxiety, and insomnia. I will also provide evidence-based information on CES for the treatment of chronic pain since this is a common off-label use.

Enjoy.

CFisher

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