

The Case for Alpha-Theta: A dynamic Hemispheric Asymmetry Model

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The Dynamic Hemispheric Asymmetry model (DHA) postulates a differential functional cortical arousal level range wherein the dominant hemisphere, with its critical screening capability, is diminished in this capacity at high and low arousal levels, however, the nondominant hemisphere is still able to function at these extreme levels. At the low end of the arousal continuum, images and/or verbal suggestions are processed without the full effect of the critical screening, and therefore, are more likely to be accepted and acted upon. Conversely, early memories, especially those traumatic in nature, tend to be brought to the surface during this low arousal condition which has been labeled the twilight state. Neurofeedback, in the form of alpha-theta training, provides the means to access and maintain this state.

The Effects of Single Session and Multi-Session Audio-Visual Stimulation (AVS) at Dominant Alpha Frequency and Two Times Dominant Alpha Frequency on Cortical EEG

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Audio-visual stimulation (AVS) at fixed frequencies has been shown to synchronize brain activity towards those frequencies. We have conducted two studies employing 19 channel EEG recordings to determine if a single 20 minute session of AVS stimulation had significant and lasting effects over baseline on the cortical EEG measured in the 19 standard 10-20 electrode locations. We then examined the effects of dominant and twice dominant frequency stimulation over 20 sessions assessing the EEG every 5 sessions and also 2 weeks after the termination of all stimulation. Measurements were compared with initial baseline measurements which were taken in eyes closed situation and also we evaluated the effects on an eyes open post baseline measurement compared with a pre-eyes open measure before any stimulation had been employed. All of the measurements were obtained on normal college students. They were ten individuals in each AVS group. In addition, another study was carried out over 20 sessions to evaluate the effects of stimulation at one half the dominant frequency (theta activity) on cortical EEG. In addition to the AVS-EEG measurements, we obtained an assessment of possible behavioral effects as measured by the Categories Test of the Halstead-Reitan battery, the NEO - a

Retest for treatment effectiveness
