

## **A Brief Guide To The Five Phases of CNS Functional Transformation**

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Cz is used as active site at the beginning and end of all phases except for Phase V, where a four channel hook-up involving O1, O2, F7 and F8 is required. Placement is varied within phases as necessary to obtain demonstrable clinical effect. Thus, Phase II work with depression may involve a temporal placement during the work of that phase, whereas, in cases involving TBI, placement is frequently specified at or contralateral to site of injury. Once criteria is attained at the alternate site(s), then the original hook-up is reinstated until criteria can be attained at Cz. At that point, the work can progress into the next phase.

**Phase I: SMR Augmentation** (14 Hz.) with Theta Suppression, especially of low end, high amplitude, spiked Theta (3 and 5 Hz.). Begin here with everyone until they achieve criteria (e.g., via Temperature training > 94 for 20 min; SMR amplitude doubled/20 minutes at sustained increase without frustration; amplitudes at 3 and 5 Hz. decreased by 40%, especially with decrease in spiking and local recruitment). Also used as a 5 minute reorientation at the end of sessions in other phases. Frequently need to "notch down" the Theta range (v.g., 2 - 6, 2 - 4, 4 - 6) then follow with step-wise "notching up" (4 - 6, 2 - 4, 2 - 6 or other variations) especially with Immune System involved disorders like Lyme's, CFIDS and PMS. Primary task is to stabilize autonomic functioning especially re: sleep-wake cycle disturbance. If affective withdrawal, as in lack of empathy, especially with manipulative behavior/temper tantrums and poor body-part integration and aggressive requests/demands for help/reduction in symptoms, then shift to C4. Notch down as above if necessary, then notch backup at C4, then shift back to Cz with notching down, then notching up as necessary in terms of symptom changes. Catch phrase is: Just let go.

**Phase II: Beta Augmentation** (> 14 Hz.) with Theta Suppression (3 and 5 Hz.). Begin with low Beta (15-18) initially, then shift to high Beta (20-24); however, if there is a poor clinical response to low Beta Augmentation with concurrent Theta Suppress at 2 - 6 Hz. and continued criteria attainment for Phase I, then shift to high Beta Augmentation; if this is still ineffective and there is impulsivity, especially which seems manipulative, and poor spatial integration, including interpersonal spatial integration and high pain threshold (as if there is no body part integration), then return to Phase I work at C4. If Phase I criteria are no longer met after attempt at low Beta, then shift back to Phase I until criteria achieved. If emotional overlay (depressed or anxious) or ODD overlay (esp. intermittent explosive type), then shift to C3 with low then high Beta in order to augment left hemisphere function, especially language mediation. If poor spatial integration, schizoid in the sense of affective withdrawal but no psychotic Symptoms, then C4 in order to augment right hemisphere functioning. The majority of the work with ADD occurs in this Phase. Primary task is to increase the availability of and access to focal attention and concentration. Criteria for this Phase are fulfilled when symptom relief occurs (esp. as indicated by CPT and school related behaviors in the case of ADD) with Phase I criteria continuing to be met. Many times ambient low and high Beta amplitudes show a doubling when this occurs, but just as frequently there is little overt, quantifiable change in Beta amplitudes or ratios to slow wave activity. Catch phrase is: Just pay attention.

**Phase III: Alpha Augmentation** and the initiation of the Meditation Model. Sustained tripling (or even quadrupling) of Alpha amplitude for 20 minutes or more, ultimately with eyes open and Cz as placement. May need to begin at O1, then to O2, then to Oz, then progressing up the z line. Primary task is to reliably and demonstrably attain the Relaxation Response while maintaining the abilities of prior functional gains. The majority of the work with chronic stress related disorders, as well as many chronic pain disorders occurs in this phase. Catch phrase is: Just relax.

**Phase IV: Alpha-Theta protocol** with continued production of sustained, high amplitude Alpha which leads to a rapid, episodic decrease in Alpha amplitude with associated, rapid 7 Hz. surging (this is what has been referred to as the Alpha-Theta Crossover) while maintaining the abilities of prior functional gains (i.e., continued suppression of 2 - 6 Hz. activity). The majority of the work with substance abuse and PTSD and its variants occurs in this phase. Catch phrase is: Just be free and watch.

**Phase V: Synchrony Training** with increasing amounts of inter- and intra-hemispheric synchronization of dominant frequency. This usually occurs first in the Alpha range, with a natural progression through Theta and into Delta synchrony. Immune system involved disorders benefit greatly from low Theta - High Delta synchrony as long as criteria for the earlier phases continue to be met. The majority of the work with peak performance occurs in this phase. Catch phrase is: Just be.