

# **History of Clinical and Non-Clinical Applications of Bi-Lateral Alternating Stimulation-Tactile (BLAST)**

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During a decade of clinical neuropsychological practice and clinical training in advanced EMDR topics, I observed that when patients were undergoing desensitization of traumatic memories in EMDR Therapy, using BLAST concurrently with eye movements seemed to produce a lower magnitude of distress during processing. I started using BLAST in every desensitization session. Over time, I began using BLAST during the initial history taking session (which occur prior to the desensitization sessions) and noted that using BLAST served to improve distress almost immediately. Rather than asking new patients to come in, meet me, and then discuss their distress with no intervention, I used BLAST during the first session and their distressing body sensations (i.e. tight chest, stomach pain, headaches) would remit partially or totally within 20 seconds starting BLAST. It became apparent that neuropsychologists and therapists were underutilizing BLAST and that clinical outcomes could be improved with more liberal use of this during more phases of EMDR therapy.

I then started using BLAST on my own children and on myself to help aid in sleep onset, de-escalation of stress, and to mitigate the effects of their sensory sensitivities during fire alarms at school and situations which typically would produce a fight or flight stress response due to sensory overload. I allowed my patients to use BLAST prototypes to help aid their own gifted children with sleep onset difficulties and sensory integration issues at home and soon they were reporting that other members of the family used BLAST to de-escalate stress during difficult conversations, and to help ease body aches and pains due to stress. One patient with an Autism Spectrum Diagnosis used BLAST all day, every day at school and teachers noted when the batteries of the device had worn down almost immediately due to profound changes in his anxiety and startle response. I then expanded my use of BLAST to aid in children undergoing electroencephalograms (eegs) in my office to interfere with the pain of placing the dry cap sensors on their scalp. However, it became apparent that applying BLAST changed the eeg patterns and subsequent analysis of archival data revealed significant differences in key areas such as the somatosensory cortex, insula, and the amygdala. These findings could explain the mechanisms of action and why BLAST can very quickly produce such a positive profound physiological and psychological effect within seconds. BLAST may reverse the body's parasympathetic nervous system arousal and prevent the fight or flight response.