



How TRAUMA affects your brain & body & 5 ways to overcome its effects

Trauma isn't just metaphorically "in your head". It literally changes your physiology. When you experience a frightening or life-threatening event, your amygdala (the brain's "alarm center") becomes hyperactive, tagging neutral cues as dangers and triggering chronic fight-or-flight responses. Meanwhile, the prefrontal cortex (PFC) responsible for rational thought and emotional regulation, goes offline under stress, leaving you less able to calm intense emotions or make clear decisions.

Your hippocampus, which encodes and contextualizes memories, also shrinks in volume, contributing to fragmented recall and intrusive flashback memories of the traumatic event.





Neuro-imaging studies confirm these shifts: adults with PTSD often show reduced gray matter in the ventromedial PFC — weakening the suppression of fear response — and smaller hippocampal volumes, which correlate with symptom severity. At the same time, the amygdala's connectivity with threat-detection circuits becomes over-potent, making survivors hyper-vigilant to perceived dangers even when none exist. Over months or years, this altered brain wiring can fuel anxiety, depression, sleep disturbances, and difficulty concentrating — hallmarks of post-traumatic stress.



Real-World Story: A Case of Complex PTSD

Case 1: A 40-year-old woman who survived a childhood abuse and neglect. For decades she lived with hyper-arousal, nightmares, and social withdrawal. After several sessions combining trauma resolution therapy and neurofeedback, her symptoms dropped to below 50% of their original severity. She regained restful sleep, improves her relationships and social life, and her overall work performance improved showing much better results in her satisfaction with life, depression and anxiety assessments.



5 Ways to Heal Your Brain After Trauma

1. Brain Mapping & Neurofeedback

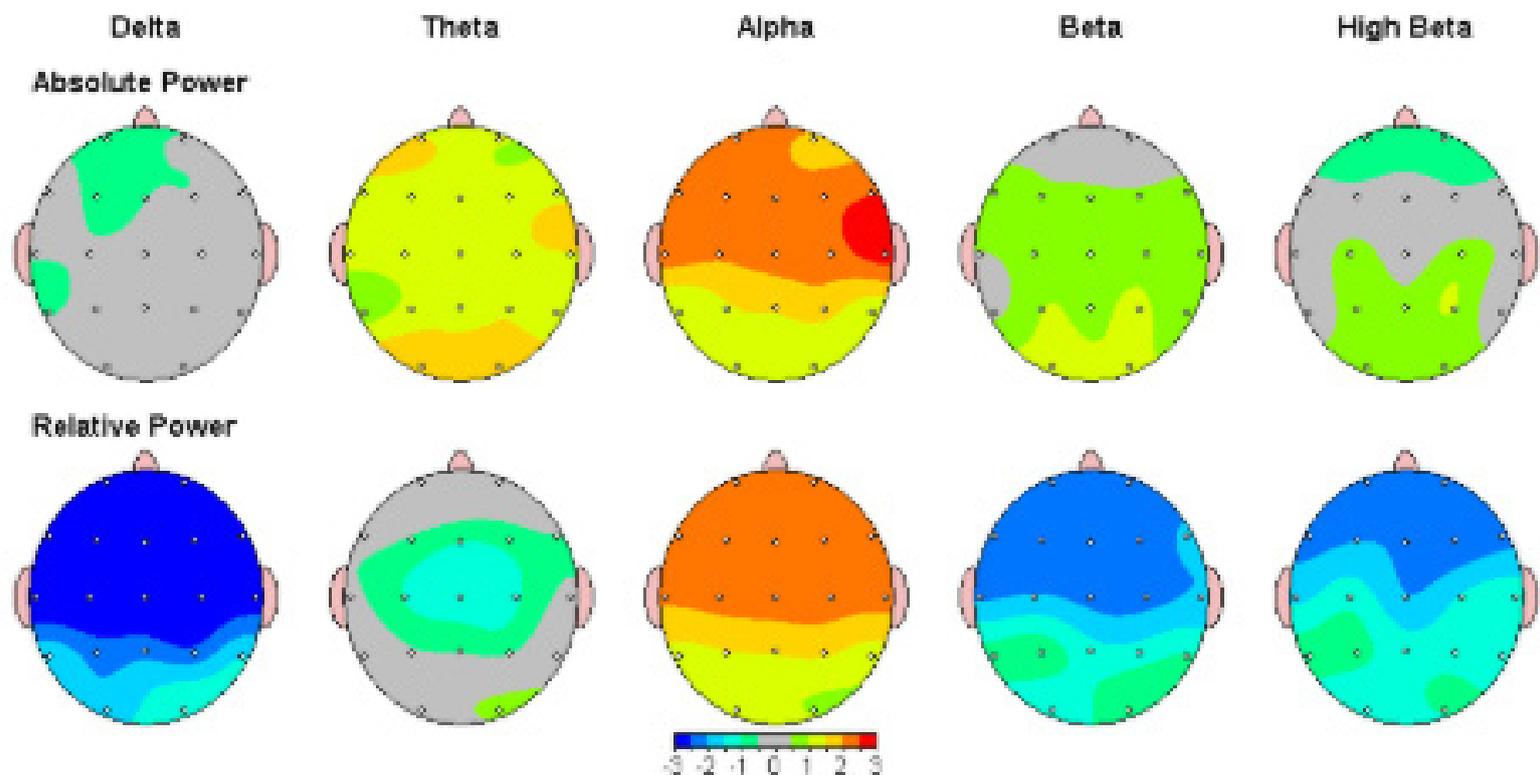
What it is: A quantitative EEG (“brain map”) identifies dysregulated areas (e.g., overactive high-beta waves). Neurofeedback then trains your brain to shift toward calmer rhythms by giving real-time audio and visual cues when you hit target brainwave patterns.

How it helps: Meta-analyses show 79% remission of PTSD symptoms with EEG-NF versus 24% in controls, likely due to improved self-regulation and neuroplastic changes in PFC–amygdala pathways. Wikipediabeemedic.com.

Montage: LinkEars

EEG ID: ECa

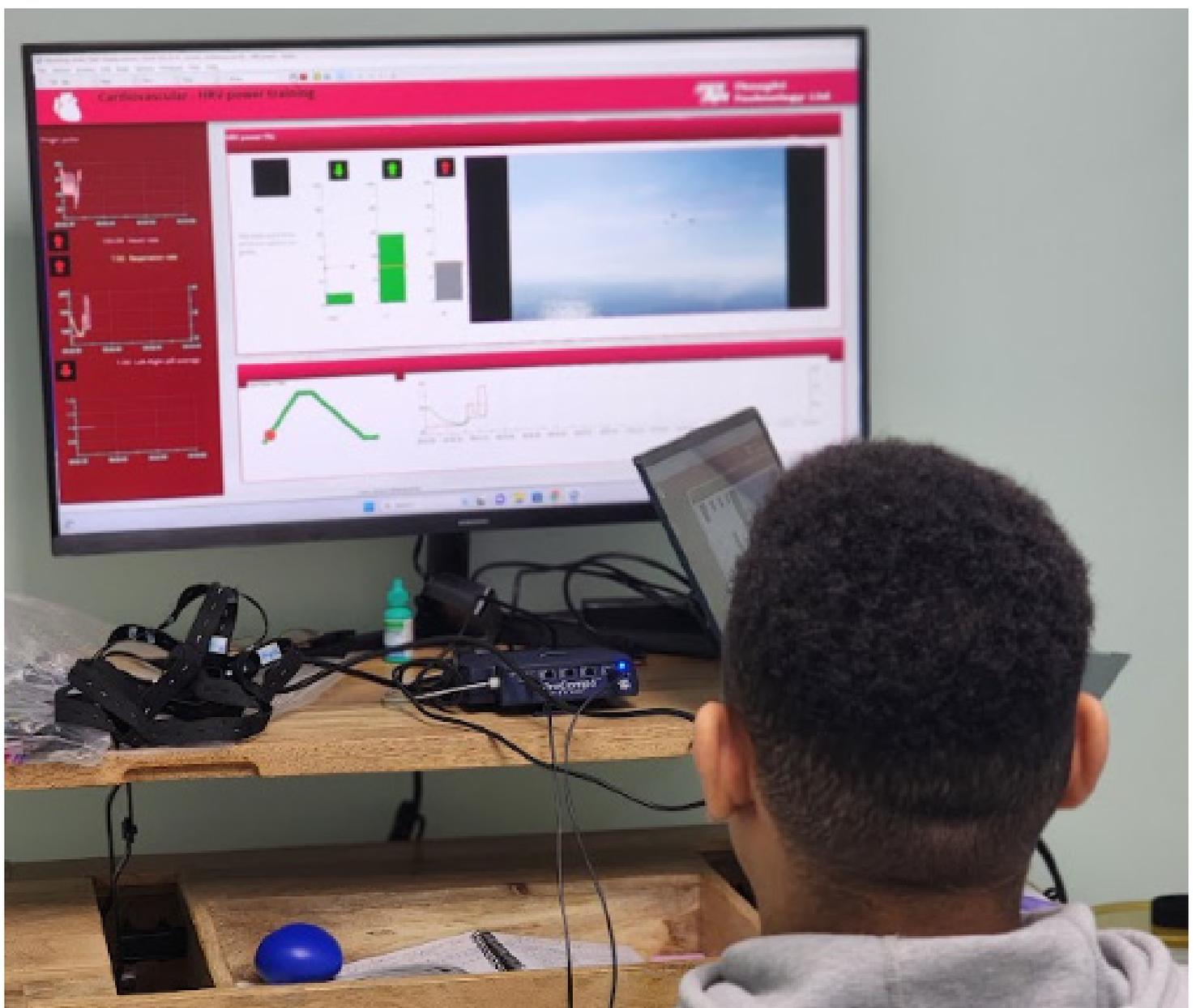
Z Scored FFT Summary Information



2. Heart Rate Variability (HRV) Biofeedback

What it is: HRV biofeedback teaches you to pace your breathing (around 5–6 breaths/min) to boost parasympathetic (“rest-and-digest”) activity and increase beat-to-beat variability.

How it helps: A 5-session HRV-BF protocol reduced stress and anxiety in frontline healthcare workers during COVID-19, objectively normalizing autonomic function and improving mood. [FrontiersWikipedia](#).



3. Photobiomodulation Therapy

What it is: Also called red-light therapy, PBM uses near-infrared or red light to stimulate cellular energy (ATP) in the brain, supporting neurogenesis and synaptic plasticity.

How it helps: Animal studies show early PBM after trauma prevented PTSD symptoms like anxiety, depression, and cognitive dysfunction by normalizing activity in the hippocampus and amygdala. Human pilot trials report significant reductions in depressive symptoms and good tolerability with t-PBM sessions over 4–8 weeks. NatureFrontiers.



4. Neuromeditation

What it is: Neuromeditation is a scientifically-backed form of meditation that focuses on directly influencing the brain's neural patterns to create lasting positive change. Unlike conventional meditation, neuromeditation uses real-time biofeedback and brainwave training to actively engage the brain's cognitive and emotional processes.

How it helps: Helps enhancing Focus and concentration, Stress Reduction, Emotional Regulation, Pain Management, among others.

MINDFULNESS.

It helps with:
Stress, anxiety, sense of being overwhelmed

FOCUS.

It helps with:
Focus, concentration, improved cognitive function, ADHD

OPEN HEART.

It helps with:
Empathy, relationships, anger, depression, and mood

QUIET MIND.

It helps with:
Negative self-talk, perfectionism, chronic pain, addictive behaviors, identity concerns

DEEP STATES.

It helps with:
Trauma release, creativity, self-hypnosis/learning new behaviors, self-exploration

5. Trauma resolution modalities

Some trauma resolution modalities

INTERNAL FAMILY SYSTEMS (IFS):

Is a transformative approach to psychotherapy that fosters self-awareness and healing by engaging with the different sub-personalities or “parts” within an individual.

SOMATIC THERAPY:

Helps people release damaging pent-up emotions in their body by using various mind- body techniques.



EMDR (Bilateral Stimulation):

This type of therapy works to use the brain’s natural healing process to stimulate growth and healing by focusing on the trauma while engaging both parts of your brain, in order to reprocess the memory.