BRAIN-BODY FUNCTIONS RELATING TO TRAUMATIC STRESS AND RESTORATION: Non-Pathological Physiological Brain-Body Responses to the Environment

**ANS**
Autonomic Nervous System

**SNS**
Sympathetic Nervous System

**FIGHT/FLIGHT**
“HOT ZONE”

**PNS**
Parasympathetic Nervous System

**RELAXED** or FREEZE
“COOL ZONE”

**ERGOTROPIC** (ENERGY-SEEKING)
Activates SNS, Motor and Premotor System: *(Incr. muscle tension and prepare to act)*
Endocrine System: *(Incr. secretion of stress hormones)*
Central Nervous System: *(Incr. sensory alertness)*
Too much activation: “OUT OF” WINDOW OF TOLERANCE

**TROPHOTROPIC** (NUTRITION-SEEKING)
Activates PNS, Same systems as SNS, but for:
Rest, Relaxation, Feeding, Restoration, Recuperation
“IN” WINDOW OF TOLERANCE-Comfort Zone

Freeze State- “OUT OF” WINDOW OF TOLERANCE- Shut Down

**BRAIN**
3 MAIN PARTS & LEFT/RIGHT HEMISPHERES

**1- Brain Stem-Reptilian Brain**
- Autonomic Processes of the Organism
- Breathing, Hunger/Thirst, Sleep, Sex, Coordination of Movement, Posture, Balance
- Cerebellum, Pons, Medulla

**2- Limbic System-Mammalian Brain (Emotional Brain)**
- Fear / Pleasure / Pain- Emotions
- Fight-Flight-Freeze
- Thalamus, Hypothalamus, Amygdala, Hippocampus

**3- Cerebrum-Neo-Cortex (Covering)**
- Executive Functions, Higher brain functions
- Decisions/Choice, Understand Consequences, Sense of Self in Relation to Others, Meaning
- Thinking, Imagining, Empathy, Morality

Right and Left Hemispheres of the Brain: (Need for Integration)
*Left:* Logic, Linear, Labeling, Language, List-Making
*Right:* Imagery, Sensations, Feelings, Abstract Thinking, Artistic, Intuitive, Spiritual

**ATTENDING TECHNIQUES- 4 C’s** Dezelic & Ghanoum

1. **CALM** THE BODY
Regulate the Body to the “Cool Zone,” Re-Set and Stabilize to present, Demonstrate Somatic Regulation

2. **CHOICE** OF THINKING
Psychoeducation, Discussion, Neo-Cortex gets back online when physiology is calmed down

3. **CONFRONT** THE CONCERNS
Address the Trauma/Concerns, Re-process, Re-work

4. **CHANGE** BEHAVIORS- CHANGE THE WIRING
Changing beliefs, try new behaviors, with new results, while staying calm and regulated, creating and stabilizing new neural networks