

#### 4) Neurobiology 101

- a) CNS
  - i) Inhibition and modulation of emotions and responses, Cortex, Frontal Lobes
  - ii) Sympathetic Nervous System
    - (1) Limbic System, Fight or Flight
    - (2) Amygdala and Hippocampus, responding to perceived threats
    - (3) We are descendants of nervous people
  - iii) Para-Sympathetic Nervous System, the breaks, rest, recover, restore
- b) Neurotransmitters Overview
  - i) Dopamine, Serotonin, Acetylcholine, Gaba
  - ii) Eric Braverman, BravermanTest.com
  - iii) Natural Stacks
- c) Brain as a Battery, Electrical System
- d) Hebbian Principle
  - i) Neurons that Fire Together will Wire Together
  - ii) Networks, Systems, Building, Learning, Pruning, Re-Wiring
- e) Neuro-Plasticity
  - i) Build the Brain that You Want to Have

#### 5) Brain as Electrical System

- a) Cells FIRE, create pulses called “brain waves”
- b) Delta
- c) Theta
- d) Alpha
- e) SMR, sensory motor rhythm
- f) Low Beta
- g) High Beta
- h) Gamma from Thalamus
- i) Flow State

#### 6) Slower, higher amplitude waves are idling rhythms

- a) Observed with head injuries or traumas
- b) Observed with eyes closed, alpha
- c) Observed with aiming at a target with eyes open
- d) We CAN INHIBIT THESE.
  - i) This is the definition of FOCUS or
  - ii) CONCENTRATION or
  - iii) SELF-REGULATION, SELF-CONTROL