

Harnessing the Healing Power of The Nervous System, Brain and Heart

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NEW EARTH VISIONING PROJECT

How do the brain, nervous system and heart relate to our mission?

1. The health and functioning of these 3 systems and how they interact with each other is foundational to the:

- regulation of emotions
- physical health
- neurotransmitters and mood
- focus and attention
- our ability to move forward in life
- be in relationships
- everything about how we function in the world

2. Emotion-raising techniques done on top of a dysregulated nervous system, unresolved trauma, acquired brain injury or low heart rate variability can be futile and frustrating.

Let's not spin our wheels!

My goal for this presentation and what we'll discuss:

- Gain enough understanding of these systems to recognize in yourself whether or not you can benefit from the modalities discussed.
- Techniques you can use for past injuries or to handle current stressors.
- This presentation is a jumping off point for you to learn how to bring yourself back into harmony

We'll discuss:

- My health journey and the role these methods have played
- Look at each system at a high level
- What can go wrong and how issues can manifest
- Ways to heal and stay in harmony

Brief Overview of these systems and what they do for us – page 1

Brain

Brain stem

- pre-verbal, sense of safety, proprioception - where am I in space?
- where cranial nerves connect to rest of body - 10th is key - Vagus Nerve
- involved in many automatic functions - breathing, heart rate, body temperature, circadian rhythm, digestion, swallowing

• Limbic System

- memory
- the emotional brain - responsible for all emotional reactions
- creation of neuro-cocktail of chemicals and hormones
- seat of the autonomic nervous system

Brief Overview of these systems and what they do for us – page 2

BRAIN, continued

Neo-Cortex

- accounts for 76% of the volume of the human brain
- higher order brain functions such as language
- reasoning, rationality, analysis
- creativity, imagination
- sensory perception and discrimination
- cognition - planning complex behavior

Brief Overview of these systems and what they do for us – page 3

Nervous System

Sympathetic Branch

- Fight/Flight - prioritizes bodily functions
- Prepares body for stress related activities or activities requiring high degree of alertness such as exercise, sex, giving a presentation
- Dilate pupils and bronchi, secretes adrenaline, increases heart rate, converts glycogen to glucose for fuel, stops digestion

Parasympathetic Branch - 2 functions

- Freeze - when system is overwhelmed and you can't fight or flee
- Rest & Digest = healing mode
 - 75% of all parasympathetic fibers come from the Vagus Nerve
 - slows down heart rate
 - stimulate digestion
 - inhibits adrenaline

Brief Overview of these systems and what they do for us – page 4

The Heart

Heart Rate Variability (HRV) - the variation between heart beats

If variation is low - indicates high sympathetic nervous system activity

If variation is high - indicates high parasympathetic activity

The ability to switch gears - indication of resilience

Example of impact of HRV

- Low variability associated with worsening depression and anxiety
- High variability associated with stress resilience and high cardiovascular fitness and health

We can improve HRV

Health and functioning of the vagus nerve, which runs through the heart, has direct impact on HRV

What Can Go Wrong?

- **Brain structure**, nervous system and vagus nerve can all become structurally changed, rewired, or damaged
- **Childhood trauma** - can start in utero
 - ACE study - Adverse Childhood Experiences - score 1-10
- **PTSD** - accidents, surgery, witness a tragedy, part of traumatic event
- **Chronic Stress** and Low Stress Resilience
- **Acquired Brain Injury** chemical, mold or other environmental exposure
 - Infection
 - bacterial
 - viral

Limbic System Impairment

Since seat of autonomic nervous system affects everything we're discussing.
let's focus on it

Symptoms may include:

- Chronic inflammation
- Poor memory
- Brain fog
- Digestion issues
- Lowered energy levels
- Numerous sensitivities - chemicals, environmental, food, EMF, electrical
- Chronic pain
- Depression and/or anxiety, panic attacks
- Poor detoxification, absorption of nutrients and cellular communication
- Eating disorders
- Heart arrhythmias, palpitations, tachycardia
- Immune system dysfunctions - allergies, autoimmunity, skin conditions, latent and chronic infections

What Can We Do About It?

- ♥ NeuroPlasticity
- ♥ Modalities that utilize neuroplasticity
- ♥ DNRS - Dynamic Neural Retraining System
- ♥ HeartMath for HRV
- ♥ Vagus Nerve
- ♥ Somatic Exercises
- ♥ Meditation and Breathing

Writing Exercise

Building awareness of patterns and neural pathways is the first step in a conscious neuroplasticity process. DNRS calls these Pathways of the Past - POPs

Questions to consider:

1. What are the repetitive thoughts you think in response to stress triggers?
2. What are the triggers that create discord and disharmony? What pulls you out of coherence?
 - You feel like you're spinning - the "spun up" feeling
 - Heart rate goes up
 - Anger, frustration, depression, anxiety
 - A repetitive thought loop begins
3. What is your go-to response - fight, flight or freeze? What are the circumstances for each type of response?
4. Energy goes where attention flows - where does your attention go when you're under stress?

Soul Work

1. Of the patterns and neural pathways you identified in the writing exercise - pick one or two this week and catch yourself when you do them. Interrupt it and redirect.

- **Focus on something different**
- **Replace the thought or reaction with your desired response to begin creating a new neural pathway**

Remember: “Neurons that fire together, wire together.”

2. Choose one of the practices we discussed or practiced and work with it this week. Notice any shifts. They may be subtle at first so be patient.

- **Orienting**
- **Grounding**
- **HeartMath Quick Coherence**
- **Open Focus meditation or in the moment - pay attention to space**

3. Journal on what you learned about your brain, nervous system and heart. What next steps are you led to take to improve your system’s coherence, stress resilience, and capacity?

RESOURCES page 1

Neuroplasticity

Dr. Norman Doidge - Neuroplasticity researcher and author

<https://www.normandoidge.com>

Documentary - "The Brain That Changes Itself"

https://www.youtube.com/watch?v=bFCOm1P_cQQ&t=8s

Impaired Limbic System Rehabilitation

Dynamic Neural Retraining System

<https://retrainingthebrain.com>

<https://www.youtube.com/user/SaturdayMornFunhouse>

Gupta Program

<https://www.guptaprogram.com>

Open Focus Meditation

<https://openfocus.com>

HeartMath Institute - for improving heart rate variability, heart-brain coherence, vagus nerve functioning

<https://www.heartmath.org>

RESOURCES - page 2

Trauma Healing

Somatic Experiencing - somatic therapy based on Peter Levine's work

<https://traumahealing.org/about/>

Attachment Styles

<https://dianepooleheller.com/attachment-styles/>

Adverse Childhood Experiences (ACEs) Study

https://www.cdc.gov/violenceprevention/aces/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Findex.html

<https://acestoohigh.com/got-your-ace-score/>

Vagus Nerve

Self-healing exercises

<https://www.amazon.com/Accessing-Healing-Power-Vagus-Nerve/dp/1623170249>

<https://www.heartmath.org>

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Polyvagal Theory

<https://www.stephenporges.com>

Brain Rewiring

<https://drjoedispenza.com>