

Review/Watch

Biology of Stress Video #3: Vagus Nerve 101.

Recap of Nervous System

TWO main nervous systems in vertebrates.

- 1) **CENTRAL** nervous system
 - > Central nervous system is the **BRAIN** and **SPINAL CORD**.
- 2) **PERIPHERAL** nervous system
 - > Peripheral nervous system is the a) **AUTONOMIC** nervous system and the b) **SOMATIC** nervous system.

Between all of these nervous system branches are pathways (sensory & motor) that **COMMUNICATE** signals (sensations; stimuli; hormones; etc.) for human function (metabolism; homeostasis, etc.), action (movements) and survival (fight, flight, freeze).

ANS Has Two Main Branches (Plus its Sub-Branched)

- Sympathetic Nervous System (SNS), which is our **FIGHT** and **FLIGHT** survival system.
- Parasympathetic Nervous System (PNS) which is our **SLOWING DOWN** survival system.
- Then, the PNS is broken into two more branches:
 - Speedy, primitive, unrefined (unmyelinated) **SHUTDOWN** nervous system (Dorsal Vagal Complex of the PNS).
 - Steady, refined (myelinated), more evolved **CALMING DOWN** nervous system (Ventral Vagal Complex of the PNS).

Here's Where it Gets More Complicated 😊

Dorsal Vagal Complex of the PNS (the clumsy & unrefined portion of the dorsal (shutdown) has **TWO** main modes it operates in:

LOW Tone Dorsal.

HIGH Tone Dorsal.

Low tone is the true **REST- DIGEST** parasympathetic nervous system and is responsible for **RECOVERY** and **HEALING** of the body's many organs and organ systems:

- Supports **TISSUE** Repair.
- **IMMUNE** System Response.
- Barrier Keeping of The **GUT** .
- **CELL** Repair and Regeneration.

For healing, health and our smarts to be restored, we want all **THREE** branches to be in sync with each other.

The Two "Ceptions"

THE FIRST "CEPTION"

INTERO - ception

THE SECOND "CEPTION"

NEURO - ception

Story time from 'Nurturing Resilience' Kain and Terrell (2018). Chapter 2, *Knowing When We Are Safe*.

(Remember) Primary Wiring

The ventral vagal branch (the social engagement portion of our ANS) is not fully **REFINED** (nor mature) when we are born.

- We have to **LEARN** how to use it.
- The refinement and **WIRING** must be built up
(via social engagement from another, more mature, human).
- If the wiring was not optimal early in life, we need to **BUILD** the foundations and **TEACH** the body what self-regulation and co-regulation is.

Notes on Co and Self-Regulation

- This primary wiring is how we learn to **SELF - REGULATE**.
- Interestingly, we learn self-regulation *via* **CO** - regulation.

For Example:

1. Baby **DOES NOT** have self-regulation when born.
2. She **LEARNS** how to self-regulate by co-regulating with mom, or dad, or caretaker.
(This is just one of the hallmarks to healthy attunement between infant and adult: having connection with a more mature - and regulated - nervous system so the infant gets those primary wirings that start to form a self-regulating and more emotionally intelligent human being.)
3. She learns how to self-regulate based on how she is taught in the co-regulation **'DANCE.'** She is 'borrowing' her caretaker's ventral vagal parasympathetic nervous system.)

Three stories to share - Teddy, Ryan, & Rome

All have been shared previously on my YouTube channel, but they are worth mentioning for this training call.

- **THE STORY OF TEDDY (HOW EARLY TRAUMA IMPACTS ALL OF US) - NOVEMBER 24, 2018**
https://youtu.be/dNts7T8_Vig
- **THE STORY OF RYAN (WHY SECURE ATTACHMENT IS ESSENTIAL) - NOVEMBER 28, 2018**
<https://youtu.be/3WI3aUfsNxM>
- **HOW TO TAME A TANTRUM - JANUARY 27, 2019**
<https://youtu.be/4EofdGeOUAo>