




Yoga

And The Treatment of Trauma



“Some people's lives seem to flow in a narrative; mine had many stops and starts. That's what trauma does. It interrupts the plot. You can't process it because it doesn't fit with what came before or what comes afterwards.”

— [Jessica Stern](#)



Box breathing

- Breath in for 4 counts, hold for four counts, out for four counts, hold out for two counts
- Common grounding breath technique
- Utilized in both presenters clinical work

Introductions and Shameless Plugs

- April: Worked in Psychiatric Hospital for 23 years. Currently in private practice specializing in the treatment of trauma.
- Bob: Social worker in clinical practice at Hope Place Centres, a trauma informed live in treatment for men and women with addictions (resources)
- Shaye Molendyke: Here in spirit. Lieutenant Colonel in USAF. Combat Veteran. Masters in Counseling. Creator of Warriors Yoga (resources)



Over-view of Workshop

- Trauma defined
- Window of Tolerance
- Polyvagal theory
- Heart Rate Variability
- Interception
- Yoga Snack

Trauma Defined

- The individual's ability to integrate his/her emotional experience is overwhelmed, or
- The individual experiences (subjectively) a threat to life, bodily integrity, or sanity

(Pearlman & Saakvitne, 1995, p. 60)

Traumatized patients are continuing the action, or rather the attempt at action, which began when the thing happened and they exhaust themselves with these everlasting recommencements”

Pierre Janet (1919/1925, p 663)

Impacts of Trauma

- Loss of Control
- System is prepared for danger
- Hyper/ Hypo arousal
- The body's reaction
- ACE study



From small t to big T to PTSD Trauma

- Developmental: a lack of sufficient bonds
- Individual: violence, neglect
- Organizational
- Social such as war.
- Small t trauma as ubiquitous

(Jindal & Jennings, 2010)

Window of Tolerance

Hyperarousal Zone

2. Sympathetic "Fight or Flight" Response

Increased sensations, flooded
Emotional reactivity, hypervigilant
Intrusive imagery, Flashbacks
Disorganised cognitive processing

Window of Tolerance Optimal Arousal Zone

1. Ventral Vagal "Social Engagement" Response

State where emotions can be
tolerated and information
integrated

Hypoarousal Zone

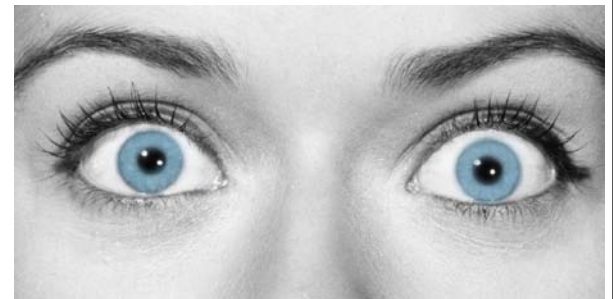
3. Dorsal Vagal "Immobilisation" Response

Relative absence of sensation
Numbing of emotions
Disabled cognitive processing
Reduced physical movement

Adapted from Ogden, Minton, & Pain, 2006, p. 27, 32; Corrigan, Fisher, & Nutt, 2010, p. 2

Hyper - arousal

- Agitation, paranoia, anger, impulsivity anxiety, insomnia
- Activation of sympathetic nervous system
- Prepare to fight, flee or freeze



Hypo - arousal

- Depression, flat affect, chronic fatigue, dissociation, poor digestion
- Parasympathetic system is engaged
- Younger and longer trauma occurs more likely



Polyvagal Theory

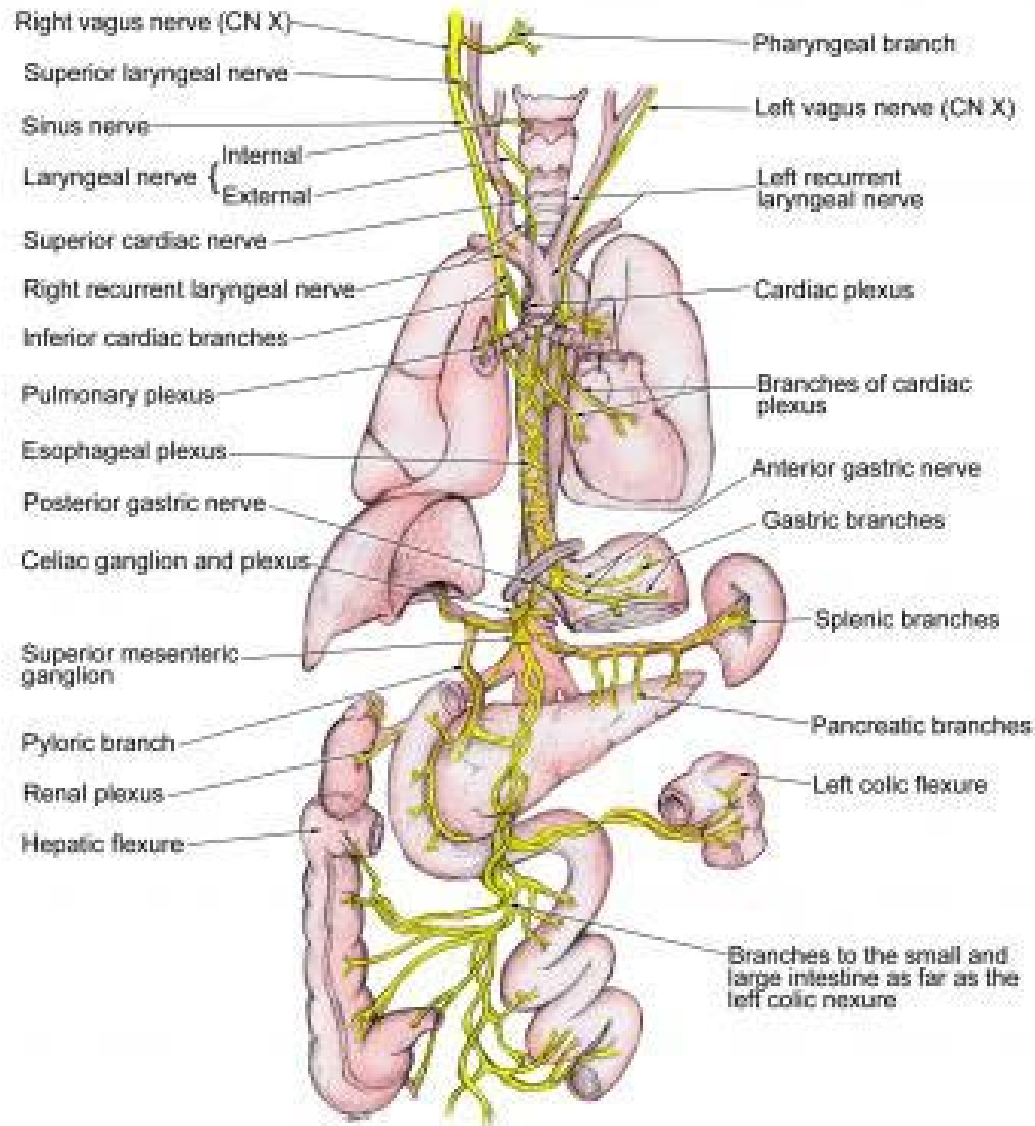
Stephen Porges



*HOLY
VAGUS!!!*



**This Nerve
does *What!?!***



The Pathetic Systems

- Sympathetic: Fight/ Flight/ Bite (hyper)
- Parasympathetic: Shut down chemical response (hypo)
- A third response: Social

Enter Polyvagal

- Example: doing 128 km/h on the 407, and suddenly police lights are on behind you
- A. Fight/ flight/ bite mobilization (sympathetic)
- B. Rest/ digest immobilization (parasympathetic)
- C. Socialization
- Socialization responses modulate sympathetic (fight flight) responses, and vice versa through HPA axis dampening and heart rate functions.
- Reptiles was simple sympathetic and parasympathetic vagal
- In mammals it became “smart vagus”, enervating the social features and organs

(Porges, 2007; Porges, 2011)

More polyvagal

- Danger and defense behaviours are naturally and biologically opposed to socialization behaviours
- A “bidirectional coupling of social engagement behaviours and bodily states” (Porges, 2007)
- The vagal nerve both delivers efferent signals to the body, but also receives and transmits afferent signals back to the CNS *from* the body
- The body is bio-intelligent material that negotiates safety and danger: a brain in the body

(Molendyke, 2013; Porges, 2007; Porges, 2011)

Interoception

- Trauma shudders someone's awareness onto the outside world, and it takes practice to come back to internal awareness
- Interoception: Inner awareness
- Feelings and emotions are guided *by internally regulated* responses to outside stimulus
- Esp. those parts we maintain control over: the esophagus, larynx, lungs
- Heartbeat awareness: A person's awareness of number of heartbeats in a given time frame
- Inner awareness of visceral organs provides us with the basis of our emotional states

(Craig, 2015)

Interoception

- “Better heartbeat perceivers are better at reading their own emotional feelings, and...are better at reading others’ emotional feelings” (Craig, p. 6).
- Associated with better decision making, performance of tasks, response to intuition, sense of the passage of time, energy utilization
- “Alterations in cardiorespiratory activity do indeed distinguish different human emotional feelings and affect human perception of emotion” (Craig, 2015).
- “As a functional neuroanatomist, I believe that the brain in our bodies is what engenders our feelings, thoughts, and behaviours” (Craig, p. 13).

(Craig, 2015)

Heart Rate Variability



Yoga, Trauma, HRV

- **What is HRV? Heart rate variability (HRV)**-variation in the time interval between heartbeats.
- Hold your pulse, long breath in, long breath out
- Good or high HRV correlates back to greater window of tolerance in trauma
- HRV measures the body's and mind's ability to return to a state of normalcy after a stressful event
- HRV relates to autonomic balance or sympathetic and parasympathetic nervous system activity
Example: higher HRV in combat veterans correlates with resilience to symptoms of PTSD

(Stauss, 2003; Minassian, Geyer, Baker, Nievergelt, O'Connir & Risbrough, 2014)

HRV continued

- HRV and respiratory sinus arrhythmia (RSA)- “RSA... when heart rate increases during inhalation and decreases during exhalation” (Lehrer & Gevirtz, 2014, p. 1)
- HRV: a measured, scientifically valid description of mind and body connection, esp. by modulating out-breath (Lehrer & Gevirtz, 2014; Strauss, 2003)
- Yoga, meditative practices impact on HRV (Peng et al, 2004; Melville, Chang, Marshall & Cheema, 2012; Kodituwakku, S., Lazar, S., Indic, P., Brown, E. & Barbieri, R., 2010)

Trauma Informed Care

- Safety, trust, collaboration, choice and empowerment
- Sense of safety is deeply rooted in physiology, environment and evolution.
- Yoga as a source for trauma informed self care: for therapists as well
- Do agencies care how their employees handle things like firings?
- Are our emotional- internal responses in healthcare settings marginalized as unprofessional?
- Self-reflecting practitioners: Reflection and action: yoga techniques as a way of moment to moment check in with self

(Center for Substance Abuse Treatment, 2014)

What Does This Look Like ?

- Notice small changes
- Don't notice environment
- Tense and anxious
- Easily startled
- Sleepy, disengaged



Yoga

The science



Pranayama

The Practice of Breath



Deep Breath ©Melanie Weidner 2005 www.ListenForJoy.com

Alternate Nostril Breathing

Using thumb and knuckle of pointer finger
(right hand)



Block right nostril with thumb - inhale through
left nostril

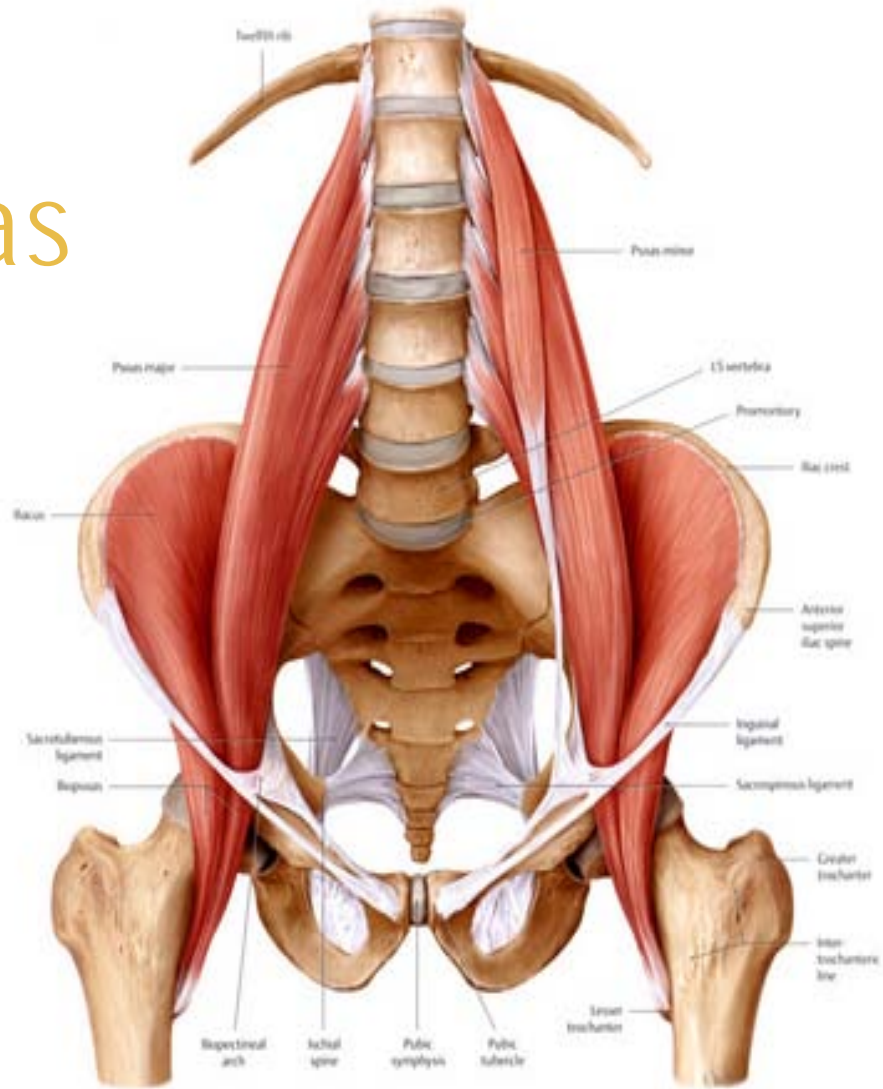


Hold at top - switch - blocking left nostril with
knuckle



Exhale - inhale same nostril - switch at top

The Psoas



The Psoas

- Deep muscle
- Attaches at T4, wraps around body and attaches again at groin and inner thigh
- The emotional muscle
- Holds onto non-verbal memories, becomes tight and dry
- Yoga can target that muscle, 'juice it up' and release the held memories (sensations)

The Asanas



Tadasana



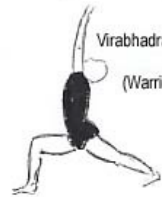
Trikonasana (Triangle pose)



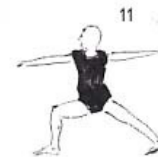
Parvsvakosana



Parivrta Parsvakonasana



Virabhadrasana 1
(Warrior Pose)



11



111



Padangusthasana



Uttanasana (Intense Stretch)



Paschimottasana



Purvottasana



Spinal Twist



Virasana
(Hero Pose)



Vipasana
(Camel Pose)



Adho Mujjha Svanasana
(Dog Pose)



Sarvangasana
(Shoulder Stand)

The Flow

- Re-establish a sense of strength and effective movement
- Match breath with movement
- Inversions - reset the dorsal vagal nerve



Trauma Sensitive Yoga

- Smaller
- Slower
- Inclusive and invitational language
- Overview of class
- Large amounts of reassurance



Things to Think About

- Is the class going to be gender sensitive?
- Music or no?
- Tone of voice
- Set up of room: Principles of trauma informed care. ie, back to the door?
- Silence?

What's Next ?





Our Yoga Class

Inspired by Shea Mollendyke and David Emerson

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