

Wired to Survive & Flourish

- ▶ Body generate signals that indicate need
- ▶ Develop a map of the body in the space to satisfy those needs
- ▶ Generate energy to meet those needs
 - Arousal regulation: co-regulation & later self-regulation
- ▶ Identify safety or danger and select appropriate action
 - At the heart of affect regulation

© Vital Links 3

What is Trauma?

© Vital Links 4

Stress & Trauma Continuum

Stress ←————→ Trauma

Any experience that requires change in an individual's typical coping mechanisms

Any experience that overwhelms an individual's typical coping mechanisms

© Vital Links 5

Innate Defense System

- ▶ We are hardwired to survive and thrive
- ▶ An innate survival response to perceived danger
 - Increase in physiologic arousal in preparation for Fight or Flight
 - If Fight/Flight is not possible, we are wired to respond with an immobilization response
 - Fear + Immobilization = Sets the Stage for Trauma

© Vital Links 6

Two Sources of Trauma

- ▶ **Shock Trauma** - an experience of an overwhelming event or events which are perceived as life threatening at any time in our life
- ▶ **Developmental Trauma** – ongoing childhood abuse or inadequate nurturing and support critical to developmental periods

© Vital Links 7

Posttraumatic Stress Disorder

- Any anxiety following the traumatic experience
- Irritability
- Difficulty Sleeping
- Exaggerated Startle Response
- Difficulty Concentrating
- Daily Function is Impaired
- Disturbing Memories
- Lapse of Memory
- Nightmares
- Detachment
- Flashbacks
- Symbolic Avoidance

© Vital Links 8

Causes of Developmental Trauma

- ▶ Emotional Abuse
- ▶ Neglect
- ▶ Attachment Disruptions
- ▶ Disorganized Attachment
- ▶ Sexual Abuse
- ▶ Medical Interventions
- ▶ Innocent Traumas

© Vital Links 9

Early Interpersonal Trauma

- ▶ Threatens physical and psychological safety
- ▶ Social engagement system fails
- ▶ If related to primary caregiver, then attachment relationship fails; undermining the child’s ability to be soothed or feel safe

© Vital Links 10

Trauma’s Impact

- ▶ Evidence shows, Hx or trauma associated with:
 - Psychiatric/Mental Health issues
 - Physiological & Neurological differences
 - Chronic Health issues in adulthood
 - Sensory Integrative challenges
 - Developmental delays
- ▶ Over 90% of people with psychiatric disorders have experienced trauma

References: Felitti, Vincent J et al. (1998); Kumar, J. (2009); van der Kolk, (2003)

© Vital Links 11

3 Innate Responses to Danger

There are **3** innate responses to danger in, both, animals & humans

1. **Fight** - try to fight off attacker if it is possible
2. **Flight** - try to outrun the attacker if it can
3. **Immobility** - death feigning is the most misunderstood biological survival reaction that is actually involuntary

© Vital Links 12


Fear of Immobilization Cycles

- ▶ Fighting & Fleeing, if successful, will discharge arousal
- ▶ Immobility is the point at which trauma is created and symptoms begin to develop in humans
- ▶ Typically do not see post-traumatic stress in animals due to natural recovery or release from hyper aroused state

© Vital Links 13

Immobility


- ▶ Very Slow
- ▶ If overcome by threat of death, will roll onto its side in a death-like pose
- ▶ Mouth open and drooling



© Vital Links 14

Discharge of Hyper-Arousal

- ▶ The key to healing traumatic symptoms in humans lies in our ability to mirror the fluid adaptation of wild animals as they shake out and pass through the immobility response and become fully mobile and functional again (Levine).
- ▶ Animals who were not allowed to successfully go through this tremoring process had a reduced resiliency to subsequent life-threatening experiences (Scaer).



© Vital Links 15

Trauma

- ▶ Truncated defensive responses
“Disorganized sensation and action patterns form the core imprint of trauma”
- ▶ If unresolved hyper-arousal of the nervous system creates a chemically altered state
- ▶ Impacts neurological integration and loss of connections between parts of oneself; resulting in psychological and cognitive symptoms developing later
- ▶ Trauma causes the release of high levels of cortisol and adrenaline
 - Cortisol is growth inhibitory
 - Adrenaline increases the encoding of implicit memory


Based upon the work of Daniel Siegel & Martin Teicher

© Vital Links 16

Trauma & Memory

- ▶ Panic and Fear are triggered by the alarm centers in the brain
- ▶ Trauma affects the alarm system through memory (implicit & procedural) as if they are happening in the moment
- ▶ Alarm system appears to be firing randomly, but firing from unconscious cues from past, early “sensory-motor snapshots” of the danger

© Vital Links 17



Trauma Release Exercises (TRE®)

Dr. David Berceci

© Vital Links 18

What is TRE®?

- ▶ TRE is part of the “trauma release process”
- ▶ TRE is a protocol developed by Dr. David Berceci based on his own experiences and observations

© Vital Links

19

How TRE® was Developed

- ▶ Dr. David Berceci’s first-hand experiences providing relief services in Lebanon and, later, Sudan
- ▶ Both countries experienced instances of being under attack
 - Members of the community gathered together in the bomb shelters
 - In Lebanon, adults from different countries automatically curled into the fetal position
 - In Sudan,
 - ↳ the youngest children began to shake
 - ↳ older children resisted shaking
 - ↳ the adults exhibited, almost, no trembling at all

© Vital Links

20

The Beginning of TRE®

- ▶ Why didn’t the adults shake like the children?
 - “... We don’t want the children to think we’re afraid.”
- ▶ He came to the realization:
 - “... This shaking mechanism seems to be a healthy and useful neurophysiological mechanism that appears to down regulate the nervous system, restore a sense of calmness and reduce the myofascial tension that were created during the experiences of high arousal...”

-Dr. David Berceci (2015)

As cited in: Shake It Off Naturally: Reduce Stress, anxiety, and tension with [TRE]

© Vital Links

21

Purpose of the Tremor Mechanism

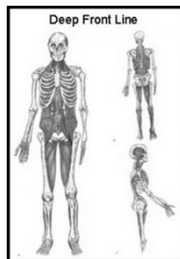
- ▶ The fetal curl is an automatic response to danger or threat as a means of survival
- ▶ The tremor mechanism is an automatic and natural response to release contractions and stiffness from that fetal response and restore the body back into a relaxed state

© Vital Links

22

Physical Patterns of Defense

- ▶ Held in the body
- ▶ Myofascial continuity
- ▶ Psoas



© Vital Links

23

Overview of TRE® Protocol

- ▶ Set of 7 Exercises
- ▶ Exercises designed to fatigue muscles to activate the tremor mechanism
- ▶ Importance of Self-Regulation

© Vital Links

24

Developmental Movement Patterns of Defense

© Vital Links 25

The Defense Action System

- ▶ Serves as survival system; is activated when any stimuli is perceived as dangerous
- ▶ All mammals equipped with range of defensive reactions
- ▶ Hierarchical system enables responses to, both, mild and severe threats
- ▶ Three General Subsystems:
 - Attachment & Social Engagement
 - Fight / Flight
 - Freezing, Collapse, Feigning Death
- ▶ Defensive pattern evoked depending on characteristic of threat, available resources of the individual, what has worked in the past

© Vital Links 26

Hierarchy of Defense

© Vital Links 27

Cycles of Arousal

© Vital Links Adapted from J. Wilbarger 28

Orienting-Defensive Continuum

Inherent Movement Patterns

- ▶ **Fetal Curl** - Fright, Freeze
 - Develops at 9 weeks in utero
 - Response to loud sounds
- ▶ **Moro Response**
 - Evolves out of fetal curl to allow opening up, orienting and responding to environment
- ▶ **Orienting** - Fright, Freeze
 - The Orienting Response
 - Primes approach, social engagement and play behavior

© Vital Links 29

Fetal Curl

www.haveyoumetus.net blog.predatorbdu.com

© Vital Links 30

Freeze

- ▶ Developmental Course
 - 9-12 weeks fetal development
 - Fetus phasic fetal curl in response to loud sounds
- ▶ Autonomic Features
 - Unmyelinated vagus to sub-diaphragmatic structures
 - Metabolic reserve
- ▶ Postural Features
 - Phasic activation of flexor muscle group

© Vital Links 31

Moro



springcitydiary.blogspot.com

© Vital Links 32

Moro / Startle

- ▶ Developmental Course
 - Fully developed at birth
 - Elicited by loud sound, sudden change in position
 - Develops into mature startle by 6 months
- ▶ Autonomic Features
 - First Phase:
 - ↳ sympathetic activation
 - Second Phase:
 - ↳ modulation of heart with exhale (myelinated vagus)
- ▶ Postural Features
 - First Phase:
 - ↳ phasic postural extension
 - Second Phase:
 - ↳ Postural extension is modulated by return to body midline &/or tonic holding with balance between the front and back side of the body

© Vital Links 33

Orienting / Social Engagement



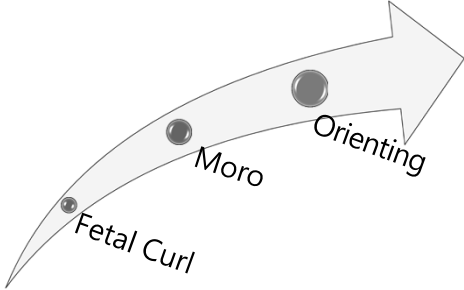
Ocean Cradle
www.dailymail.co.uk



www.familylifeinv.com

© Vital Links 34

Fluidity & Adaptability in Response to Environment



© Vital Links 35

Sensory-Motor Play

- ▶ Creating Safety
- ▶ Co-Regulation
 - Body Action
 - Affect
 - Themes of the Game
- ▶ Supporting the fullest expression of the innate defense movement patterns
- ▶ Sensory-Motor resolution of unresolved tension and mobilization
- ▶ Sensory-Motor resolution of defensive action patterns

© Vital Links 36

References

- ° Berceli, D. (2015). Shake It Off Naturally: Reduce stress, anxiety, and tension with [TRE].
- ° Felitti, Vincent J et al. (1998) Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine* , Volume 14(4) , 245 – 258
- ° Koomar, J. (2009) Trauma- and Attachment-Informed Sensory Integration Assessment and Intervention. *Special Interest Section Quarterly Sensory Integration*. Volume 32(4), 1-4.
- ° Van der Kolk, B.A. (2003). The neurobiology of childhood trauma and abuse. *Child and Adolescent Psychiatric Clinics Northern America*. Volume 12. 293-317.

© Vital Links 37

