

SETTLING THE SCORE: A BODY BASED APPROACH TO TRAUMA RECOVERY

KEVIN BERCELI, LPC, NCC, CPH, CERTIFIED TRE® PROVIDER
COUNTERPOISE SOLUTIONS LLC



THIS PRESENTATION IS:

© 2015 [UPDATED 2022] COUNTERPOISE SOLUTIONS LLC

WWW.RESETSTRESS.COM

AN UNDERSERVED POPULATION

Studies propose that up to:

81% of the general population, and

98% of Community Mental Health Center clients

experienced a traumatic event at some time in their lives.⁹

And **69%** of people in a psychiatric hospital had been found to have been repeatedly exposed to trauma for some length of time.¹²

Yet **ONLY 7%** received a PTSD Diagnosis¹²

The number of traumatic events is **negatively** correlated with **physical** and **mental** health **functioning**.⁹

After increasing screening rates for PTSD, they did increase the rate of PTSD diagnosis, however:

“the rates of actual PTSD treatment services provided did not change.”⁹

AN UNDERSERVED POPULATION

“Diagnostic reliability isn’t an abstract issue:

If doctors can’t agree on what ails their patients,
there is no way they can provide proper treatment.

When there’s no relationship between diagnosis and cure,
a mislabeled patient is bound to be a mistreated patient.”³⁰

The Body Keeps the Score, P. 165

Bessel van der Kolk, MD

TRAUMA INFORMED CARE

“There is an increasing focus on the impact of trauma and how **service systems** may help to **resolve** or **exacerbate** trauma related issues.”²⁶

“With appropriate supports and intervention, **people can overcome traumatic experience.**”²⁶

Substance Abuse and Mental Health Services Administration
(SAMHSA)

POST TRAUMATIC **STRESS** DISORDER

Trauma

Tension

Stress

WHAT IS STRESSFUL?

birth marriage work
divorce school deadlines
graduation finances
learning new things accidents
relationships bills deaths
injury illnesses

IS STRESS...

an event?

the memory?

HAS STRESS ALWAYS EXISTED?

The word **STRESS**
has been used for hundreds of years
in the field of **PHYSICS**

It wasn't until **1936** when Hans Seyle²³
identified stress medically:

“The **non-specific response of the body**
to any demand for change.”

DEFINING STRESS:

- Sympathetic Nervous System (SNS) activation
- Resulting in the Fight-or-Flight response

Sympathetic
Nervous System

Parasympathetic
Nervous System

FLIGHT OR FIGHT

**SOCIAL
ENGAGEMENT**

safety
happiness
groundedness
love

WHY STRESS MATTERS: ACES, AS EXPLAINED BY DR. VAN DER KOLK

ACE score of 4 or more

- More than 50% reported a learning or behavior problem as a child
(compared to 3% of those with a score of 0)
- Chronic depression in adults rises to 35% in men, and 66% in woman
(compared to an overall rate of 12% for those with a score of 0)
- 7 times more likely to be an alcoholic
(than adults with a score of 0)

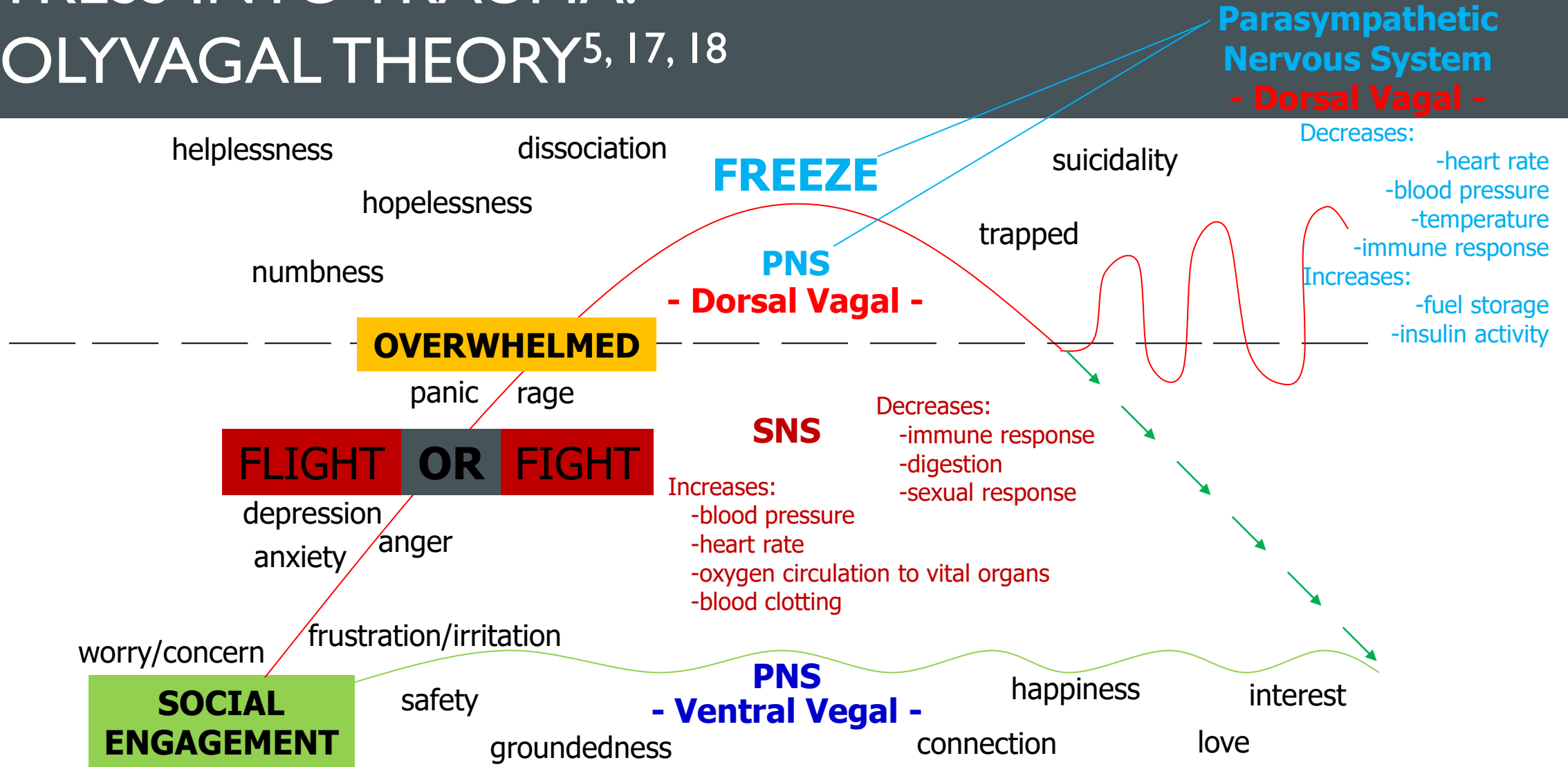
ACE score of 6 or more

- The likelihood of IV drug use is 4,600% greater
(than a score of 0)
- About 5,000% increased likelihood of a self-acknowledged suicide attempt
- 15% greater chance to be currently suffering from any of the ten leading causes of death in the United States

P. 144-148³⁰

The Body Keeps the Score

STRESS INTO TRAUMA: POLYVAGAL THEORY^{5, 17, 18}



CONNECTING TREATMENT TO RECOVERY

“Diagnostic reliability isn’t an abstract issue:

If doctors can’t agree on what ails their patients,
there is no way they can provide proper treatment.

When there’s no relationship between diagnosis and cure,
a mislabeled patient is bound to be a mistreated patient.”³⁰

The Body Keeps the Score, P. 165

Bessel van der Kolk, MD

SAMHSA'S APPROACH

“A program, organization, or system that is trauma-informed

- **Realizes** the widespread impact of trauma and understands potential **paths for recovery**;
- **Recognizes** the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and
- **Responds** by fully integrating knowledge about trauma into policies, procedures, and practices,
- And seeks to actively **resist re-traumatization.**”²⁶

2014

Substance Abuse and Mental Health Services Administration (SAMHSA)

TRIUNE BRAIN & INTRINSIC CONNECTIVITY NETWORK

National Institute of Health²⁸

Top-Down



Bottom-Up



Cortex
(cognitive)

Limbic System
(emotional)

Brain Stem
(physical)

[Some relevant information related to the Triune Brain, Intrinsic Connectivity Network, Salience Network, and regulation of the neurophysiology] ^{2, 3, 6, 7, 8, 11, 15, 19, 22, 24, 25, 27, 28, 29, 31, 32}

2 PATHS: TOP-DOWN & BOTTOM UP

“One only has to read the most basic of the literature on the function of the **brain**, the **nervous system**, and the **physiology of stress** to understand that **the mind and body are undeniably linked.**”²⁰

1994

CHOOSING YOUR TREATMENT PATH

➤ “Our greatest challenge is to **apply the lessons of neuroplasticity**, the flexibility of brain circuits, to rewire the brains and reorganize the minds of people who have been programmed by life itself to experience others as threats and themselves as helpless.” (p. 167)³⁰

➤ “You can tell equilibrium has been restored **when the physiology calms down.**” (p. 112)³⁰



The Body Keeps the Score,

Bessel van der Kolk, MD

BOTTOM-UP: TIPPING THE SCALE

“**Until recently**, this **bidirectional communication** between body and mind was largely ignored by Western science” (p. 76)³⁰

“Some **80%** of the fibers of the vagus nerve (which connects the brain with many internal organs) are **afferent**; that is, they run from the body into the brain. This means that we can directly train our arousal system by the way we breath, chant, and move, a principle that has been utilized since time immemorial in places like China and India, and in every religious practice that I know of, **but that is suspiciously eyed as ‘alternative’ in mainstream culture.**” (p. 207)³⁰

The Body Keeps the Score,

Bessel van der Kolk, MD

“The popularity of **complementary and alternative medicine** [CAM] is increasing in the United States. ...significantly increased use of mind-body therapies by Americans... recent statistics indicate that between **41%-59%** of chronically ill adults use CAM.”²⁸

BOTTOM-UP: PATH TO RECOVERY

“Trauma induced behavior cannot be rectified with the use of traditional crisis intervention techniques that depend on logical processing, because trauma is an illogical, instinctual response not under control of the rational brain.”

Dr. David Berceli

Worked in over 36 countries

International Expert in Stress and Trauma

Founder of Tension/Trauma Releasing Exercise (TRE)®

*We need strategies so clients can “unlearn” the **nervous system’s** response to stress and trauma.*

 **nicabm** National Institute for the Clinical Application of Behavioral Medicine

TENSION / TRAUMA RELEASING EXERCISE (TRE®)

GRASSROOTS: FROM ONE EXPERT TO AROUND THE WORLD

- Translated into more than 12+ languages
- Used in over 100 countries
- Is being researched by the Veterans Administration
- Identified by the Defense Centers of Excellence
- Used by military personnel and first responders in several countries including:

United States, Canada, Brazil, Norway, and Sweden



TRE® is currently supporting underserved and vulnerable populations around the globe^{1,10,13,14,21} including: children, adolescents, adults, 1st responders, military personnel, those with medical conditions, & following natural disasters, and traumatic events.

PROPOSED BOTTOM-UP CONNECTIONS

Mechanics

- Muscle Patterns
- Psoas Muscle (fight/flight muscle)
- Central Pattern Generators [CPGs]⁴
- Triune Brain
- Transcortical Loop
- Neurogenic (tremor) Mechanism¹⁶

Intrinsic Connectivity Network

Insula is part of the Saliense Network

2 lines of communication⁴:

1. Central Pattern Generators
 2. Vagus Nerve
 - Parasympathetic control
 - Bi-directional
- (~80% afferent, body to brain)

Saliense Network ('The Switch')⁴

- Central Executive Network
(Thinking Mode)
- Default Mode Network
(Rest Mode)

A WORKING UNDERSTANDING

TRE® AS A BOTTOM-UP APPROACH

“There are certain **muscle patterns**, associated to certain **Central Pattern Generators**, associated to that **emotional expression**. The **insula** is an intrinsic part between the brain shifting from knowing how I feel and what I experience, and going to do something about it. The insula is a part of the ‘**Salience Network**’ which is a part of a certain mechanism called the ‘**Intrinsic Connectivity Network**’ in the brain, and that has a really important function in determining how stable you are emotionally or mentally.”⁴

Dr. Ricardo Cassiani Ingoni

Neurologist / Researcher

BOTTOM-UP PATH: BODY, EMOTIONS, MIND

Example of Average Ratings Using TRE®

	PHQ-9 (symptoms of depression)	BAS (symptoms of anxiety)
Avg Pre	19.8	40.3
Avg Post	4.3	6.2

Average pre and post PHQ-9 and BAS ratings for those I worked with in an outpatient psychiatric clinic in 2021 prioritizing use of the TRE® technique. Clients were male and female, 18 years of age or older, all with a diagnosed Serious Mental Illness (SMI), and several with a coexisting Drug & Alcohol Diagnosis.

REFERENCES:

1. Amaral MA, Andrade EAR, Angnes GM, Sardeiro ER, Carvalho LBS, Fonseca VMAC, and Vasconcelos AA. Innovative Solutions for the Promotion of Adolescent Mental Health in Primary Care. *Revista Adolescência e Saúde* 2018; 15(1):66-72.
2. Behavioral Interpretations of Intrinsic Connectivity Networks. Massachusetts Institute of Technology (2011). *Journal of Cognitive Neuroscience* 23:12, pp.4022-4037.
3. Berceli D. [Neurogenic tremors: A body-oriented treatment for trauma in large populations]. *Trauma und Gewalt*. 2010 May; 4 (2):148-156. German.
4. Berceli, D. (2016, February). Central Pattern Generators and Body Tremors [Video file]. Retrieved from <http://www.youtube.com/watch?v=2ehf8-gnzzY>.
5. Chapter 4 from Porges SW & Dana D (2018). *Clinical Applications of the Polyvagal Theory: The Emergence of Polyvagal-Informed Therapies*. New York: WW Norton.
6. Christine L. Cox, Lucina Q. Uddin, Adriana Di Martino, F. Xavier Castellanos, Michael P. Milham, Clare Kelly, The balance between feeling and knowing: affective and cognitive empathy are reflected in the brain's intrinsic functional dynamics, *Social Cognitive and Affective Neuroscience*, Volume 7, Issue 6, August 2012, Pages 727–737.
7. Cortico-Striatal-Thalamic Loop Circuits of the Salience Network: A Central Pathway in Psychiatric Disease and Treatment. *Frontiers in Systems Neuroscience*, 27, December 2016.
8. Cramer, H., Anheyer, D., Saha, F. J., & Dobos, G. (2018). Yoga for posttraumatic stress disorder - a systematic review and meta-analysis. *BMC psychiatry*, 18(1), 72.
9. Cusack, K., Frueh, B., Brady, K. Trauma History Screening in a Community Mental Health Center. *Psychiatry Online*, 55, 2, (2004).
10. Davis M, Hustead M, Dietrich B, Berceli D, and Kent, M. Neuromuscular Tremors as Tension and Trauma Releasing (TRE): From Cultural Practices to Controlled Clinical Trial (RCT) of TRE (2-186; Abstract #1213). In: Poster Abstract Book, International Society for Traumatic Stress Studies, 34th Annual Meeting: Promoting Societal Change: Integrating Traumatic Stress Research, Practice and Policy for Vulnerable Populations, November 8-10, 2018. Washington Marriott Wardman Park, Washington, DC, USA.
11. Fengmei Lu, Qian Cui, Xinju Huang, Liyuan Li, Xujun Duan, Heng Chen, Yajing Pang, Zongling He, Wei Sheng, Shaoqiang Han, Yuyan Chen, Yang Yang, Wei Luo, Yue Yu, Xiaohan Jia, Qin Tang, Di Li, Ailing Xie, Huaifu Chen. Anomalous intrinsic connectivity within and between visual and auditory networks in major depressive disorder. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, Volume 100, 2020.
12. Floen, S.K., Elklit, A. Psychiatric diagnoses, trauma, and suicidality. *Ann Gen Psychiatry* 6, 12 (2007).
13. Heath R. and Beattie J. Case Report of a Former Soldier Using TRE (Tension/Trauma Releasing Exercises) For PostTraumatic Stress Disorder Self-Care. *Journal of Military and Veterans' Health*, 2019, Vol 27; No.3.
14. Lynning M, Svaneb C, Westergaard K, Bergien SO, Gunnensen SR, Skovgaard L. Tension and trauma releasing exercises for people with multiple sclerosis – An exploratory pilot study. *Journal of Traditional and Complementary Medicine*, Volume 11, Issue 5, 2021, Pages 383-389.
15. Mind-Body Skills for Regulating the Autonomic Nervous System. Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, March (2011).
16. Neurogenic Tremor Through TRE: Tension, Stress and Trauma Releasing Exercises according to D. Berceli in the Treatment of Post-Traumatic Stress Disorder (PTSD). 2015.
17. Porges, S. (1995). Orienting in a defensive world: Mammalian modifications of our evolutionary heritage: A Polyvagal Theory. *Psychophysiology*, 32 301-318.
18. Porges, S. (2001). The polyvagal theory: phylogenetic substrates of a social nervous system. *International Journal of Psychophysiology*, Volume 42, Issue 2, 2001, Pages 123-146.
19. Reduced intrinsic connectivity of amygdala in adults with major depressive disorder. *Frontiers in Psychiatry*, 19 February 2014.
20. Rothschild, B. & Jarlmae, E. (1994). Nervous system imbalances and post-traumatic stress: a psycho-physical approach Members: European Association of Body-Psychotherapy and European Society for Traumatic Stress Studies.
21. Salmon, M. Interim Research Report 2, May 2013. Pilot TRE Research program with Chrysalis Academy Students, Cape Town, South Africa. (Chrysalis is a school for at risk youngsters from disenfranchised communities who are interested in taking responsibility for transforming their lives).
22. Scaer, R.C. The Neurophysiology of Dissociation and Chronic Disease. *Applied Psychophysiology and Biofeedback* 26, 73–91 (2001).
23. Selye, H. A Syndrome produced by Diverse Nocuous Agents. *Nature* 138, 32 (1936).
24. Shifted intrinsic connectivity of central executive and salience network in borderline personality disorder. *Frontiers in Human Neuroscience*, 30 October 2013.
25. Stoica, T., & Depue, B. (2020). Shared Characteristics of Intrinsic Connectivity Networks Underlying Interoceptive Awareness and Empathy. *Frontiers in human neuroscience*, 14, 571070.
26. Substance Abuse and Mental Health Services Administration. SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.
27. The Limits of Talk, Bessel van der Kolk wants to transform the treatment of trauma. Wylie, M.S. (2015). *Psychotherapy Networker*.
28. Top-Down and Bottom-Up Mechanisms in Mind-Body Medicine: Development of an Integrative Framework for Psychophysiological Research. *Explore (NY)*. 2010;6(1):29-41. doi:10.1016/j.explore.2009.10.004
29. Touroutoglou, A., Lindquist, K. A., Dickerson, B. C., & Barrett, L. F. (2015). Intrinsic connectivity in the human brain does not reveal networks for 'basic' emotions. *Social cognitive and affective neuroscience*, 10(9), 1257–1265.
30. Van der Kolk, B. A. (2015). *The body keeps the score: brain, mind, and body in the health of trauma*. New York, New York: Penguin Books.
31. Van der Kolk BA, Stone L, West J, Rhodes A, Emerson D, Suvak M, Spinazzola J. *J. Clin. Psychiatry* 2014; 75(6): e559-e565.
32. Zhiqiang Sha, Tor D. Wager, Andrea Mechelli, Yong He. Common Dysfunction of Large-Scale Neurocognitive Networks Across Psychiatric Disorders. *Biological Psychiatry*, Volume 85, Issue 5, 2019, Pages 379-388.

SETTLING THE SCORE: A BODY BASED APPROACH TO TRAUMA RECOVERY

KEVIN BERCELI, LPC, NCC, CPH, CERTIFIED TRE® PROVIDER
COUNTERPOISE SOLUTIONS LLC



THIS PRESENTATION IS:

© 2015 [UPDATED 2022] COUNTERPOISE SOLUTIONS LLC

WWW.RESETSTRESS.COM