

Craig, Strickland, PhD

1. **Proposed Course Name:**

Neurobiology of Traumatic Exposure/PTSD

2. **Brief Course Description:**

Given the prevalence rates of traumatic exposure, it is important to study PTSD and to try and understand why some individuals will develop the disorders and others, also exposed to specific traumatic events, do not. Studying the symptomology of PTSD as it relates to possible neural mechanisms may provide insight toward answering these questions. In addition, neural changes, which may occur because of experiencing a traumatic event, may explain the variability of PTSD symptoms as well as the long-term nature of these symptoms.

3. **Learning Objectives:**

At the conclusion of this session participants will be able to:

- List the general categories of symptoms typically exhibited by people diagnosed with Post-Traumatic Stress Disorder (PTSD)
- Describe the role of the limbic system and associated structures in the production of memory dysfunction in persons who have been traumatized
- Summarize the mechanism by which the hypothalamus and pituitary gland participate in the “fight or flight” response in persons diagnosed with PTSD

4. **Content Level: Beginner-Advanced**

5. **Outline:**

Welcome and Overview	9:30-9:40 AM
Definition, Description and Differential Diagnosis of Post-Traumatic Stress Disorder (PTSD)	9:40-9:10:00 AM
Neuroanatomy of PTSD (CNS)	10:00-11:45 noon
Structural changes	
Hippocampus..... (Memory, emotion)	
Other Limbic structures..... (emotion)	
Cortical areas..... (Cognition, reward, social behavior)	
Hypothalamus (depression, anxiety)	
Pituitary Gland (depression, anxiety)	
Neurochemical changes	11:45-12:20
Catecholamines (Dopamine, Serotonin and Norepinephrine)	
Gamma-aminobutyric acid (GABA)	
Neurohormonal (ACTH, CRF, Cortisol)	
Wrap up/Q&A	12:20-12:30

6. References Section

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- Porges SW & Dana D (2018). Clinical Applications of the Polyvagal Theory: The Emergence of Polyvagal Informed Therapies. New York: WW Norton.
- Waxenbaum JA, Reddy V. and Varacallo M. (2021) Anatomy, Autonomic Nervous System. In: StatPearls [Internet]. Treasure Island (FL): Available from: <https://www.ncbi.nlm.nih.gov/books/NBK539845/>

7. Biography

Dr. Strickland graduated from Bryn Mawr College with a Doctorate in Psychology and a focus on experimental research and neuroscience. Past positions include a faculty position at the Medical College of Pennsylvania and affiliate faculty positions at Widener University and Springfield College. He currently has guest lecturer privileges at the Bryn Mawr Graduate School of Social Work and Social Research, the Rutgers School of Social Work and an affiliate professor position

at Thomas Jefferson University, East Fall Campus in the Community and Trauma Counseling program. Dr. Strickland is the owner of Biobehavioral Education and Consultation, LLC.