POSTTRAUMATIC STRESS DISORDER (PTSD): 
ETIOLOGY, DIAGNOSIS AND TREATMENT

PRESENTATION BY:
Andrea G.L. Elkon, Ph.D.
Georgia Licensed Clinical Psychologist
Director of Behavioral Health Services, Alliance Spine & Pain Centers
aelkon@spinepains.com
WHY LEARN ABOUT PTSD?

• Trauma is a common human experience

• Posttraumatic Stress Disorder (PTSD) has garnered increased media and political attention, particularly since September 11, 2001

• Important to recognize when a person’s reaction to trauma exceeds the typical and expected response
TRAINING OBJECTIVES

• Distinguish between normal reactions to trauma versus clinically significant reactions to trauma (i.e., PTSD)

• Understand the ways in which trauma affects the brain – endocrine, chemical, structural

• Recognize the typical emotional and behavioral manifestations of PTSD (i.e., symptoms)

• Learn about the most effective, evidence-based treatments for PTSD, both psychotherapy and psychopharmacology

• Know how to respond effectively to your patients suffering from possible PTSD
WHAT IS TRAUMA?

• Derived from the Greek word Τραυμα
  • A wound, hurt; a defeat
  • Psychic wound, unpleasant experience which causes abnormal stress

• Exposure to actual or threatened death, serious injury, or sexual violence
  • Direct exposure
  • Witnessing the traumatic event(s) happen to another/others
  • Learning about the violent and/or accidental incident of close family member or close friend
  • Repeated/extreme exposure to aversive details of traumatic events

(Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; DSM-5)
TRAUMA IS NOT “STRESS”

• Upsetting life events
  • Divorce
  • (Generally expected) loss of loved ones
  • Job termination

• Daily hassles
  • Work
  • Family
  • Chores
Reacting to danger is adaptive.

Fear! (a conditioned response)
WHEN WE FEEL AFRAID:

- HPA axis: hypothalamic release of corticotropin-releasing hormone (CRH). When CRH binds to CRH receptors on the anterior pituitary gland, adrenocorticotropic hormone (ACTH) is released. ACTH binds to receptors on the adrenal cortex and stimulates adrenal release of cortisol.
WHEN WE FEEL AFRAID:

• Cognitive (Thought) Reactions

ACTIONS

FIGHT  FLEE  FREEZE
THE FEAR RESPONSE:

• Protects us from immediate danger or harm

• Helps us avoid dangerous situations in the future
IT IS NORMAL TO REACT TO A TRAUMA

- Changes in mood (sadness, fear, irritability, guilt)
- Disrupted sleep, including nightmares
- Changes in concentration and attention
- Somatic symptoms
- Feeling hyper-alert or “on guard;” easily startled
- Lost of interest in enjoyable activities
- Mistrust
- Social withdrawal
- Avoidance of trauma reminders
POSTTRAUMATIC STRESS DISORDER (PTSD)

Failure of the normal fear response to “shut off;” resulting in neurochemical, neuroanatomical, emotional, cognitive, and behavioral disturbances.
PREVALENCE OF PTSD

• More common among women (10% lifetime) than men (5% lifetime)

• More common among certain professions
  • Public safety officers/first responders

• More common (3-4 times) among veterans than non-veterans
  • Combat exposure
  • Military sexual assault

(source: 2015 National Comorbidity Survey, NCS)
RISK FACTORS FOR DEVELOPING PTSD

Nature of the traumatic event

PTSD

Personal characteristics

Recovery environment
NATURE OF THE TRAUMATIC EVENT

• Lethality and/or Perceived Threat

• Proximity

• Duration (also, one incident vs. repeated)

• Intentionality/Controllability

• Expected versus Unexpected
PERSONAL CHARACTERISTICS

- Previous exposure to trauma
- Environmental instability
- Pre-existing mental illness (e.g., depression, anxiety)
- Poor social support
- Poor coping resources
- Genetics
RECOVERY ENVIRONMENT

• Social support

• Exposure to additional trauma

• Amount of life stress
PTSD AND THE BRAIN: NEUROENDOCRINE

- Dysregulation of the HPA axis
- Persistent flooding of CRH affects binding (and subsequent ACTH release;) possible overall suppression of cortisol
- Possible dysregulation of the HPT(hyroid) axis as well
PTSD AND THE BRAIN: NEUROCHEMICAL

- Catecholeamines (*norepinephrine* and *dopamine*)
  - Regulates arousal
  - Regulates autonomic stress responses
  - Interacts with CRH to increase fear conditioning and encoding of emotional memories

- Serotonin
  - Regulates sleep, appetite, sexual behavior, aggression, impulsivity, pain tolerance, motor function, neuroendocrine function

- Amino acids (GABA and glutamate)
  - Balances inhibitory and excitatory responses in the brain

- Peptides
PTSD AND THE BRAIN: NEUROBIOLOGICAL

• Reduced hippocampal volume—difficulty making new memories, recalling information accurately
• Hyper-responsive amygdala
• Failure of prefrontal cortex to control the Stress response, emotional reactivity, extinguish conditioned fear
EMOTIONAL AND BEHAVIORAL MANIFESTATIONS OF PTSD:

The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) details 4 categories of symptoms associated with PTSD:

- Traumatic Re-experiencing/Intrusion
- Avoidance
- Alterations in Mood and Cognition
- Hyperarousal
PTSD: TRAUMATIC RE-EXPERIENCING

• Recurrent nightmares with trauma-related content
• Intrusive memories
• Dissociative flashbacks
• Emotional and/or physiological reactivity to trauma reminders
PTSD: AVOIDANCE

• Avoidance of thoughts or feelings associated with trauma

• Avoidance of situational reminders of trauma
Inability to remember an important aspect of the traumatic event(s)
Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world
Blaming oneself for either the cause and/or consequences of the traumatic event(s)
Persistent negative emotional state
Markedly diminished interest/participation in activities
Emotional detachment or estrangement
Persistent inability to experience positive emotions
PTSD: HYPERAROUSAL

• Irritability, unprovoked angry/aggressive outbursts
• Reckless or self-destructive behavior
• Hypervigilance
• Exaggerated startle
• Concentration problems
• Sleep disturbances
DIAGNOSING PTSD

• Presence of a traumatic event or events
• 1+ intrusion/re-experiencing symptom
• 1+ avoidance symptom
• 2+ alterations in mood and cognition
• 2+ hyperarousal symptoms

• Duration of the symptoms is more than one month
• The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning
PTSD IN THE MOVIES

AMERICAN SNIPER
COURSE OF PTSD

- Recall, it is normal to have an emotional and behavioral response to trauma.
- About 50% of all individuals exposed to trauma recover within the first three months.
- Symptoms/functional impairment can wax and wane over time.
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TREATMENTS THAT WORK: PSYCHOPHARMAKOLOGY

- Selective Serotonin Reuptake Inhibitors (SSRI’s) are the premier pharmacological agent (paroxetine, fluoxetine)

- Seratonin-Norepinephrine Reuptake Inhibitors (SNRI’s) also demonstrate utility (venlafaxine)

- Off-label use of prazosin to treat nightmares has found mixed results (Kung et al., 2012)

- Benzodiazepines (e.g., alprazolam, lorazepam) are not effective
• Prolonged Exposure (PE) Therapy (E. Foa)
  • Focus on undoing the avoidance associated with PTSD, through in-vivo and
    imaginal exposure exercises

• Cognitive Processing Therapy (P. Resick)
  • Added layer of expressly addressing the *distorted beliefs* ("stuck points")
FOR FUTURE REFERENCE: BOOKS, CHAPTERS, & ARTICLES


• McClean, C.P.; Asnaani, A.; Foa, E.B. (2015) Prolonged Exposure Therapy. Evidence-Based Treatments for Psychological Disorders, 143-159


FOR FUTURE REFERENCE: WEB PAGES

• The National Center for PTSD [www.ptsd.va.gov](http://www.ptsd.va.gov)

• Cognitive Processing Therapy [wwwcptforptsd.com](http://www.cptforptsd.com)
QUESTIONS?   COMMENTS?

Thank you for your time!