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## PTSD and Military Trauma

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## PTSD

- An Anxiety Disorder
- 3-6% of adults in the United States
- Twice as common in women as in men
- Rates as high as 58% in heavy combat
- Torture/POW 50-75%
- Natural Disaster victims 4-16%
- Rape 75-90%

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## PTSD in the Military History

- U.S. Civil War  
Soldier's Heart (DaCosta, 1871)
- 20<sup>th</sup> Century  
World Wars: Shell Shock, Battle Fatigue  
Vietnam: PTSD  
OIF/OEF: PTSD + TBI

(Kar Ray, no date)

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# PTSD

“HART”

- Hyperarousal
- Avoidance
- Re-experiencing
- Trauma

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## DSM-IV diagnostic criteria for PTSD

### *Hyperarousal*

Persistent features of increased arousal  $\geq 2$ :

- Difficulty sleeping
- Irritability or outbursts of anger
- Difficulty concentrating
- Hypervigilance
- Exaggerated startle response

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## DSM-IV diagnostic criteria for PTSD

### *Avoidance/Numbing*

Avoidance of stimuli and numbing of general responsiveness indicated by  $\geq 3$  of following:

- Avoid thoughts, feelings, or conversations\*
- Avoid activities, places, or people\*
- Inability to recall part of trauma
- $\downarrow$  interest in activities
- Estrangement from others
- Restricted range of affect
- Sense of foreshortened future

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## DSM-IV diagnostic criteria for PTSD

### *Re-experiencing*

Persistent re-experiencing of  $\geq 1$  of the following:

- Recurrent distressing recollections of event
- Recurrent distressing dreams of event
- Acting or feeling event was recurring
- Psychological distress at cues resembling event
- Physiological reactivity to cues resembling event

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> ed. 1994

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## Physiology of PTSD

- Changes in brain regions:
  - Amygdala and hippocampus
    - Associated with fear and memory
    - PET Findings
- Changes in systems involved in coordinating body's response to stress:
  - Hypothalamic-Pituitary-Adrenal

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## PTSD Comorbidity

- Comorbidity is the **RULE**, not the exception
  - Mood Disorders
- Substance Abuse/Dependence
  - mTBI
  - 50% have >3 Axis I Diagnoses

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## Stats

- 1.6 million troops deployed to OEF/OIF to date
- Approximately 40% have accessed VA care
- Most common presenting problems:  
 Musculoskeletal Ailments  
 Mental Disorders (PTSD, SA/D, Depression)

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### Demographic Characteristics of OEF and OIF Veterans Utilizing VA Health Care

% OEF/OIF Veterans  
(n = 347,750)

<b>Gender</b>		
	Male	88 %
	Female	12
<b>Age Group</b>		
	<20	7
	20-29	51
	30-39	23
	≥40	18
<b>Branch</b>		
	Air Force	12
	Army	64
	Marine	13
	Navy	11
<b>Unit Type</b>		
	Active	52
	Reserve/Guard	48
<b>Rank</b>		
	Enlisted	92
	Officer	8

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### Frequency of Possible Mental Disorders Among OEF/OIF Veterans since 2002

Disease Category (ICD 290-319 code)	Total Number of GWOT Veterans
PTSD (ICD-9CM 309.81)	75,719
Depressive Disorders (311)	50,732
Anxiety NOS (300)	40,157
MDD/Bipolar (296)	28,734
Nondependent Abuse of Drugs (ICD 305)	21,201
Alcohol Dependence Syndrome (303)	12,780
Special Symptoms, Not Elsewhere Classified (307)	7,685
Sexual Deviations and Disorders (302)	7,076
Drug Dependence (304)	5,764
Specific Nonpsychotic Mental Disorder due to Organic Brain Damage (310)	4,654

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## RAND Study (2008)

- Multicenter VA study of OIF/OEF vets
- 18.5% met criteria for PTSD or MDD (300,000)
- 19% reported mTBI (320,000)
- Societal costs \$4-6 billion over 2years

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## PTSD and Mild Traumatic Brain Injury (TBI)

- Slightly more than half of combat injuries early in OIF came from explosions
- 29% evacuated from combat theater to WRAMC had evidence of TBI (Jan 2003-Feb 2007)
- Approximately 15% of all wounded vets have suffered TBI
- "Signature Illness"

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## TBI

- Physical damage by external blunt or penetrating trauma
- Acceleration-Deceleration Movement (whiplash) resulting in tearing or nerve fibers, bruising/contusion of brain
- Scraping of brain across bony base of skull leading to olfactory, oculomotor, acoustic nerve damage
  - Usually remit after several days or weeks (nerves recover or regenerate)

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## Levels of TBI

- Mild
  - LOC for less than 30 minutes w/normal CT and/or MRI
  - Altered mental state: "dazed," "confused," "seeing stars"
  - PTA less than 24 hours (unable to store or retrieve new information)
  - Glasgow Coma Scale (GCS): 13-15

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## Levels of TBI, con't.

- Moderate
  - LOC less than six hours w/abnormal CT and/or MRI
  - PTA less than seven days
  - GCS: 9-12
- Severe
  - LOC greater than six hours w/abnormal CT and/or MRI
  - PTA greater than seven days
  - GCS: 1-8

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## Post-Concussion Syndrome (PCS)

- Symptoms immediately post-injury may include:
  - Memory, attention, concentration deficits
  - Fatigues, poor sleep, dizziness, headaches
  - Irritability, depression
  - Anxiety
    - Most common: free-floating anxiety, fearfulness, intense worry, generalized uneasiness, social withdrawal, heightened sensitivity, related dreams
- Recovery (mild TBI) expected within 4-12 weeks; however, some symptoms may linger for months to years

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## Assessment

- Post concussion Syndrome (PCS)
  - Insomnia
  - Memory Deficits
  - Poor Concentration
  - Depressed Mood
  - Anxiety
  - Irritability
  - Headache
  - Dizziness
  - Fatigue
  - Noise/Light Intolerance
- PTSD
  - Insomnia
  - Memory Deficits
  - Poor Concentration
  - Depressed Mood
  - Anxiety
  - Irritability
  - Intrusive symptoms
  - Emotional Numbing
  - Hyperarousal
  - Avoidance behavior

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## Therapeutic Intervention

- Reluctant to seek help
- Psychoeducation
  - Normal response to trauma
  - Not character flaw or sign of weakness
    - Fear that will be seen as "damaged" or emotionally unstable
    - Military (Limited Duty / Disability)

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## Therapeutic Intervention

- Effective
  - Exposure Therapy
  - Cognitive-Behavioral Therapy / Cognitive Processing Therapy
  - EMDR
  - Group Therapy
  - Pharmacotherapy

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 **Medications**

<b>Effective</b>	<b>Used but Uncertain</b>
<ul style="list-style-type: none"><li>• SSRIs/SNRIs<ul style="list-style-type: none"><li>- Paxil, Zoloft FDA approved</li><li>- Growing support for Effexor</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Mood Stabilizers</li><li>• Antipsychotics</li><li>• Hypnotics</li><li>• Alpha adrenergic agents<ul style="list-style-type: none"><li>- Prazosin for nightmares</li></ul></li><li>• Beta Blockers</li> <li>• <b>AVOID</b> Benzos</li></ul>

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 **Prognosis**

- 'Rule of Thirds'
  - 1/3 remit
  - 1/3 relapsing/remitting
  - 1/3 chronic debilitating

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 **Q & A**

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