





Overview of Traumatic Brain Injury (TBI) In the Military

Center for Deployment Psychology
Uniformed Services University of the Health Sciences
Defense and Veterans Brain Injury Center






Disclaimer

The views expressed are those of the presenters and do not necessarily reflect the opinions of the Uniformed Services University of the Health Sciences, the Department of Defense, or the U.S. Government.







Acknowledgements

Wendy Law, Ph.D.
Beth Davis, Ph.D.
Debra Warden, MD
Louis M. French, Psy.D.
Aditya Bhagwat, Ph.D., ABPP-CN
Michael Wilmore, MPAS, PA-C
Rodney Vanderploeg, Ph.D.
Helen Coronel, MSN BC



Overview

- TBI definition(s) and Brain Basics
- TBI Prevalence
- Severe TBI Pathophysiology
- Combat TBI and Mechanism of Blast Injury
- mTBI/Concussion Assessment and Complications
- TBI Resources

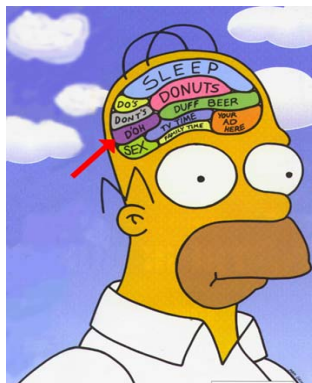


What is Traumatic Brain Injury (TBI)?

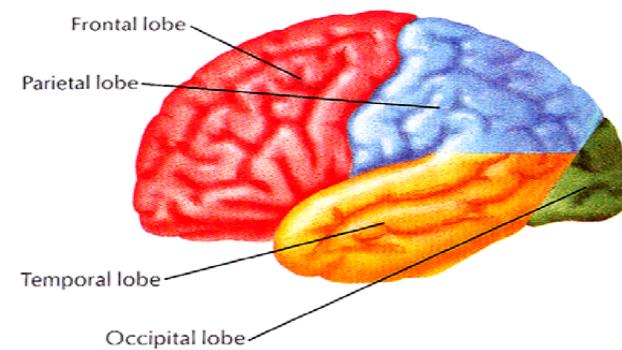
TBI in Brief...

A blow or jolt to the head (closed) or a penetrating (open) head injury that disrupts the function of the brain. Not all blows or jolts to the head result in TBI.

The Brain in Brief...



Brain Basics



Lobes of the Brain: Frontal, Temporal, Parietal, Occipital



Brain Basics

Density/Efficiency

- 1300-1400 grams (3lbs; 2% body wt)
- 100 Billion neurons
- 10-50x more glial cells
- 80% tissue, 10% CSF, 10% Blood
- Volume ratio (gray:white) = 1:1.3
- (250,000,000 fibers in Corp Callos)
- % Oxygen consumption
- gray : white = 94% : 6%



Cortex (Outer Gray Matter – Lobes)

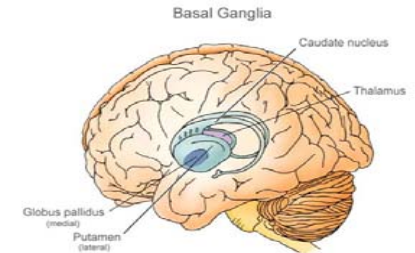
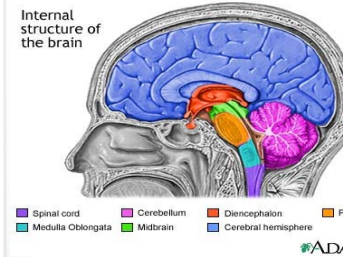
- Frontal (output- exec fxns)
- Temporal (input- audit percept fxns)
- Parietal (input- somatosens percept fxns)
- Occipital (input- visual percept fxns)



Brain Basics

Principal Subcortical Structures

Basal Ganglia
(Caudate, Putamen, Globus Pallidus)
modulate motor output



Diencephalon
(Thalamus, Hypothalamus)
modulation sensory output
autonomic



Brain Basics

Subcortical System:

- “Limbic Lobe”
- (Amygdala, Hippocampus, Cingulate Gyrus)
- Modulation emotion, olfaction
- White Matter
- Tracts (Intrahemispheric)
- Gyri/lobes - Heterogeneous
- Commissures (Interhemispheric)
- CC, Anterior – Homogeneous

Ventricular System:

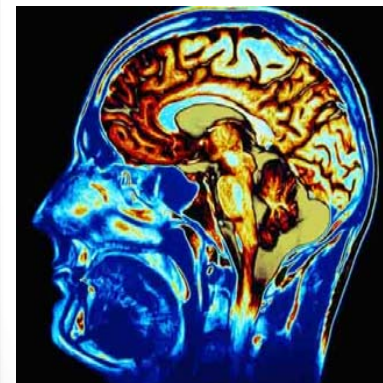
- Protective Support (CSF)
 - Lateral (I/II), Third, Fourth, Aqueducts

Vascular System: (Circle of Willis)

- Nutritional Support (Blood)
 - Carotids
 - Vertebrales → Basilar



Brain Basics



Hind Brain

- Cerebellum: Little Brain
 - Motor Coordination, Learning/Memory
- Brain Stem: Pons, Medulla
 - 12 cranial nerve nuclei, ARAS
- Spinal Cord
 - Reflex “Control”
 - Projection Fiber Pathways



TBI Case Definition: ACRM


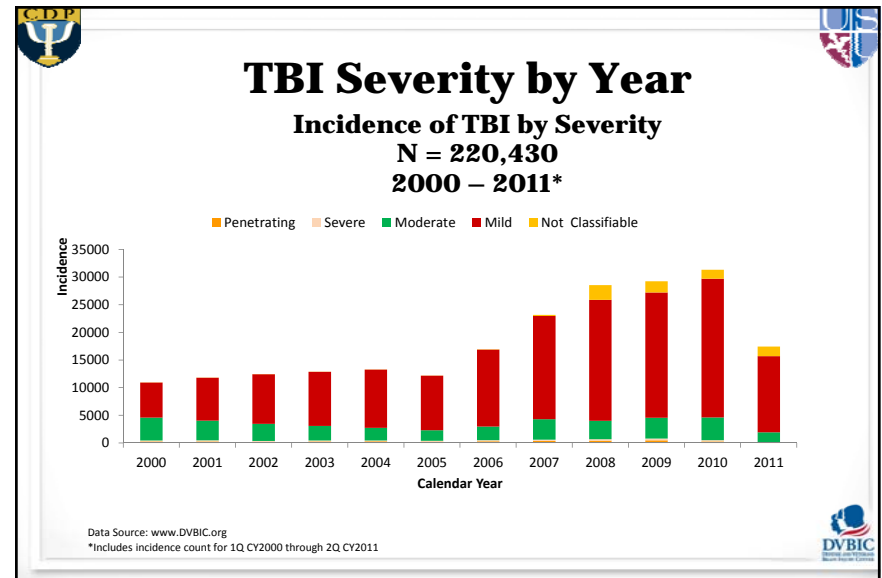
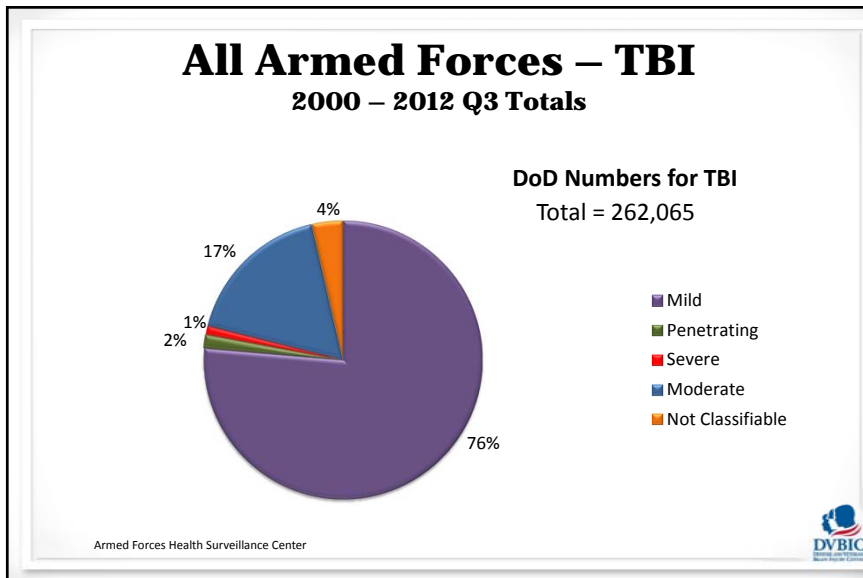
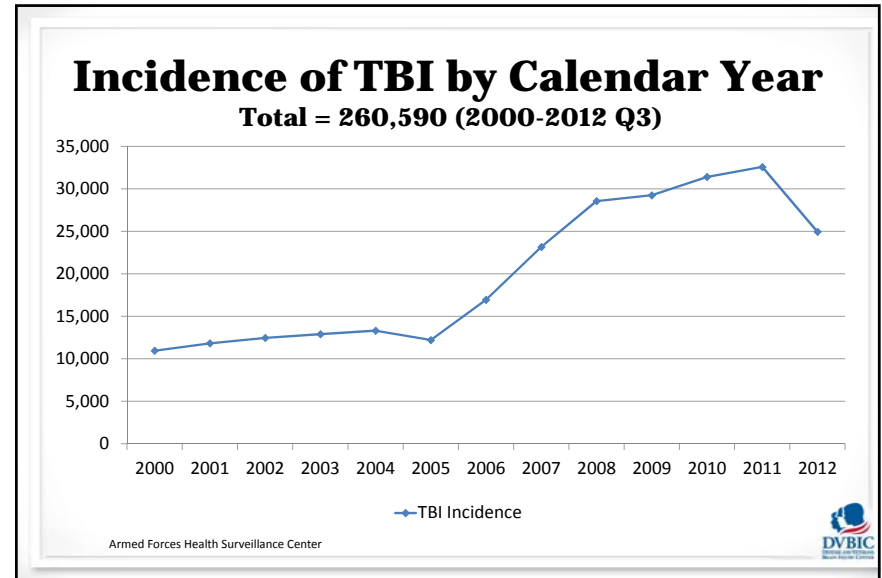
*ACRM (American Congress of Rehabilitation Medicine)

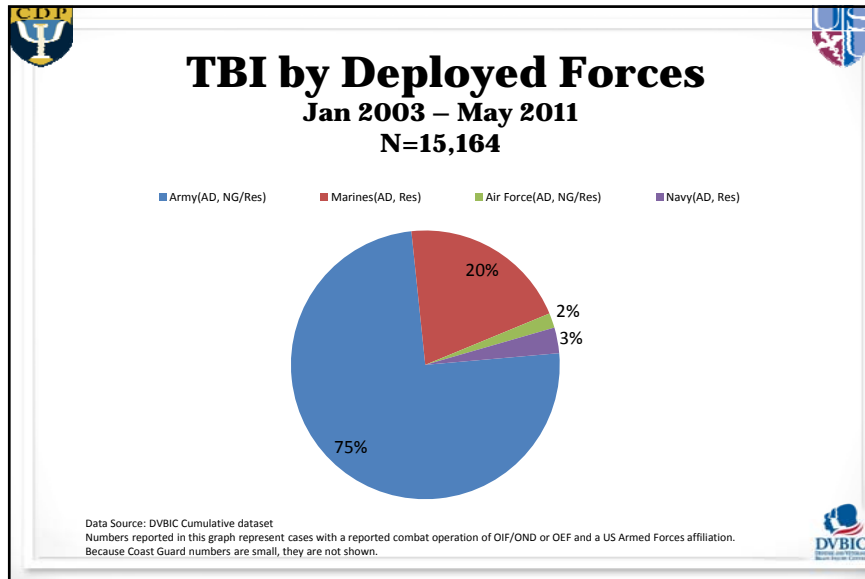
Any one of the following:

- any period of loss of consciousness;
- any loss of memory for events immediately before or after the accident;
- any alteration of mental state at the time of accident (e.g., feeling dazed, disoriented, or confused); or
- focal neurological deficit(s) that may or may not be transient

Note: TBI does not require LOC; is typically based on self-report; and acute symptoms at time of injury are important.

Kay et al (1993)



Severity Rating for TBI

| GCS | Glasgow Coma Scale | | Coma | |
|-------------------------|--------------------------------|-------------------------|------|---|
| | Motor Response | Verbal Response | | |
| Mild TBI = 13-15 | Obeys commands | 6 | 5 | |
| | Localizing responses to pain | 5 | | |
| | Generalized withdrawal to pain | 4 | | |
| | Flexor posturing to pain | 3 | | |
| | Extensor posturing to pain | 2 | | |
| Moderate TBI = 9-12 | No motor response to pain | 1 | 2 | |
| | Verbal Response | Oriented | | 5 |
| | | Confused conversation | | 4 |
| | | Inappropriate speech | | 3 |
| Incomprehensible speech | | 2 | | |
| Severe TBI = 3-8 | No speech | 1 | 1 | |
| | Eye Opening Response | Spontaneous eye opening | | 4 |
| | | Eye opening to speech | | 3 |
| | | Eye opening to pain | | 2 |
| | | No eye opening | | 1 |
| | | | ≤ 8 | |

Severity Rating for TBI

| Severity | GCS | AOC | LOC | PTA |
|----------|---------|----------|---------------------|---------------------|
| Mild | 13 - 15 | ≤ 24 hrs | 0 - 30 min | ≤ 24 hrs |
| Moderate | 9 - 12 | > 24 hrs | > 30min < 24 hrs | > 24hrs < 7 days |
| Severe | 3 - 8 | > 24hrs | ≥ 24 hrs | ≥ 7 days |

- Consider Imaging results when determining level of severity
- Positive Imaging = at least a moderate TBI rating
- GCS not as useful given complications of theater setting
- Use of AOC in DoD severity rating

GCS- Glasgow Coma Score
AOC- Alteration in consciousness
LOC -Loss of consciousness
PTA- Post-traumatic amnesia

Concussion (mTBI) Definition

Two conditions must be met to suspect / diagnose a TBI:

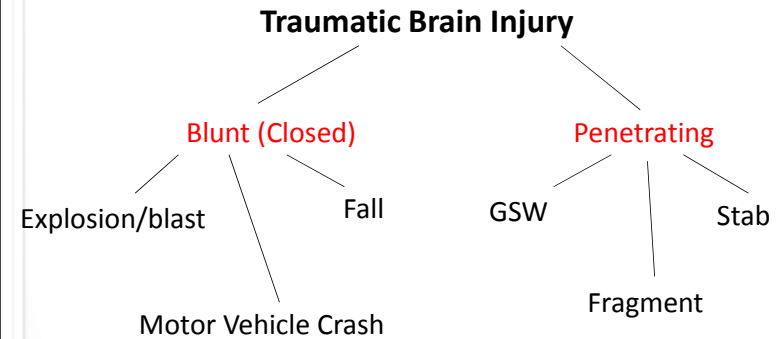
- A traumatic injury mechanism / event must occur (Blast, GSW above the neck, Fall, MVA, etc.)
- The person must have experienced a loss of consciousness or an *alteration of consciousness* (AOC)
 - More difficult to determine when injury occurs in combat setting
 - The patient interview is key to making the correct diagnosis
 - Reported AOC requires further investigation
 - Neurological disruption vs. psychological reaction

TBI “Red Flags”

- a. Altered consciousness
- b. Progressively declining neurological examination
- c. Pupillary asymmetry
- d. Seizures
- e. Repeated vomiting
- f. Double vision
- g. Worsening headache
- h. Cannot recognize people or is disoriented to place
- i. Behaves unusually or seems confused and irritable
- j. Slurred speech
- k. Unsteady on feet
- l. Weakness or numbness in arms / legs

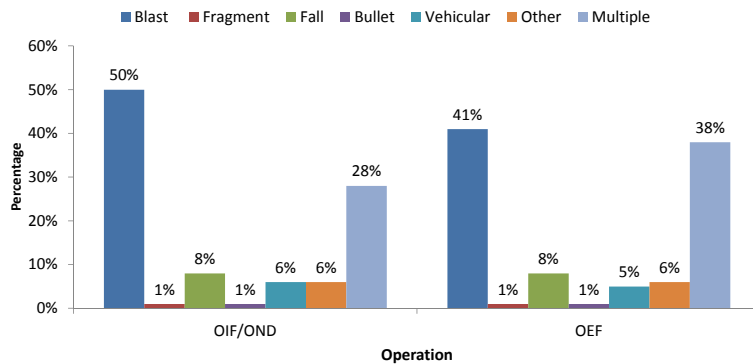


Mechanisms of Injury



Mechanism of Injury in Deployed Forces for OIF/OND and OEF

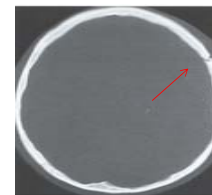
Jan 2003 – May 2011
N = 15,166



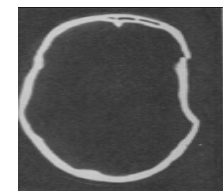
Data Source: DVBC Cumulative dataset
Numbers reported in this graph represent cases with a reported combat operation of OIF/OND or OEF and a US Armed Forces affiliation.



Skull Fractures



Linear




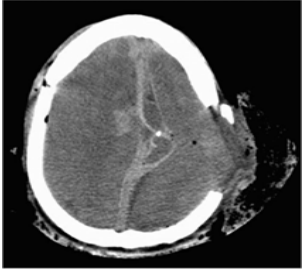
Depressed




Basilar





Penetrating Brain Injury

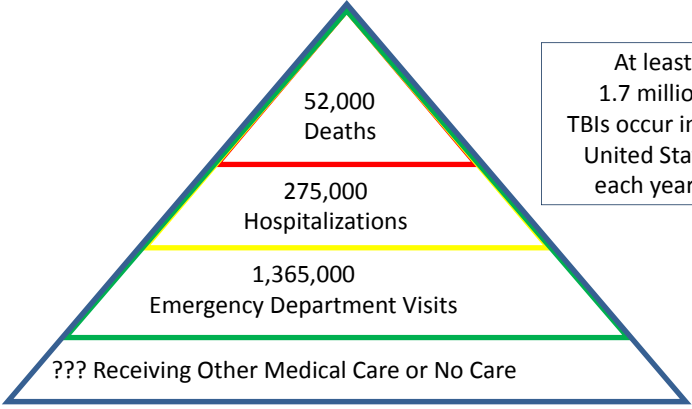
- GSWs, Stabbing, Fragment
- Typically easily identified at the scene
- Neurosurgical intervention



TBI Prevalence





TBI in the United States




At least
1.7 million
TBIs occur in the
United States
each year.*

*Source: CDC, Average annual numbers, 1995-2010



TBI: In Sum

- TBI can be penetrating or closed.
- Closed TBI may be missed when more visible injuries require immediate attention.
- Penetrating injuries are typically identified and cared for immediately.
- 75% of TBIs that occur each year are concussions or other forms of mild TBI.



Brain Contusion

A brain contusion is defined by cell death accompanied by hemorrhage (leakage of blood)

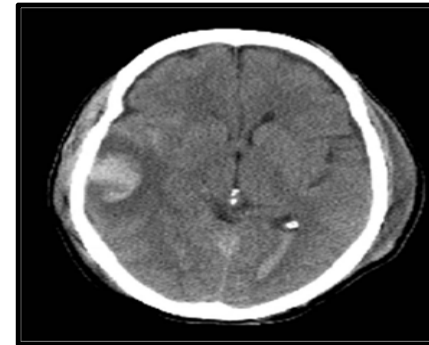
The soft brain tissue is vulnerable to contusion in head trauma

- Contusion = localized and macroscopic
- Concussion = wide-spread and microscopic

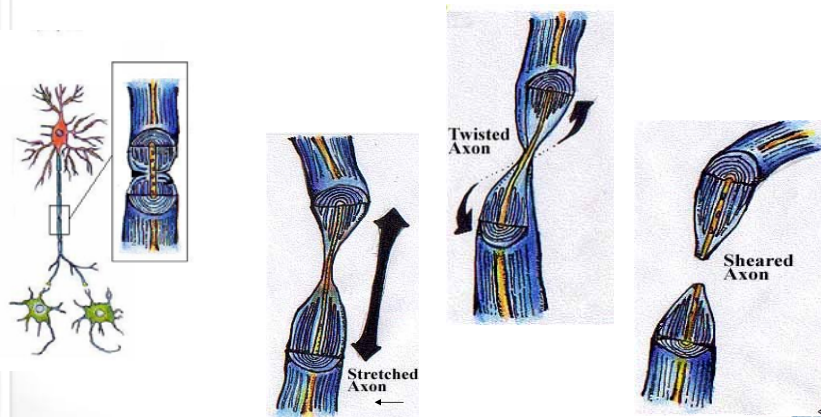


Gross brain image from http://neuropathology.neoucom.edu/chapter4/chapter4bContusions_dai_sbs.html#contusion

Closed Traumatic Brain Injury



Diffuse Axonal Injury (DAI)



Neuropathology of Closed TBI

Primary Injury

- Subdural Hematoma (SDH)
- Epidural Hematoma (EDH)
- Traumatic Subarachnoid Hemorrhage (SAH)
- Diffuse Axonal Injury (DAI)

Secondary Injury (Intracranial)

- Blood Flow and Metabolic Changes
- Cerebral Edema
- Hydrocephalus
- Increased Intracranial Pressure

Combat Related TBI



FOB Shank BAS, May 2011

Mechanism of Blast Injury

- Primary – Overpressure of “blast wave”
- Secondary – Flying Debris
- Tertiary – Body Displacement, Victim thrown into stationary objects
- Quaternary – Any injury or disease not due to other mechanisms (burns, toxic inhalation, crush injuries, radiation exposure)
- Blast event often occurs in conjunction with MVA


Mechanism of Blast Injury



Primary

- Enormous over-pressurization wave passes through skull, brain, and body.
- Axonal damage can occur as well as changes in cell metabolism, which can lead to increased cell death.


Blast Wave



A large conventional explosion. Beyond the fireball, the blast wave appears as a sharp line, which is caused by refraction of light by the higher-density gas at the shock front

DVBIC

Blast Wave



Courtesy of Keith Prusaczyk, Ph.D.

DVBIC

Primary Blast Injuries

Ear

- Organ affected most frequently
- Tympanic membrane (TM) rupture
- Sensorineural loss usually improves spontaneously
- 2007 NEJM TM rupture = @3x > risk of TBI w/ LOC

Auditory and Vestibular Injuries

- TM Rupture, Ossicular Disruption, Cochlear Damage
- Hearing Loss, Distorted hearing, Tinnitus, Earache
- Dizziness
- Sensitivity to noise

DVBIC

Primary Blast Injuries

Lung

- Pulmonary Contusion (bruising of lung tissue)
- Air emboli (air bubble – potentially lethal)
- Microscopically
 - Diffuse pulmonary hemorrhage (bleeding)
 - Alveolar wall destruction

Abdomen

- Air-filled Organs
- Caecum (see'-kum), small bowel most at risk
- Bruising of the gut wall

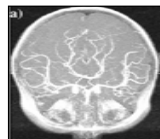
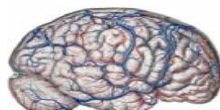
DVBIC



Shock Wave & Brain Injury

Potential Mechanisms

- **Biomechanical** – Coupled fluid-structures interaction during compression wave propagation in brain parenchyma, inertial shear/deformation of brain tissue, damage to axons, glia, and blood-brain barrier (BBB).
- **Hemodynamic** – Blood and pressure (CPP) distribution in brain, local hemorrhage, edema, hematoma, BBB integrity disruption, increased ICP
- **Neurobiologic** – DAI, rise of intracellular Ca^{++} , apoptosis
- **Metabolic** – inflammatory response, endogenous toxins production, hypoxia, ischemia
- **Electromagnetic** – disrupts neuroelectrical functioning



Courtesy of Keith Prusaczyk, Ph.D.



Secondary Blast Injury: Flying Debris

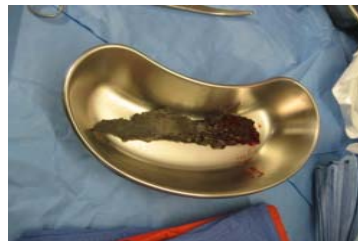
Objects propelled by blast wind

Small missiles accelerated to 50 ft/sec cause skin laceration

Speeds of 400 ft/sec associated with body cavity penetration



Secondary Blast Injury: Flying Debris



- Flying debris damages exposed body areas like the face and soft tissue

FOB Shank, April 2011



Secondary Blast Injury: Wounds from Flying Debris

Contaminated

Resistant Organisms

Infection Control Measures





Tertiary Blast Injuries: Body Displacement



- Displacement of Body by:
 - Overpressure
 - Shockwave
- Close to explosion
- Multiple Fractures
- Head Injuries
- Amputations



Quaternary Blast Injuries: Burns or Thermal Injuries



- Burns occur in individuals closest to the blasts



Quaternary or Miscellaneous Blast Injuries



- Collapsed structures causing crush injuries
- Displaced heavy objects
- Inhalation of smoke or toxic fumes
- Burns
- Exacerbations or complications of existing conditions (breathing problems, hypertension, blood loss)





Return to Duty



- A concussed patient should NOT return to unrestricted duty until asymptomatic
- If patient denies symptoms, complete exertion testing protocol including MACE
- If symptom(s) do not return upon exertion, patient may be deemed fit for full duty
- If symptom(s) return upon exertion, patient rests and is monitored for 24-48 hours and then retested






Concussion Brain Injury Clinical Course




Expected Outcomes

- Full recovery (vast majority)
 - Rapid recovery (days to weeks) with minimal intervention
 - Longer recovery (3 months – 12 months)
- Persisting symptoms (minority; years)
 - Post concussion syndrome


Concussion Assessment: Principle Goals

- **Identify** patients who have experienced risk for traumatic brain injury (TBI)
- **Minimize** impact of secondary effects
- **Improve** treatment outcome
- **Optimize** mTBI care
- **Reduce** disability

Concussion Screening

- Military Acute Concussion Evaluation (MACE)
- Screening Protocols In-Theater, Landstuhl, MTFs
- PDHA, PDHRA
- VA 4 Questions



MACE
Military Acute Concussion Evaluation

Patient Name: _____ Unit: _____
 Service Member ID#: _____ Line: _____
 Date of Injury: _____ Time of Injury: _____
 Examiner: _____
 Date of Evaluation: _____ Time of Evaluation: _____

CONCUSSION SCREENING
 Complete this section to determine if there was both an injury event AND an alteration of consciousness.

1. Description of Incident
 A. Record the event as described by the service member or witness. Use open-ended questions to get as much detail as possible.




Key questions:
 - Can you tell me what you remember?
 - What happened?

B. Record the type of event. Check all that apply.

Explosive Blast Fragment Motor Vehicle Crash
 Blast Object Sports Injury Gunshot/Wound
 Fall Other _____


C. Was there a head injury event? Key questions:
 YES NO
 - Did your head hit any object?
 - Did you objects strike your head?
 - Did you hear a blast noise?
 - Did you feel that is not sitting the background is consistent with the noise?



Revised 02/2012 www.dvbc.org Page 1 of 3

Military Acute Concussion Evaluation




- The MACE was developed by a team of DVBC personnel, DoD and civilian TBI experts (first distributed for clinical use by military personnel)
- SAC (Standardized Assessment of Concussion) embedded as cognitive evaluation
- The instrument is currently the only standardized and most widely used method for evaluation of acute mTBI/concussion in military operational settings








Mandatory Events Requiring Evaluation

- Any service member in a vehicle associated with a blast event, collision or rollover
- Those exposed to a blast within a specified radius
- Anyone who sustains a direct blow to the head
- Command directed



Concussed Service Members




- Consultation with Provider if Symptomatic
- Mandatory Recovery Period
- Return to Duty Decision by Provider



Concussion Assessment: Domains

History:


- **Concussion Incident** – blast, fall, MVA, impact
- **Mechanisms** – blast (primary, secondary, tertiary), fall (coup/contrecoup), MVA (contact, acceleration/deceleration, rotational)
- **Acute injury characteristics** – LOC/AOC, confused/disoriented, RA/PTA, hearing/sight, nasal/auricular bleeding, polytrauma/blood loss, HA, dizziness
- **Symptom course** – immediate with gradual improvement over 24 hours, minor symptoms with progressive worsening



Concussion Assessment: Domains

Symptoms: Systematic inventory

- **Interview (acute/subacute; in-theatre)**
- **Tools (subacute/chronic – MTF/non-theatre)**
 - Neurobehavioral Symptom Inventory (NSI: 22 items)
 - PTSD Check List – Military Version (PCL-M: 17 items)
 - Patient History Questionnaire-9 (PHQ-9: 9+1 items)
 - Drug Abuse Screening Test-20 (DAST-20: 20 items)
 - Dizziness Handicap Inventory (DHI: 25 items)
 - Epworth Sleepiness Scale (ESS: 8 items)





Concussion Complications



Second impact syndrome (repeated mild concussion before full recovery) - > possible [rare] fatality (synergistic effects)

Multiple concussions (>2) over time – more morbidity/slower recovery (Guskiewicz et al., JAMA 2003; Collins, et al, Neurosurgery 2002)

“Invisible Injury”

- Can adversely impact interpersonal relationships
- Symptoms can be missed due to more apparent physical injuries
- Co-morbid emotional distress



Potential Consequences of Screening Errors



False Positive Errors: Diagnosing a concussion when none has occurred

- Diagnosing based solely on symptom report or cognitive testing
- Misattribution of symptoms to concussion
- Incorrect focus of treatment leading to longer lasting symptomology
- Mistaking surprise/shock for AOC; Not considering blood loss



Potential Consequences of Screening Errors (False Negative)



- Alienating the patient by incorrectly explaining away symptoms
- Incorrect focus of treatment leading to longer lasting symptomology
- Lack of overt symptoms taken as lack of injury

- Not performing brain imaging on concussion patients and missing greater pathology



How To Prevent Misdiagnosis and Missed Diagnoses






- Do not rely solely on screening checklists
- Perform a thorough records review to obtain injury characteristics
- Contact patients' unit for event details
- Interview other injured unit members
- Talk with the family (personality/intellect)
- Ask about a previous history of concussion
- Do not over/under diagnose based on symptomology






Once Identified as Positive for Concussion

- Evaluate and treat symptoms
- Assess for non-TBI factors contributing to presentation
- Assess cognitive complaints through formal testing, if appropriate
- Educate about recovery appropriately depending on severity of injury and time since injury







What are common complications following a concussion?



Changes after a Brain Injury




The most important things to remember:

- No two brain injuries are exactly the same
- The effects of a brain injury depend on such factors as cause, location and severity
- Adjustment dependent on “before-after” changes in the person
- Emotional and physical recovery are two different things



Changes after a Brain Injury

- It is common to see changes in cognitive abilities, emotional, social, or behavioral functioning which (again) is dependent on severity of the injury among other things.
- TBI can also be associated with PTSD symptoms, sleep problems, and pain.



Thinking Changes in "Executive Functioning"

Difficulty planning/ setting goals

Problems being organized

Difficulty being flexible

Difficulty problem solving

Difficulty prioritizing

Decreased awareness of thinking changes in self

DVBC

Thinking Changes

Attention

- Reduced visual attention
- Reduced concentration
- Inability to divide attention between competing tasks

Processing Speed

- Slow thinking
- Slow reading
- Slow verbal and written responses

DVBC

Thinking Changes

Communication

- Difficulty finding the right words, naming objects
- Disorganized in communication

Learning and Memory

- Information before TBI intact
- Reduced ability to remember new information
- Problems with learning new skills

DVBC

Emotional, Behavioral, and Social Changes

Depression

Rebellious

Difficulty with self initiation

Impatience

Inability to get along with others

Increased risk taking

Anxiety

Rapid loss of emotional control (short fuse)

Self-monitoring

Increased impulsivity

Irritability/ agitation

Socially inappropriate behavior

Intolerant




Before-after contrasts

Increased self focus




DVBC

Long Term Challenges Post-TBI

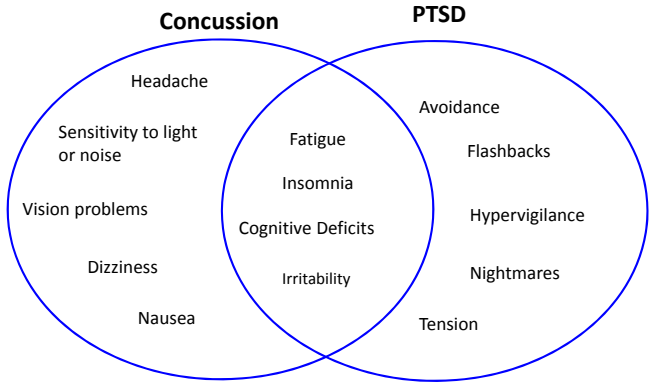
- Vocational and/or school failure
- Family life/social relationships collapse
- Increased financial burden on families and social service systems
- Alcohol and drug abuse
- Chronic depression/anxiety




There is an overlap of post-concussion and psychiatric symptoms, particularly in service-members injured during combat.

Concussion and PTSD Overlap






The diagram consists of two overlapping circles. The left circle is labeled 'Concussion' and contains the following symptoms: Headache, Sensitivity to light or noise, Vision problems, Dizziness, and Nausea. The right circle is labeled 'PTSD' and contains: Avoidance, Flashbacks, Hypervigilance, Nightmares, and Tension. The overlapping area in the center contains: Fatigue, Insomnia, Cognitive Deficits, and Irritability.

Factors Affecting Outcome After Concussion or PTSD


- Physical Injury In Theater
 - Increases risk for PTSD
 - May mask sx's (TBI or PTSD) due to urgent care physical treatment needs
- Pre-Injury and Demographic Variables (education, gender, psychiatric history)
- Family/Social/Unit/Command Support
- Compensation/Secondary Gain
- Additional Behavioral Health Conditions (depression, ETOH)
- Course of Medical Care

Chronic Pain

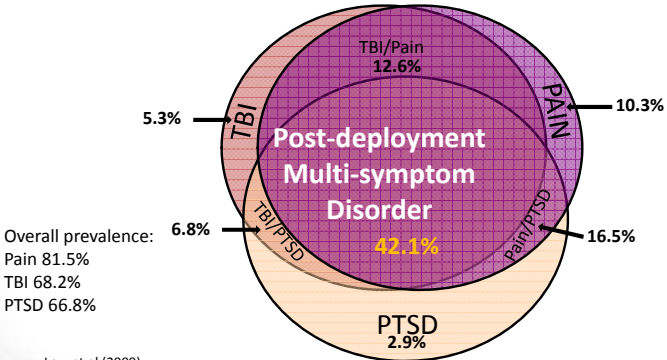
- Headache remains the most common symptom following mild head trauma.
- Headaches are estimated as occurring in 30-90% of patients who suffered mild head injury.
- Many clinical studies report post-traumatic headaches occurring less frequently after severe TBI.






Post-Deployment Disorders

Sample = 340 OEF/OIF outpatients at Boston VA



Overall prevalence:
 Pain 81.5%
 TBI 68.2%
 PTSD 66.8%



Postconcussion Syndrome (PCS)

DSM-IV


A: Head trauma → “significant cerebral concussion”*

B: Objective decline (testing) in either attn/concentration or learning/memory

C: Subjective complaints (at least 3) lasting at least three months after injury

1. easily fatigued
2. disordered sleep
3. Headache
4. Vertigo/dizziness
5. Irritability/underprovoked aggression
6. Anxiety, depression, affective lability
7. Personality change (social/sexual inappropriateness)
8. Apathy/lack of spontaneity

* LOC, PTA, and rarely posttraumatic sz onset



PCS Symptom Prevalence: The Fog of Everyday Life

(McCrae et al, 2008)

| | Headaches | Dizziness | Irritable | Memory Problems | Concentr. Problems |
|------------------------|-----------|-----------|-----------|-----------------|--------------------|
| College Students | 36% | 18% | 36% | 17% | 42% |
| Chronic Pain | 80% | 67% | 49% | 33% | 63% |
| Depressed | 37% | 20% | 52% | 25% | 54% |
| PI claimants (non-TBI) | 77% | 41% | 63% | 46% | 71% |
| mTBI | 42% | 26% | 28% | 36% | 25% |





The Fog of War...

Predictive non-injury variables of PCS are:

- Blaming of other(s) for injury
- Limited social support
- Current levels depression/anxiety
- Pre-morbid psychiatric Hx
- PTSD Sx presence
- Somatization
- Motivational factors (exaggeration, litigation, malingering)




Based on a talk by MAJ Wijnans

- Physical/emotional fatigue
- Sleep deprivation/restriction
- Deployment/life stress
- Chronic pain
- Narcotic use

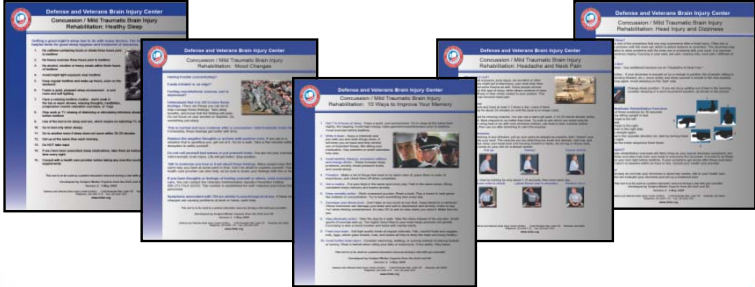
Concussion Education

- Patients, Families, Providers, Military Command, Employers
- Early intervention with TBI education and positive expectations have a direct effect on recovery
- Reduces patient and family anxiety








Resources

- **Concussion Symptom Management Patient Handouts**
 - Improving Memory
 - Healthy Sleep
 - Mood Changes
 - Headache Management
 - Head Injury and Dizziness



info@DVBC.org

Products & Tools Available From DVBC

- mTBI Pocket Guide
- Clinician Resources & Tools Binder
- DoD ICD-9 Coding Guidance





info@DVBC.org

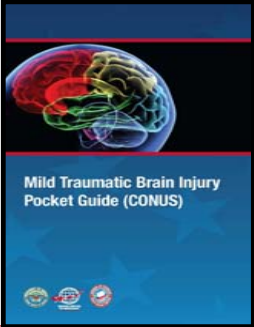




Mild TBI Pocket Guide

Contents Include


- Summary of VA/DoD Clinical Practice Guideline (2009) and DoD mTBI Updated Clinical Guidance (2008)
- Assessment, referral and treatment for common symptoms associated with mTBI
- ICD-9 coding guidance
- Summary of cognitive rehabilitation clinical recommendations
- Clinical recommendations on driving after mTBI
- Patient education materials
- Clinical tools and resources




Mild Traumatic Brain Injury Pocket Guide (CONUS)

To request copies, please contact info@dvbic.org or call 1-800-870-9244

Purpose: Quick-reference, all-encompassing resource on the treatment and management of patients with mTBI and related symptoms




New Co-Occurring Conditions Toolkit




- Assessing and managing patients with co-occurring TBI and PH disorders
- Clinical guidance from VA/DoD CPGs:
 - Concussion
 - PTSD
 - Depression
 - Chronic Pain
 - Substance Use Disorder
- Additional input from SME Panel
- Tips for an effective first appointment
- Clinical assessment and treatment of symptoms (sleep, mood, attention, & chronic pain)
- Patient education tips
- Additional provider resources


Toolkit developed collaboratively by DCoE and Component Centers




Web Based TBI Education & Resources




www.dvbic.org




www.dcoe.health.mil



www.traumaticbraininjuryatoz.org



www.brainline.org




TBI Clinical Practice Guidelines


Acute/Subacute

- Evaluation & Management of Concussion in Deployed Setting (DVBIC, 2008)
- Evaluation & Management of Concussion in CONUS (DVBIC, 2008)

Chronic

- VA/DoD Evidence Based Guideline for Management of Concussion / mTBI (DVA/DoD, 2009)







Rapid TBI Consultation

Providers, SMs & Families

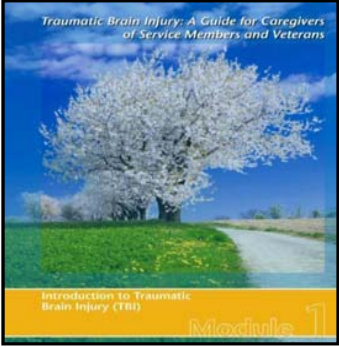
- **DVBIC**
 - Info@DVbic.org
 - 1-800-870-9244
- **DCoE 24/7 Outreach Center**
 - 1-866-966-1020
 - resources@dcoeoutreach.org
 - Live Chat
- **Military One Source**
 - 1-800-342-9647
 - wwrc@militaryonesource.com

Providers Only


- **TBI.consult**
 - For Deployed Providers
 - Feedback Within 12 Hours
 - 38 TBI Specialists
 - 14 Clinical Disciplines
- **ANAM Baselines**
 - anam.baselines@amedd.army.mil

Traumatic Brain Injury: A Guide for Caregivers of Service Members and Veterans




<http://www.dvbic.org/Families---Friends/Family-Caregiver-Curriculum.aspx>
<http://www.traumaticbraininjuryatoz.org/Caregivers-Journey/Caregiver-Guides.aspx>




CDP Website: Deploymentpsych.org

Features include:

- Descriptions and schedules of upcoming training events
- Blog updated daily with a range of relevant content
- Articles by subject matter experts related to deployment psychology, including PTSD, mTBI, depression, and insomnia
- Other resources and information for behavioral health providers
- Links to CDP's Facebook page and Twitter feed






Online Learning

The following online courses are located on the CDP's website at:
Deploymentpsych.org/training/online-courses

NOTE: All of these courses can be take for free or for CE Credits for a fee

- Cognitive Processing Therapy (CPT) for PTSD in Veterans and Military Personnel (1.25 CE Credits)
- Prolonged Exposure Therapy for PTSD in Veterans and Military Personnel (1.25 CE Credits)
- Epidemiology of PTSD in Veterans: Working with Service Members and Veterans with PTSD (1.5 CE Credits)
- Provider Resiliency and Self-Care: An Ethical Issue (1 CE Credit)
- Military Cultural Competence (1.25 CE Credits)
- The Impact of Deployment and Combat Stress on Families and Children, Part 1 (2.25 CE Credits)
- The Impact of Deployment and Combat Stress on Families and Children, Part 2 (1.75 CE Credits)
- The Fundamentals of Traumatic Brain Injury (TBI) (1.5 CE Credits)
- Identification, Prevention, & Treatment of Suicidal Behavior in Service Members & Veterans (2.25 CE Credits)
- Depression in Service Members and Veterans (1.25 CE Credits)

All of these courses and several others are contained in the Serving Our Veterans Behavioral Health Certificate program, which also includes 20+ hours of Continuing Education Credits for \$350.



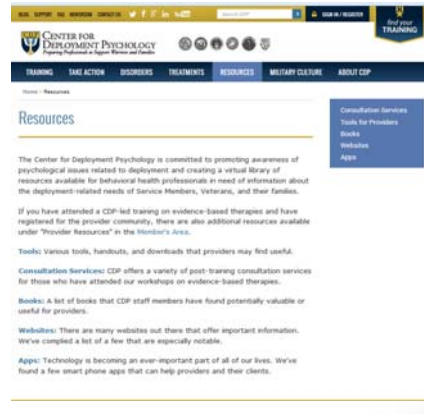
Provider Support

CDP's "Provider Portal" is exclusively for individuals trained by the CDP in evidence-based psychotherapies (e.g. CPT, PE, and CBT-I)

Features cover topics including:

- Consultation message boards
- Hosted consultation calls
- Printable fact-sheets, manuals, handouts, and other materials
- FAQs and on-on-one interaction with answers from SMEs
- Videos, webinars, and other multimedia training aids

Participants in CDP's evidence-based training will automatically receive an email instructing them how to activate their user name and access the "Provider Portal" section at Deploymentpsych.org.



How to Contact Us

Center for Deployment Psychology
Department of Medical & Clinical Psychology
Uniformed Services University of the Health Sciences
4301 Jones Bridge Road, Executive Office: Bldg. 11300-602
Bethesda, MD 20813-4768

Email: General@DeploymentPsych.org

Website: DeploymentPsych.org

Facebook: <http://www.facebook.com/DeploymentPsych>

Twitter: @DeploymentPsych

