

THE INTERSECTION OF BRAIN INJURY AND DOMESTIC VIOLENCE

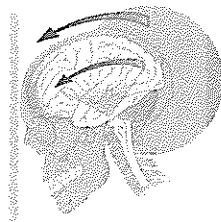
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BRAIN INJURY 101

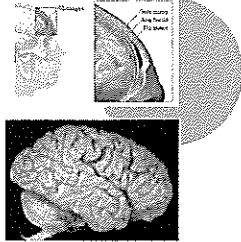
What is a brain injury? www.biausa.org

- ▶ **Traumatic Brain Injury (TBI)**
 - ▶ *caused by a blow to the head or neck*
- ▶ **Acquired Brain Injury**
 - ▶ *an injury to the brain caused by a medical condition*

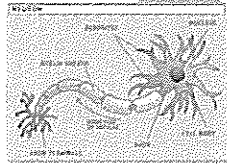
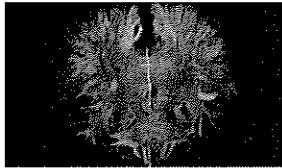


Basic neuroanatomy

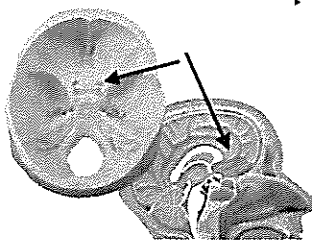
- ▶ Soft tissue surrounded by:
 - ▶ 3 layers of protective membrane
 - ▶ Cerebrospinal fluid
 - ▶ The skull



Neurons & Axons the information highway

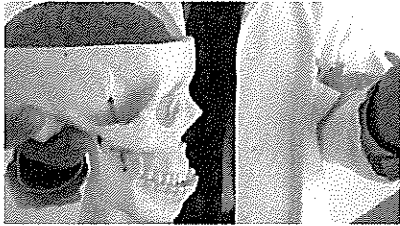


The Skull



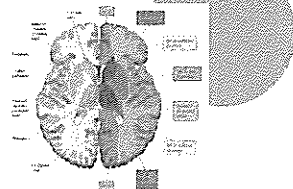
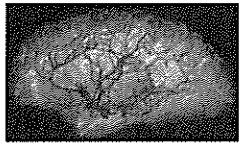
- ▶ A protective covering
- ▶ Bony protuberances in the bottom of the skull can scrape the brain
 - ▶ Problem solving
 - ▶ Spontaneity
 - ▶ Memory
 - ▶ Language
 - ▶ Motivation
 - ▶ Judgment
 - ▶ Impulse control
 - ▶ Social and sexual behavior

What This Might Look Like



Oxygen deprivation

The brain's blood supply Hypoxic/Anoxic injury



Current (but challenged) grading of TBI

Mild

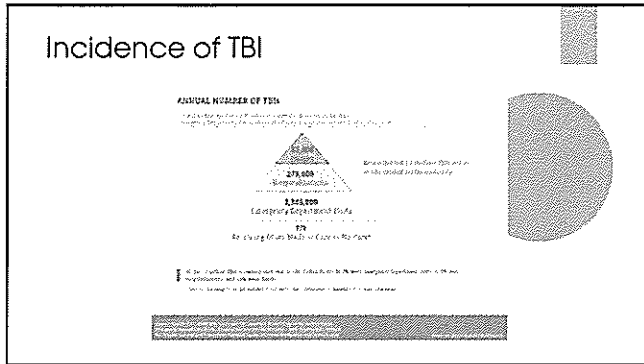
- LOC < 30 minutes
- GCS 13-15
- PTA < 1 day
- Temporary altered mental state
- Post concussion symptoms

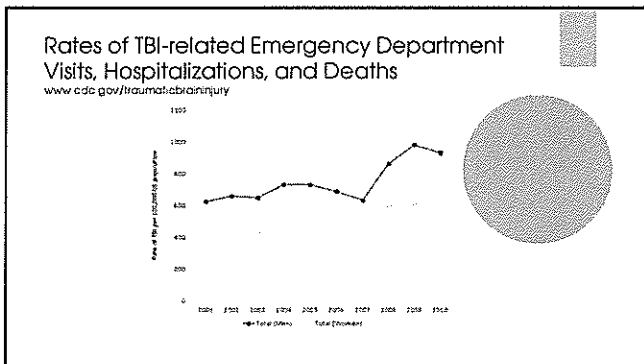
Moderate

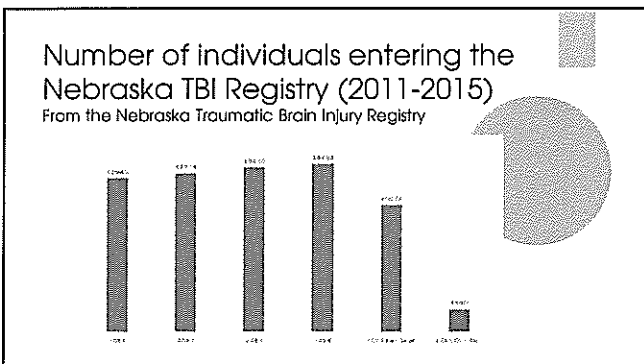
- LOC > 30 minutes to < 24 hours
- GCS 9-12
- PTA 1-7 days
- Bruising/bleeding
- Signs on EEG, CT, MRI
- Some LT problems in one or more areas of life

Severe

- LOC 24+ hours
- GCS < 9
- PTA > 7 days
- Bruising/bleeding
- Signs on EEG, CT, MRI, LT
- Impairments in one or more areas of life







Mild TBI

- Symptom onset varies
- Injury can be difficult to identify

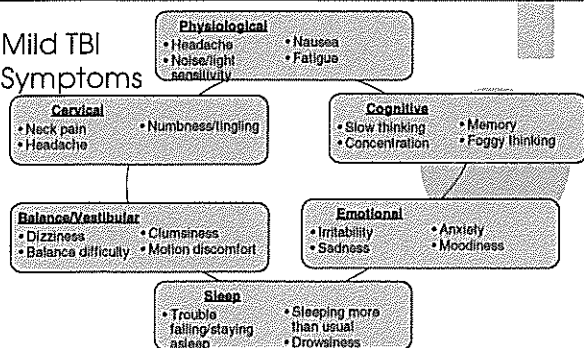


Moderate to Severe Brain injury

- Account for about 20 % of all brain injuries
 - 80% mild
 - 10% moderate
 - 10% severe
- Often has more severe effects in frontal and temporal lobes of brain
- Reactive processes to injury can further the damage

Schoenberg, M & Scott, J (Eds)
The Limbic Edge of Neuropsychology

Mild TBI Symptoms



Additional Symptoms of Moderate/Severe TBI

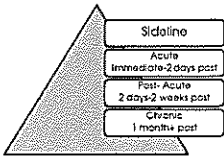
- Balance problems/dizziness
- Cranial nerve impairment
- Motor impairment/movement disorders
- Depression and anxiety disorder
- Fatigue/sleep disturbance
- Headache
- Lack of awareness
- Personality changes, apathy, decreased motivation
- Vision impairments
- Frontal lobe dysfunction

Schönberg, M. & Scott, J. (Eds.)
The Little Black Book of Neuropsychology

TBI Recovery Course

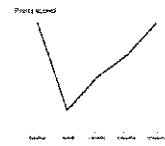
Mild

- 80-90% recover in 1-4 weeks

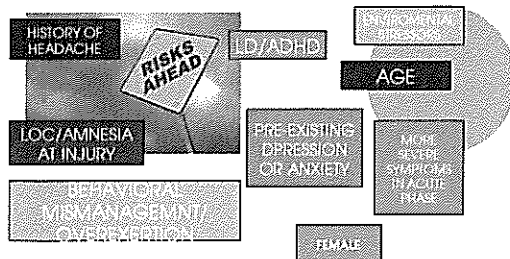


Moderate/ Severe

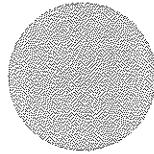
- Recovery trajectory varies
- Reactive processes matter



Risk factors for protracted recovery



POINTS OF INTERSECTION



TRAUMATIC
DOMESTIC VIOLENCE
BRAIN INJURY



Nebraska Numbers from 2016 screening project

► 93 HELP brain
injury screenings
completed

► **60% positive for
possible TBI**

► 90% had been hit in the head or
strangled

► 1-3x- 40.5%

► 4-6x- 16.7%

► 6+x- 42.9%

► 45% had been received medical
care

► 66% had lost consciousness or
experienced disorientation

► 81% experience problems because
of a hit to the head or strangulation



Nebraska Numbers from 2016 screening project

Symptoms endorsed on screening

"Since the injury, have you experienced or are you experiencing..."

- ▶ 90%- Anxiety/depression
- ▶ 86%- Headaches
- ▶ 71%- Difficulty concentrating or focusing
- ▶ 70%- Difficulty sleeping or changes in sleeping patterns
- ▶ 61%- Dizziness
- ▶ 58%- Feeling irritable or impatient
- ▶ 57%- Difficulty remembering
- ▶ 52%- Challenges at school/work or performing tasks

National Numbers

- ▶ 1 in 4 women will experience severe physical violence by a partner in their lifetime

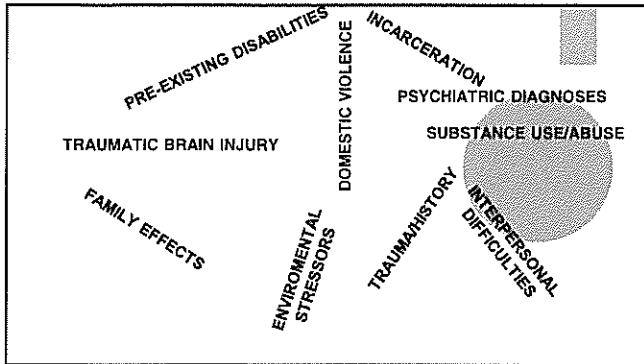
In contrast,

- ▶ In collegiate athletes, women's ice hockey results in highest rate of concussions- about 8 per 10,000 athlete exposures
 - ▶ 1 practice/day, then someone will experience a concussion every 400 days
 - ▶ 2 practices/day= 1 concussion every 200 days
 - ▶ 3 practices/day= 1 concussion every 130 days

National Numbers

- Women who were assaulted by an adult caretaker are 2x as likely to be assaulted as a adult
- DV costs exceeded \$8.3 billion
 - The increased annual health care costs for victims of IPV can persist as much as 15 years after the cessation of abuse
- Victims of severe DV lose nearly 8 million days of paid work


(CDC 2010)



Pre-existing disability (Petersilla, 2001)


- ▶ 10.7x more likely to be sexually assaulted
- ▶ 2.8x more likely to be non-sexually assaulted
- ▶ Children w/ disabilities experience higher levels of abuse

Trauma/PTSD



TBI

- Memory problems
- Difficulty concentrating
- Poor judgment
- Trouble sleeping
- Headache
- Dizziness
- Irritability/trouble sleeping
- Depression
- Anxiety/panic
- Low self-esteem



PTSD

- Memory problems
- Difficulty concentrating
- Feeling detached
- Trouble sleeping
- Startle response
- Substance use/abuse
- Depression/panic
- Low self-esteem
- Depression

Family effects

- ▶ Women who were assaulted by an adult caretaker are twice as likely to be assaulted as a adult (CDC, 2010)
- ▶ 64% of violence against women is committed by a husband, boyfriend, partner, ex, or date
- ▶ Up to 23% of women experience DV during pregnancy (Petersilla, 2001)
 - ▶ increases risk of miscarriage, premature labor, low birth weight, prenatal substance use (CDC, 2010)

Incarceration (Ray et al., 2014)

- ▶ TBI was a better predictor of prior incarceration than age, race, education, or psychiatric disorder
- ▶ 60-64% of inmates report TBI
 - ▶ 8-11% in general population)

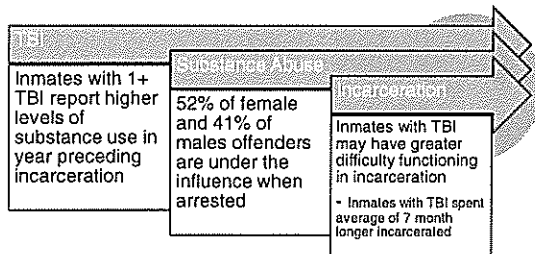
Mental Health and TBI (Ray et al., 2014; Wiaams et al., 2010)

- | | |
|--|--|
| <ul style="list-style-type: none"> ▶ Depression ▶ PTSD ▶ Anxiety and Panic disorder ▶ Suicidality ▶ Substance/use abuse | <ul style="list-style-type: none"> ▶ Significant correlation between TBI and mental health diagnosis ▶ Prevalence of most psychiatric disorders is higher in inmates who endorse TBI |
|--|--|

Interpersonal functioning

- ▶ "Traumatic brain injury (TBI) can lead to aggression, violence, and impairment in emotional regulation..." (Farer, & Hedges, 2011)
- ▶ 25 % of a mod/severe TBI sample had significant aggression 5 years after injury
- ▶ Those with brain injuries were more likely to have committed a crime against a person

Incarceration and Substance Use



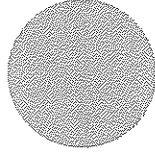
Effects on kids

- ▶ **Multiple injuries have a different effect than single injury**
- ▶ Cognitive reserve plays a role in injury
- ▶ 300, 000 pregnant women experience DV
 - DV during pregnancy increases risk of miscarriage, premature labor, low birth weight, prenatal substance use
- ▶ Kids who grow up in abusive homes are more likely to
 - perform poorly in school
 - have physical and behavior problems
 - have emotional and relational difficulties as adults



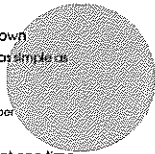
*Why can't she answer questions?
Why do her answers change?*

- Allow the person to think before responding
- Ask simple, clarifying questions
- Offer/allow "I don't know" as an answer
- Check in for comprehension



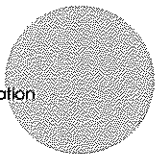
Why is she so distracted?

- | | |
|---|---|
| <ul style="list-style-type: none"> • Simplify environment • Control noise and light • Provide clear visual prompts for environment • Provide clear structure and predictable routine • Remove any surprising/startling stimuli • Check-in for comprehension | <ul style="list-style-type: none"> • Break larger tasks down <ul style="list-style-type: none"> • Make paperwork as simple as possible <ul style="list-style-type: none"> • Large font • Soft colored paper • Give breaks • Give few problems at one time • Shorten instructions • Provide quiet room to complete tasks |
|---|---|



Why does paperwork make her headaches worse?

- Assist in completing paperwork
- Sunglasses inside
- Provide soft lighting and a quiet place for relaxation
- Assist with computer usage



*Why is she not following through?
Why does she not remember conversations we
had yesterday?*

- Recognize the different types of memories
- Write things down
 - Provide way for individuals to record information
- Provide memory supports in the environment
 - Written and posted schedule/instructions; label cabinets/drawers/rooms
- Shorten instructions
 - Present in with words and pictures
- Model tasks
- Checklists for chores/tasks

Why is she slow to answer questions?

- Complete paperwork in quiet, distraction-free room
- Don't put on the spot
- Provide cues for time sensitive tasks
- Create an environment that is conducive to asking for help and acknowledging any cognitive or emotional difficulties

*Why is she so difficult to get along with?
Why does she not follow through on things?*

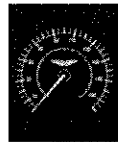
- Communication should be direct, not subtle
- Nonjudgement, noncritical, supportive feedback
- Remain calm to reduce others' agitation
- Recognition that self-awareness and/or awareness of deficits may be low or non-existent

Moving the needle on TBI



- This injury is frequently overlooked
 - Increasing recognition
 - Among health care providers
 - Among first responders
 - Among facilitators
 - Among those who have experienced the injury
 - Increasing resources
 - Systemic
 - Financial

Moving the needle on TBI



- Making the invisible injury visible.
- It takes the village

Thank you!

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