

TRAUMATIC BRAIN INJURY (TBI) LAW ENFORCEMENT CONSIDERATIONS



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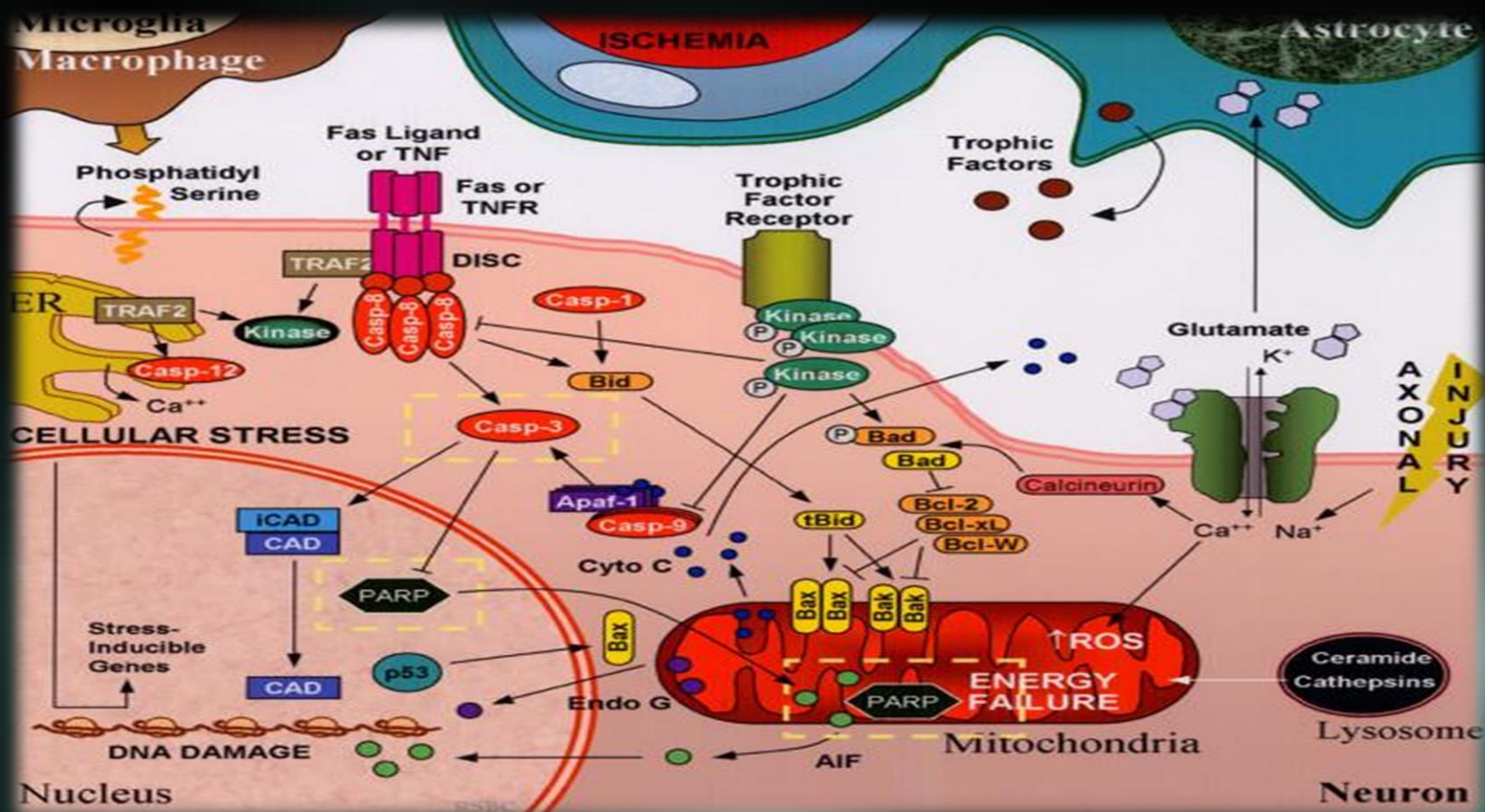


WHAT IS TBI?

- Traumatic Brain Injury is defined as a jolt or blow to the head (closed injury), or a penetrating head wound (open injury) that disrupts the function of the brain.
- Not all head injuries result in TBI, but there are many cases where a head injury is not externally visible, yet results in TBI.



TBI @ WORK IN THE BRAIN



NEUROLOGICAL/MEDICAL CONDITION WITH *PSYCHOLOGICAL* SIGNS AND SYMPTOMS

- What's going on "under the hood" is a *NEUROLOGICAL / MEDICAL* condition that manifests itself in a way that presents as a *PYSCHOLOGICAL* disorder.
- It is not a mental illness, but it may co-exist with a mental illness or other psychological disorder (and often co-exists with alcohol/drug abuse), thus making it difficult to diagnose and treat.



TBI IS A RESULT OF PHYSICAL TRAUMA

- While some psychological disorders can result from chemical or emotional abuse/trauma, TBI is the result of physical trauma to the brain.
- This trauma is often overlooked due to a lack of outward signs of injury, such as in the case of whiplash or a jolt or impact to the head which leaves little or no mark.
- TUMORS and BLAST CONCUSSION are also causes of TBI.



BLAST / CONCUSSION

- Not just the pressure entering the head through the ears, eyes, nose and mouth – **pressure experienced THROUGHOUT the body reverberates through the blood and spinal fluid in waves, shocking the entire brain** and causing the same EXITO-TOXICITY (explained later) as physical impact and internal shifting of the brain within the skull.
- These injuries are most frequently overlooked, as there is no reported head injury.



SIMPLY PUT: A SHORT IN THE BRAIN'S CIRCUITRY

- As we all know, the brain is a VERY complex communication center.
- The communication receptors become damaged (*AXONAL INJURY*) and the information is not received properly by the parts of the brain needing it.
- While this is a problem throughout the brain, the interruption of communication relating to the *FRONTAL LOBE* results in behaviors that are of significant concern to law enforcement and society in general, because sudden shifts in behavior, often involving violence, can occur with no precipitators whatsoever.



CHEMICAL DAMAGE

- While TBI is the result of physical trauma, it should be noted that chemical damage can occur subsequent to the traumatic event.
- This is called EXITO-TOXICITY
 - * When an axon is stretched and damaged, the brain responds by releasing many neurotransmitters. The neurotransmitters in turn may cause chemical damage to the brain.



SYMPTOMS

- Persistent headaches and/or neck pain
- Difficulty remembering, concentrating or making decisions
- Slowness in thinking, speaking , acting or reading (hesitation)
- Getting lost or easily confused (often accompanied by acute frustration)
- Feeling tired all the time, having no energy or motivation
- Mood changes (feeling sad or angry for no apparent reason)
- Changes in sleep patterns (increase or decrease in ability to rest)
- Light-headedness, dizziness or loss of balance
- Nausea (sudden, unexpected onset)
- Increased sensitivity to lights, sounds or distractions
- Blurred vision or eyes tiring easily
- Loss of sense of taste or smell
- Ringing in the ears (tinnitus)



SEVERITY / RECOVERY FACTORS

- As with PTSD, the severity of symptoms and chances of / rate of recovery differ, depending upon how stable the person was (social / emotional / mental stability) when the harmful event occurred.
- The severity of the injury and length of LOC (Loss of Consciousness) are also very critical factors.
- Diagnosis and treatment are obviously key factors!



BEHAVIORS

- Many of the symptoms often cause irritability, especially when multiple symptoms are present.
- A person suffering from TBI may suddenly become hostile and violent.
- Depending on the areas of the brain affected, normal inhibitions are absent, along with ability to reason or think rationally.



BEHAVIOR INCONSISTENCY

- It is important to note that there may be a complete absence of consistent behaviors, and that a person's behaviors and affect can change suddenly without precipitators.
- You may be making progress with calming or reasoning, then suddenly the person explodes with anger and animation.



SIMILARITIES TO MANIC DEPRESSIVE DISORDER

- While many of the behaviors may seem similar to those suffering from Manic Depressive Disorder (Bi-Polar Disorder), the frequency and extremes of the symptoms have sudden onset, as opposed to the “cycle” of MDD/BPD.
- Self-Medication is also frequent among TBI victims, regardless of their awareness of the cause of their experiences.



SAFETY

- Among all aforementioned symptoms and behaviors, it is paramount to keep in mind the possible absence of inhibition and reason or logic. This creates a significant concern in terms of Officer Safety and the safety of others.
- If TBI co-exists with PTSD and/or other psychological disorders, safety considerations are much higher.



SCREENING QUESTIONS

- You can ask the person if they have ever suffered a head injury, whiplash or brain tumor, if the answer is yes, ask how long ago this occurred, and if the person has a medical care provider assisting them.
- Ask if they have been present or near any significant blast or explosion.
- Ascertain whether or not they are on any medications to help them with the trauma.



SCREENING QUESTIONS

- If the person states they were present near a blast or explosion, even if they had hearing protection in, remember, the pressure reverberating through the body can cause the damage.
- **ASK** the person if they ever felt dizzy or experienced headaches or nausea shortly after the experience.



KEEP IN MIND...

- While Officer Safety and the safety of others must always be first, while dealing with a person who has, or may have TBI, keep in mind that their erratic behaviors and sudden turns are not within their control.
- Even if they are aware they suffer from TBI, the sudden changes in their feelings and perceptions can cause them just as much anguish and concern as it does you or others!



How Common Is This?

- With significant advancements in medical technology, our combat warriors are surviving medical trauma at an unprecedented rate. This equates to MANY more wounded warriors returning home, and we don't store them in a secret compound, tucked away from society – they are having to adjust to a non-combat environment – in our society. You will be encountering them in situations where they are truly in a crisis.
- The number of veterans returning home with TBI, PTSD and a myriad of other disorders is staggering.
- **Over 1.6 MILLION American Warriors have served in Operation Iraqi Freedom and Operation Enduring Freedom (Afghanistan) since 2001.** The vast majority of those service men and women have encountered severe trauma, be it mental, physical or both.



Advanced medical technology is bringing more wounded warriors back than ever before.

One Example... SGT Powers

- In July 2007 SGT Daniel Powers, a Military Police Airborne soldier, was stabbed in the side of the head with a 9-inch knife by an Iraqi insurgent (teenager).



SGT Powers – Returned to Duty

- Due to superior medical support, SGT Powers recovered from this injury, and on 23 June 2009, he took his first jump, signifying his return to full duty.



SUCCESS!



EDUCATE YOURSELF!

- It is highly recommended to seek further information on Traumatic Brain Injury.
- Use **Google** or **Bing** to find resources by searching Traumatic Brain Injury or TBI.

Here are a few good starting points:

www.mirecc.va.gov/visn19/docs/Brenner_AAS_2010_website.pdf

www.ninds.nih.gov/disorders/tbi/tbi.htm



QUESTIONS?

- This concludes the presentation on Traumatic Brain Injury – Law Enforcement Considerations
- If you have questions that I am unable to answer at this time, please email me at Robert.Smith36@va.gov and I will either find the information you need or direct you to our staff of professionals at the Reno, VA Medical Center.

**THANK YOU FOR
YOUR TIME AND
ATTENTION!
STAY SAFE!!**

