TRAUMATIC BRAIN INJURY AND POST TRAUMATIC EPILEPSY

What is Traumatic Brain Injury (TBI)?

A traumatic brain injury occurs when a person's brain is physically injured, usually by a sudden force. With military members, this is often the result of a concussive blast or explosion. It can also be caused by falls, motor vehicle accidents, assaults, or any sudden blow to the head. Because the damage is internal, there may be no visible head wound.

Although TBI has been called the signature injury of the Global War on Terror, it is not a new condition, and it is not unique to those serving in the military. The Centers for Disease Control estimates that 1.4 million TBIs occur every year in the US, with about 6% resulting in long term disability. In prior conflicts, approximately 14% - 20% of surviving casualties had a TBI.

Are There Different Levels of TBI?

Yes. As the figures above suggest, there is a wide range in severity depending on the circumstances of the injury. Some people who experience a TBI can recover completely without medical intervention. On the other end of the scale, some people will have permanent and total disability. Any brain injury, whether mild, moderate, or severe, can temporarily or permanently diminish a person's physical abilities, impair cognitive skills, and interfere with emotional and behavioral well being. *Because of this, anyone who feels there is a possibility they may have a TBI should be seen by a doctor.*

What is Post-Traumatic Epilepsy?

PTE is a seizure disorder that is caused by a TBI. It is most likely to occur after an open or penetrating wound to the head, but sometimes it can follow a closed head injury. The incidence of PTE is highest in the military as soldiers are at a higher risk for TBI than the general population. PTE is also often associated with:

- Skull fractures
- Subdural hematomas (accumulation of blood between the brain and the skull, caused by a ruptured blood vessel)
- Intracranial hematomas/hemorrhages
- Brain contusion (bruise)

In the general population the risk of PTE increases with the severity of the TBI:

- Mild TBI: 1.3 times as likely to develop PTE
- Moderate TBI: 2.9 times as likely to develop PTE
- Severe TBI: 17.2 times as likely to develop PTE

TBI in the Military

Personnel with wartime injuries have a higher incidence of missile wounds and blast injuries, both of which may cause severe impairments.

Between 50 and 80 percent of all TBIs are due to blast injuries sustained during combat. Penetrative wounds have historically been more likely to lead to PTE. The likelihood of PTE increases with severity of injury.

Incidence of PTE in the Military

- 1.64 million Soldiers have served in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) and 320,000 of these Soldiers (19.5 percent) will experience TBI
- Between 15-34 percent of TBI patients have PTE, and active-duty military rates can be as high as 53 percent
- Between 48,000-169,600 Soldiers serving in OIF/OEF are expected to develop PTE

What are the Symptoms of TBI?

Every brain injury is unique and symptoms can vary widely. Damage to different parts of the brain will result in different symptoms. TBI shares symptoms with other physical and mental health conditions, such as *Posttraumatic Stress Disorder* which complicates diagnosis. Below are some of the symptoms. Having some of them, however, does not necessarily mean a person has TBI. *Only a doctor can definitively identify and diagnose a TBI.*

Common Symptoms Immediately After Injury

Being Dazed, confused, or "seeing stars"; Not remembering the injury; Losing consciousness knocked out)

Common Symptoms That May Develop Later On

Persistent headache or neck pain; Sensitivity to light and noise; Loss of balance; Changes in sleep patterns Feeling tired all the time, lacking energy; Ringing in the ears; Loss of sense of smell and taste; Slowness in thinking, acting, speaking or reading; Short term memory loss; or Getting lost or easily confused .

Symptoms that may appear to be mental health conditions

- Sudden mood changes for little or no reason
- Difficulty managing relationships
- Chronic anxiety, depression, apathy

Having more trouble than usual with:

- Paying attention or concentrating
- Organizing daily tasks
- Making decisions

How do I find out if I have TBI?

There are two steps to finding out if you have a traumatic brain injury. The first step is screening to find out if you if you have experiences or symptoms that indicate you may have a TBI. This is a verbal logical test. The screener will ask a series of “Yes” or “No” questions, which usually takes about 5 minutes to complete. Lastly, register with the VA Health Care System who will provide an official screening.

There are two possible outcomes of the official screening: “I do not have TBI” or “I should be evaluated by a doctor to determine if I have TBI.” **When you are referred to a doctor, it does not mean you have TBI.** It only means that you are in a higher risk category for having TBI, and you should be examined by a doctor.