



VETERANS

WHAT IS A BLAST WAVE?

A blast injury feels like being hit by a wave and then being pulled back into the ocean — all in intensely rapid succession. More scientifically, blast injuries result from the complex pressure wave generated by an explosion. Explosions create an instantaneous rise in atmospheric pressure that is much higher than humans can withstand. This is called a blast over-pressurization wave (CDC, Mass Casualties).

MECHANISMS OF BLAST INJURIES

There are four basic mechanisms of blast injuries. They are classified as primary, secondary, tertiary, and quaternary—TBI contributed to the deaths of more than 50,000 people.

- Primary blast injury is the explosion itself, which is an atmospheric pressure that hits the individual and pushes on all of the organs of the body. The blast over-pressurization wave, generated by the explosion, travels at a high velocity and is affected by the surrounding environment. The over-pressurization wave dissipates quickly, causing the greatest risk of injury to those closest to the explosion.
- Secondary blast injury is the result of energized fragments flying through the air; these fragments may cause penetrating brain injury.
- Tertiary blast injury may occur when the individual is thrown from the blast into a solid object such as an adjacent wall or even a steering wheel. These types of injuries are associated with acceleration/deceleration forces and blunt force trauma to the brain similar to that observed following high-speed motor vehicle accidents.
- Quaternary blast injury can occur in the presence of severe blast-related trauma resulting from significant blood loss associated with traumatic amputations or even from inhalation of toxic gases resulting from the explosion (DVBIC).



WHAT IS POSTTRAUMATIC STRESS DISORDER (PTSD)?

PTSD describes a group of symptoms that may develop after you are exposed to actual or threatened death, serious injury or sexual violence. These events can include combat exposure; domestic violence; sexual, mental or physical abuse; a motor vehicle crash; a terrorist attack; or a natural disaster.

IS THERE A CONNECTION BETWEEN CONCUSSION AND PTSD?

- Yes. Concussion and PTSD involve physical changes and psychological symptoms, and you can have both. Concussion and PTSD can be caused by the same traumatic event.
- Some people with a concussion may also have PTSD, but not everyone does.
- The symptoms of PTSD and concussion may be similar and make it hard to tell which condition you have.

WHAT DO I NEED TO KNOW ABOUT CONCUSSION AND PTSD?

- If you experience a head injury, get evaluated by your health care provider as soon as possible.
- If you have symptoms of PTSD after a traumatic event, see your health care provider to talk about treatment options.
- Most cases of concussion improve with rest.
- Most cases of PTSD respond well to treatment. Common treatment options may include counseling and medications. Some complementary or alternative medicine approaches such as meditation have also shown to be useful, as a second line treatment, for managing symptoms of PTSD.
- Avoid using drugs, drinking alcohol or energy drinks. These can disrupt your recovery process.
- Ask your family if they have noticed anything different about you lately. They may be aware of changes that you can't see for yourself.