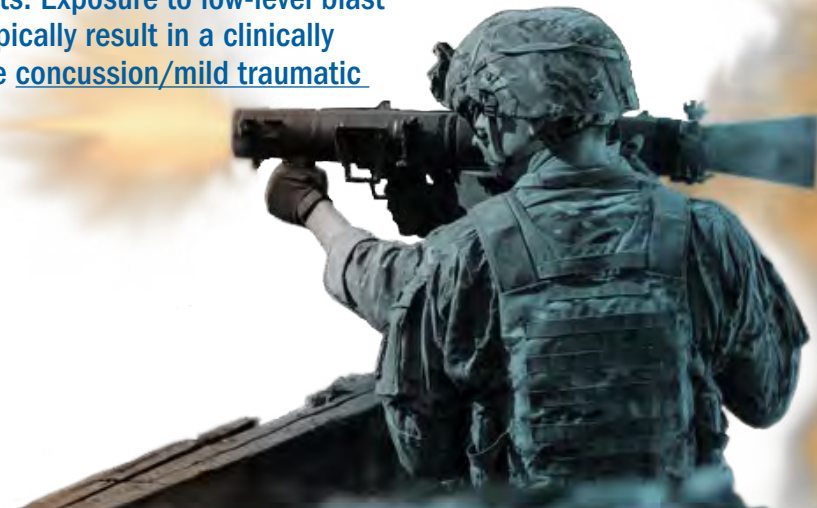


What is Low-Level Blast?

Blast generated from firing heavy weapon systems or explosives in combat or training environments. Exposure to low-level blast does not typically result in a clinically diagnosable concussion/mild traumatic brain injury.



VA PROVIDERS

LLB Exposure May Cause

- Concentration problems
- Irritability
- Memory problems
- Slowed thinking/slow reaction time
- Decreased hand-eye coordination
- Difficulty hearing
- Headaches
- Tinnitus

What Should Medical Providers Do?



Ask

When taking a patient's history, ask about LLB exposures and assignment to high-risk military occupation(s).



Document

Document history of LLB exposure in the medical record.

- Military occupation(s)
- Experience as a military training instructor
- Years in high-risk occupation/unit (e.g., MOS/NEC/AFSC)



Manage

For persistent symptoms:

- Comprehensive assessment
- Individualized symptom-focused treatment plan
- Consider symptom management recommendations from the [mTBI CPG](#)
- For additional resources, refer to [Health.mil/TBIProviders](https://www.health.mil/TBIProviders)

Research is still emerging on the full impact of LLB exposure on brain health and performance outcomes.

Military Occupations and Heavy Weapon Systems That Can Increase Risk of LLB Exposure

Armor, Artillery,
and Gunnery
Combat Engineer



Breaching
Charges



Explosive
Ordnance Disposal
Special Operations
Forces



Shoulder
Mounted
Weapons



Infantry
Military Training
Instructor



.50 Caliber
Weapons



Medical Assets Attached
to Expeditionary Units



Indirect Fire
Weapons



Key Terms

Acute Exposure: Contact with a blast event from a single origin at a specific point in time (i.e., use of a blast-generating weapon during a training session)

Blast Overpressure: Positive change in ambient pressure generated by the blast shockwave created when a weapon is fired. The highest part of the wave is referred to as peak overpressure (measured in pounds per square inch)

mTBI CPG: Management and Rehabilitation of Post-Acute Mild Traumatic Brain Injury (mTBI) (2021) - [VA/DoD Clinical Practice Guidelines](#)

Repetitive Exposure: Contact with multiple blast events either in a single training session or over a period of time (i.e., use of a blast-generating weapon over the course of multiple days of training or multiple training exercises)

The research efforts focused on understanding the effects of low-level blast exposure were initiated following the National Defense Authorization Act of Fiscal Year 2018 Section 734, which required research on members of the armed services exposed to blast from heavy weapons use in combat or training.



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