

Editorial Reviews

Product Description

This up-to-date and comprehensive electronic book on CD-ROM provides the best collection available anywhere of reports and documents on military blast injury and traumatic brain injury (TBI), with particular emphasis on military and veterans issues. This extensively researched collection includes material from the medical departments of the Department of Defense (including the DoD Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury and Wounded Warrior Program), Veterans Administration, and CDC. The term Blast Injury creates much confusion. Simply stated, ?blast injury includes the entire spectrum of injuries that can result from exposure to an explosion. The DoD Blast Injury Research Program uses the Taxonomy of Injuries from Explosive Devices as defined in DoDD 6025.21E to characterize such injuries. This taxonomy assigns blast injuries to five categories-Primary, Secondary, Tertiary, Quaternary, and Quinary-based on the mechanism of injury. Primary blast injuries result from the high pressures created by the blast itself. These high pressures, known as blast overpressure, can crush the body and cause internal injuries. Primary injuries are the only category of blast injuries that are unique to blast. Secondary blast injuries result when the strong blast winds behind the pressure front propel fragments and debris against the body and cause blunt and penetrating injuries. The strong winds and pressure gradients can also accelerate the body and cause the same types of blunt force injuries that would occur in a car crash or a fall. These are known as tertiary blast injuries. Quaternary blast injuries are the result of other explosive products, such as heat, light, and toxic gases, that can cause burns, blindness, and inhalation injuries. Finally, quinary blast injuries refer to the clinical consequences of ?post-detonation environmental contaminants including bacteria, radiation (dirty bombs), and tissue reactions to fuel and metals. A new DoD program is addressing critical medical research gaps for blast-related injuries and will fully address traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD) research. The program is leveraging new extramural blast research partnerships with DoD medical research laboratories to achieve a cutting-edge approach to solving blast injury problems. Medical research products include medical standards for enhanced personal protective equipment (PPE). The program is addressing the new concept of reset for warfighters in redeployment, ensuring return-to-duty (RTD) readiness (or healthy return to civilian life for citizen Soldiers). One of the program's major areas of focus is the improvement of battlefield medical treatment capabilities to mitigate neurotrauma and hemorrhage. Finally, the program is modernizing military medical research by bringing technology advances and new research concepts into the DoD programs. The blast injury research program is focused on filling gaps in the blast injury knowledge base. Key research topics by program area include: Injury Prevention: Determining if a link exists between primary blast and mild traumatic brain injury (mTBI); developing drugs to prevent and treat blast-related hearing loss; analyzing combat injuries and PPE performance; developing multi-effect blast injury models to improve protective equipment; and developing strategies that enhance psychological resilience and prevent PTSD. Acute Treatment: Developing diagnostics and neuroprotectant drugs for TBI; developing hemorrhage control and blood products; developing treatments for psychological trauma; developing medical procedures for damage-control orthopedics; and devising innovative strategies for improved pain management. Reset. Advancing tissue engineering and prosthetics; improving recovery of function; and developing RTD standards.

About the Author

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