Record Nr. UNINA9910253964903321 The Mechanobiology and Mechanophysiology of Military-Related **Titolo** Injuries / / edited by Amit Gefen, Yoram Epstein Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2016 **ISBN** 3-319-33012-8 Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (332 p.) Studies in Mechanobiology, Tissue Engineering and Biomaterials, , Collana 1868-2006;;19 Disciplina 617.47044 Soggetti Biomedical engineering Traumatology Human physiology Mechanics Mechanics, Applied **Biomaterials** Biomedical Engineering and Bioengineering Traumatic Surgery **Human Physiology** Solid Mechanics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto The Mechanophysiology of Stress Fractures in Military Recruits --Traumatic Brain Injury in the Military: Biomechanics and Finite Element Modelling -- Modeling Skeletal Injuries in Military Scenarios --Biomechanics of Eye Injury in the Military -- The Biomechanical Basis for Increased Risk of Overuse Musculoskeletal Injuries in Female Soldiers. Sommario/riassunto This book provides a state-of-the-art update, as well as perspectives on future directions of research and clinical applications in the implementation of biomechanical and biophysical experimental, theoretical and computational models which are relevant to military medicine. Such experimental and modeling efforts are helpful, on the

one hand, in understanding the aetiology, pathophysiology and

dynamics of injury development and on the other hand in guiding the development of better equipment and protective gear or devices that should ultimately reduce the prevalence and incidence of injuries or lessen their hazardous effects. The book is useful for military-oriented biomedical engineers and medical physicists, as well as for military physiologists and other medical specialists who are interested in the science and technology implemented in modern investigations of military related injuries.