

Guest Editor's Note

The United States Army is a diverse organization. The Army operates its own gymnasiums, shopping centers (post exchange), grocery stores (commissaries), warehouses, schools (for soldiers and for children of service members), legal offices, and hospitals. In 1999, over 1.2 million individuals were on active duty in the Armed Forces, with 445,000 in the Army [5]. There are over 300 types of jobs, called military occupational specialties (MOS), including administrative (finance, accounting, legal, maintenance, or supply), combat (infantry, artillery, and special forces), construction, plumbing, and pipe fitting (build or repair buildings, airfields, bridges, foundations, dams, bunkers, and the electrical and plumbing components of these structures), electrician, engineering and technology specialties, health care specialties (X-ray, ultrasound, pharmacy, therapy), human resource specialties, machine operators, media specialties, law enforcement, transportation and mechanics, and support personnel such as chaplains and chaplains assistants. Personnel in each of these MOSs may be called on to perform their duties in foreign countries or aboard aircraft, helicopters, ships, or submarines. They may have to work under extreme environmental conditions, such as heat, cold or altitude and in threatening circumstances such as combat operations. Finally, military service members are expected to be available to do these jobs, under these conditions, in these places, at a "moments notice".

Just as civilian businesses are interested in the work and welfare of their employees, the military is also interested in quality of work as it impacts their end product, and in the fitness and welfare of their workforce as it impacts soldier productivity. The study of work, Ergonomics, as well as the study of injuries and injury prevention methodologies, are paramount in an environment such as the military. Although some of the research conducted by civilian institutions will be repli-

cable and can be applied to military settings, many of the job demands are unique to the military.

Injuries have been recognized as one of the top three prevention priorities of the Department of Defense, and one of the top priorities of the US Army Surgeon General, LTG James B. Peake. Injuries are the leading cause of morbidity and mortality [2]. As stated by the Assistant Secretary of Defense (Health Affairs) and the Deputy Under Secretary of Defense (Environmental Security), injuries are the leading cause of outpatient visits, hospitalizations, disabilities and deaths among US military personnel [1]. Injuries "impose a greater ongoing negative impact on the health and readiness of US Armed Forces than any other category of medical complaint during peacetime and combat" [3, p. 16]. Obviously, prevention strategies must be carefully developed, implemented, and evaluated to address injuries and performance as they impact military readiness.

The National Center for Injury Prevention and Control is one of the newest centers at the Center for Disease Control and Prevention. Working collaboratively with the CDC, military personnel from various commands have endeavored to implement the public health approach to prevent injuries. This process includes defining the problem through surveillance, conducting research to identify risk and protective factors, implementing and evaluating intervention strategies, and disseminating the information. The articles in this special edition of *WORK* are grouped and presented in the sequence, which follows the public health model. Surveillance and risk factors are presented in the first six articles. These articles demonstrate the importance of describing the types and magnitude of injuries, as well as how risk factors and modifiable causative factors can be identified and developed into prevention strategies. Intervention programs are described in the next two articles, the first of which focuses on incorporating participation from supervisors and workers. Performance enhancement is explored in the final two articles, and it can be noticed that the exploration to improve performance also can improve worker safety.

The opinions and assertions contained herein are the private views of the authors, and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

These articles should be of interest in terms of describing the procedures involved in each step of the public health process, and the content of the articles. Additionally, they should be of interest to both civilians and military personnel. Some of the topics in this special edition include:

- The natural history of 13 musculoskeletal conditions requiring hospitalization
- Risk factors associated with disability
- Physical, psychological, behavioral, demographic, and occupational characteristics associated with injury and with high-risk behaviors
- Job satisfaction, work stress, and smoking as potential intervention targets for reducing injuries
- The association between drinking and seatbelt use, speeding, and smoking
- Causative factors for fall-related injuries
- Furniture design and self reports of work-related pain and soreness
- The relationship of tension/anxiety, Type A Behavior, and sleep patterns with musculoskeletal injuries and physical performance
- Potential use of tibial flexural wave propagation velocity in evaluating patients for stress fractures
- Methods to track participation of workers and supervisors in injury prevention programs
- A Computer/Electronic Accommodations Program (CAP) to eliminate employment barriers for people with disabilities.
- Usefulness of anthropometric and aerobic data to screen workers for the physically demanding task of carrying loads
- Equipment design changes to increase efficiency of movement through snow

This special edition of WORK barely scratches the surface of military involvement in ergonomics and injury prevention, yet the articles do provide a glimpse into the diversity of efforts directed toward improving work life, safety, and efficiency. These articles have been written by researchers, clinicians, physical and occupational therapists, ergonomists, physiologists, epidemiologists, and administrators. These professionals work in various military commands such as the US

Army Research Institute of Environmental Medicine, the US Army Center for Health Promotion and Preventive Medicine, the US Army Medical Department Center and School, and in various health clinics and hospitals. For some, it is part of their job to do research and to publish. For others, they do it in addition to their normal patient treatment or teaching responsibilities. Many write their articles during their "free time". They do this because they know change can begin only through research and education of others. They are well aware of the power of scientific information to shape policy and influence health.

It is hoped that readers of this special issue will use the information to help design their own surveillance, intervention, program evaluation, and dissemination efforts. It is also hoped they too will choose to share their findings with the world-wide community. Together, the military and civilian communities can systematically and scientifically prevent injuries, promote health, improve efficiency, and improve the work-lives of all.

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