

Increasing soldiers' physical performance: Researchers share updates

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Researchers from around the world are working to improve soldiers' health and physical performance and health—with the goal of increasing military readiness and effectiveness, according to the November special issue of *The Journal of Strength and Conditioning Research*, official research journal of the National Strength and Conditioning Association (NSCA).

Drawn from presentations at the Third International Congress on Soldiers' Physical Performance (ICSPP), the special issue provides an update on efforts to optimize human performance in the military through "the science and applications of physical fitness and [injury prevention](#) research." Guest Editors Dr. Bradley C. Nindl of the US Army Institute of Public Health and Dr. Marilyn A. Sharp of the US Army Research Institute of Environmental Medicine write, "Collectively, the presentations [focus] on a fundamental premise that soldiers are the center of warfighting capability, and the human service member is the prime resource and key enabler of all warfighting systems."

New Evidence on Increasing Soldiers' Health and Physical Performance

Held last year in Boston, the Third ICSPP drew 374 registrants from 27 countries. Participants shared and discussed current evidence on "translating state-of-the-science soldier research" to maximize the readiness and effectiveness of fighting forces. For a limited time, the

contents of the special issue will be freely accessible to all readers via [The Journal of Strength and Conditioning Research](#) website.

The special issue presents 35 concise research articles and reviews submitted by conference presenters, at the invitation of a Special Advisory Committee. The papers present and analyze current evidence on physical training programs, performance testing, injury prevention, and other areas relevant to soldiers' health and physical performance.

A submission by Drs. Bruce H. Jones and Veronique D. Hauschild of the US Army Institute of Public Health highlights lessons from studies of injury prevention. This issue is a critical one, as unintentional injuries are the single biggest health problem facing the US military.

Drs. Jones and Hauschild emphasize the need to focus prevention efforts on modifiable factors proven to be associated with injury risk: particularly the type and amount of physical training, along with individual risk factors such as [physical fitness](#) level, sedentary lifestyle, and tobacco use. They conclude, "Balanced fitness programs, such as the US Army's physical readiness training program, may be a partial answer to optimizing future performance through injury reduction."

Several papers are drawn from keynote addresses delivered at the Third ICSP. Dr. Joseph Carvalho, Jr., of US Army Medical Research and Materiel Command believes that Army medicine must shift toward an alternative model of health promotion and disease prevention. He proposes a "system of health" focusing on the Performance Triad of sleep health, physical activity, and nutrition behaviors, along with Delivery of Health and Healthy Environments. "The implementation of this system for [health](#) will not only improve individual soldier's resiliency/capability both throughout and beyond their military careers...but could also serve as a successful model for the nation," Dr. Carvalho writes.

Two papers focus on issues related to integrating female soldiers into "combat-centric occupations"—including physiological differences, performance assessment, and risk mitigation strategies. "Evidence-based occupational standards and optimal training programs provide short-term solutions for integrating women in support combat and indeed direct combat roles," writes Julie P. Greeves of the UK Army Recruiting and Training Division writes. In a separate paper, Dr. Nindl summarizes specific training recommendations to better prepare women for combat training.

The special issue also includes two additional presentations of special relevance to military [physical performance](#): an NSCA "Blue Ribbon Panel" report on military performance testing and a Center for Health and Military Performance workshop on metrics for human [performance](#) optimization.

The fourth ISCSP is scheduled for 2017 in Melbourne, Australia. "The intent of the ICSPP series is to focus on the soldier—the individual service member," Drs Nindl and Sharp write. "As we move forward with focus placed on the human dimension of soldiering, the key to our scientific success and what will prove to be transformative will be the extent to which we can operationalize and disseminate our scientific knowledge for the benefit of our soldiers on the ground."

More information: journals.lww.com/nsca-jscr/toc/2015/11001

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