

## Comparison of self-reported musculoskeletal injury history between female and male US Army Soldiers

Tuesday, November 1, 2011

Mita Lovalekar, MBBS, PhD, MPH , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

John Abt, PhD, ATC , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

Timothy Sell, PhD, PT , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

Anthony House, MS, ATC , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

Takashi Nagai, MS, ATC , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

Jonathan Pederson, ATC , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

Scott Lephart, PhD, ATC , Department of Sports Medicine and Nutrition, University of Pittsburgh, Pittsburgh, PA

**Background/ Purpose:** Musculoskeletal injuries can adversely impact performance and certain injuries are risk factors for recurrence of the injury. The aim of this analysis was to compare the proportion of female and male US Army Soldiers with a self-reported history of musculoskeletal injury.

**Methods:** Self-reported musculoskeletal injury history for a period of two years was obtained from 296 Soldiers (age =  $27.8 \pm 6.5$  years, 12.2% female). Injuries were classified according to their anatomic location and injury type (traumatic vs. overuse). Proportions of subjects with injuries were compared using Fisher's exact test.

**Results:** Age was not significantly different between genders (females  $27.0 \pm 6.0$  years, males  $27.9 \pm 6.6$  years,  $p = 0.440$ ). A greater proportion of females reported a musculoskeletal injury compared to males (41.7% and 28.1% respectively,  $p = 0.119$ ), though this difference was not statistically significant. A greater proportion of females than males reported a lower extremity injury (27.8%, 13.8%,  $p = 0.046$ ) and a knee injury (11.1%, 2.7%,  $p = 0.033$ ). There was no difference in the proportion of females and males reporting an upper extremity injury (5.6%, 7.7%,  $p = 1.000$ ). Interestingly, a greater proportion of females than males reported an overuse injury (22.2%, 8.8%,  $p = 0.036$ ).

**Conclusions:** Examination of potential physiological, musculoskeletal, biomechanical and nutritional risk factors in these subjects is necessary. There may be a need to implement a customized program to prevent recurrence of certain lower extremity and overuse injuries in female Soldiers, and to prevent an adverse impact on performance.