



## Mid Atlantic Regional Chapter of the American College of Sports Medicine

45<sup>th</sup> Annual Scientific Meeting, November 4<sup>th</sup> - 5<sup>th</sup>, 2022  
Conference Proceedings

International Journal of Exercise Science, Issue 9, Volume 11



### Trends in Moderate-to-Vigorous Physical Activity among Veterans: Findings from the National Health Interview Survey 2011-2020

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The “Healthy Soldier Effect” postulates that service members have lower rates of mortality compared with civilians due to military physical requirements, frequent physical screenings, and access to medical care. However, this effect may wane over time resulting in similar or increased mortality rates. Declines in moderate-to-vigorous physical activity (MVPA) post-service may contribute to the reduced health of veterans. **PURPOSE:** Compare age-related changes in MVPA among veterans to civilians over the past decade. **METHODS:** Data from 2011-2020 of the National Health Interview Survey were examined for age, sex, veteran status, and self-reported MVPA. To account for age differences between groups, age was assessed in decade increments beginning at 20 years until 80+ years. MVPA was expressed as  $\text{min} \cdot \text{wk}^{-1}$  and classified by meeting the 2018 Federal physical activity guidelines as follows: “Inactive” ( $0 \text{ min} \cdot \text{wk}^{-1}$ ); “Below Guidelines” ( $1-149 \text{ min} \cdot \text{wk}^{-1}$ ); “Meets Guidelines” ( $150-300 \text{ min} \cdot \text{wk}^{-1}$ ); and “Exceeds Guidelines” ( $300+ \text{ min} \cdot \text{wk}^{-1}$ ). The influence of study year, age, and veteran status on MVPA was determined using an analysis of variance with Bonferroni-corrected alpha levels while controlling for sex. Differences in MVPA guideline classifications were assessed via Chi-square. **RESULTS:** A total of 203,092 civilians and 22,803 veterans were included for analysis. Both groups reduced MVPA with older age ( $p \leq 0.03$ ). Veterans had greater MVPA for the ages 20-29 yrs ( $353.5 \pm 336.3$  vs  $285.8 \pm 303.5 \text{ min} \cdot \text{wk}^{-1}$ ,  $p < 0.001$ ), 30-39 yrs ( $342.8 \pm 323.7$  vs  $257.5 \pm 287.6 \text{ min} \cdot \text{wk}^{-1}$ ,  $p < 0.001$ ), 40-49 yrs ( $270.2 \pm 294.4$  vs  $230.1 \pm 276.2 \text{ min} \cdot \text{wk}^{-1}$ ,  $p < 0.001$ ), and 70-79 yrs ( $193.0 \pm 271.9$  vs  $157.2 \pm 238.0 \text{ min} \cdot \text{wk}^{-1}$ ,  $p = 0.01$ ). MVPA was similar for 50-59 yrs, 60-69 yrs, and 80+ yrs ( $p \geq 0.06$ ). Across age groups, a greater proportion of veterans than civilians exceeded Federal MVPA guidelines ( $15.5-48.0\%$  vs  $10.0-39.8\%$ ,  $p \leq 0.006$ ). **CONCLUSION:** Data from a large-scale, nation-wide study show that, over the last decade, veterans participate in more MVPA than their civilian counterparts at almost every age and were more likely to exceed the physical activity guidelines. While follow-up studies with objective assessments of MVPA are warranted, this study suggests that reduced MVPA may not contribute to the waning “Healthy Soldier Effect” observed in veterans.