

## 52. SWACSM Abstract

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### Army Combat Fitness Test Performance by Sex in ROTC Cadets

KEVIN L. WITHROW<sup>1</sup>, J. JAY DAWES, Ph.D.<sup>2</sup>, ROBIN M. ORR, Ph.D.<sup>3</sup>, ROBERT G. LOCKIE, Ph.D.<sup>1</sup>

<sup>1</sup>Center for Sport Performance; Department of Kinesiology; California State University, Fullerton; Fullerton, CA, USA; <sup>2</sup>Tactical Fitness and Nutrition Lab; School of Kinesiology, Applied Health and Recreation; Oklahoma State University, Stillwater, OK, USA; <sup>3</sup>Tactical Research Unit; Bond University; Robina, Qld, Australia

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*Advisor / Mentor: Lockie, Robert (rlockie@fullerton.edu)*

#### ABSTRACT

The U.S. Department of Defense recently opened all combat jobs to women. The Army Combat Fitness Test (ACFT) is the U.S. Army's new assessment for measuring a soldier's ability to execute combat-related tasks. However, issues have been raised at a national level relative to the impacts of the ACFT on female personnel. As the Reserve Officers Training Corps (ROTC) is the initial entry point for many future Army officers, it is important to analyze how male and female cadets compare in their physical abilities. **PURPOSE:** To investigate the between-sex differences in ACFT performance in cadets from one program. **METHODS:** A retrospective analysis of ACFT data for 101 cadets (76 men and 25 women) from one Midwestern college was conducted. The six events in the ACFT were the three-repetition maximum (3RM) deadlift, standing power throw, hand release push-ups, sprint-drag-carry, leg tuck and 2-mile run. Total scores and scores for each of the six events were stratified by sex. Independent samples *t*-tests ( $p < 0.05$ ) calculated differences between men and women. Cohen's *d* calculated effect sizes between the sexes. **RESULTS:** Men scored significantly higher than women in total score and all six events ( $p < 0.001$ ). The effect sizes for the difference in total scores, sprint-drag-carry and standing power throw were very large ( $d = 2.06 - 2.48$ ). For the 3RM deadlift and leg tuck, the effect sizes were large ( $d = 1.24 - 1.69$ ); for the hand release push-up and 2-mile run, the effect sizes were moderate ( $d = 0.94 - 1.08$ ). Female cadets failed to achieve a minimum passing score for the overall ACFT and the standing power throw, leg tuck and two-mile run events, with mean scores of 356, 56, 51 and 53 respectively. A minimum passing total score is 360, with at least 60 points in each event. **CONCLUSION:** At a micro-level, this ROTC program reflected the challenges present on a national-scale for the U.S. Army. Female cadets were not as physically capable as male cadets in the ACFT, which simulated combat-related tasks. The ACFT events where sex had the largest impact were tests in which strength was a major factor (sprint-drag-carry, standing power throw, 3RM deadlift, leg tuck). Training plans for female cadets should ideally prioritize developing strength, in addition to other fitness qualities (i.e., anaerobic and aerobic capacity) important for army personnel.